

**Block**

# 4

## **PLANNING AND MANAGEMENT OF ODE**

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# **BESE-131: Open and Distance Education**

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## **BLOCK 1 OPEN AND DISTANCE EDUCATION: GENESIS AND EVOLUTION**

Unit 1 Historical Developments

Unit 2 Theoretical Foundations

Unit 3 Indian Experiences

Unit 4 Global Practices

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Unit 9 Distance Learners and Self-Directed Learning

Unit 10 Counselling and Tutoring in Teaching at a Distance

Unit 11 Assessment of Learner Performance

Unit 12 Learner Support Systems and Services

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## **BLOCK 4 PLANNING AND MANAGEMENT OF ODE**

**Unit 13 Management of ODE Systems**

**Unit 14 Quality Assurance in ODE**

**Unit 15 Economics of ODE**

**Unit 16 Research in ODE**

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# BLOCK 4 PLANNING AND MANAGEMENT OF ODE

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## Introduction to the Block

We have discussed the genesis and evolution of open and distance education, teaching at a distance including design and development of ODE resources, and the learner support services required in ODE in Blocks 1, 2 and 3 respectively. You might have understood that teaching at a distance and support services to facilitate learning happen through the structures established at different levels under an institutional framework. But these structures, their functions, processes, programmes, costs and so on need to be managed, coordinated and monitored continuously. These must also be evaluated from time to time for assuring the quality of ODE. In addition, the contribution of research has its own significance in improving the theory and practice of ODE. This Block therefore attempts to focus on these aspects of planning and management of ODE.

This Block (i.e. Block-4) is the last block of this course. Containing four units (Units 13-16), it presents an overview of planning and management of ODE systems, economics of ODE and quality assurance and research in ODE.

**Unit 13, *Management of Open and Distance Education Systems***, discusses the functions and processes of management in general, and the management of ODE with special reference to organisational structure of dual mode, single mode and consortium systems as well as academic, administrative and industrial sub-systems of ODE.

**Unit 14, *Quality Assurance in ODE***, deals with quality assurance issues and parameters and also quality concerns in programme evaluation with emphasis on input, process and product evaluation.

**Unit 15, *Economics of ODE***, explains the concepts of (distance) education as an investment and consumption and importance of human capital formation through education and ODE in the context of national development. Also, it describes different types of costs, discusses factors affecting costs, and explains economies of scale in ODE.

**Unit 16, *Research in ODE***, highlights the contribution of research in distance education to the body of knowledge and its representation and focuses on research trends as well as systemic and action research in ODE.

After working through this Block, you will be able to:

- Compare the modes, systems and organisational structures involved in different types of ODE institutions;
- Analyse the issues, parameters, challenges, modes and means of quality assurance in ODE;
- Apply the concepts of economics of education to ODE;
- Evaluate the management systems of ODE institutions and justify their practices in the given contexts;
- Understand the research trends and appreciate the need and significance of systemic and action research in the context of ODE.

The design and the presentation of the units in this Block resemble that of the other Blocks of the course. To facilitate your access to the subject matter in this block, we suggest you to refer to or recall the schematic representation of the design of the units and other details given under 'Introduction to the Block-1'.

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# UNIT 13 MANAGEMENT OF ODE SYSTEMS

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## Structure

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  - 13.2.1 Institutional Management: Main Functions
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  - 13.2.3 Management Information System (MIS)
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## 13.0 INTRODUCTION

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In Block 1 of this Course you have known the genesis and evolution of ODE. In Block 2 we discussed different aspects of teaching at a distance, including design and development of ODE resources. In Block 3 we dealt with learner support services in ODE. These three Blocks together might have provided you comprehensive understanding of development of ODE as well as different aspects and issues of teaching-learning at a distance including learner assessment and evaluation. Yet, your understanding of ODE will be incomplete if we do not cover aspects of planning and management of ODE.

Therefore, in this Block (i.e. Block 4, which is the last Block of this course) our endeavour is to present you an overview of planning and management of ODE. As a part of this effort, in this Unit, we attempt to outline the management structure of DE Institution in general, describe different models of DE, explain inter-relationship between different functional sub-systems of DE institution and highlight the functions, the processes and the issues of management of these institutions.

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## 13.1 OBJECTIVES

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After going through this unit, you should be able to:

- understand the functions and processes involved in management of an ODE institution;
- describe organisational structures of different ODE institutions;
- explain the role of a Management Information System (MIS);
- compare different models of ODE institutions;
- discuss the issues involved in the management of ODE systems/institutions; and
- analyse the relationship between and among different functional sub-systems of ODE.

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## 13.2 MANAGEMENT FUNCTIONS AND PROCESSES: AN OVERVIEW

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The structures and organisation will have significant impact on the nature and process of decision-making related to various aspects of an educational institution. ODE institutions are no exception to this. The structure of a distance teaching institution invariably determines (and in effect gets reflected in) its organisation and management including its sub-systems. In other words, the structure is determined by the type of the DE institution. The institution may be an independent and autonomous one, which is usually known as ‘single mode’ type, or a dual-mode type, in which conventional (face-to-face) education and distance education co-exist. In the latter case, the same teachers might teach both on-campus students and also the distance learners, or there could be separate teachers for each mode). Whatever the type, within an institution, the organisation may follow either a top-down approach or a collaborative-democratic (bottom-up) approach. The functional sub-systems may be independently handled and coordinated through a Management Information System (MIS) or centrally controlled and supervised. The kind of programme evaluation exercises and the utilisation of the results of such exercises within the system and its sub-systems will also depend on the structural organisation of the institution concerned.

In the following three sub-sections, we shall focus on different aspects of structure and management of a distance teaching institution in general. This would provide a strong base for further discussion on management of various sub-systems, and for analysis of some management issues presented in the subsequent sections of this unit.

### 13.2.1 Institutional Management: Main Functions

*Institution building* is at core of institutional management. An organisation tries to develop internally so that it can acquire the capacity to function progressively and leave an impact on all those concerned in the society. In other words, while it works towards showing scholarship and innovation in its operation it plays a proactive role

towards bringing about and managing change (for the greater benefit of the society and the community). *Effectiveness* (achievement of predetermined objectives) and *efficiency* (i.e. achievement of the objectives at a lower cost) are important principles of a well managed institution, which endeavours to establish its own culture and ethos.

The institution should provide required flexibility and support so that everyone feels proud to be associated with it. It should provide for challenges for each one to face, and progress thereby. Also, it should bring in changes and innovations, and manage them well to pave way for the progress of the society. For this, the institution should first evolve a policy and delegate powers, responsibilities and functions to each member of the organisation. The responsibilities should be fixed, and provisions be made to facilitate the individual's or group's work. The work structure or working needs to be more participative, with a common understanding among all.

The organisation has its missions, aims, objectives and the plan of action to achieve the set objectives. The policies should be flexible enough to change in the light of innovations and external changes or environment. The organisation must, therefore, *exercise the powers and carryout the responsibilities* envisaged in the approved plan and as per institutional missions. This requires a direction with a clear and focused organisational policy. Necessary arrangements (in terms of work allocation, methods and procedures, resources, training, and the like) need to be made by the organisation to facilitate the work of its members. The operative responsibility and the decision-making thereof rest with the top management and hence, usually, a top-down model is followed. However, the organisation functions better and achieves more if there is adequate provision for a bottom-up approach to decision-making and implementation. The latter would develop a participative culture, greater cooperation and thus a strong institutional commitment with collective responsibility.

There should be proper and objective *communication* within the organisation -- the lack of it largely affects smooth functioning of the organisation and brings in lethargy, chaos and skepticism. A well developed MIS (management information system) gears the organization towards more effective and efficient functioning.

The organisation, its functioning, personnel and resources need to be *evaluated* from time to time. The evaluative function is carried out by a variety of units, which are delegated with appropriate powers by the institutional head or authority. The evaluation variables include the institution itself (its policy and missions), the personnel and their performance, the processes, the utilisation of resources, and the like. Routine monitoring and programme evaluation are strong and important mechanisms which provide feedback to the organisation for constant updating, and maintaining high level of effectiveness and efficiency. Evaluation needs to be collaborative and democratic, through involvement of the personnel concerned from within the organization, so that there is greater possibility of utilisation of evaluation results by the institution as a whole or the sub-systems within it. Both the strengths and the weaknesses of the institution need to be identified, and the managerial skills reshaped so as to effectively implement decisions for organisational effectiveness.

### **13.2.2 Institutional Decision-Making Process**

The decision-making process within the institution determines the functioning of the organisation, as also the need for and mechanisms of programme evaluation. There are certain authorities of the institution which function and provide overall policy guidance to it within the framework of Acts and Statutes, and rules and regulations of the institution

concerned. But, for the day-to-day functioning, the institution may adopt a top-down approach or bottom-up approach, or even a participatory approach to decision-making through quality circles, within the framework of total quality management (TQM). TQM implies that every functionary and every activity is directed towards a systematic achievement of organisational goals and progress. A well established management information system facilitates communication and effective decision-making. MIS in ODEIs is much more demanding than that of the conventional institutions of education.

### **13.2.3 Management Information System (MIS)**

The MIS includes collection, processing and retrieving of information at continuous intervals for the effective management. To be able to make better and informed decisions, information or data regarding the inputs, processes and outputs of the system, as also constraints, if any, is very essential. A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis based on an effective MIS becomes more effective for constantly helping the organisation move forward, and also for the effective management of any change. The MIS, as different from a mere information system, must equip the decision-maker to take informed decisions regarding inputs, processes and outputs. The MIS, therefore, should be continuous, timely, accurate and relevant.

In a distance teaching institution (DTI) there must be a nodal unit, which collects, processes and retrieves information concerning all aspects of the institution and its operational (and other) networks. The unit needs to constantly dialogue with users or initiator-experts to collate and make information available to the appropriate authorities and others concerned to enable them to take right decisions. However, control, as a factor, affects the style of functioning of the middle and upper level MIS operators who want to control, rather than disseminate information. Unless informed decisions are made, the functionaries involved in the sub-systems may become skeptical, and may not provide information to the nodal unit. This calls for proper management of MIS. It is necessary to programme the collected information and provide it (except such information which may have been decided to be kept confidential) freely through the local area network (LAN) of computers or in appropriate form suitable to the requirement.

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## **13.3 MANAGEMENT ISSUES**

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Managing a DTI or ODEI and its sub-systems involves consideration of a host of variables constantly affecting the progress of the institution and the quality of management itself. In the following sub-sections we shall focus on some of the important variables which need to be constantly toned for the institution to function effectively.

### **13.3.1 Quality Control and Service Management**

Quality, though an elusive concept, needs to be defined, its indicators developed, processes outlined, and actions taken by all those involved at the input, process and output stages of any activity being controlled. Quality, defined by (Guri, 1987), refers to a product's fitness for purpose. Holt (1990) defined quality, in industrial terms, as error-free, totally reliable products or services; and customers measure the quality of a product by how well it fulfills their expectations at a given time. These definitions may not be sufficient to explain the processes or activities which are crucial to good quality learning. As Avabrath (2013) points out: 'Quality' in ODL is most often judged in terms of the learning materials, whatever the medium. These are the pivot on which

the whole learning enterprise turns. However, a course is more than just the materials; it is also the totality of experience of the learner. Since the purpose of an ODL provider is to create the conditions for learning, its success depends on how well the course production, delivery and student systems function, and how well they all integrate in operational terms. Excellent materials are useless if not delivered to students; poor materials have limited value even if delivered on time. Underpinning the creation of products and provision of services are processes and operations which are not very visible unless they fail. They get less attention than they deserve and are a key area for attention in improving quality in ODL. So, what is important is quality control, which according to Guri (1987) is “primarily an action which adjusts operations to predetermined standards”. Quality control and quality assessment mechanisms do contribute to organisational effectiveness and performance; but this needs to be located from the points of view of all the stake-holders, the authorities, the faculty and other staff, the students, the parents, the government and other funding agencies, the employers and the public at large. Performance indicators for all the sub-systems may be developed and adhered to by all those concerned, so that fulfillment of individual responsibility at a given level of performance may be achieved. However, one may realise that these indicators may not fully explain the issue of quality. Some qualitative aspects need to be handled through continuing professional development and experiential learning by the functionaries; and in fact the level of quality depends on the level of professionalism and of the human resources engaged in distance teaching. The major considerations are related to the quality of learning materials, and the support services offered to the learners — be it information, material despatch, counselling, examination, and so on. Simple marketing approach may not fully help to cope up with the situation, as it needs full commitment of the providers/functionaries in reaching out to their clients.

### **13.3.2 Accountability**

Once tasks are allocated and responsibility is fixed, it becomes necessary to monitor the process continuously. Each and every functionary needs to be held accountable to the tasks undertaken. ODE system, with constant communication and the commitment to contribute (rather than distract), develops more faith in the system and its functioning. Unlike face-to-face teaching where the teacher(s) is/are solely responsible for teaching, distance education involves team work. Everyone’s contribution is crucial to the success of the system and its processes. With proper balance between autonomy — administrative, academic, and financial – and accountability, one may expect to reap more benefits from the functioning of the system.

### **13.3.3 Management of Technological Innovations**

Open and Distance Education, of late, has tended to largely depend on technologies of delivery and interaction. Technologies may be involved in the development of materials, but largely communication and information technologies like audio, video, radio, television, teleconferencing, internet, web-conferencing and the like are used for delivery of learning (which is now called ‘distributed learning’). Technologies like computers (and Internet) are involved in the operations of the system, information storage and dissemination, and development of learning packages. Maintenance of such systems is difficult, and crucial as well for the operational success of the open and distance education sub-systems. Further, technologies like teleconferencing and interactive radio counselling may involve large networks which need to be maintained and managed. Therefore, choice of appropriate technologies and their compatibility with future technological developments are crucial in the management of technological innovations. Ultimately, the measure of success lies in determining whether technology

is helping in doing things more effectively and in facilitating effective and active learning by learners.

### 13.3.4 Marketing

DTIs or ODEIs are constantly engaged in marketing their products, services and brand. Distance education, especially in the professional areas and for continuing professional development, has become more competitive in ensuring quality, appropriateness and flexibility in programme offerings for the prospective clients. Quality assurance and accreditation have become issues to be dealt with properly.

However, in any case, two things are very crucial:

- i) open and distance education needs to be marketed internationally (if one is convinced of its quality in-house); and
- ii) quality of service needs to be greatly increased to be professional in one's approach.

### 13.3.5 Networking

Networks, networking and collaboration have been crucial to effective functioning of DTIs or ODEIs. Networking may involve networking within the organisation, technological networking (including virtual networking) all over the world, human networking for development or rich (and appropriate) self-learning packages plus their effective delivery to learners, and resource networking and collaboration to increase effectiveness and to reduce cost. Such networks may lead to credit transfers amongst collaborating institutions, joint degree programmes, and joint development and sharing of teaching-learning resources. The networks, networking and the processes involved in these need to be managed carefully as this is a very sensitive area to be handled with utmost caution.

#### Check Your Progress

- Note:**
- a) Write your answer in the space given below.
  - b) Compare your answer with the one given at the end of this unit under "Answers to 'Check Your Progress' Questions".

- 1) Write down your views on improving and proper management of marketing services in distance education.

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## 13.4 MANAGEMENT OF ODE SYSTEMS: DIFFERENT MODELS

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Structure of DTIs or ODEIs has been described in different ways. Let us look at some models that have relevance to the management structure or systems of ODE.

### 13.4.1 Models/Systems of ODE

Let us first examine here the three kinds of management models of distance education — institution-centred, person-centred, and society-based models described by Rumble (1986).

- In the *institution-centred model*, there is predominance of systematic models of education, i.e. every attempt is made to make the system more efficient and cost-effective. All the functionaries are assigned with key functions such as accountability and personal responsibility; and the academics work as consultants for the organisation to develop course materials (Examples: UKOU; IGNOU).
- In the *person-centred model*, the learner is the key person to be served, and the distance education programmes are more individualised and negotiable. The tutors/counsellors personally negotiate with and follow-up the learning of individual students (e.g. Athabasca Open University, Canada).
- In the case of *society-based models*, distance education materials are used in a community situation where the teacher involves all the members of the community to meet their needs through these materials. The teacher acts as a facilitator to help identify the learning goals, contents of learning, learning materials and evaluation mechanisms for the group (e.g. Agricultural Extension Programmes; Paulo Freire's Pedagogy of the oppressed).

Freeman (1997) has identified *six types of open learning systems* which are based on two sets of variables: i) whether the institution is campus-based, or organisation-based, or individual-based, and ii) whether it is paced, or self-paced. The six types of open learning systems formed by combination of one variable from each group (three multiplied by two) are as follows:

- The '*paced campus-based*' open learning system meets all the requirements of a formal system, viz. semester, lectures, time-table, etc. but at the same time provides for individual responsibility in learning.
- In the '*paced organisation-based*' system, the need for training or continuing education arises when the work at hand so demands, rather than when the employees need it. The in-company flexible learning schemes represent this type of open learning.
- The open universities represent the '*paced individual-based*' system of open learning, as they provide for all teaching-learning materials and guidance, paced at organisation's preparedness, rather than when learners need them. There are deadlines for despatch of materials, submission of assignments, and conduct of examinations. The learners have to obediently follow the schedule if they wish to complete the academic programme within that semester/term/duration.
- There is a lot of tutor-learner contact and interaction in the '*self-paced campus-based*' system. Both tutoring and assessment are based on the needs of the individual learners. There is possibility of interaction amongst learners too.

- In the '*self-paced organisation-based*' system the tutor's place is taken by the line manager, and learning takes place among learners while they are at work, rather than in the classroom.
- The old correspondence courses represent best the example of '*self-paced individual-based*' open learning system, provided the institution allowed sufficient flexibility to learners to proceed at their own pace. However, this flexibility poses organisational difficulties, since the learners are at different points in the learning continuum and there is rarely tutor-learner contact.

Irrespective of the type of the systems discussed above, a DTI or an ODEI usually functions within an organisational network of headquarters, regional centres, and study centres (or programme centres, work centres, etc.). While the programme development activities are largely taken care of by the headquarters, the programme implementation activities are the responsibility of the regional and study centres with centralised coordination by certain Division/Unit at the Headquarters. Within the headquarters, there are Schools or Departments of Studies which are involved in programme development activities. Support divisions manage admissions, material printing and distribution, regional services, evaluation, media production, staff training, research, evaluation and such other functions involved in programme implementation. The units such as the general administration and finance support all the above activities. While material design and development is taken care of by the teachers/academic staff the other related activities are taken care of by the other staff in the units concerned. This requires a system of well-organised and coordinated interaction and monitoring of the various units. Only then the organisation can function effectively, and provide maximum satisfaction to its learners. You may notice here that the institutional structure does have influence on its management.

In open learning system, mostly, we come across two models of ODE Institutions, viz. Single Mode DE institutions and Dual Mode DE institutions. Of course, of late, the third model of DE institutions has emerged through introduction of Consortium model of DE. Each of these types are explained below in brief.

The *single mode* reflects autonomous DE institutions like the open university or the open school. Such institutions focus on organisation of distance teaching activities for distant learners only. These institutions do not have on-campus regular students.

The *dual mode* DE institution connotes that the institution organises both face-to-face regular programmes as well as DE programmes. The traditional universities in India organise campus-based courses as well as correspondence courses. Of course, the correspondence courses are organised by the Institutes of Correspondence Courses (ICCs), the pre-cursors of Directorates of Distance Education (DDEs) of these universities. Unlike single mode open universities DE programmes of traditional universities remain under the control of face-to-face system in matters of curriculum development and examination.

The *consortium model* is an emerging concept. It aims at optimum level of sharing of resources of different kinds of institutions organising DE programmes under one consortium. The erstwhile Distance Education Council of IGNOU, for example, facilitated formation and functioning of consortium of Open Universities at India level. The Commonwealth of Learning (COL) is an example of similar thing at the level of commonwealth countries. Now, there exist many consortia at country, regional and continent levels.

### Check Your Progress

**Note:** a) Write you answer in the space given below.

b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

2) List out the following.

a) Three kinds of management models of distance education described by Rumble.

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b) What are the six types of open learning systems identified by Freedman?

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### 13.4.2 Comparison of Single Mode and Dual Mode Institutions

Single mode and dual mode institutions can be compared by considering different parameters like the nature of institutions, the concept of open learning, entry policies, nature of courses, objectives of programmes, course structure/materials, methods and media, duration, evaluation procedure, student support system and outcome of the programmes.

**i) Nature of Institutions:** The single mode institutions like open universities/open schools are autonomous with the sole purpose of organising DE programmes at different levels of education. These institutions award degrees, diplomas (Open Universities) and certificates (Open Schools) to DE students. The dual mode system’s main focus is organising face-to-face regular course activities. They have correspondence education programmes as a secondary channel of instruction for distance learners. The campus-based programmes dictate terms to correspondence education programmes. Degrees/Diplomas/Certificates are awarded by the traditional universities to the students of both the streams. Unlike open universities, the Institutes of correspondence courses or Directorates of distance education are not autonomous ones. Their programmes are controlled by the traditional universities.

**ii) Concept of Open Learning:** The single mode DE institutions aim at creating an open learning system. In other words, openness in education is the motto of DE institutions like IGNOU, State Open Universities and the National Open School (NOS) / National Institute of Open Schooling (NIOS). Openness is seen in the autonomy of learner in choosing specific courses out of various options, planning

their own learning, activities, selection of learning projects, choosing the place and the time to learn, freedom to consult counsellors and guides, learning through self-instructional materials, engaging in self-assessment, deciding the pace of completion of learning activity or a course or programme, etc.

The dual model institutions, on the contrary, work as subservient to traditional university programmes. Unlike open universities, openness in these institutions and their courses is limited. The autonomy is confined to planning their own learning activities through correspondence texts and other materials. You will find detailed discussion on these dimensions in the following pages.

- iii) **Entry Policies:** The single mode institutions believe in open entrance policies. Their jurisdiction is wider. The criteria for admission for different programmes are mainly experience-based. They do not insist much on past educational qualifications, age, domicile, etc. After a specific age the adult candidates with experience are considered eligible for different courses. Of course, eligibility criteria may vary from programme to programme, so the range of openness also varies accordingly.

The dual mode institutions do aim at flexible entrance policies. But, unlike single mode institutions which have jurisdiction over specific state (state open university) or whole country (in the case of IGNOU) the correspondence education programmes may have limited jurisdiction in conformity with that of the parent university. Rarely, some universities extend their jurisdiction regarding offer of distance education programmes.

The eligibility norms for admission to all the correspondence or distance education courses in a large number of universities have been similar to those for admission to regular courses. In some cases they lower the requirement of minimum percentage of marks for admission to certain courses, e.g. Delhi University, Annamalai University, Himachal Pradesh University. In a few cases, there have been provisions of open entry like Andhra University, Madurai Kamraj University, and Annamalai University. For a few courses/programmes, these universities encourage a kind of openness on the basis of age of the students, for example, any one above 21 years can take up any programme of study.

- iv) **Nature of Courses:** The open universities take their decisions to introduce various kinds of programmes leading to degree, diploma and certificates. Their major emphasis is on the introduction of programmes of innovative, need-based, in-service, continuing education, capacity building, skill development nature. Of course, some of the programmes of open universities are of traditional type as well. Their innovations pertain to credit system, multi-entry system, multiple number of courses under one programme, some courses falling under more than one programme and the learners' freedom to choose any course to earn the number of credits required to complete a programme. They offer a large number of interdisciplinary programmes as well as discipline-oriented programmes. For instance, IGNOU, BRAOU, YCMOU, Kota Open University and others offer professional, technical, vocational and general programmes. It is the autonomy of the open university (single mode) system that enabled introduction of such programmes.

In the case of dual mode institutions it has been observed that a large number of general education programmes are offered through correspondence courses. These

institutions allow little option to students to choose optional courses under any programme. Hence, they are as rigid as regular courses. Credit systems are hardly adopted in these institutions.

- v) **Objectives of Programmes:** The single mode DE institutions aim at extending educational opportunities to all kinds of learners who are motivated and capable enough to get education through self-learning. Ideally they focus on the needs and requirements of learners to be linked with the objectives of courses. The subject experts and authorities have final say on formulation of course objectives. In dual mode DE system the subject experts and authorities do not have more say in deciding the objectives of the programmes/courses. In the single mode institutions it is possible to launch courses in areas which have not been touched by the dual mode institutions. Courses and programmes on community development, skill development for agricultural workers, farmers, women, people with disabilities, tannery workers, construction workers, etc. have already been launched (e.g. YCMOU, IGNOU). The extension dimension of the university education gets more attention in the single mode open university system. This is not the case with dual mode institutions.
- vi) **Course Structure/Materials:** The single mode institution (open university system) focus on learner-based courses. The modular approach to programme and course structure is useful to develop need-based courses. The modules (Blocks, Courses, etc.) can be easily assembled in many different combinations, as per the requirements of courses or target groups. The learner must be given opportunities to make use of a wide range of materials drawn from various sources. Individual learner can select different modules suiting to his/her need. More emphasis is given on experience-based and practical-based programmes in place of factual and academic programmes. The Indian experiences reveal that the open universities have encouraged credit-based courses tailored to the needs of DE learners, particularly those working in various fields. Counselling provision is made available at study centres for selection of courses.

The dual mode programmes are just like repetition of regular courses, but through distance mode. They are mostly academic and knowledge-oriented. Learners have limited opportunity to link experience with course contents.

- vii) **Methods and Media:** The open university system gives importance to multiple methods and media. Alternative or supplementary multi-media packages including print-based and electronic media-based inputs form the basis of instructional system. Advanced technology-based facilities are also available to learners. The learner enjoys autonomy to select appropriate methods and media according to his needs, requirements, facilities and constraints. In India, the open universities make serious efforts to incorporate self-learning packages with print media, electronic media and occasional opportunities for tutor-student interaction through face-to-face or teleconferencing sessions. Some of the IGNOU programmes (e.g. Computer Programmes) are also available on-line.

In the case of correspondence education programmes major emphasis is on print-based materials which may not follow self-instructional model. The scope to use multi-media facilities in correspondence courses, unlike in open university courses/programmes, is limited. Of course, all the correspondence course institutions insist on contact programmes. They are compulsory for professional and skill-based

programmes, whereas attendance is optional for general courses in correspondence courses.

- viii) Duration of Courses:** In the case of single mode institutions there is provision for completing the programmes on longer duration. The durations to complete a one year programme may vary from 2 semesters (one year) to 8 semesters (4 years) period. IGNOU's B.A., B.Sc., and B.Com programmes, for example, can be completed in a minimum duration of 3 years or in a maximum of 6 years (which was even 8 years earlier). Unlike open universities the dual mode system adopts course duration almost similar to the pattern of regular programmes offered by the parent university; the flexibility in course duration of DE depends on the regular course system.
- ix) Evaluation Procedures:** Continuous evaluation is usually integrated with the learning process of DE programmes. The open university system incorporates facilities for learners' self-evaluation through instructional package, periodical evaluation of learners progress through assignments, peer evaluation in the case of group learning and course-end evaluation. In the case of credit-based courses, the learner has more freedom to appear in the examinations at his own pace, depending on his preparedness. The learner can complete the programme/course credit-wise.

The dual mode DE system adopts assignment system for assessing learners' progress. There is less scope for learner's self-evaluation. The course-end evaluation is determined by the regular course system. Most of the universities offering correspondence or distance education courses in India adopt the same examination schedule and question papers for both campus-based and DE streams.

- x) Student Support Services:** This is an important feature of single mode DE system. The open universities have in-built organisational structure for organising students support services. The Regional Services Division or student support unit looks after such activities through Regional Centres and Study Centres. Regular counselling programmes, personal contact programmes, extended contact programmes, radio broadcast and TV telecast facilities, teleconferencing facilities, library studies and practicals form the major component of student support services activities. Such facilities are limited in the case of dual mode institutions. The study centres have library facilities and limited facilities for guidance. Radio and TV facilities provided in the study centres are limited in universities like Delhi and Kashmir Universities.

From the above discussion you would have clearly understood the similarities and differences between the single mode and dual mode DE systems. As a whole, the single mode DE institutions have more autonomy to move in the direction of open learning. They have systematic organisational structure to carry out the functions of a DE system independently. On the contrary, dual mode institutions depend heavily on traditional universities/colleges for all their activities. They make use of physical and manpower resources of its parent university and the affiliating colleges. These institutions, thus, have limited autonomy to carry out their functions, since they are controlled by traditional university system. However, there is a lot of scope for strengthening the base of DE in dual mode institutions too, if facilities of both the streams are shared to an optimum level. For that, some structural changes to free them from the control of the conventional universities are necessary.

**Check Your Progress**

- Note:** a) Write you answer in the space given below.  
 b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.  
 3) In what respect courses offered, methods and media of single mode organisation of DE are more prone to openness in comparison to dual mode organisations?

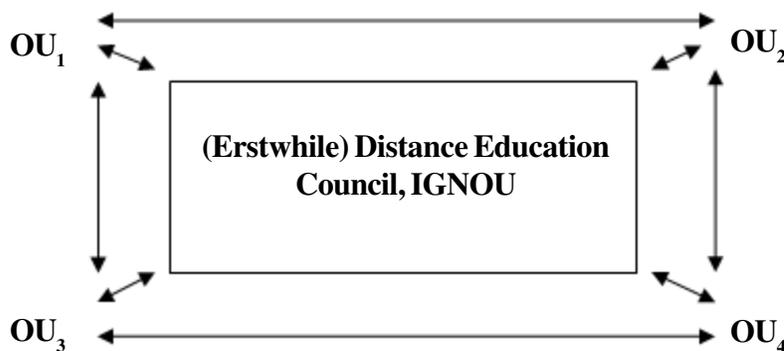
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**13.4.3 Consortium Model of Distance Education Institutions**

This is an emerging model. In this model different DE institutions interact with each other and share common pool of resources. It helps avoid duplication of programmes and wastage of resources. Uniqueness and specialisation of institutions can be identified. The major contributions of one institution can be shared by other institutions. It is possible to make optimum use of the existing facilities available at different DE institutions.

In the Indian context, the erstwhile Distance Education Council (DEC), i.e. the precursor of present Distance Education Bureau under UGC, played a major role in bringing DE institutions of different types together, since one of the activities of DEC was, “Identification of a common pool of programmes and courses for sharing by DE institutions”.

You can understand consortium model from the following diagram:



**Fig. 13.1: A Consortium of OUs**

In this model you will recognise that the then DEC coordinated activities of different OUs. In other words, different OUs used to interact with each other through DEC. One of the ways of interaction is making use of study materials of one OU by another OU for similar programmes. For example, state open universities like Kota Open University, YCMOU are making use of IGNOU materials for Management Programmes. Different OUs are making use of teleconferencing facilities of IGNOU very frequently. The Open Networking (OPENET) has been installed by DEC-IGNOU for two-way audio and one-way video teleconferencing with all the open

universities in the country. Besides sharing of resources, the OUs used to share the credits too. For example, a candidate who has registered for B.A. programme of one university (e.g. OU<sub>1</sub>) can choose a few credits worth courses from another open university (e.g. OU<sub>2</sub>) as a part of the degree programme. Sharing of credits was made possible through appropriate co-ordination of DEC. This provided opportunities to DE learners to pick up courses of their choices out of a pool of hundreds of varieties of courses available in different OUs. Advanced communication technologies can facilitate networking of institutions which can be monitored by DEC. This approach, however, suffers from limitations of lack of voluntary co-operation and understanding among different DE institutions. Nevertheless, this model will help achieve the aims of open learning system from a common platform of DE institutions in future paving way for lifelong education and learning society.

**Check Your Progress**

- Note:** a) Write you answer in the space given below.  
b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.
- 4) What are the advantages of a consortium model over single mode organizations?

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### 13.5 ORGANISATIONAL STRUCTURE OF ODE

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In the Indian context, as stated in the Unit-3 of Block-1, there are 210 approved traditional universities offering correspondence courses / DE programmes. These universities have major functions of teaching through regular campus-based studies. Simultaneously they organise DE / Correspondence education programmes through their Institutes of Correspondence Courses / Directorates of Distance Education. These institutions offer courses in both conventional face-to-face mode and distance education mode and thus are known as dual mode of institutions. The 15 Open Universities offer programmes/courses through single mode, i.e. distance mode only. Therefore, the Open Universities and other institutions offering courses through distance mode only are called single mode institutes.

In the following sub-sections you will know about the organisational structures of single mode National Open University, one state open university and a dual mode university in India.

#### 13.5.1 Organisational Structure of IGNOU

IGNOU is a national open university. It is an autonomous open and distance education university having jurisdiction all over the country. Of course, it offers programmes in other countries as well. You can see its organisational structure in Fig.13.2.

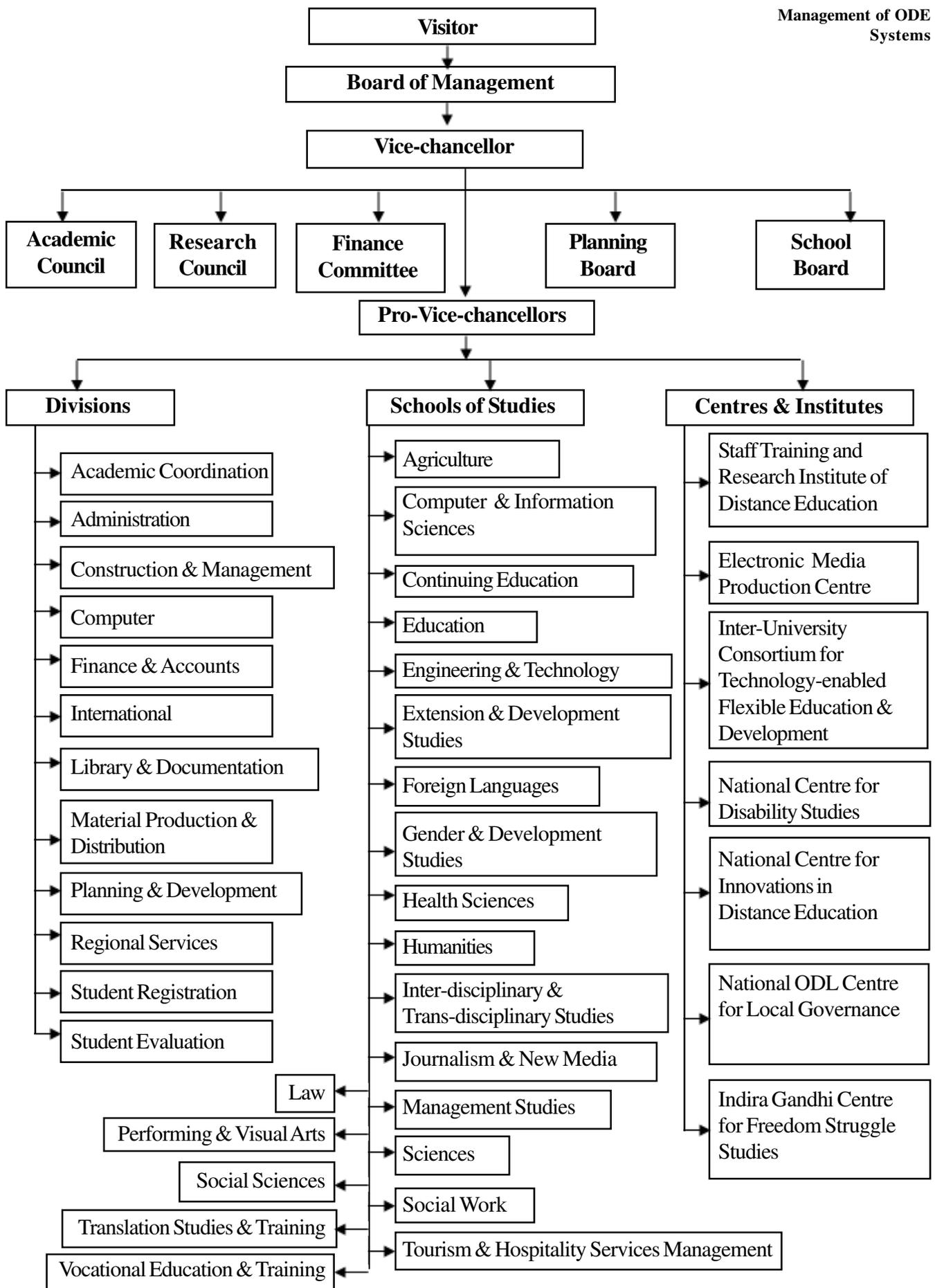


Figure 13.2: Organisational Structure of IGNOU

From the flow chart given in Figure 13.2 you can notice that the topmost authority of IGNOU is the Visitor followed by the Board of Management and the Vice-chancellor. The major policy decision-making body thus is its Board of Management. Other decision making bodies are Academic Council, Planning Board and Finance Committee. The chief executive head is the Vice-Chancellor assisted by Pro-Vice-Chancellors, Registrars and Directors of different schools of studies and divisions, among other officers. The Planning Board, Academic Council and Finance Committee are linked with Management of DE activities of IGNOU. Here, it may be noted that the erstwhile DEC, under IGNOU, which was performing the functions of promotion, co-ordination and maintenance of standards of different DE institutions of higher education and the open university system in the country, now stands taken out of it, and hence does not find a place in the above figure.

There are three kinds of units, viz., School of Studies, Divisions and Institutes/Centres. The School of Studies look after academic matters where as divisions look after administrative and student support services activities, and Institutes/Centres perform certain specific academic activities. There are 21 Schools of Studies and 12 Divisions and 7 Institutes/Centres. Each School, Institute or Centre is headed by a Director, while heads of some Division are called Registrars and of others the Directors.

The IGNOU operates as a three-tier system, i.e. its headquarters located at Delhi, 67 Regional Centres located in different regions of the country and about 3000 study centres, work centres, etc., spread all over the country under the Regional Centres.

### 13.5.2 Organisational Structure of State Open Universities

There is a major functional difference between the National Open University and the State Open Universities. While the President of India is the Visitor of IGNOU (the national open university), the Governor of the concerned state is the Chancellor of a State Open University. For an example, you can have a look at Figure 13.3, which presents the flow chart of the Organisational Structure of Kota Open University, which is a state open university.

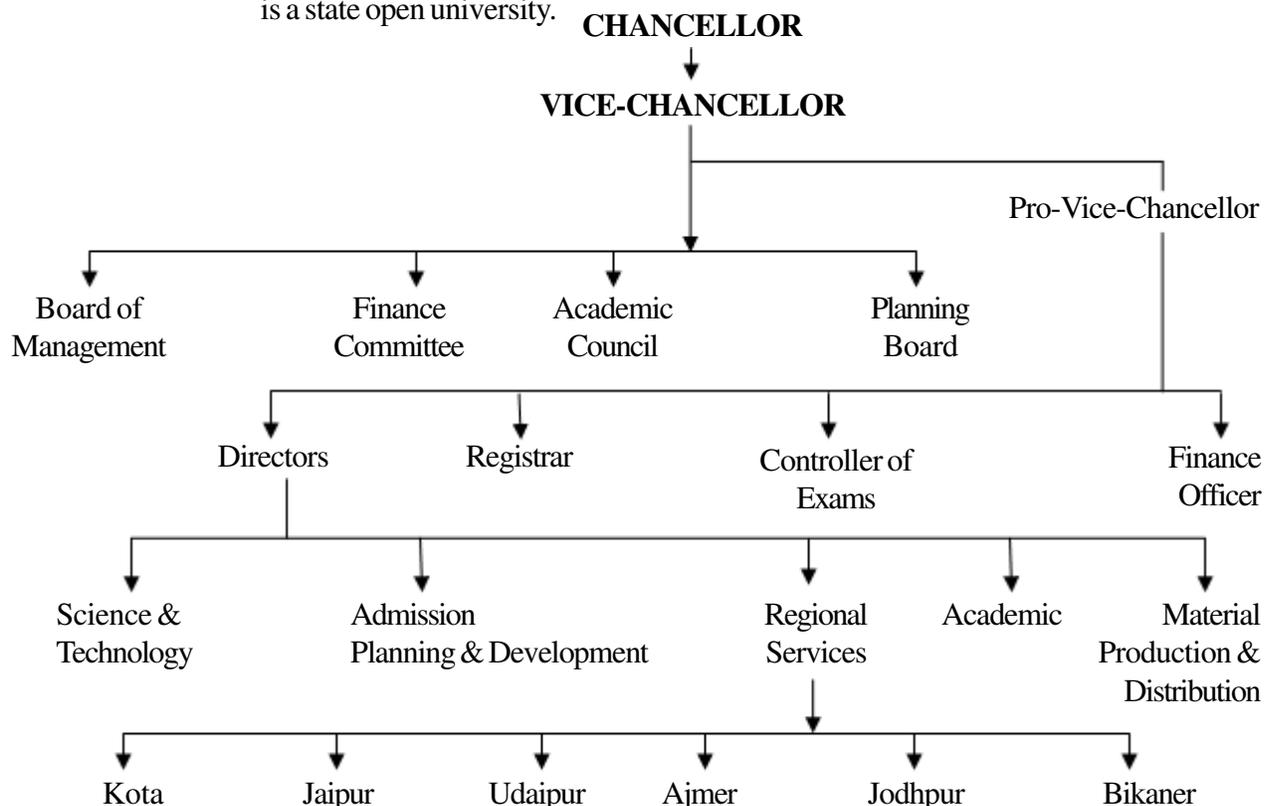
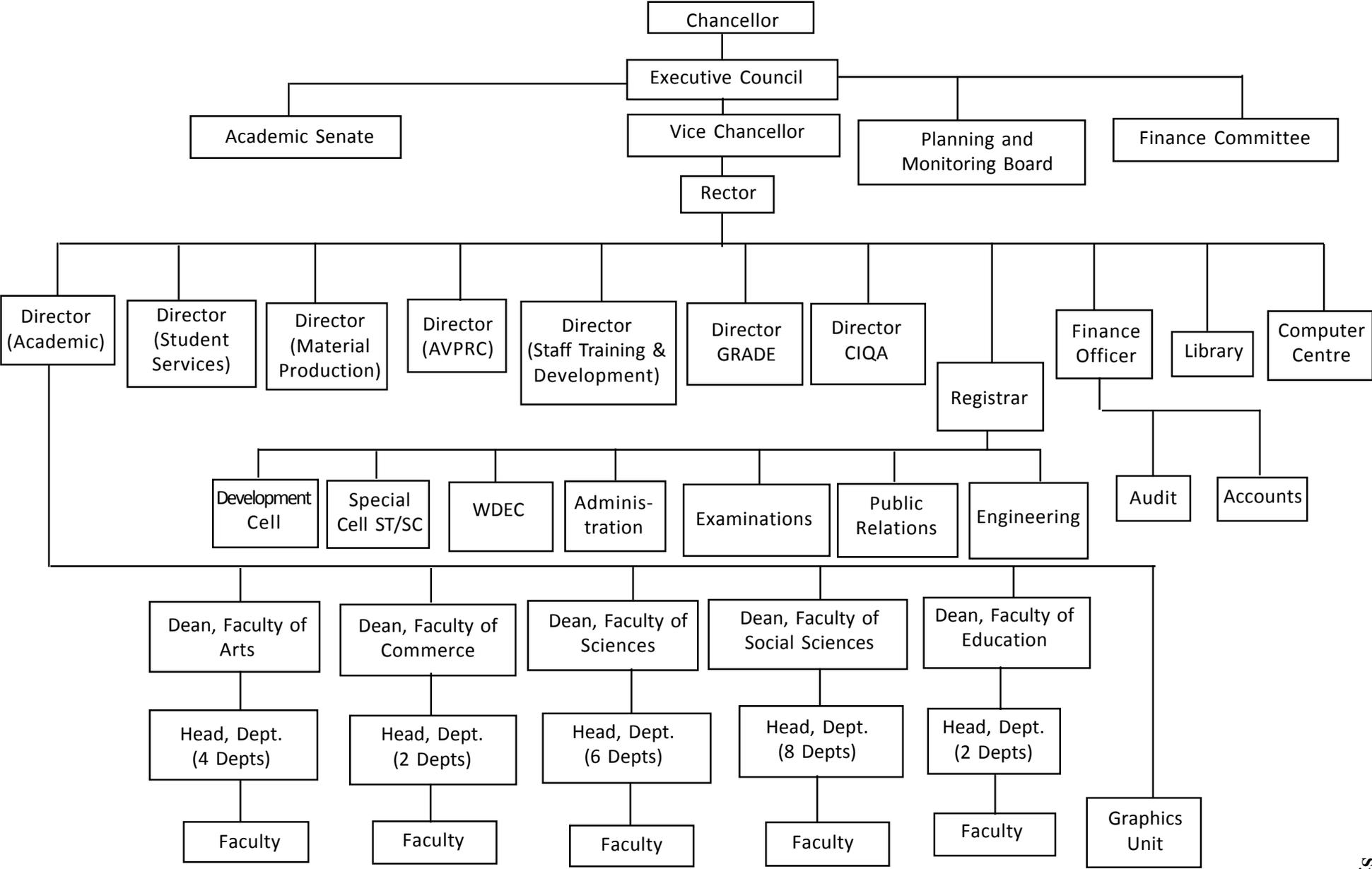


Figure 13.3 : Organisational Structure of Kota Open University

Source: Sahoo, P. K. (1993). Higher Education at a Distance, Sanchar, New Delhi.

# ORGANISATIONAL STRUCTURE OF THE UNIVERSITY



**Figure 13.4: Organisational Structure of Dr. B. R. Ambedkar Open University, Andhra Pradesh**

Source: <http://www.braou.ac.in/managementdescriptionpages.php?id=8>.

The top most authority is vested with the Chancellor. Other authorities are Vice-Chancellor and Pro-Vice-Chancellor. The major decision making bodies are Board of Management and Academic Council. There are other Boards and Committees linked with above decision making bodies. There are Directors looking after Academic, Science & Technology, Regional Services and Admission, Planning & Development and Material Production & Distribution activities respectively. The Academic division has different teaching departments, students unit and research unit. There are other officers having independent charges like Registrar, Controller of Examination, Finance Officer and Librarian. Each division / unit is sub-divided into further sub-divisions / sub-units.

The university follows the IGNOU model for decentralising its activities in three-tier system, i.e., Headquarters level (at Kota), Regional Centres level and Study Centres level at different places

At present KOU has seven Regional Centres and 82 Study Centres (<https://www.vmou.ac.in/rc/1>).

In some universities there is no Pro-vice-chancellor, instead they have Rector. For example, you can look at flow chart in Figure 13.4 displaying the Organisational Structure of Dr. B. R. Ambedkar Open University, Andhra Pradesh, which is a state open university the pioneer of open university system in India.

The supreme authority is vested with the Chancellor. Other authorities are Vice-Chancellor and Rector assisted by Registrar, Finance Officer, Directors, Deans and Heads of Departments, among others. The major decision making bodies are Executive Council, Academic Senate, Planning and Monitoring Board, and Finance Committee.

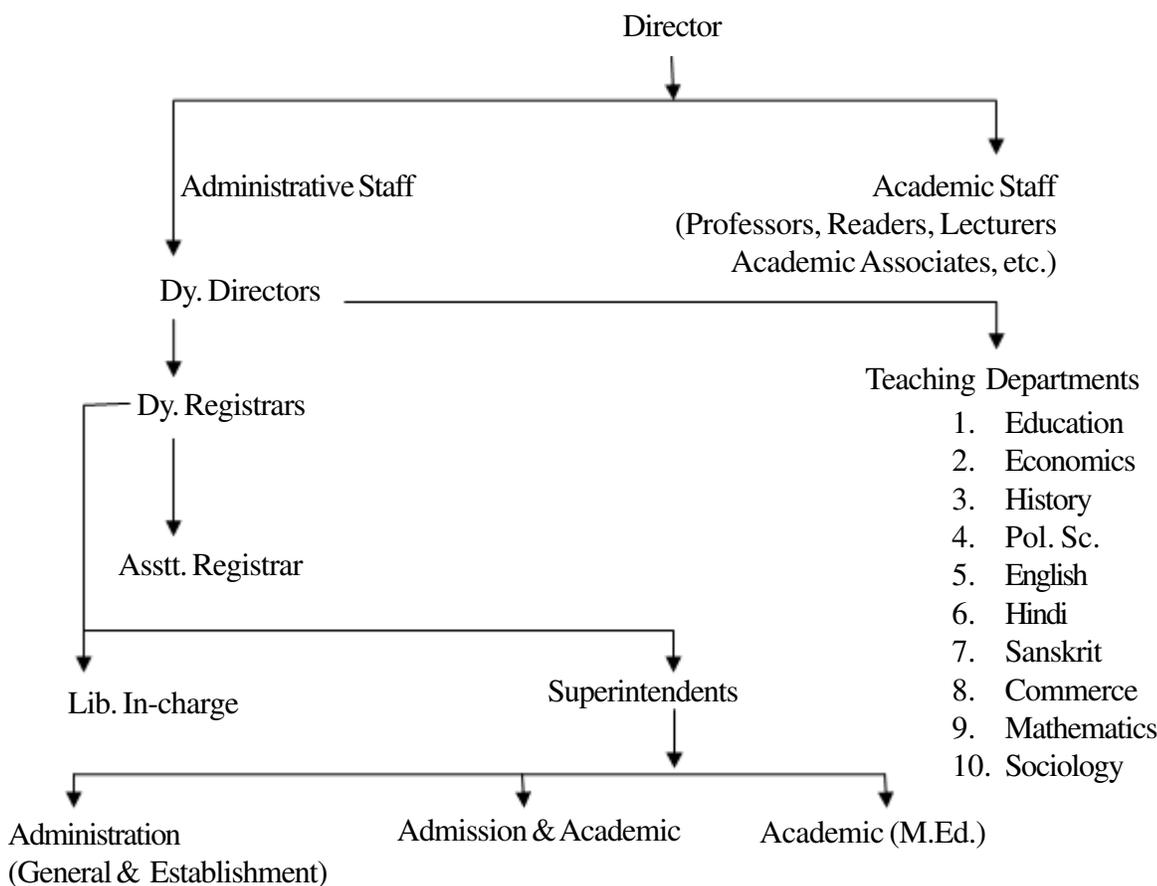
Unlike IGNOU and KOU, BRAOU does not have Regional Centres, and instead have only study centres.

### **13.5.3 Organisational Structure of the Institutes of Correspondence Courses / Directorates of Distance Education**

Unlike the Open University the DE programmes of traditional universities are offered through a Directorate or Institute. The Institute / Directorate may or may not hold the status of a University teaching department. The Directorate is usually headed by a Director. The Directorate's major functions are development and production of course materials, admission, delivery system, students support services, including assignment evaluation and personal contact programmes. The courses are instituted by the Academic Council of the parent university. The curriculum is developed by the Boards of Studies of respective subject/discipline areas which are headed by the university teaching department head. Mostly, the members of Boards of Studies belong to the university teaching departments. Besides curriculum development, the university also controls examinations of correspondence courses. The Directorate's role is mostly of operational type. Major policy decisions are taken by the statutory bodies of the parent university like Academic Council, Executive Council, Faculty Council, Boards of Studies, etc. Even though the Director is an ex-officio member of the statutory bodies of the university like Academic Council and Executive Council, other faculty members of correspondence courses do not get representation in such bodies. Accordingly, the organisational structure of Directorate of Correspondence Courses is built in the context of operational part of the DE programmes. Given below is the

flow chart showing the organisational structure of Directorate of Correspondence Courses of H. P. University, Shimla, which is one of the oldest Institutions of Correspondence Courses in the Country (See Fig.13.5).

As per the statutory position of the university, the Director occupies the highest position of the Directorate of Correspondence Courses with dual responsibilities of administrative and academic activities. The Director is to be assisted by two Deputy Directors who can have both administrative and academic responsibilities. The administrative positions can be arranged in order of Deputy Registrar, Assistant Registrar, Superintendents, etc. Different administrative units keep direct liaison with the administrative block of the parent university with regard to Registration, Finance, Examination, etc. The administration takes care of admission, material production, delivery and organisation of student support services. The academic positions are organised with the positions of Professors, Readers and Lecturers under the authorities of Director. They look after material development, admission, organization of students support services activities. As stated above, the major responsibilities concerning academic decisions like creation of Programme/Course Development and Examinations are taken care of by the university level bodies like Academic Council, Boards of Studies and the Parent University Teaching Departments.



**Figure 13.5: Organisational Structure of Directorate of Correspondence Courses H. P. University, Shimla**

**Source:** Sahoo, P. K. (1993). *Higher Education at a Distance*, Sanchar, New Delhi.

Section 13.5 provided you a broad understanding of the organizational structure of a national open university, a state open university and a Directorate of correspondence courses/distance education. The intention was to give you a fair idea of organizational structure constituting a functional system of ODEs. Now let us look at the sub-systems.

**Check Your Progress**

- Note:** a) Write your answer in the space given below.  
b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

5) a) What is the main feature of organisation of open university?

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b) What is the difference between organisation of open university and traditional correspondence system?

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**13.6 SUB-SYSTEMS OF ODE INSTITUTIONS**

As we are aware the primary objective of the educational organizations or conventional education system is teaching (or ‘learning’ as emphasized in ODE systems). It involves managerial expertise in bringing resources, students, teachers, courses, materials together to achieve curriculum objectives. The conventional educational institutions operate mainly through two sub-systems – academic and administrative. The academic sub-system refers to those activities through which the organization achieves its purpose and provides legitimacy, overall direction and credibility to the institution. The administrative sub-system engages itself in providing the academic sub-system all necessary resources, coordinates its activities and mediates between the environment and the system. But the distance education managers have to perform many more functions. Kaye and Rumble (1981) present a comprehensive discussion of four sub-systems of a distance education system – regulatory sub-system, course sub-system, student sub-system and logistical sub-system. Close examination of functional divisions common within distance education systems suggest us that there are three main sets of activities or sub-systems – administrative, academic and industrial – related to running of an open and distance education enterprise. We will discuss them briefly.

**13.6.1 Administrative Sub-system**

The major administrative activities undertaken by an ODEI are the same as those of an industry or conventional system. Yet, because of the more complex designs of instructional system in distance education institution, coordination of various divisions and control of operational activities become crucial in planning and management at higher level.

The major administrative functions of distance education institution include: planning, decision making, management of resources, control and coordination, and evaluation. Specifically, these functions might include the following.

- Strategic planning including providing vision and leadership for the organisation's future directions
- Identifying the market opportunities
- Commissioning or conducting of needs assessment surveys
- Programme development including identification of potential programmes, developing and scheduling the programmes and marketing the programmes to the potential students
- Programme accreditation
- Responsibility for the entire financial aspect of the programme
- Programme review and assessment, and general oversight to ensure quality control
- Compliance with standards and principles of good practice
- Compliance with regulations, etc.

### **13.6.2 Academic Sub-system**

The academic sub-system of ODE system includes two major activities – teaching-learning material development and student support services.

Material development requires contribution of academics like course planners, subject experts, teachers and other academic groups like instructional designers, media producers, editors, graphic designers and other persons who help in the production of media. The output from material development activities are prototype course material which through the process of the sub-system of materials production are turned into finished products. In addition, this sub-system covers a broad range of activities such as the following.

- Ensuring that the courseware meets standards for accessibility
- Training, pedagogical consultation and technical support regarding any of the matters related to implementation of the programme
- Providing 24x7 help desk for faculty and student support
- Individual course maintenance, evaluation and follow-up including uploading of digital version of printed courses for online or web-based access
- Provision of instructional development and digital media production staff to support faculty in online course conceptualization, design and development, etc. as required.

Student support is totally separate from material development. The support activities are basically concerned with facilitating the students' learning activities and managing their progress.. Distance teaching and support provided to students comprise three distinct activities.

- i) Despatch of study materials, supplementary materials and information to learners such as work schedules, functioning of study centres and other facilities available for them.

- ii) Work on the responses to assignments constitutes the second major component of distance teaching. This activity is undertaken by local study centres. This includes activities related to getting the assignment responses evaluated by the tutors and processing of their grades, etc.
- iii) Appointment of staff for counselling/tutorial sessions, arranging tutorial or counselling sessions, providing adequate library, audio/video and other facilities at study centres.

### 13.6.3 Industrial Sub-system

Otto Peters was the first person who compared mass production of teaching materials and related operations of distance education with industrial production of goods. Distance education is, thus, an academic enterprise which displays all the features of an industrial enterprise.

The production process in ODEIs consists of two activities: producing pedagogic material of different types; and producing graduates, i.e. with different types of university certificates, diplomas and degrees. The former is a unique industrial operation, while the latter is socio-academic-educational operation.

DTIs or ODEIs generally follow multi-media approach in their instructional system and this pedagogy makes available the materials in the form of print, audio and video (also radio and TV are used for broadcasting the audio and video materials wherever possible and so planned). The main operations associated with these materials are:

- Developing the pedagogic prototype material;
- Production of these materials; and
- Distribution of these materials.

The production units thus have to produce a variety of items such as the following.

- Different course materials
- Supplementary materials
- Audio materials
- Video materials
- Experimental kits, etc.

Also, the production, storage and dispatch of different items as per prescribed schedules are to be maintained for the purposes of accountability and monitoring. In ODE, it is ensured by using letter and/or number codes for each of these items. Specification of size, illustrations, paper quality, print type and colours, etc in the case of print materials, and signature tunes, duration, language of presentation, etc in the case of audio and video materials have to be standardized. Capacity planning to provide for space for storing and also for activities related to distribution of these materials is very crucial in ensuring timely reach of the material to the concerned.

Another industrial aspect which is adopted by distance education institutions is 'marketing'. Advertising and other publicity measures are more important in distance education system to generate their own clientele from time to time for the courses/programmes already on offer, and special efforts whenever a new course/programme is launched.

**Check Your Progress**

**Note:** a) Write you answer in the space given below.

b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

6) How do you justify the statement, “distance education system is an industrial system”?

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**13.7 LET US SUM UP**

In this Unit, we have presented to you an overview of management functions, processes and issues with special reference to ODEIs. We discussed management systems, different models and organisational structures of ODEIs. You might have noticed that for effective functioning of a DTI or an ODEI there should be proper networking, communication, team work, clear responsibilities, an effective MIS, and collaborative-democratic decision-making. The activities of units or divisions involved in the course design and development, media, student support services, assessment and evaluation system, MIS and networking, amongst others, need to be handled and managed carefully for higher organisational effectiveness, organisational quality, and learners’ satisfaction. We also focused on the three sub-systems – administrative, academic and industrial – which define the operating activities of the distance education institution. These sub-systems belong chiefly to the industrial nature and processes of the system. Although visibly different in their functioning, they work together for a common goal and contribute to make a total system of distance education. They draw their resources from outside as well as from other sub-systems of the distance education system in order to serve different stakeholders effectively and efficiently.

**13.8 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS**

- 1) Marketing is a specialised activity, and marketing of distance education mechanisms, products and services need to be a more specialised activity. The DTI may centrally market materials, services and expertise or decentralise the operations up to the level of study centres. Outsourcing may be done in which publishers and distributors do it, with a fixed royalty paid to the institution. For international marketing, rigorous and sustained advertisement, display and involvement in international activities are very essential.
- 2) a) The three kinds of management models of distance education described by Rumble are :
  - i) institution-centred model
  - ii) person-centred model, and
  - iii) society-based model.

- b) Freeman has identified six types of open learning systems. They are:
  - i) paced-campus-based open learning system
  - ii) paced-organisation-based open learning system
  - iii) paced-individual-based open learning system
  - iv) self-paced-campus-based open learning system
  - v) self-paced organisation-based open learning system, and
  - vi) self-paced individual-based open learning system.
- 3) Courses offered in OUs incorporate modernity, open entrance system and learner-oriented autonomy. They are credit-based and adopt advanced technology-based multi-media packages which encourage openness in learning system. These features are mostly absent in dual model system.
- 4) Consortium model has advantages of better sharing of resources among collaborating DE institutions. It encourages multi-entry system and sharing of credits among different institutions involved in it. On the other hand, single or dual mode institutions depend solely on its own resources or system, and thus opportunity for open learning is comparatively restricted.
- 5)
  - i) Main feature of an open university is its autonomous system functioning with a three-tier structure of Headquarters, Regional Centres and Study Centres.
  - ii) Open University is an autonomous DE institution. Institute of Correspondence Courses / Directorate of Distance Education function within the structure of a traditional university as a teaching department/institution. Unlike OU these Directorates or Institutes do not enjoy autonomy with regard to administration and decision-making.
- 6) Distance education systems are industrial in nature because they entail: a) mass production of course materials, ii) systematic distribution of these materials, iii) aggressive marketing of these materials, etc which are essentially industrial operations.

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## 13.9 REFERENCES

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Avabrath, G. (2013). Quality Assurance in Open Distance Learning: Learning: IGNOU a Case Study. *International Journal of Computer Science and Network*, Vol.2, Issue 1, pp.119-124; at <http://ijcsn.org/IJCSN-2013/2-1/IJCSN-2013-2-1-66.pdf> — Retrieved on 30-5-2017.

Freeman, R. (1997). *Managing Open Systems*, Kogan Page, London.

Guri, S. 1987, 'Quality control in distance learning', *Open Learning*, 2 (2), pp. 16–21.

Holt, David, H. (1990). *Management: Principles and Practices*, (2nd edition), Prentice Hall, New Jersey.

<http://www.braou.ac.in/managementdescriptionpages.php?id=8> — Retrieved on 25-02-2017.

<https://www.vmou.ac.in/rc/1> — Retrieved on 25-02-2017.

IGNOU. 1994. "The Planning and Management of Distance Education Block-3" of *ES – 314: Management of Distance Education*, IGNOU, New Delhi.

IGNOU. (2016). *Profile 2016*, IGNOU, New Delhi.

Kaye, A., and Rumbe, G. (1981). *Distance Teaching for Higher and Adult Education*, Croom Helm, London.

Peters, O. (1998). *Learning and Teaching in Distance Education: Analyses and Interpretations from an International Perspective*, Kogan Page, London.

Rumble. G. (1986). *Planning and Management of Distance Education*, Croom Helm, London.

Sahoo, P. K. (1993). *Higher Education at a Distance*, Sanchar, New Delhi.

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## 13.10 UNIT END EXERCISES

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You may write brief notes or full-length answers to the questions given here in your own interest. Such notes or answers might help you during your preparation for term-end examination.

### Unit End Questions

- 1) Give an overview of management functions and processes in ODE. (1000 words).
- 2) Highlight the issues of management in ODE. (1000 words).
- 3) Discuss different models/systems of ODE. (1000 words).
- 4) How do you compare single mode and dual mode institutions? (1000 words).
- 5) Describe the organizational structure of ODEIs. (1000 words).
- 6) Discuss the role and importance of different sub-systems of ODEIs. (1000 words).
- 7) Describe consortium model of Distance Education Institutions. (250 words).
- 8) Write a short note on Management Information System (MIS). (250 words).



### Questions for Critical Reflection

- 1) Do you think that an ODE Institution cannot exist without administrative, academic and industrial sub-systems? Justify your answer with reasons and examples.

### Activity



Try to draw the organization structure (flow chart) of the school system to which you belong as a teacher. If you are not an in-service teacher, then select any institution of your choice, other than those which have been given in section 13.5, and draw its organizational structure. (Note: First identify the hierarchy of authorities, then attempt to draw the chart reflecting their hierarchical relationship from top to bottom).

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# UNIT 14    QUALITY ASSURANCE IN ODE

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## Unit Structure

- 14.0 Introduction
- 14.1 Objectives
- 14.2 Issues and Parameters of Quality Assurance
  - 14.2.1 Imperatives
  - 14.2.2 Issues
  - 14.2.3 Parameters
  - 14.2.4 Modes
  - 14.2.5 Challenges
- 14.3 Quality Concerns in Programme Evaluation
  - 14.3.1 Why to Evaluate?
  - 14.3.2 How to Approach Evaluation?
  - 14.3.3 For Whom to Evaluate?
  - 14.3.4 What to Evaluate? – Input, Process and Product
  - 14.3.5 What Perspectives to adopt?
- 14.4 Let Us Sum Up
- 14.5 Answers to ‘Check Your Progress’ Questions
- 14.6 References
- 14.7 Unit End Exercises

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## 14.0 INTRODUCTION

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Assuring the quality of education has been a fundamental aspect of gaining, maintaining and enhancing credibility for programmes, institutions and systems of higher education including the ODE system. Quality assurance (QA) is not just one time affair and has a strategic value with continuous relevance and concern. The standards of practice and criteria of measurement keep varying from system to system, from institution to institution, from model to model, from time to time, and so on. Quality of a higher education programme basically includes its norms and policy, quality of learning inputs it provides for its students and quality of graduates it produces. Hence, in higher education through ODL, it is important to clearly formulate the quality standards related to various inputs, processes and products.

In Unit-13, we have discussed management of ODE systems, models, organizational structures including different sub-systems and their significance in effective functioning of DTIs. Since, ODE system has established a successful track record of being a parallel system besides complementing and supplementing the conventional system, it needs to ensure that quality of its student’s learning is no less than that of the latter. In ODL, different aspects such as its policies, programmes, teaching-learning materials, student support services, and students’ learning or achievement, among others, become matters of concern for quality assurance. Quality Assurance (QA) policies, systems, approaches and measures become inevitable for achieving, maintaining and promoting credibility of ODL provision. Therefore, accomplishment of such tasks requires comprehensive quality assurance system designed to improve the quality of an ODL institution’s inputs, methods/processes and products or outcomes.

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## 14.1 OBJECTIVES

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After going through this Unit, you should be able to:

- explain the concept of quality in open and distance education;
- identify the issues, parameters and modes of quality assurance in open and distance education;
- analyse quality concerns in programme evaluation in open distance education; and
- discuss different perspectives of evaluation in open and distance education.

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## 14.2 ISSUES AND PARAMETERS OF QUALITY ASSURANCE

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Several broad trends have fostered interest in quality assurance policies in higher education; including the trend toward mass higher education, growing diversity of educational offerings, the internationalisation of higher education and the expansion of private higher education institutions and of distance learning (ElKhawas et al., 1998, cited in Viktoria Kis, 2005).

In the context of higher education in general and ODE Institutions in particular, quality means different things to different people, i.e. teachers, students, managers, policy makers, stakeholders, assessors, employers, and so on, and at different times. A broad range of factors such as institutional vision and goals, the talent and expertise of the teaching staff, the quality of students, the teaching and learning environment including library, laboratory and other facilities, assessment standards, the employability of its graduates (relevance to the labor market), the quality of the management effectiveness, governance and leadership, among others, affect overall quality of an educational institution. Thus, quality is a complex and dynamic concept and very difficult to define it, albeit many attempts have been made.

Since Open Distance Education (ODE) is increasingly accepted as an effective alternative means of access to higher education at national and international levels, all stakeholders including the governments, public, private groups, the society and the individuals concerned will look for quality provision. Fact is that it is difficult to have universally or commonly acceptable quality assurance strategy, given the diversity in the background of the students/clientele and other stakeholders, the range and the levels of programmes within an institution and across the institutions. It is thus essential that Quality Assurance (QA) systems, processes and guidelines are developed and maintained by the ODEIs as well as the concerned regulatory bodies.

In order to continue our discourse on quality assurance, let us first attempt to understand the imperatives in the context of ODL system.

### 14.2.1 Imperatives

The need to enhance the quality of higher education is strongly felt when the students are seen struggling in the global workforce / market, professions and technical fields operating with compromised professionalism and excellence resulting in creating

obstacles to national growth and prosperity. Quality is thus a key concern of academia across the globe and several efforts in multiple directions are made by the administrators and academicians to induce this component into the teaching learning situation.

Quality in education is achieved when education output conforms to the planned goals, specifications and requirements (Crosby, 1979). Quality in education is a very conscious and planned effort of all those involved in every stage and component in this activity. In developed countries, following massive research and scholarly output (Bonser, 1992; Crosby, 1979; Feigenbaum, 1983; Juran and Gryna, 1988; Peters and Waterman, 1982; cited in Zaki and Rashidi, 2013), quality assurance remains the basic component in the policies and practices of the institutions that are teaching or training individuals for assuming various roles in the society. They are fully conscious of the fact that if quality in education is ignored, then, profound adverse affects are created on the society which reduces the concept of viewing “education as means to harmonize and develop societies” to a mere fantasy (Holt, 2000; UNESCO, 1996; cited in Zaki and Rashidi, 2013). In the developing countries also, presently, there is a shift in the value system pertaining to education and those involved in education have begun discussions regarding the missing quality factor in their respective education system which has rendered all efforts surrounding the training and grooming of masses completely ineffective (Zaki and Rashidi, 2013).

As we know, a special feature of ODE is the application of well-tried principles of division of labour and specialization. ODE institution having complex system has to put very conscious and planned efforts in all its sub-systems for maintenance of quality at all levels. Quality assurance in ODE is an imperative in the new educational environment that encompasses a growing international trade in educational services, the expansion of the number and types of institutions offering degrees and other programs, the increased mobility of students and graduates, and the needs of students, parents, governments, educational institutions, and international partner institutions. Hence, the principal responsibility for quality assurance rests with the ODEIs themselves, rather than the regulatory bodies. In other words, it is in the interest of the institutions concerned to carry out periodic audits of their programmes in which they identify their strengths and weaknesses. The purpose is to institutionalize self-regulation and ensure continuous improvement and innovation.

It may be almost impossible to recommend a specific quality assurance strategy that can universally be adopted because the distance education programme, the background of the clientele it serves, the extent and levels of programmes offered, the modus operandi, and the purpose and scope of the distance education outfit may vary widely from institution to institution and from one country to another. It must, however, be noted that the focus of any quality system must be to satisfy the needs and aspirations of the learners vis-à-vis the appropriate delivery of services. There are many factors that may be considered for the improvement of the management strategy of distance education programmes in order to achieve higher quality. ([https://wikieducator.org/images/3/35/PID\\_628.pdf](https://wikieducator.org/images/3/35/PID_628.pdf)). We can thus notice a wide range of factors linked to quality in ODL and greater responsibility rests with the ODEIs concerned to conduct regular monitoring and periodic evaluation activities in order to ensure the desired quality at the institutional level, programmes level and finally at the level of learning outcomes or performance / achievement of the learners. Thus, quality assurance (QA) is very essential in ODL if its credibility, particularly among the learners, is to be established, maintained and enhanced.

### 14.2.2 Issues

Quality assurance is essentially aimed at ensuring the desired quality in all the programmes as well as the ODE Institutions with a view to enhancing learning outcomes and performance of distance learners. The issue of quality provision concerns all stakeholders – learners, teachers, institutions, governments, private groups, individuals, the society, and national and international labour market forces operating in the higher education environment. But the onus of quality assurance falls mainly on the provider institutions, government and the regulatory bodies.

In practice, there are a range of issues that pertain to quality assurance. These are:

- 1) What is the definition of quality considered in the context of quality assurance in education?
- 2) Whether all the stakeholders are identified and their perspectives and interests are included in such definition?
- 3) Whether the stakeholders find a place in quality assurance processes, and if so what organisational implications this could have within quality assurance systems or mechanisms?
- 4) Whether the reviews should focus on academic programmes only or the institutions as a whole and should involve only quality assurance agencies and academics or other stakeholders as well?
- 5) What are the approaches to be followed for quality assurance?
- 6) On whom should the onus of quality assurance be — whether the provider institutions, the government and the regulatory bodies?
- 7) What is the scope of QA — whether it varies considerably between and within different national education systems?

All the issues mentioned above essentially depend upon how quality is defined in the context of quality assurance. It is therefore important here to provide you clarity on the concept of quality and quality assurance, as all the issues get embedded in it. This will offer you sound basis for your reflection on all other issues mentioned above.

Quality means different things to different people; and even the same person may adopt different conceptualisations at different moments about the same thing. Quality is thus always contextual in its nature and has reference point(s). It refers to the degree of excellence of particular aspect or the distinctive attributes or characteristics possessed by something, or the standard of something as measured against other things of a similar kind.

User-based definition of quality is given by International Organisation for Standardisation (ISO 8402: 1986, 3.1, cited in Katsoni and Stratigea, 2016) as “*the totality of features and characteristics of a product or service that bears its ability to satisfy stated or implied needs.*” Quality in education is seen as a positive and dynamic idea achievable by design with meaningful investment (Crawford and Shuttler, 1999) and the quest for quality should reflect customer-oriented approach with continuous improvement of the products and services, and of the processes brought about by the planning, implementing, evaluating, and decision-making methods (Navaratnam, 1997; cited in Zaki and Rashidi, 2013).

UNESCO definition, mentioned as edited and abridged by Vlăsceanu *et al* (2007, pp.70–73), states that quality in higher education is a multi-dimensional, multi-level, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives, and to specific standards within a given system, institution, programme, or discipline. Quality may thus take different meanings depending on:

- i) the understanding of various interests (set requirements) of different constituencies or stakeholders (student / university discipline / labour market / society / government) in higher education;
- ii) its references: missions, objectives, inputs, processes, outputs, etc.;
- iii) the attributes or characteristics of the academic world which are worth evaluating; and
- iv) the historical period in the development of higher education.

Concept of quality in higher education embraces all functions and activities of a university including teaching, academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community and the academic environment (Uvah, 2005, cited in Ogunleye, 2013). We can find a wide spectrum of definitions of academic quality particularly when it is linked to evaluation of higher education. While Harvey and Green (1993) argued that these definitions could be ‘grouped into five discrete but interrelated ways of thinking about quality’ and Harvey (1995) provides the brief overview of the same (<http://www.qualityresearchinternational.com/glossary/quality.htm>), which is further summed up here as follows:

- The *exceptional* view (of quality) sees quality as something special. In educational terms it is linked to notions of excellence, of ‘high quality’ unattainable by most.
- Quality as *perfection* sees quality as a consistent or flawless outcome that can be attained by all.
- Quality as *fitness for purpose* sees quality in terms of fulfilling a customer’s requirements, needs or desires. It could be based on the ability of an institution to fulfill its mission or a programme of study.
- Quality as *value for money* sees quality in terms of return on investment. ‘Customer’ gets a quality product or service.
- Quality as *transformation* is a classic notion of quality that sees it in terms of change from one state to another. In educational terms, transformation refers to the enhancement and empowerment of students or the development of new knowledge.

The above approaches to conception of quality provide us as a fair idea of what quality means to different people in different contexts and times. Here we raise an important question: Are the terms *quality assurance* and *quality control* one and the same? Quality Control is “a part of quality management focused on fulfilling quality requirements” while Quality Assurance is also “a part of quality management focused on providing confidence that quality requirements will be fulfilled.” (ISO 9000:2005). Quality control is the physical verification that the product conforms to these planned arrangements by inspection, measurement, etc. or it just measures and determines the quality level of products or services. It is a process itself. Quality Assurance on the other hand is fundamentally focused on planning and documenting those processes to assure quality including things such as quality plans, and inspection

and test plans. It is a complete system to assure the quality of products or services. It is not only a process, but a complete system for evaluating performance, service, or the quality of a product against set standards or specified requirements for customers (<http://www.qualitygurus.com/courses/mod/forum/discuss.php?d=1557>). What then is total quality management (TQM)? It refers to systems which are developed to monitor all processes that are part of the work of an organization. In higher education the assessment and accreditation agencies perform these tasks.

Quality assurance (QA) is the systematic review of educational programmes to ensure that acceptable standards of education, scholarship and infrastructure are being maintained. (<http://www.unesco.org/new/en/education/themes/strengthening-education-systems/higher-education/quality-assurance/>). It is the set of activities that an organisation undertakes to ensure that standards are specified and reached consistently for a product or service. It is thus a planned and systematic review process of an institution to ensure that the standards are set, met, maintained and enhanced.

Distance education which is technology-driven and industrial in nature requires constant revision of its operations for exploiting the advantages of technological advancements based on proper monitoring and evaluation. It becomes a great systemic or strategic challenge for distance education institutions / providers when they attempt to set standards of its different sub-systems and the stakeholders. Further, in ODE institutions which offer the same programmes in both on-campus and off-campus modes, quality assurance and quality improvement processes employ different quality frameworks to ensure comprehensive coverage of the factors affecting students’ experiences of learning across these modes and systems with an institution and across the systems and institutions at broad level. These aspects assume significance in countries and institutions where such practices are followed.

**Check Your Progress**

**Note:** a) Write you answer in the space given below.  
 b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

1) Explain the concept of quality with special reference to higher education.

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**14.2.3 Parameters**

Having understood the issues of quality and quality assurance, in this section we focus our discussion on parameters of quality assurance.

Egbokhare (2006) identifies the following as the basis of quality assurance: quality of staff; environment of instruction; content of instruction; student support services; culture of quality; management by processes and facts; continuous learning and improvement; and quality of instruction and feedback from clients and consumers of products. Zaki and Rashidi (2013, See <http://ijsse.com/sites/default/files/issues/2013/v3i4/papers/>

Paper-24.pdf) present a framework with eight key components or parameters that act as core factors which induce quality in higher education or contribute to the quality attribute of an academic institution. These factors are: i) higher education policies and practices; ii) resources; iii) curriculum; iv) institutional design and strategy; v) open-system thinking and change; vi) institutional leadership; vii) faculty KSA (knowledge, skills and abilities); and viii) learners' profile.

Different dimensions, components and factors discussed above are interdependent, influencing each other in ways that are sometimes unforeseeable. The quality assurance in the realm of ODL practice is thus unable to produce major improvements because of the inability to make satisfactory measurement of specific impact of inputs, processes and outcomes, together with the intrinsic difficulties associated with bringing in changes in the operating policies and procedures. Main and most fundamental issue is ascertaining the relative efficacy and effectiveness of the various sub-systems and in choosing appropriate measures for bringing in change in the practice of each of them.

The major aspects to which due attention should be paid in a distance education delivery mode include the following ([https://wikieducator.org/images/3/35/PID\\_628.pdf](https://wikieducator.org/images/3/35/PID_628.pdf)):

- admission requirements and procedures;
- development and production of instructional materials;
- structure and management of the delivery system;
- quality of materials used for teaching and promotion of learning;
- student assessment procedures;
- availability of adequate human and material resources for the operation of the programme.
- problem of assessment of the effectiveness of an individual distance education facilitator since distance education has the element of quasi-bureaucratization (teamwork);
- student support services; and
- monitoring, evaluation and feedback systems.

Having known the major aspects, it is relevant here to touch upon some specific performance indicators. In the U. K. the Jarrat Committee Report (1985), based on the commissioned efficiency studies, has divided the performance indicators for universities into the following three categories (<http://www.educationengland.org.uk/documents/jarratt1985/index.html>).

a) *Internal performance indicators*: These include the following.

- market share of undergraduate applications (by subject)
- graduation rates and classes of degrees
- attraction of master's and doctoral students
- success rate of higher degrees (and time taken)
- attraction of research funds
- teaching quality

b) *External performance indicators*: These include the following.

- acceptability of graduates (postgraduates) in employment
- first destination of graduates (postgraduates)
- reputation judged by external reviews
- publications by staff and citations
- patents, inventions, consultancies
- membership, prizes, medals of learned societies
- papers at conferences

c) *Operating performance indicators*: These include the following.

- unit costs
- staff/student ratios
- class sizes
- course options available
- staff workloads
- library stock availability
- computing availability

The above indicators were identified with reference to conventional universities. Yet, these indicators are equally relevant to ODEIs as well.

#### 14.2.4 Modes

In institutions of higher learning there exist three primary modes of quality assurance globally. These are assessment, audit and accreditation (Ogunleye, 2013). These modes are equally applicable to and are popularly followed in ODEIs as well.

##### **Mode 1: Assessment**

Assessment is an evaluation which results in a grade, whether numeric (e.g. a percentage or 1, 2, 3, 4 etc on a specified scale); literal (e.g. A, B, C, D, etc) or descriptive (excellent, very good, good, satisfactory, etc). A combination of these is followed by most of ODEIs. For example, IGNOU follows a grade system having A, B, C, D, E grades with respective descriptive levels of Excellent, Very Good, Good, Satisfactory and Unsatisfactory with grade points of 5, 4, 3, 2 and 1 respectively.

##### **Mode 2: Audit**

An audit is a process of review of an institution or program to determine if its curriculum, staff, and infrastructure meet its stated aims and objectives. It is an evaluation of an institution or its programmes in relation to its own mission, goals and stated standards. An audit is therefore a check on what an institution explicitly or implicitly claims about itself. Audit asks, “how well are you doing what you say you are doing?” An audit focuses on accountability of institutions and programmes and usually involves a self-study, peer review and a site visit. Such an evaluation can be self-managed (internal) or conducted by external body; most of the institutions follow both.

### Mode 3: Accreditation

Accreditation can be defined as a process of self-study and external quality review used in higher education to scrutinize an institution and its programmes for quality standards and need for quality improvement. The process is designed to determine whether or not an institution has met the published standards (set by an external body such as a government, national quality assurance agency, or a professional association) for accreditation and to check whether the institution is achieving its mission and stated purpose. Accreditation asks such questions as “are you good enough to be approved (to confer degrees)? It has a dual purpose of quality assessment and quality improvement. The process usually includes a self-evaluation, peer reviews and site visits.

The results of an accreditation of a programme or an institution may have implications for the institution itself (e.g. permission to operate or eligibility for external funding) and also its students (e.g. eligibility for grants or a professional degree). An institution or programme which is denied accreditation can experience the cessation of public or private funding; its graduates being unqualified to enter the profession; a loss of status in the national higher education community.

There exist two types of accreditation, viz. institutional accreditation and programme accreditation.

***Institutional Accreditation:*** It focuses on the institution as a whole, giving attention not only to the overall educational programs but also to such areas as:

- Mission
- Governance
- Effective Management
- Academic Program
- Teaching Staff
- Learning Resources (library, laboratories, and educational technology)
- Students and Student
- Physical Facilities
- Financial Resources

***Programmes Accreditation:*** Academic program accreditation concerns the quality of each programme by the *standards of*:

- Education
- Curriculum
- Students
- Quality of faculties
- Quality of facilities
- Administration
- Finance

Adherence to the above modes will no doubt help in promoting quality assurance at both micro and macro levels. Yet, the practices need to gear up to meet the quality

demands or expectations of all the concerned within and outside the ODEIs or the ODL system at large.

**Check Your Progress**

**Note:** a) Write you answer in the space given below.  
b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

2) i) What are the modes of quality assurance in institutions of higher learning?  
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ii) What are the focus areas of institutional accreditation and programme accreditation?  
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## 14.2.5 CHALLENGES

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If we look at the above sub-sections viz. 14.2.1, 14.2.2, 14.2.3 and 14.2.4 in a holistic manner we can identity certain major challenges of quality assurance in higher education institutions in general and in ODEIs in particular. Some of these are highlighted below.

- 1) It is important to note that the personnel being used for regular programmes of conventional universities/institutions are also used for the ODL activities at different levels. Therefore, for the success of ODL they are the factors to reckon with. At the same time, conventional universities/institutions as partners of ODL system are also using the ODEIs materials, equipments and technologies, and human resource capital for the benefit of their students and institutions. There is thus mutual contribution and symbiotic relationship to their quality assurance efforts.
- 2) Quality assurance exercises through internal audit and internal evaluation of performance of different programmes under different disciplines under different schools of studies cannot be undertaken fairly and uniformly given the deteriorating ethics and standards of faculty and other staff.
- 3) Frequent changes in processes, overstretching of academic reach, dropping of quality due to rapid start-up of programmes and revisions, undue stress on the inadequate faculty and other staff already under stress without appropriate resource support constitute a major challenge to quality assurance.

- 4) Functioning of high officials such as Visitors, Vice-chancellors and statutory bodies cannot be subjected to objective and fair quality assurance mechanisms/processes. Further, issues such as adverse impact of prolonged leadership succession on already poor or deteriorated quality culture and quality management pose serious challenges to the quality assurance efforts at the institutional level.
- 5) Leadership succession and transition sometimes results in conflicts of 'quality cultures' within the institution reflecting upon and setting in 'incompatible poor culture' imposed and sustained by dominant vested interests of the leadership. Such situations are very challenging to re-establish the quality culture for quality assurance in the institution/system.
- 6) Instilling quality culture is a continuing challenge. This is more so when there is influx of many new staff members and there is cultural conflict between the old and the new staff.
- 7) Problems of communication with the staff by the leadership and failures in building and maintenance of staff confidence in the decision-making processes of the university/institution create low morale among the staff, leading to lack of concern for quality assurance initiatives.
- 8) Increasing competition, demographics and poor quality students, large numbers and cohorts of students within and across the collaborating institutions in case of a consortium add to the complexity and nature of the existing challenges of quality assurance.
- 9) Public and private institutions are often or selectively subjected to different regimes of quality assurance or with deliberate statutory oversight by the regulatory agencies producing multiple quality institutions with multiple quality cultures within the system. It is much more serious challenge to quality assurance at accreditation level.
- 10) Among other challenges facing the ODL are the determinations by the changing leadership regimes of:
  - the institution's notion of quality;
  - the quality management goals, objectives and expected outcomes;
  - a framework for the quality management, including resource generation; and
  - a framework for monitoring and evaluating the implementation of the strategic plan and the outcomes.
- 11) Various developments have been witnessed relating to quality assurance mainly through the intervention of information and communications technologies (ICT) in education, like networking of the open learning system with traditional Universities, interdisciplinary interactions at intra-institutional and inter-institutional levels, networking of institutions globally, data-based management of higher education, changing the orientation of institutions by incorporating self-financing in their financial management, assessment and accreditation of higher education institutions with frequently changing statutory set of regulatory bodies at the national level add new dimensions to the challenges.
- 12) There are many different stakeholders whose concerns and expectations of quality of education vary widely. Fulfilling quality demands of the diverse stakeholders

necessitate accommodation of a range of parameters and require various measures of addressing the quality concerns.

All these challenges together complicate the issues of quality assurance in open and distance education and thus add new concerns in programme evaluation, which require serious attention at all levels.

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### **14.3 QUALITY CONCERNS IN PROGRAMME EVALUATION**

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Quality assurance and program evaluation are interlinked and form essential part continuous quality improvement efforts in ODL. Therefore in this section, we will focus on quality concerns in ODE programme evaluation.

We are aware that for evaluating any distance education programme, it is essential to know about the institution (its structure and functions) in which the programme is developed and implemented as also the actual field of operations of the programme. Once this is done, a plan is further needed to evaluate the objectives of programme evaluation. This is so because, programme evaluation in distance education takes into account various aspects of an academic programme, and also evaluation of the processes involved in designing and operating the evaluation model.

Programme evaluation in distance education refers to the continuous (formative) and term-end (summative) assessments of student achievement, based on assignments (tutor-marked, and computer-marked), projects, lab experiments, hands-on tests, presentations and demonstrations, term-end examination and the like. The scores or grades secured in these assessment situations are accumulated to give an overall score and/or grade for a students' performance, on the basis of which the certificate or degree is awarded. As you know, for example, at the Indira Gandhi National Open University the grades/marks secured on assignments at continuous intervals and the grades/marks secured in term-end examinations are combined to calculate the overall grade or marks. While continuous assessment (through assignment) carries 25-30% weight(age) term-end exam carriers 70-75% weight(age) to the different courses of the university. On a five-point scale with grades ranging from A (excellent) to E (unsatisfactory), a student has to secure a minimum D (satisfactory) grade in any assignment or term-end exam of a course, but at least a overall C (Good) grade in each course to successfully complete it. This type of 'evaluation' pertains to the assessment and the gradation of learner's performance only. Of course, the evaluation model or scheme may vary from institution to institution, and from programme to programme within an institution, depending upon the nature of different aspects of an academic programme as well as evaluation of the processes involved in designing and operating the evaluation model. We shall discuss these in the subsequent sections. Before that, let us discuss a little more of educational evaluation and evaluation of distance education programme in this section here.

Evaluation as a process includes the acts of testing and measurement, and goes beyond to make qualitative judgement about educational inputs, processes and products. Evaluation is a broader concept in comparison to testing and measurement, and involves diverse acts, purposes and processes. It may be intended to find out effects of learning (and improve it), effectiveness and efficiency of measures adopted, perspectives of other people, and so on. We shall note here a definition of evaluation given by Thorpe (1988) which better suits our purpose of programme evaluation in distance education:

*Evaluation is the collection of, analysis and interpretation of information about any aspect of a programme of education or training as part of a recognised process of judging its effectiveness, its efficiency and any other outcomes it may have.*

If you analyse this definition of evaluation, you may deduce the following characteristics.

- i) Evaluation covers a wide range of activities than what is possible in testing or measurement. While evaluating a programme, besides examining the courses and their effectiveness, one might look into the monitoring aspects, the aspects of effectiveness of planning and management of programmes, learning and learner support, and the examination of the entire scheme of programme design, development and implementation. Evaluation is a one-time activity and is taken up at intervals, while monitoring is a continuous and practical activity taken up at various stages of a scheme.
- ii) Evaluation is distinguished from assessment in the sense that the latter is concerned with assigning values to student achievement at various stages of learning (continuous and term-end). The assessment scores facilitate evaluation though additional information and explanations are needed to make considered judgement.
- iii) Evaluation exercises, like any research exercise, are concerned with collection, analysis, and interpretation of data.
- iv) Evaluation involves a deliberate and planned activity. Some of the routine activities concerning monitoring of programmes, discussions, decisions and steps taken could become part of an evaluation exercise, provided those are deliberately included in the plan of action of the exercise and, therefore, need to be recorded from time to time. This usually does not happen in many instances because of lack of planning. As would be seen in sub-section 14.3.2, evaluation exercises need to be collaborative and transparent so as to ensure the applicability of the findings of evaluation.
- v) Evaluation can at the same time be focused as well as comprehensive. Some evaluation exercises focus on only a part of an activity as per the necessity of the time, while others may take into account all that is involved in a programme. Further, evaluation exercises may go beyond the stated or overt programme goals to include what is not obviously intended but is very much deep within the programme.

Programme evaluation in open and distance education refers to evaluation of any programme of study or programme of education and/or training, which may be credit-based or non-credit-based (degree-oriented or not aimed at any certificate/degree). There may be continuous ‘monitoring’ of a programme at regular intervals, but programme evaluation is essentially concerned with the outcome or effectiveness of a specific programme that has already been in place for a specified duration and the retrospective findings related to programme.

The programme evaluation exercise deals with academic (pedagogic), managerial, financial, quality and accountability aspects (which we shall examine in section 14.3.4). A programme comprises of a few or a set of courses and involves course design and development, production and distribution, student learning and support, assessment and evaluation, time and money. All these and other related aspects may be focused individually or collectively in a programme evaluation which is a planned exercise. The plan must indicate as to why to evaluate, what aspects to evaluate, who would be

involved in the process of evaluation, who would utilise results of the evaluation, what perspectives should be considered and what are the models/principles that should guide the evaluation exercise. At this stage, you may like to keep a particular distance teaching institution in mind, for a clear conceptualisation of programme evaluation.

### 14.3.1 Why to Evaluate?

The decision to evaluate an academic programme is taken at a time when it is felt that something more should be known about how the programme is doing — how the students are learning from the programme; the difficulties they face; the kind and level of support services being provided to them; whether there is any need to change the pattern of continuous and term-end assessment; how much money has been spent; how to be more economical; and above all, whether the programme objectives have been met and the goals have been achieved. One can still go deeper to examine persistence and dropout rates of students, the quality and effectiveness of self-instructional course packages, nature of counselling and student interactivity, nature of teleconferencing and two-way interaction, evaluation of assignments, grading, turn-around time, and the like. In short, all the aspects of programme development and implementation can be studied, depending on the priorities of the institution.

Evaluation exercises are undertaken to get first-hand data and information (or feedback) so as to make decisions, alter the course of action, and improve upon any aspect of the process of distance teaching and learning. Many practitioners or functionaries of distance education are involved in this process. They include: members of planning and management bodies, programme advisers and expert members, course writers and editors, media producers, counsellors, evaluators, material producers and distributors, trainers, members of the accrediting agencies, the faculty and those responsible for administering the programme, and above all the students and other stake-holders (parents, employers, government, and public). They all would like to know how the programme is doing and what revisions are required so as to further ensure the effectiveness of the programme.

Sometimes, the revision of a programme or course is taken up when a programme evaluation exercise is completed, as the results of the evaluation provide sufficient feedback to the programme or course coordinator for completely revising the programme. The feedback may lead to alternative course design and development models; new ways of presenting materials and media-mix; changes in structure and presentation of counselling sessions; alternative assessment and evaluation systems and procedures; new planning and management techniques; new training models and methodologies and so on. However, the evaluation exercise and implementation of findings are a collaborative exercise to be undertaken in a manner which ensures involvement / concern of all those associated with the programme, and implementation of suggestive measures as a cohesive team. In the process, individual accountability is also ensured.

### 14.3.2 How to Approach Evaluation?

One of the important ways of looking at evaluation is to focus on the purpose of evaluation. From this point of view, we may categorise any evaluation exercise into two approaches: **formative-summative** and **input-output** approaches.

*Formative evaluation* is undertaken from time to time with the objective of further improving the programme at the various stages of its development and implementation.

It may aim at the overall improvement and effectiveness of the programme, though largely the exercises are undertaken on various components of the programme, keeping in view the broad programme goals. Testing of instructional materials, modifying procedures of collating and reporting admission data and student records, improving the effectiveness of counselling sessions, etc are some examples of formative evaluation in distance education.

*Summative evaluation* is concerned with the overall effectiveness of the programme from a wider perspective, relative to the programme goals and objectives. For student learning the usual procedure has been the term-end examination, which along with the results of continuous evaluation lead to overall grading or scoring and award of certificates/degrees. This kind of evaluation also intends to judge the effectiveness of various kinds of approaches or means of achieving the same goal; and largely it is concerned with effectiveness and efficiency. For any kind of project or programme, the broad questions pertain to the cost, the products or achievements, time spent, precautions for the future, and any model or procedure emerging out of the project or programme.

Thorpe (1988) suggested that formative evaluation is undertaken during the programme to evaluate the progress and answer questions like ‘how are we doing?’ and ‘what should we be doing next?’ Summative evaluation is concerned with the effectiveness of the programme, and answers questions like, ‘were the aims achieved?’ ‘was it worth doing?’ and ‘is it worth continuing?’ Thorpe (1988) noted the following comparison between formative and summative evaluation:

**Table 14.1: Comparison between formative and summative evaluation**

Sl. No.	Formative Evaluation	Summative Evaluation
1.	Takes place during the programme.	Takes place towards the end of the programme.
2.	Conducted by the practitioners themselves; is a sort of self-evaluation.	Conducted by specialists from outside the programme or system.
3.	It is usually a low cost affair.	It is expensive; therefore, needs extra resources.
4.	Is usually a small scale affair. (though descriptive based on statistics often used)	Is usually a large scale affair; uses surveys, and statistically based methodologies for sampling and data analysis.
5.	Results are reported locally.	Results are reported nationally.
6.	The evaluation exercise is driven by decision-making and operational constraints of the organisation.	The evaluation exercise is driven by time-constraints of the chosen design and methodology.
7.	The sources of data are usually monitoring exercises on performance indicators.	The sources of data are varied which aim at gathering data to reveal effects of the long- term programme.

Much of the formative evaluation is developmental in nature, i.e. intending to further refine the process or product, Often we have the misconception that formative evaluation is undertaken at various stages of the development of the programme, and

summative evaluation is undertaken at the end. Contrary to this misconception, summative evaluation (like ‘market testing’) may be undertaken at development stage, which for formative evaluation would refer to ‘developmental testing’.

While formative-summative approach is concerned with the purpose of evaluation, the input-output approach is based on the methods/models adopted to execute an evaluation exercise. Within the input-output approach, we may consider pre-test-post-test model and context-input-process-product model of evaluation.

For example, in an experimental method, a pre-testing is undertaken before the programme starts, and post-testing is done after at the end of the programme, and the difference is ascribed to the effectiveness of the programme. Usually a pre-test-post-test model is used to study the differences between the effects of various independent variables on the dependent variable(s). This is done after due control of the intervening variables (either by eliminating their effect at the stage of conducting the experiment or by partialing out their effect at the stage of data analysis. However, this method has its own limitations and therefore is less appealing to those intending to find out the wholeness of the variable under study and also how the context (of, for example, learning) is related to the variable (say, for example, student achievement). ‘Illuminative evaluation’ is another category (within input-output model) which focuses on the processes through which and contexts in which the learner goes through an academic exercise. To study the processes, problems, issues and effectiveness, a combination of methods comprising interview, observation, document analysis, questionnaires and the like are used by the evaluator to be illuminated and to draw meaningful conclusions accordingly.

The ‘*context-input-process-product*’ (CIPP) approach takes into account the context in which the project or learning is taking place, which can be studied through methods of survey and illumination. The context includes such areas as the need for the project, its objectives, and pre-stipulated outcomes of the programme. Inputs may be the materials, time, money and human resources invested in the programme as also the programme strategy. For evaluating the process, one has to look into how the procedures and strategies were implemented; and evaluation of the product may be largely summative, focusing on the overall success of the programme. In such an evaluation exercise, all the aspects are taken into account within a comprehensive and composite framework so as to draw meaningful conclusions.

### 14.3.3 For Whom to Evaluate?

Distance education involves industrial form of teaching and learning, with teams working for providing education to a large mass of people. Therefore, it is imperative that all those team members, in one way or the other, are associated with the programme evaluation exercise. Three broad categories of people are concerned with the evaluation exercise: *managers, practitioners* and *learners*.

Those involved in planning and management (including the head of the institution, the government and any other funding agencies) are more interested in accountability of people, process and products (more in sub-section 14.3.4). This may include: how much time and money has been spent to develop/produce the programme? Whether materials have reached the students in time? Whether counselling and examination have taken place properly in time? What is the students’ completion rate of the programme? How are the graduates doing in the job-market or self-employment? and the like. Evaluation of these aspects is relevant for managers and policy makers.

The practitioners are more concerned with and interested in the minute details of programme planning, design, development, implementation and evaluation. They are a varied group who occupy positions in the institution at various levels and in various capacities, with fixed work structure and responsibilities. Since evaluation also intends to have performance review and quality control, these are taken more seriously by the practitioners. Evaluation exercises provide feedback to a variety of practitioners involved directly or indirectly with the programme: members of school board / school council / planning board / academic council, programme and course coordinators, course writers, course editors, instructional designers / educational developers, language editors, translators, media producers, graphic artists, trainers, researchers, in-charges of student admission, persons responsible for material production and distribution, regional and study centre functionaries, counsellors and evaluators, mentors and project guides, examination personnel, and so on. Besides the overall effectiveness of the programme, they are more concerned with areas and tasks dealt by them, and would like to examine programme evaluation findings relating to their day-to-day tasks and improve upon further so as to ensure effective and qualitative process for quality student learning. This approach goes beyond the accountability perspective towards the managerial perspective where one is more concerned with self-evaluation and the process of the operation of the system and sub-systems with the intention of improving those from time to time. Therefore, this exercise is developmental in nature, and includes individual and team accountability. But, there is a danger that the evaluation results may simply become a tool at the hands of the management to ensure accountability, output and efficiency, rather than the process of teaching-learning. Therefore, as we shall see in sub-section 14.3.4, the exercise has necessarily to be democratic and collaborative.

Learners occupy the central place in DTI (or ODEI) because the establishment of institution is driven by student interests and the existence or continuation of institutions depends on them. Therefore, the primary focus of evaluation should be to protect and promote the interests of students or learners. The relevance of the academic programmes is determined by the interests of students, degree of acceptance of the programmes by employers and the public at large. The quality of the programmes, their delivery, accessibility, retention of students, performance and success rate of students, job prospects, etc should become essential components of evaluation. Only then it would be relevant to the students, the parents and the employers.

#### **14.3.4 What to Evaluate? – Input, Process and product**

There are many variables on which an evaluation exercise may focus. And, under each variable, a set of sub- or micro-variables also operate which need to be studied when a focused exercise is undertaken on a particular variable. At the time of the design of a programme evaluation exercise, it must be categorically noted as to what aspects one intends to evaluate so that the methodology (including evaluation instruments) gets set at the beginning. What to evaluate and what mechanisms to adopt to evaluate that/those depend on the evaluation perspective and approach that one adopts (see section 14.3.2). If we consider various sub-systems within the distance teaching system from a systems perspective, the following input-process-output outline emerges for distance teaching-learning (Fig. 14.2) (Panda, 1990):

Input	Process	Output
<ul style="list-style-type: none"> <li>• Programme planning</li> <li>• Objectives as inputs</li> <li>• Staff development, (material development, assessment and evaluation, tutoring and counselling, administration and management, monitoring)*</li> <li>• Course (print, audio, video, etc.)*</li> <li>• Students</li> <li>• Infrastructure</li> <li>• Time</li> <li>• Financing and budgeting</li> </ul>	<ul style="list-style-type: none"> <li>• Two-way communication</li> <li>• Students' interaction with materials (learning style, strategy, pace, etc.)</li> <li>• Evaluation process</li> <li>• Student support service</li> <li>• Time management and decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Students' achievement (grades / scores) and other skills</li> <li>• Student satisfaction</li> <li>• Students' relevance with job market</li> <li>• Their employment and promotion</li> <li>• Staff development and use of acquired skills as further inputs</li> <li>• System efficiency as further input</li> <li>• SIMs as future input</li> <li>• Effectiveness and efficiency of subsystems**</li> </ul>

**Notes:** \* themselves as processes at input stage.

\*\* also part of process.

**Fig. 14.2: Systems perspective to distance teaching-learning.**

If we look at each component in input/process/output more minutely, we may find them operating simultaneously with the entire system. Regarding inputs, Chacon (1987) and Feasley (1988) have noted that most of the evaluation activities in distance education have concentrated on 'course' as the unit of the analysis, in which specific variables include students (Chacon, 1987) and instructional process (Feasley, 1988). Chacon suggested two dimensions — structural (students, courses, etc.) and functional (curriculum development, instructional design, support services, staff development, etc.) — to be considered while evaluating higher education programmes at a distance.

While you will find out process framework, based on accountability and managerial perspectives in section 14.4.1, you will notice the perspective of process and output variables given below:

### Process Variables

These may not be equated with the 'process' presented in Fig. 14.2. These include the process, the input and part of the output put together (i.e. operation of the sub-systems) where the evaluator acts in a democratic-collaborative style at every stage of the evaluation exercise. The following are some of the important process variables of evaluation:

- Generation of knowledge (on teaching methods and learning processes in general).
- Curriculum development (models) and implementation.
- Instructional design and development; course design, and design and development of modular self-instructional material or multi-media materials.
- Assignments, commenting and grading.
- Support system, and perceptions of those involved in it.
- Student characteristics (age, gender, residence, caste, educational background, economic status, study skills, language proficiency, course needs, attitude to the system, occupational background, spare study time, level of motivation, etc.).

- Student drop-out / dropdown (background characteristics, social integration, academic integration, goal commitment, instructional commitment, academic and social problems, etc.).
- Sub-system(s) efficiency — costs, effectiveness.
- Student admission and related student affairs.
- Material production and distribution.
- Evaluation system (testing, grading/scoring, commenting on assignments, turn-around time, management of evaluation, etc.).
- Quality assessment and quality assurance.
- Quality control and decision-making sub-systems, evaluation of decision-making process and mechanisms.
- The logistical system (personnel, finance, establishment, administration, and their role at various stages of programme development and delivery).
- The coordination system, especially among the important instructional functionaries like course writers, media producers, educational technologists, academic counsellors, paper setter, moderators, evaluators, etc.
- The system of staff development — orientation and training.
- Employers' perception of the programme.

(It may be noted that the functionaries are equally concerned with the output, though their onus of emphasis would be more on processes).

### **Output Variables**

Output is concerned largely with the overall evaluation of the system with an accountability perspective (accountable to the government, funding agency, and the like) where the evaluator acts as an advisor to the project and has control over the entire process of evaluation. Some of the variables for output evaluation include the following:

- Equality of educational opportunity — access and equity.
- Student pass out — grading/marking.
- Relevance to needs and expectations.
- Impact on other distance teaching institutions and the systems including conventional learning systems.
- Overall efficiency — cost-effectiveness, cost-efficiency.

Let us now examine some of the functional categories of components that one may like to evaluate in each category of the variables. The variables selectively described here are: programme and curriculum development, self-instructional materials, tutoring and counselling.

### ***Programme and Curriculum Development***

- The procedure and adequacy of learning/training needs assessment.
- Programme viability: target groups, appropriateness of content areas, financial viability, availability of experts to develop and present the programme, piloting and pump-priming.
- Structure of the courses/programmes.

***Self-instructional Materials***

- Appropriateness of aims/objectives, contents and strategy.
- Assessment strategy and difficulties faced by students.
- Requirement for updating, partial remake, revision.
- Most liked and least liked unit (what and why).
- Content density and difficulty — text consuming more time and why.
- Need for additional materials.
- Developmental testing and changes made thereof.
- Degree of use of text units, programme guide/handbook, set books, study guides, SIMs, activities, broadcast notes, audio-’ video notes, TV broadcasts, audio and video programmes, radio broadcasts, home kits, computer practicals, lab practicals, tutor comments, and the like.
- Amount of work required in each block/unit, and time taken for each task.
- Best and worst aspects of a unit/block.
- Tutor’s comments on the SIMs.
- Alternative content and presentation.
- Student performance on assignments.
- Relationship with other related courses in the area.
- Clarity and appropriateness of access devices.

***Tutoring and Counselling***

- Tutor’s involvement in the preparation of learning materials.
- Tutor’s involvement in arrangement of tutorials, setting of assignments, keeping records, evaluating/monitoring courses and students.
- Tutor’s awareness of the mechanism of distance teaching-learning, university database, etc.
- Tutor’s skills of communication, guidance, teaching, counselling, adopting to learning styles, teaching study skills, telephone tutoring, evaluating assignments, dealing with personal problems of students.
- Effectiveness of counselling, guidance, tutor comments and grading/markings, organizing, and presenting practicals.
- Students’ perception of counselling, TMA commenting and grading, personal support.
- Clarity of explanation, teacher enthusiasm, organisation of presentation, group discussion, and the like in each counselling session.

Each of the sub-themes under each category of variables can also be studied more minutely, and each one can be expanded to include micro level questions/items to be evaluated in a programme evaluation exercise.

### Check Your Progress

- Note:** a) Write your answer in the space given below.
- b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.
- 3) Distinguish between ‘output’ and ‘process’ variables of evaluation in distance education.

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### 14.3.5 What Perspectives to Adopt

In this section, we shall focus on some of the evaluation perspectives which provide mental framework, attitude or world view within which a programme evaluation exercise is carried out. Such framework helps in determining different issues and concerns we discussed in sub-sections 14.3.1 to 14.3.4 above, which you may revisit. This would provide you clarity to further discussion on evaluation perspectives.

Some of the issues raised by Thorpe (1988) (see subsection 14.3.2) are worth noting since these are of concern to the evaluator irrespective of the perspective of evaluation one has. The issues include: resolving conflicts associated with appropriate methodology versus facilitating decision-making; making value judgements in evaluation versus providing evidences; practitioners as evaluators versus outside agencies as evaluators; systematic and scientific data collection versus qualitative accounts of events and attitudes; monitoring versus evaluation; and evaluation versus research.

With this background, let’s now examine a few perspectives that influence decisions on evaluation. It may, however, be noted that there is hardly any strict boundary between the perspectives discussed below; it is only the relative importance that can be attached to one or the other.

#### i) Accountability and Managerial Perspectives

Underlining the relationship between accountability and evaluation, Calder (1994) points out that while evaluating a programme one may be accountable to any of the following five levels of decision-making:

- external agencies responsible for funding or sponsoring the programme;
- decision-makers at managerial level in one’s own institution where evaluation is taking place;
- decision-makers at faculty or programme level;
- decision-makers at course level; or
- students or other clients/customers.

A distinction has been made by Calder (1994) between *quality control* and *quality assurance*, and between *summative* and *formative evaluation*. While quality control

is concerned with rejection of products which do not confirm to the pre-stipulated standard (for which a range of summative evaluation approaches are followed), the concern of quality assurance is to achieve defined standards through application of agreed procedures (for which a range of formative evaluation approaches are followed).

Evaluation exercises with *accountability* and *managerial perspectives* have been noted by Panda (1990) that while the former examines especially the efficiency of a programme so as to report to the funding agency/authority, the latter intends to assess the effectiveness of the programme so as to provide feedback to the programme manager / coordinator / team regarding the effectiveness of programme delivery and management, and the programme itself. In the accountability perspective, the focus is on the ultimate objective(s) of the programme; the objectivity of evaluation methodology and the quantitative aspects of data gathered. The purpose behind such an exercise is to decide whether to retain the programme (and with what corrective measures) or reject it altogether. On the other hand, in the managerial perspective, the focus is on the immediate or intermediate objectives; the methodology followed (i.e. is it rigorous to the extent that sound decisions can be made?); and the data gathered — both qualitative and quantitative. The purpose of such evaluation is to improve the programme (its components and processes) along with its delivery.

## ii) Democratic and Collaborative Evaluation

While outlining a case for democratic-collaborative evaluation, Tovar (1989) focused on roles and responsibilities of evaluation consultants in the process of selecting evaluation questions, and conducting programme evaluation based on those questions. In any distance teaching institution, the client-evaluator relationship determines the focus of the evaluation questions and the way the evaluation exercise is carried out (though, to a large extent, it depends on the institutional policies and purposes). The role of the evaluator is of special importance to examine such an evaluation exercise. According to political orientations, three evaluation roles based on institutional goals, client's needs, and evaluator's activities are discussed as follows:

- a) ***Bureaucratic Evaluation:*** In this kind of evaluation, the evaluator works as a hired researcher who obeys and carries out the directives without any freedom of decision-making related to purposes, processes, products and utilisation of evaluation exercises. The role of the evaluator is limited to gather, process and feed information to the client who makes institutional decisions.
- b) ***Autocratic Evaluation:*** The objective of this evaluation is to get advice from the evaluator on a programme or an aspect of it. The evaluator is free to formulate the questions, set procedures for data collection and data analysis, and recommend findings. The role of the evaluator is like an adviser to the client. The evaluator decides the objectives, methods and the scope of the evaluation.
- c) ***Democratic Evaluation:*** This kind of evaluation accommodates and tries to meet the pluralism of values and interests. The political context under which the evaluation exercises are carried out is very important here. The client and the evaluator work hand in hand right from chalking out the focus of evaluation and formulating the evaluation questions to the analysis and application of the findings.

Collaboration is undertaken with a view to increasing the validity of the evaluation exercises, to carry out the findings to further improve upon the programme or the system, and to find out not only the overall effectiveness but also the effectiveness of the sub-systems.

One of the important democratic models of evaluation is the utilization-focused evaluation suggested by Patton (1986) in which collaboration exercises are undertaken in defining and focusing evaluation questions. The model takes into account the relevance of process and product to the system, and the utilisation of such exercises, i.e. what for to undertake it. Such evaluation proceeds through the following:

- identification of information needs of people in the system.
- formulation of the focus of evaluation.
- deciding upon the methods (sample, tools and techniques, procedures).
- doing analysis and interpretation of data.
- putting forward recommendations.

In this kind of evaluation, the group of users is identified beforehand, and in the entire process of evaluation the evaluator operates in collaboration with the users within a democratic perspective. The utilisation of recommendations increases with every increase in negotiation and collaboration between the clients/users and the evaluator in the identification and focusing of evaluation questions.

**iii) Centralised and Decentralised Evaluation**

The operations of any distance education institution are through its headquarters, regional centres and study centres (or may be variations of this model). The programme evaluation exercise, in which a variety of functionaries are involved (including the students as respondents), has to be decentralised with specified tasks to be undertaken by specified groups. Further, in the exercise is a build-in mechanism of the institutions which is continuous in nature and decentralised to facilitate the evaluation exercise. In a democratic-collaborative set-up, a decentralized evaluation involves those who actually undertake distance teaching-learning and also those who would eventually act on the findings (like the faculty members, academics in support divisions, administrators, etc.). If the evaluation is on a very small scale and has to be undertaken for once, a centralised exercise is more desirable because the evaluator has control over the entire exercise.

You may, at this stage, take a pause and formulate your views on the kind of perspective you may like your evaluation exercise to focus on. However, there is hardly a cemented wall between perspectives, and these may overlap depending on the formulation of evaluation questions and the focus/purpose of evaluation.

**Check Your Progress**

**Note:** a) Write your answer in the space given below.  
 b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

4) Relate democratic-collaborative evaluation with centralised-decentralised evaluation.

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## 14.4 LET US SUM UP

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Quality is a key concern of academia across the globe and several efforts in multiple directions are made by the administrators and academicians to induce this component into the teaching learning situation. Irrespective of any system or model the issue of quality in ODL remains a major concern, particularly because of its innovation in education. QA policies, systems and measures become inevitable for establishing and promoting credibility of ODL provision. Accomplishment of such task requires comprehensive quality assurance system designed to prove and improve the quality of an ODEI's inputs, processes and products or outcomes. In this Unit, we discussed different aspects related to maintaining and enriching the quality of ODEIs in general and their programmes in particular.

Assuring the quality of higher education through ODL has been a fundamental aspect of gaining, maintaining and enhancing credibility for their programmes and systems. We discussed in this unit how evaluation of distance education programmes will help in addressing the quality concerns in distance education and QA. The formative-summative dichotomy was discussed, with a caution that it may not be construed that formative is during the process and summative at the end. In fact, this is a continuous process in the programme evaluation and is an in-built exercise of any distance teaching institution. Based on why, how, for whom and what to evaluate, we focused on a few evaluation perspectives. It was pointed out that the potentiality of utilisation of evaluation findings will increase if it is undertaken within a democratic-collaborative framework, with a view to making the evaluation findings contribute to enhance the effectiveness and efficiency of the overall system and its sub-systems, and to make evaluation an in-built process for providing continuous feedback to the system at different stages for sustaining and improving quality of the ODL programmes in particular and of the ODEIs in general.

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## 14.5 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

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- 1) Quality in higher education is a multi-dimensional, multi-level, and dynamic concept that relates to: the contextual settings of an educational model, the institutional mission and objectives, and the specific standards within a given system, institution, programme, or discipline. Concept of quality in higher education embraces all functions and activities of a university including teaching, academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community and the academic environment. In respect of quality in the context of evaluation of higher education, the main approaches to conception of quality are as follows:
  - The *exceptional* view in educational terms is linked to notions of excellence, i.e. of 'high quality' unattainable by most.
  - Quality as *perfection* sees quality as a consistent or flawless outcome that can be attained by all.
  - Quality as *fitness for purpose* sees quality in terms of fulfilling a customer's requirements, needs or desires.
  - Quality as *value for money* sees quality in terms of return on investment. 'Customer' gets a quality product or service.

- Quality as *transformation* in educational terms refers to the enhancement and empowerment of students or the development of new knowledge.
- 2) i) There exist three primary modes of quality assurance globally. These are: assessment, audit and accreditation.
    - ii) *Institutional accreditation* focuses on the institution as a whole, giving attention not only to the overall educational programs but to such areas as: Mission, Governance, Effective Management, Academic Program, Teaching Staff, Learning Resources (library, laboratories, and educational technology), Students and Student, Physical Facilities and Financial Resources.

*Programme accreditation* accreditation concerns the quality of each academic programme by the *standards of*: Education, Curriculum, Students, Quality of faculties, Quality of facilities, Administration, and Finance.
  - 3) The output variables like total number of students passing out of courses, overall effectiveness and efficiency of the system, access and equity are more concerned with the overall system evaluation in which the system's accountability to funding agency or government are also examined. In case of process variables, which indicate the actual functioning of every unit and every activity, the stress is on achievement of quality and professionals in the process so as to increase the effectiveness of the activities and student learning.
  - 4) The democratic-collaborative model of evaluation accommodates the views of all the categories of functionaries, and collaboratively evaluates mechanisms to carry out the exercise and implement the findings. This is largely facilitated if there is a decentralised evaluation with individual responsibilities fixed on those who are actually involved in the process of distance teaching-learning. The possibility of implementation of evaluation results increases once all those (from top-headquarters to bottom-study centres) are involved in the exercise.

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## 14.6 REFERENCES

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- Bonser, C. F. (1992). Total Quality Education, *Public Administration Review*, 52(5).
- Calder, J. (1994). *Programme Evaluation and Quality*. Kogan Page and IET, London.
- Chacon, F. J. (1987). *Evaluation and Decision Making in Higher Education at Distance*, University of National Abierta, Caracas.
- Crawford, L. E. D., and Shuttler, P. (1999). Total quality management in Education: Problems and Issues for Classroom Teachers. *The International Journal of Educational Management*, 13 (2).
- Crosby, P. B. (1979). *Quality is Free: Art of Making Quality Certain*, McGraw Hill, New York.
- Egbokhare, F. O. (2006). Quality Assurance in Distance Learning, in Olayinka, A. I., and Adetimirin, V. O. (eds) (2006). *Quality Assurance in Higher Education*, Proceedings of a Symposium to mark The African University Day, 2005 Postgraduate School, University of Ibadan, Nigeria.
- ElKhawas, E., De Pietro-Jurand, R., and Holm-Nielsen, L. (1998). Quality Assurance in Higher Education: Recent Progress; Challenges Ahead, Human Development Network, Education, World Bank, Washington, D.C. [www1.worldbank.org/education/tertiary/quality.html](http://www1.worldbank.org/education/tertiary/quality.html), cited in Viktoria Kis, 2005.

Feasley, C. E. (1988). 'Evaluation .of Distance, Education Programmes', in Sewart, D., and Daniels, J. (eds.), *Developing Distance Education*. ICDE, Oslo.

Feigenbaum, A. V. (1983). *Total quality Control*, McGraw Hill, New York.

Harvey, L. (1995). 'Editorial: The quality agenda', *Quality in Higher Education*, 1(1), pp.5–12.

Holt, M. (2000), The Concept of Quality in Education, in C. Hoy, C. Byane-Jardine, and M. Wood (eds), *Improving Quality in Education*. Falmer Press, London.

Harvey, L., and Green, D. (1993). Defining quality. *Assessment and Evaluation in Higher Education*, 18(1), pp.9–34.

<http://www.qualitygurus.com/courses/mod/forum/discuss.php?d=1557> – Retrieved on 01-03-2017.

<http://www.qualitygurus.com/download/QM001DifferenceBetweenQualityAssuranceAndQualityControl.pdf> — Retrieved on 01-03-2017.

<http://www.unesco.org/new/en/education/themes/strengthening-education-systems/higher-education/quality-assurance/> — Retrieved on 01-03-2017.

[https://wikieducator.org/images/3/35/PID\\_628.pdf](https://wikieducator.org/images/3/35/PID_628.pdf) — Retrieved on 27-02-2017.

Jarrat Committee Report. (1985). See <http://www.educationengland.org.uk/documents/jarratt1985/index.html> — Retrieved on 16-03-2016.

Juran, J. M., and F. M. Gryna, Jr. (eds). (1988). *Juran's Quality Control Handbook* (Fourth Edition), McGraw Hill, New York.

Katsoni, V., and Stratigea, A. (2016). *Tourism and Culture in the Age of Innovation: Proceedings of the Second International Conference IACuDiT*, Athens, 2015. Athens, Greece: Springer.

Navaratnam, K. K. (1997). Quality Management in Education Must be a Never-ending Journey, in K. Watson, C. Modgil and S. Modgil (eds), *Educational Dilemmas: Debate and Diversity*, Vol VI: *Quality in Education*, Cassell, London.

Ogunleye, A. (2013). "Quality Assurance and Quality Indicators in Open and Distance Education: Context, Concerns and Challenges", *International Journal of Educational Research and Technology*, Volume 4 (2), June 2013: 49–62.

Panda, Santosh. (1990). "Programme Evaluation in Distance Education: A Perspective and Proposed Agenda of Action" in Mukhopadhyay, M., et al (eds.). *Third Yearbook on Education Technology*, AIAET, New Delhi.

Patton, M. Q. (1986). *Utilisation-Focused Evaluation*. Sage, Beverly Hills.

Peters, T. J., and R. H. Waterman, Jr. (1982). *In Search of Excellence*, Harper and Row, New York.

Thorpe, Mary. (1988). *Evaluating Open and Distance Learning*, Longman, Essex.

Thune, C. (1998). The European systems of quality assurance: Dimensions of harmonisation and differentiation, *Higher Education Management*, Vol.10, No.3 cited in Viktoria Kis, 2005.

Tovar, M. (1989). Representing multiple perspectives: Collaborative democratic

evaluation in distance education, *American Journal of Distance Education*, 3(2), 44-56.

UNESCO. (1996). *Learning: The Treasure Within*, Report to UNESCO of the International Commission on Education in the 21st Century. UNESCO, Paris.

Uvah, I. I. (2005). 'The Quality Assurance Process in the Nigerian University System', in Munzali J. (Ed). *Perspectives and Reflections on Nigerian Higher Education: Festschrift in Honour of Ayo Banjo*. Spectrum Books Ltd., Ibadan: pp. 139-157.

Viktoria Kis. 2005. *Quality Assurance in Tertiary Education: Current Practices in OECD Countries and a Literature Review on Potential Effects*. <https://www.oecd.org/education/skills-beyond-school/38006910.pdf>.

Vlăsceanu *et al* (2007, pp.70–73; See <http://www.qualityresearchinternational.com/glossary/quality.htm>).

Zaki, S., and Rashidi, M. Z. (2013). Parameters of Quality in Higher Education: A Theoretical Framework, *International J. Soc. Sci. & Education*, Vol.3, Issue 4, pp.1098-1105. <http://ijsse.com/sites/default/files/issues/2013/v3i4/papers/Paper-24.pdf> — Retrieved on 12-03-2017).

### Suggested Readings

Dutt, K. (1988). "Distance Education versus Traditional Higher Education: A Cost Comparison", in B. N. Koul, et al (eds.), *Studies in Distance Education*. AIU and IGNOU, New Delhi.

Freeman, R. (1997). *Managing Open Systems*. Kogan Page, London.

George, J. and Cowan, J. (1999). *A Handbook of Techniques for Formative Evaluation: Mapping the Students Learning Experience*, Kogan Page, London.

Gibson, A. (1986). 'Inspecting education' in Moodie, G. (Ed.). *Standards and Criteria in Higher Education*, Guildford, SRHE, pp.128–35.

Holt, David, H. (1990). *Management: Principles and Practices*, (2nd edition), Prentice Hall, New Jersey.

<http://www.qualityresearchinternational.com/glossary/quality.htm>

ISO 9000:2005. *Quality Management Systems - Fundamentals and Vocabulary*. <http://www.qualitygurus.com/download/QM001DifferenceBetweenQualityAssuranceAndQualityControl.pdf>

Jung, I., Wong, T. M., and Belawati, T. (2013). *Quality Assurance in Distance Education and e-Learning: Challenges and Solutions from Asia*, Sage Publications India Pvt. Ltd., New Delhi.

Martin, M., and Stella, A. (2007). *External quality assurance in higher education: Making choices*, UNESCO, Paris.

Olojede, A. A. *Issues and challenges in enhancing quality assurance in open and distance learning in Nigeria*, [https://wikieducator.org/images/3/35/PID\\_628.pdf](https://wikieducator.org/images/3/35/PID_628.pdf).

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## 14.7 UNIT END EXERCISES

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You may write brief notes or full-length answers to the questions given here in your own interest. Such notes or answers might help you during your preparation for term-end examination.

### Unit End Questions

- 1) What are the imperatives for quality assurance in ODE? (500 words).
- 2) Discuss different issues of quality assurance in ODE. (1000 words).
- 3) What are the parameters of quality assurance in ODE? (250 words).
- 4) Highlight different modes of quality assurance in ODE. (250 words).
- 5) What are the challenges to quality assurance in ODE? (500 words).
- 6) Discuss the quality concerns in programme evaluation. (1000 words).



### Questions for Critical Reflection

- 1) Do you think IGNOU has been successful in assuring quality support to you as the student of its BEd Programme? Justify your answer with reasons and/or practical instances.

### Activity



Go through your BEd Programme guide and Student Handbook for Practical Work. Note down the important schedules, guidelines and standards mentioned therein. Compare them with the reality situation of your course of journey through the programme during its implementation till date. Prepare a brief report of evaluation of the same.

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# UNIT 15 ECONOMICS OF ODE

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## Structure

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- 15.1 Objectives
- 15.2 Education as an Investment and Consumption
  - 15.2.1 Economics of Education: Meaning and Definition
  - 15.2.2 Education as Consumption and Investment
  - 15.2.3 ODE as Consumption and Investment
- 15.3 Human Capital Formation and National Development
  - 15.3.1 Education and Human Capital Formation
  - 15.3.2 ODE and Human Capital Formation
  - 15.3.3 Production Function in Education/ODE
  - 15.3.4 Cost-effectiveness and Cost-efficiency
- 15.4 Different Types of Costs: Factors and Functions
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  - 15.4.2 Factors Affecting Cost
  - 15.4.3 Cost Functions
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- 15.7 Answers to 'Check Your Progress' Questions
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## 15.0 INTRODUCTION

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Economic aspects of distance education form important component of any programme evaluation exercise either related to a particular academic programme, or all the programmes, or in evaluation of an institution or a system as a whole. The economic aspects of educational transaction help in understanding the effectiveness and efficiency of any educational programme. As we have seen in the preceding unit, when we go for evaluation of an academic programme, all the variables and activities involved in the **input, process** and **output** stages need to be examined for the effectiveness of each of these activities. These broadly include programme / course planning, design, development (including all the components of instructional materials like print, audio, video, assignment, home kits, CD-ROMs, etc.) and course implementation (including continuous assessment, tutoring and counselling, hands-on and practical experiments, term-end examinations, etc.). For each of these activities; one needs to calculate the costs so that the final unit cost of the programme (i.e. total programme cost) as well as the unit cost per student (for each of the activities as well as for the entire programme) can be ascertained. This will also indicate how best financial and other resources may be utilised if a parallel or an alternative programme offer is made in the future. We should also know the various aspects of cost-effectiveness and cost-efficiency, i.e. how much money had been spent and in what way; whether alternative models or ways of doing things would have reduced expenditure; and whether the objectives of developing and offering an academic programme have been met within the stipulated budget.

In this unit, we will however discuss a few concepts of economic aspects of education and their applications in general which shall give you a broad understanding of the economic perspectives of distance education. Costs of distance education, cost functions, cost analysis and economies of scale in a distance education programme. We begin with the general aspects of economics of education in section 15.2, which then are applied to economics of distance education (especially the calculation of costs) in the subsequent three sections of this unit. The cost of each component of a programme of education, especially the unit cost is an important indicator to judge the programme effectiveness. How effectively money should be utilised to achieve the programme objectives, how to economise both financial and human resources and yet ensure efficiency of the programme, are the key questions, among other things, that we would address in this unit.

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## 15.1 OBJECTIVES

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After completion of this unit, you should be able to:

- define the concept of economics of education;
- discuss the concept of (distance) education as consumption and investment and its contribution to human capital formation;
- distinguish between cost-effectiveness and cost-efficiency;
- analyse costs in distance education; and
- explain how economies of scale can be achieved in distance education.

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## 15.2 EDUCATION AS AN INVESTMENT AND CONSUMPTION

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Economic aspects of distance education, especially those related to costing form an important aspect of programme evaluation. Decisions relating to cost-effectiveness and cost-efficiency are crucial to programme effectiveness and its quality improvement. In this section, we shall discuss the basics of economic aspects of education such as education as consumption and investment, human capital formation, production function, and cost-effectiveness and cost-efficiency in education.

### 15.2.1 Economics of Education: Meaning and Definition

Economics of education encompasses the study of economic aspects of education. It is concerned with production and distribution of various types of education and training over (a period of) time (i.e. now and in future). On the one hand, it concentrates on how resources are allocated to educational institutions at various levels, and how benefits or returns are received by individuals and the society from such an investment. On the other hand, it focuses on the study of the economics of human resources and educational planning, decision-making, investment and the growth and development of an educational system. By so doing, economists and educationists study the impact of education on various socio-economic aspects of recruitment and promotion, occupational structure of labour force, migration of labour, international trade, distribution of resources, savings and investment, economic growth and development, and the like. To be precise, it deals with deployment of scarce productive (human, non-human, financial) resources across various educational ladders (from literacy to higher education and research) and their distribution amongst various individuals and groups of a given society and the nation.

In the early 1960s, the study of economic aspects of education acquired greater significance; and it was realized that human resource development which directly depends on education and training of people is very crucial to the economic growth and quality of life. The developed and the developing countries of the world realised that education was crucial to and had direct bearing on both economic *growth* (in the developed countries, it refers to the increase in GNP/ per capita income of people) and economic *development* (in the developing countries, it refers to fundamental changes in the structure of production, like industrialisation, urbanization and from backwardness to development).

Education and economics are interdependent. While economy provides resources for educational development, education contributes to manpower development so needed for economic modernization and socio-cultural transformation. Education and training equip individuals with higher knowledge and skills, which are essential for higher mobility and productivity. Therefore, people generally choose to invest on their own and their children's education depending on their capacity to afford, besides spending on the basic necessities of life like food, clothing and shelter. However, at the national level, unless there is parallel development in the economy it becomes difficult to ensure resources for educational development. Once the level of economic activity rises, the national income increases, the fiscal capacity of the country improves, and the nation is in a position to invest on educational expansion and diversification. Studies such as Nelson and Winter (1982), Freeman (2002), Lundvall (2011), Kruss et al (2015), among others, have shown that expansion of education across various levels leads to economic development (i.e. increase in quantity and quality of production, technical and managerial skills, quality of labour force, and quality of life). International studies (e.g. McMahan, 1999) suggest that countries which are economically advanced have a very developed system of education and training. This suggests there is reciprocal relationship between education and economic development.

### **15.2.2 Education as Consumption and Investment**

Consumption, in economics, refers to use of goods and services (and their utility) to satisfy wants; and investment usually refers to excess of production over consumption. Production and consumption of goods and services take place at the same time; and if production is more than consumption, there is surplus or accumulation. Investment in non-durable goods and services, like human beings, is essential for long-term purposes; and long-term investment is essential for future production. Education is considered both as consumption and as investment. Education is also a private consumption, because people spend on it for acquiring qualifications and training. It is also public consumption, in so far as the government spends huge amount on the education system itself. Expenditure on education is an investment in the sense that the individuals, the society and the nation as a whole derive future benefits out of those educated.

Regular education is clearly consumption, since individuals spend their earnings and government spends taxes collected from individuals for future benefits over a long period of time. On-the-job training (especially short-term training) is largely investment, since it is concerned with development of skills required for immediate use or benefit. In so far as educated persons get employment or productive work as per the level of their education, it is clearly investment — the present consumption leads to investment in future.

### 15.2.3 ODE as Consumption and Investment

In sub-section 15.2.2, while examining the concept of economics of education, we have talked about education as investment and consumption. In this section, we shall focus on distance education as consumption and investment, particularly for the large scale formation of human capital. This broad understanding shall facilitate you to grasp the application of costing of distance education presented in the subsequent sections.

Distance education is both as consumption and investment. It is consumption in so far as it consumes private and social expenditure on education and as long as it contributes to satisfaction of the human curiosity for more knowledge. But, clearly it is also investment because of its long-term benefits and the benefits derived after the completion of the gestation period. Investment in education raises individual productivity and earnings. Distance Education, as one of the modes of providing education, also increases productivity and earning especially when the educational contents/programmes are based on the immediate professional needs of its clients. The argument in favour of distance education is strengthened when investment considerations are judged within the framework of a cost-benefit analysis or simply within a costing framework.

Distance teaching-learning takes place in a non-contiguous situation, without the immediate supervision of teachers and teaching takes place through pre-produced course materials (print and/or mechanical or electronic devices). Contiguous educational arrangements are costlier than distance education — the latter is about one-fifth of the former in India. Further, formal education opportunities have limits with regard to equity of access, quality and equality.

Distance education has the inherent potentiality and possibility of providing greater access and taking care of equality of educational opportunities with lower cost. The use of latest communication and information technologies (ICTs) has made it possible for distance education not only to reach larger number of learners and provide need-based education but also to meet the continuing professional development needs of a variety of professions including medicine, computing, engineering and technology, teaching (education) more effectively. This, however, has to be understood within the framework that sufficient care is taken and sufficient investment is made to take care of the quality of materials and processes involved in this non-contiguous learning. Distance education is potentially media-savvy, and several media like print, audio, video, radio, television, counselling at recognised study centres and web centres and the like enrich independent learning at a distance. The methodology judiciously combines these media so as to reap maximum benefit towards effective and active learning. This methodology has been effective in imparting literacy and extension programmes as well as skill-based higher professional development programmes.

While education in general is an investment, distance education facilitates this more by broad-basing the access to higher and further education so needed, especially in a welfare society like ours. When continuing professional development, flexibility in course combination and educational placing are taken into consideration ODE stands out as a singular competitor for the twenty-first century. It has the added advantage of taking all the latest technological developments along with it.

The present mainstream higher education is facing the challenges of access, quality, relevance and resource constraints. ODE, the world over, has been poised to take on these challenges successfully and, at times, has got into both debates and applications for reforming higher and further education *per se*. The most important argument in

favour of ODE is that one can study through this system while being in full-time gainful employment, or unable to pursue higher education because of not getting the admission into conventional institutions or because of other constraints such as lack of adequate time, money, mobility, etc.

**Check Your Progress**

**Note:** a) Write your answer in the space given below.

b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

1) Describe how distance education is considered as investment.

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### 15.3 HUMAN CAPITAL FORMATION AND NATIONAL DEVELOPMENT

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In India, constant efforts of national as well as state planning through various Five Year Plans have led to significant development of physical (infrastructure) and human capital, though the former has grown faster than the latter. Education is an important variable contributing to formation of human capital — at the early childhood through adulthood and at the later stages of life. Education is viewed from the stand point of lifelong learning, making all the available resources in the society a party to learning experiences of individuals.

#### 15.3.1 Education and Human Capital Formation

Capital refers to assets which generate income in future. Physical capital includes equipment, machinery, buildings and the like which have productive capacity. Human capital has both quantitative and qualitative dimensions. Quantitative dimension refers to number of students studying, the proportion of people getting employment or even the number of hours needed to complete a task. Qualitative dimension refers to varieties of skills, extent of knowledge, level of attitude, aptitude and other attributes of human personality that affect the productivity of human beings. Effective use of physical capital depends on the quantity and quality of human capital deployed in performing different tasks in different fields. However, factors like education, health services, on-the-job training, housing and sanitation, modernization of technical education, mobility of workers, and the like determine the quality of human capital and its ability to do productive work.

Education and training are considered to be important part of human capital; higher the level of education/training, higher is the level of quality and capacity of people to generate, preserve and disseminate knowledge and technical know-how. Education and training contribute to better handling of the job or work at hand. It also contributes to inculcation of scientific temper and values so essential for making decisions most appropriate to achieve the set objectives. Further, education and training lead to

enhancement of the ability to innovate which is most essential for modernisation and increase in productivity.

The level and the content of education determine the formation of human capital, i.e. the level and the extent of acquisition of new knowledge, skills, experience and attitude by the workforce. Higher level of education and training contributes to development of managerial, entrepreneurial and administrative skills needed for directing the effective and efficient development of human capital for maximizing productivity. Human capital formation is a continuous and time-consuming process. It takes a longer period of time to produce or train an engineer, doctor, manager or a teacher. This process is influenced by many factors including food, clothing, shelter, educational facilities, and other resources (both individual and social) for pursuing education, and, above all, the attitude and willingness of people to undergo such a long-term exercise. The level of human capital formation through education is indicated by the level of educational attainments (i.e. the ratio of educated persons to total population of successive levels of education), and the ratio of labour force at various levels of occupation to total population.

### **15.3.2 ODE and Human Capital Formation**

ODE assumes greater importance in the context of augmenting human capital formation in order to raise the productivity of physical capital further. The mechanism of ODE, as different from that of classroom-based education of conventional system, involves team work, pre-produced courses, and multimedia instructional delivery. On the one hand, there is the use of print, and audio and video media, and on the other hand, occasional or regular face-to-face contact facilitates, group discussion, individual-based and group projects, and hands-on practices for skill development. However, largely, a good part of teaching and learning takes place at a distance (in both space and time).

ODE helps in the expansion of the delivery of knowledge to a large mass at a lower cost in open and flexible manner. Updating and upgrading of knowledge is possible through continuing professional development programmes offered at a distance. The large scale use of audio-visual and video media (and even teleconferencing) in distance education, notwithstanding which takes care of development of skills through visual demonstrations, there is a need for greater physical participation of tutor/mentors and learners for learning the effective application of skills. Further, ODE is very useful in the effective utilisation of leisure time for part-time learning in the areas or subjects of one's own interest, choice and satisfaction. It also fulfills the pursuit of profitable hobbies linked to learning while earning, and earning while learning. In addition, ODE contributes to educational equality and to the idea and practice of lifelong learning/education, which requires largely non-formal education classroom, and for which community learning resources should be put to maximum use.

### **15.3.3 Production Function in Education/ODE**

Economists employ production function as a theoretical construct to analyse the effectiveness of decisions on resource allocation. The possibilities of production in a firm depend on the relationship between its inputs and outputs, i.e. how maximum output can be achieved from a given set or combination of inputs. Similarly, production function, in an educational system, also refers to the input-output relationship. Educational productivity, which is the concern of all of us, is the present educational output (graduates, educational materials, innovative methods and media, better

management styles, and the like) obtained from the human, financial and material resources deployed in the past. The relation between total educational output and the total educational input at a particular period of time is the *average productivity of education*; and the relation between incremental output resulting from an additional unit of educational input is the *marginal productivity of education*.

The production function in education is, thus, the process which explains the relationship between educational inputs and educational outputs. The inputs in the context of ODE can be: number of teachers and other staff, number of students, size of the institution, the instructional process, teacher-student ratio and interaction, instructional materials, commenting and grading on assignments, academic counselling provided at study centres, and more importantly the private study of the distance learner. What do you think about the outputs? Obviously, one variable that comes to mind is the graduates (those who pass out from the system/institution). Other outputs may include the ability of personnel to apply knowledge and skills in their profession, their vertical professional mobility, their future earning profile, and the like. In distance education, especially, certain activities like course design and development and production take place before students are admitted. Therefore, these outcomes are considered as outputs also. Production function in distance education would then mean the process through which the fixed quantities (and qualities) of inputs are transformed into outputs, in either quick succession (like course materials) or over a period of time (like graduates) which are essential for economic development and socio-cultural transformation. The process through which this transformation takes place is largely invisible in distance education (which though is largely around then and there in contiguous learning situations). Student learning is the centre of all activities in distance education, and this learning process is unknown to many of the people involved (i.e. the teams in this industrial process of distance education).

For programme evaluation, therefore, it becomes essential to look into these invisible *processes* so as to be able to relate these to the economic aspects and draw meaningful conclusions. Though quantitative indicators and data are essential, it is the qualitative data (i.e. quality of learning and quality of services provided to facilitate learning) which are crucial to have deeper insight into and improve upon the processes in future. As you have seen in Unit 14, evaluation on the basis of only accountability perspective, and quantitative data through surveys and questionnaire analysis would be inadequate to explain the phenomenon under investigation. Even costs, when studied in isolation would be misleading and they need to be studied in relation to the process, i.e. quality of students learning and quality of services provided so as to be able to draw meaningful findings and recommendations.

### 15.3.4 Cost-effectiveness and Cost-efficiency

As we have noted in the introduction to this unit, both cost-effectiveness and cost-efficiency are crucial to economic analysis, and programme evaluation in distance education as well. Cost-effectiveness refers to achievement of pre-stipulated objectives within the given amount of physical, human and financial resources, whereas cost-efficiency implies achievement of the given output with reduced cost or increasing the level of output within the given cost. If we are able to produce multimedia learning packages in time, admit students and distribute material in time, organise counselling and continuous evaluation properly, provide guidance to students effectively and as per their satisfaction, conduct examinations and declare results in time (and also award degrees in time) — all within the given level of expenditure and as per the pre- specified

performance indicators for all types of activities — we are supposed to be cost-effective in our operations. On the other hand, if we can achieve greater efficiency and more output within the given time and cost, or if we can achieve the same objectives/output with less time and reduced cost, we are supposed to be cost-efficient.

For evaluating the activities (and allied areas) noted above, separate instruments are required to be administered on a variety of categories of samples. Cost-effectiveness and cost-efficiency are often overlooked while undertaking evaluation exercises; these not only tell us how to economically spend resources or how to make decisions for effective alternative uses, but also indicate the *level of efficiency* of instructional and human resources at our disposal which is so crucial to increasing efficiency and output of the organisation or the system.

### Check Your Progress

**Note:** a) Write your answer in the space given below.

b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

2) Describe briefly the contribution of education to human capital formation.

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## 15.4 DIFFERENT TYPES OF COSTS: FACTORS AND FUNCTIONS

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In the evaluation of educational programmes and the efficiency of the system, it is important to estimate how much money we spend and how economically this is utilised in achieving the programme objectives. The basis on which these analyses can be undertaken is ‘unit-cost’, i.e. cost per student or per any other unit. Before getting to know the various factors affecting the cost of distance education and calculate these costs, let us look at various types of costs used in the economic analysis of distance education.

### 15.4.1 Types of Costs

Cost types that are discussed in education or distance education have been borrowed from both accountancy and economic theory. In accountancy, cost types such as labour cost, marginal cost, capital cost, operating cost, direct cost, indirect cost and the like are used. On the other hand, in the case of cost analysis derived from economic theories, there are the cost types such as fixed cost, variable cost, average cost, marginal cost, total cost, and the like. In the case of cost analysis for education or distance education, the second category of costs is used for cost calculation and comparison across institutions, systems and national boundaries. These cost types are as follows.

## Fixed and Variable Costs

In costing of educational systems, costs can be classified broadly into two types: fixed costs and variable costs. **Fixed costs** are those which do not change in spite of changes in the volume of operation of the system and **variable costs** vary along with the volume of activity or production. Say, for instance, in the campus-based education, capital investment in the construction of buildings involves fixed costs, while costs involved in their maintenance every year refer to variable costs. These variable costs depend on the volume, i.e. number and size of classrooms, lab, library, hostels and the like. Fixed costs are usually one-time investments incurred by educational institutions for all those involved in the system. Further, these costs cannot be assigned to any group of clients or users part by part, though they can be apportioned for various categories of people or activities for calculation of unit cost. Fixed costs are also called as *non-recurring costs*.

While fixed costs are independent of the scale of operations of the institution, variable costs depend on the scale or volume of particular activities. These costs depend on the variable factors in the operation of the system or the process. Expenditure incurred on salary of permanent teachers is a fixed cost (which does not depend upon the number of students enrolled in a particular grade) whereas expenses incurred towards purchase and use of chemicals in the laboratory, for instance, are variable costs which depend on the number of students. These costs are recurring in nature, and are determined by teacher-student ratio, building capacity, nature of courses, and the like. Therefore, it may be said that these are the segments of costs which are affected by the volume of students and other related factors.

In distance education, capital investments are fixed for a longer period of time, so also is the salary of permanent faculty and staff which is paid irrespective of the number of students enrolled. Fixed costs are also extended to such items like development and production of the camera-ready copy of print materials or the first copy of audio-video programmes. These costs are incurred whether one or one hundred thousand students get(s) admitted to a particular programme. But, when these prototype materials are replicated and produced on a mass scale, depending on the number of students, these very items become variable costs.

## Average and Marginal Costs

Broadly, two types of cost are used: total cost and unit cost. Unit cost is used for better understanding and comparisons, within and across institutions. Unit cost may be based on cost per one unit – student, course, programme, credit, etc. Cost per student may refer to cost per student enrolled, or per student continuing the course or per graduate. Usually, in cost comparisons, cost per student enrolled is taken into consideration. There are two ways of measuring the unit cost of students enrolled: average cost, i.e. cost per student enrolled (measured by dividing the total expenditure by the total number of enrolled students), and marginal cost, i.e. cost per an additional student enrolled, other than those enrolled earlier (measured simply by additional costs incurred when one additional student is enrolled).

The relationship between cost and size of the unit determines the variation of the relationship between average and marginal costs. When the enrolment increases, the total cost will obviously increase, but average and marginal costs may behave differently in this situation. This is due to the very nature of fixed and variable costs in educational institutions. Let us see this point through an example.

Let us assume that there are 1000 students admitted to a particular distance education programme, and the institution has incurred Rs.50,000 for the programme (Rs.30,000 fixed cost and Rs.20,000 variable cost). The average total cost would be Rs.50 (total cost divided by total number of students); the average fixed cost would be Rs.30 (total fixed cost divided by total number of students), and the average variable cost would be Rs.20 (total variable cost divided by total number of students). Let us assume further that the institution or department/school concerned incurred an additional total cost of Rs.200 for enrolling an additional student. This, then, affects all types of costs: the total cost increases to Rs.50,200, out of which Rs.30,000 is fixed cost and Rs.20,200 is variable cost. However, the average costs would show significant variations: in this case, the average fixed cost would be Rs.29.97; average variable cost Rs.20.18; and average total cost would be Rs.50.15; while the marginal cost remains at Rs.200. You will notice that while there is a decline in average fixed cost and the average total cost, the average variable cost has increased. Therefore, the change in marginal costs depends on whether the major chunk of cost is fixed or variable, and whether resources are utilised to the maximum and additional students can be enrolled and accommodated within the existing cost without incurring additional expenditure.

### 15.4.2 Factors Affecting Cost

The operation of any distance teaching institution (DTI) involves various cost centres and cost items which can be either variable cost or fixed cost. The major heads of operation include course design and development (both print and non-print packages), publicity and admission, material printing and distribution, student support services, and evaluation and certification. For the operation of different sub-systems in the institution a major variable which takes away about 40-50% of total expenditure is salary. (This, though significant, has to be compared with the campus-based system where salary shares about 95% of the total recurring expenditure). The major factors which affect the cost of ODE include the following.

#### i) Number of Courses on Offer

The larger the number of courses offered by a DTI would mean higher the design and development the bigger the costs. The course materials may include print, audio, video and allied materials, and the development of these involves fixed costs irrespective of the number of students. Cost due to this factor increases especially when students are provided with wider choice of optional courses. Costs also encompass implementation of the programme, the evaluation, and course maintenance and revision.

#### ii) Process of Course Development

As you may already know, the course team approach to course design and development followed at the British Open University has resulted in the involvement of huge expenditure in comparison with other approaches to course development, though it has contributed high quality course materials. The processes involved, time taken, number of people involved, their level of expertise and specialization, and the like affect the total expenditure. There are other methods like individualised training and development of courses by individuals, training for and development of courses at workshops, and so on which involve less resources than the course team approach does. Further, decisions like development of fresh courses or adoption of already developed courses, translation of courses into other languages or fresh development of courses on same topic in other languages, and use of full-time or part-time faculty affect the total and the unit costs of the programme and institution. Since cost of

human beings involved in course development is quite high it is the use of part-time faculty which reduces the total cost.

### **iii) Use of Faculty**

If a DTI uses the services and expertise of part-time faculty on a large scale, as is the case with the British Open University and the Indira Gandhi National Open University, the total and unit cost get reduced considerably. The full-time faculty recruited on a permanent basis for the development of a fresh academic programme leads to the increase of the cost of the programme but the faculty contributes also to its maintenance and take care of future unit cost of the programme (in the absence of any major course development work of the permanent faculty). Many DTIs have been able to reduce the total cost and achieve economy of scale by hiring the services of experts on part-time and consultancy basis. Alternatively, as in the case of Australian Universities, the full-time campus-based teachers also teach distance students, and thereby contribute to economise the recurring expenses.

### **iv) Student Enrolment**

If the institution considers student enrolment as an outcome, increasing enrolment, though increases variable cost, reduces the unit cost (per student cost), since the fixed cost gets distributed over an increasing number of students. Because of this reason, a DTI is able to enhance the quality of course design and development processes (including higher payment to course writers, editors, instructional designers, media specialists) and thereby enhance the quality of course packages at an extra cost since this gets distributed over an increasing number of students. On the other hand, it becomes difficult to invest more on these processes, if it becomes clear at the beginning that only a few (a selected group of) students would take up the programme, once on offer. Therefore, to reduce the overall programme cost, either the enrolment has to be increased or there has to be an increase in student fees. When student enrolment is low, it leads to lower variable cost, but on the other hand, in a situation of increasing student enrolment the economy of scale is possible if some of the expenditure heads under the variable costs are shifted to fixed costs.

### **v) Choice of Instructional Media**

Most of the DTIs in India and presumably in other countries use only the print media, in the form of self-instructional print materials, for distance teaching-learning. A few like the Central Radio and Television University of China and the Athabasca University of Canada use largely non-print media. Usually DTIs have a media-mix (the multimedia package) with sophisticated media forming either supplementary or complementary component. Use of sophisticated electronic media like teleconferencing, and interactive video increases the fixed costs. Within this framework, if the media-based courses are considered as products, large scale use of media would increase fixed cost; and if students are considered as products, large enrolment of students would reduce the unit and the marginal costs. Distance education then, becomes much cheaper than campus-based education, and therefore affordable.

## **15.4.3 Cost Functions**

In sub-section 15.4.1, you have seen that fixed and variable costs together comprise the total cost. The fixed costs do not vary even when the volumes of activities vary, except when significant changes in the scale of activities occur. On the other hand, variable costs are directly related to the scale of activity, and they increase or decrease accordingly. The cost function in the conventional face-to-face education is highly

influenced by variable costs depending on the number of students. In distance education, the teacher is replaced by a range of media used for mediated communication, and this replacement changes the cost function in distance education. Significant amount of expenditure is incurred on items and processes before the students are admitted. These include preparation of self-instructional materials like print, audio, video, radio and television programmes, and printing or production of certain portions of these materials. Further, printing or production cost depends on the actual number of students enrolled for a particular programme/course.

The cost function in distance education in its simplest form is given as follows:

$$TC = F + VN$$

Where,

TC = Total Cost

F = Fixed cost

V = Variable cost

N = number of units of output (students/student hours)

In case of a linear cost function (with regard to total cost), average cost is calculated by simply dividing the fixed cost by output, and adding the variable cost to it. Thus, the average cost is:

$$AC = F/N + V$$

Where,

AC = Average Cost

F = Fixed cost

N = Number of units of output

V = Variable cost

In distance education, the number of students enrolled and the number of courses produced largely determine the total cost. Thus, the total cost may be re-written as:

$$TC = a + bx + cy$$

Where,

TC = Total Cost

a = fixed cost

b = average cost per course

c = average cost per student

x = number of courses

y = number of students

Average cost per student and per course can be obtained by dividing the total cost allocated to students and courses by the actual number of students and of courses respectively. (All the courses printed are not necessarily new ones). The courses may comprise both the ongoing courses which are simply maintained and the new courses which are developed for the first time. The cost function, in this case, gets extended further to include both the aspects:

$$TC = a + bC_n + cC_m + dS_n$$

Where,

TC = total cost

a = fixed cost

b = coefficient of the number of new courses

C<sub>n</sub> = number of new courses

c = coefficient of the number of maintained courses

C<sub>m</sub> = number of maintained courses

d = coefficient of the number of new students

S<sub>n</sub> = number of students

The coefficients of new courses, maintained courses and students can be obtained by dividing the total costs allocated to these three heads by the number of new courses to be introduced in that year, the number of courses to be maintained in that year and the actual number of students respectively.

The cost function changes when the dependence of costs on output or volume of activity is taken into consideration. Four systems are important and common to any distance teaching institution, and almost all activities can be categorised into any of these systems. The four systems which constitute the total system of distance education include the following:

- production system (p)
- instructional system (i)
- evaluation system (e)
- administrative system (a)

If the total cost consists of total fixed and total variable costs, the equation would be:

$$TC = TF + TV$$

Then, the total fixed cost would be:

$$TF = TFp + TFi + TFe + TFa$$

Where,       $TFp$  = Total fixed cost of the production system  
                  $TFi$  = Total fixed cost of the instructional system  
                  $TFe$  = Total fixed cost of the evaluation system  
                  $TFa$  = Total fixed cost of the administrative system

The total variable cost would be:

$$TV = TVp + TVi + TVe + TVa$$

Where,       $TVp$  = Total variable cost of the production system  
                  $TVi$  = Total variable cost of the instructional system  
                  $TVe$  = Total variable cost of the evaluation system  
                  $TVa$  = Total variable cost of the administrative system

The total cost, therefore, is the summation of the total fixed and total variable costs for the four systems.

$$TC = (TFp + TFi + TFe + TFa) + (TVp + TVi + TVe + TVa)$$

The final calculation of the cost would depend upon the kind of production, instruction, including media-mix, evaluation and administration involved in any distance teaching institution.

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## 15.5 ECONOMIES OF SCALE IN DISTANCE EDUCATION

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Besides micro areas, some macro issues related to decision-making are also considered with regard to evaluation of a programme. “Economies of scale” is one of the most important indicators of the viability of distance education programmes.

Dutt (1988), in a study on the cost of conventional campus-based and correspondence education programmes in Indian universities, has pointed out that to be economically

viable a university has to have at least ten thousand correspondence education students. Most of the university correspondence courses institutes in India do not fulfill this criterion. Let's examine this in the context of IGNOU, and see to what extent the university can attain economies of scale.

The following assumptions are made for working out the optimum size of enrolment for which the University can reap the benefit of the economies of scale. The data are based on the study of Pillai and Naidu (1991).

- Whatever be the size of enrolment, the total fixed cost (both direct and indirect) would remain fixed.
- Certain proportion of semi-variable costs (viz. staff salary) has been incurred in the past, irrespective of the present decision of enrolling either large or small numbers of students. For instance, the University had incurred an expenditure of Rs.12508 thousand on the salary of the staff of Divisions like Admission Division, Evaluation Division, the then Communication Division, Regional Services Division, the then Material Distribution Division, etc., and on orientation programmes for the year 1989-90, with 45,859 weighted 32-credit equivalent students. Therefore, this expenditure may be considered as fixed up to an enrolment of 45,859 weighted full-time equivalent students; and further expenditure incurred on the additionally enrolled students would be considered as the marginal cost.

For an additional enrolment, beyond 45,859 weighted full-time equivalent students in the year 1989-90, the total variable cost of Rs.597.07 per student has to be added to the total cost.

The total cost, average cost and marginal cost for student enrolment ranging from 5,000 to 3,00,000 are given in Table 15.1.

**Table 15.1: Total, average and marginal costs for different levels of student-enrolment**

Student enrolment	Total Cost (Rs. in '000s)	Average cost (Rs.)	Marginal Cost (Rs.)
5,000	5,95,22	11,904.47	597.07
10,000	6,25,08	6,250.77	597.07
20,000	6,84,78	3,423.92	597.07
30,000	7,44,49	2,481.64	597.07
40,000	8,04,20	2,010.50	597.07
46,000	8,40,02	1,826.14	597.07
50,000	8,75,20	1,750.40	869.82
60,000	9,62,18	1,603.64	869.82
70,000	10,49,16	1,498.81	869.82
80,000	11,36,15	1,420.18	869.82
90,000	12,23,13	1,359.03	869.82
1,00,000	13,10,11	1,310.11	869.82
2,00,000	21,79,93	1,089.97	869.82
3,00,000	30,49,75	1,016.58	869.82

You may derive the following conclusions from Table 15.1:

- The total cost rises with increase in student enrolment.
- The average cost declines with increase in student enrolment, and gets stabilised at the enrolment size of 70-80 thousand students.
- The marginal cost remains constant up to about the mid-point of the above mentioned size, i.e., up to about 40-50 thousand students (i.e. 45,859 students in our case for the year 1989-90), beyond which it increases and gets stabilised with an enrolment of 50,000 students.

The total cost increases at a decreasing rate due to decrease in the average cost and stabilization of the marginal cost. The marginal cost got stabilised at student enrolment of around 50,000. The University (i.e. IGNOU) can reap economies of scale up to an enrolment of 80,000 students. However, since marginal cost is still lower than the average cost, further economies of scale are possible up to an enrolment of even 3,00,000 students.

At this stage, it is imperative to take note of the cost functions of conventional as well as distance education as have been shown in Fig.15.1 and Fig. 15.2.

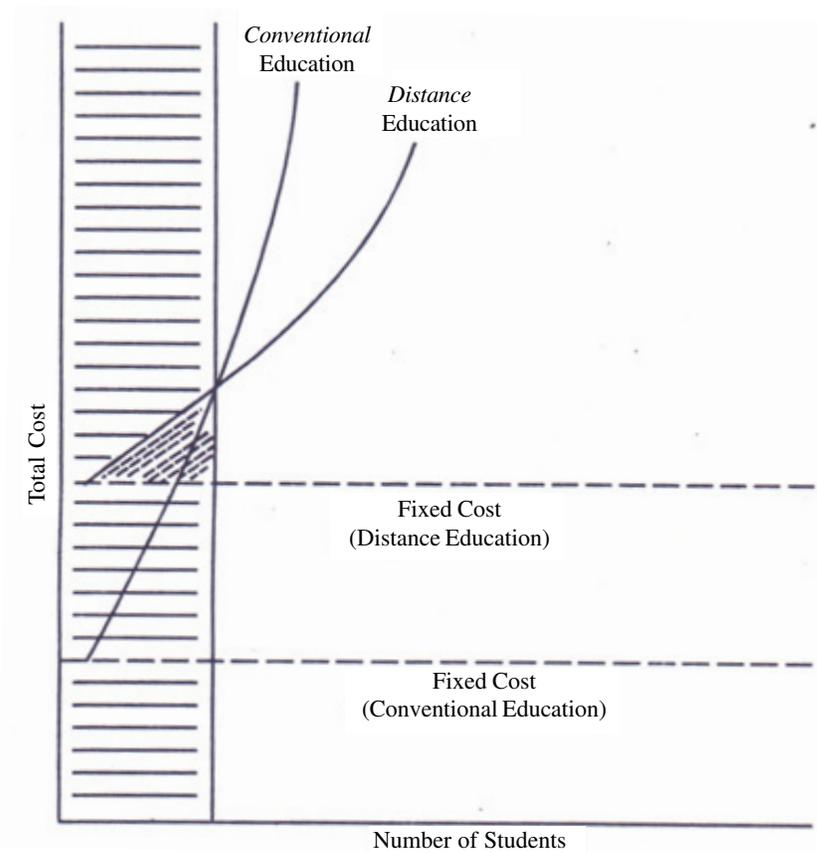


Fig. 15.1: Cost Functions (total cost) of the conventional and distance education systems

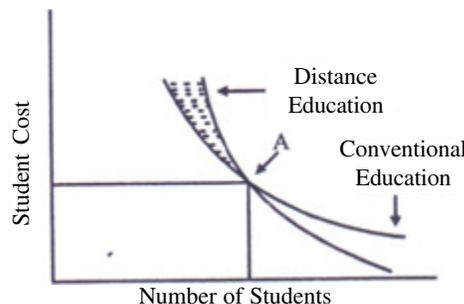


Fig. 15.2: Cost functions (student cost) of the conventional and distance education systems

You will find from Fig. 15.1 that though the fixed cost of distance education is higher than that of conventional education, the cost of distance education increases at a far more decreasing rate in comparison to that of conventional education. This further implies that the total cost of conventional education does not decrease much because of the limits to the increase in student enrolment in campus-based colleges and universities. On the other hand, there is an increase in the total cost of distance education at a progressively decreasing rate with increase in every student enrolment; and since the distance teaching institution (in this case, the IGNOU) can enrol an increasing number of students (which can certainly be higher than what a conventional college or university can), there is a decreasing trend in the increase of the total cost due to decrease in the average cost per student and the stabilisation of the marginal cost per student.

Now, let's look into the function of student cost in both the conventional and the distance education system (see Fig. 15.2).

Fig. 15.2 shows that at low student enrolment, the student cost in distance education is higher than that in the conventional education. But, this trend gets reversed at point A, where the student cost and student enrolment are the same for both the conventional and the distance education systems. Subsequently, with the increase in student enrolment in the case of distance education, the student cost (i.e., cost per student, or say the unit cost) keeps falling. You have seen in Table 15.1 that with the decrease in average student cost, the distance teaching institution could reap economies of scale up to an enrolment of even 300,000 students.

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## 15.6 LET US SUM UP

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In this Unit we have discussed: a) education (and distance education) as investment and consumption, and b) the contribution of education (and distance education) to human capital formation, and to the quality of the workforce. Distance education with its inherent flexibility and capacity of greater access can reach large number of students at a low cost, while maintaining high quality. Use of communication and information technologies facilitates this process. While evaluating distance education programmes, costing becomes an important consideration. In our discussion on how to calculate costs based on varieties of functional sub-systems of the DE system, we noted that cost of distance education is about one-fifth of that of the mainstream formal education, and DE has the potentiality of achieving economies of scale when it reaches a large mass of student enrolment, though there is a limit to the number. After it reaches certain level, marginal cost becomes higher.

Cost-effectiveness and cost-efficiency are two indicators which help us evaluate the programme effectiveness from the point of view of cost. The techniques of calculation of unit costs shall help us to have a comprehensive evaluation of an academic programme, since we shall be in a position to ascertain the effectiveness of the programme (and its various aspects) *in relation to the cost of the programme and its various aspects*. Thus, programme evaluation acquires more significance in our context when the economic aspects of distance education programmes are studied and evaluated with a comprehensive framework of evaluation.

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## 15.7 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS

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- 1) Education (especially that which provides skills for immediate use) is considered as investment in human beings; and it is a life-time investment. Like education, distance education (which is one of the modes of education) is also investment in human beings. Distance education provides greater access and equality of educational opportunity to acquire quality education at lower costs. It also caters to the continuing educational and professional development needs of adults.
- 2) For effective utilisation of physical capital, there is a need for quality human capital; and further, human capital is crucial to increasing productivity. Formation of human capital refers largely to qualitative dimensions, and individuals going through the processes of education and training acquire knowledge and skills, and develop attitudes which affect their productivity. Education itself is human capital; higher the education higher is the quality and capacity to generate and apply knowledge and skills to enhance productivity.

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## 15.8 REFERENCES

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Dutt, K. (1988). “Distance Education versus Traditional Higher Education: A Cost Comparison”, in B. N. Koul, et. al. (eds.), *Studies in Distance Education*. AIU and IGNOU, New Delhi.

Freeman, A. M. (2002). Environmental Policy Since Earth Day I: What Have We Gained? *Journal of Economic Perspectives*, Vol.16, No.1, pp.125-146.

Kruss, G., McGrath, S., Petersen, I., and Gastrow, M. (2015). Higher education and economic development: The importance of building technological capabilities. *International Journal of Educational Development*, Vol.43, July, pp.22-31, <https://www.elsevier.com/atlas/story/people/higher-education-is-key-to-economic-development> — Retrieved on 22-03-2017.

Lundvall, B. (2011). Notes on innovation systems and economic development, *Innovation and Development*, Vol.1, No.1, pp.25-38.

McMahon, W. W. (1999). *Education and Development: Measuring the Social Benefits*. New York: Oxford University Press.

Nelson, R. R., and Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts.

Pillai, C. R., and Naidu, C. G. (1991). *Cost Analysis of Distance Education*, IGNOU, New Delhi.

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## 15.9 UNIT END EXERCISES

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You may write brief notes or full-length answers to the questions given here in your own interest. Such notes or answers might help you during your preparation for term-end examination.

## Unit End Questions

- 1) Explain how (distance) education is both consumption and investment. (500 words).
- 2) How does education and ODE contribute to human capital formation and national development? (1000 words).
- 3) How do you distinguish cost-effectiveness and cost-efficiency? (250 words).
- 4) Discuss different types of costs and the factors affecting them. (1000 words).
- 5) Write a short note on cost functions in ODE. (500 words).
- 6) What do you understand by economies of scale in distance education? (500 words).



### Questions for Critical Reflection

- 1) Explain the cost function with special reference to the organization in which you are working.

### Activity



Identify different types of costs in respect of your school. Based on them try to draw the economies of scale for your organisation. (Do it on separate sheet(s) of paper).

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# UNIT 16 RESEARCH IN ODE

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## Structure

- 16.0 Introduction
- 16.1 Objectives
- 16.2 Contribution to the Body of Knowledge
- 16.3 Research Trends and Areas
  - 16.3.1 Research Trends
  - 16.3.2 Research Areas
- 16.4 Systemic Research
  - 16.4.1 Areas and Concerns
- 16.5 Action Research
  - 16.5.1 Concept
  - 16.5.2 Process
  - 16.5.3 Principles
  - 16.5.4 When is it used?
  - 16.5.5 Role of the Action Researcher
  - 16.5.6 Types
- 16.6 Educational Action Research
  - 16.6.1 Models
  - 16.6.2 Ethical Considerations
  - 16.6.3 Advantages
  - 16.6.4 Some Case Studies from ODL
- 16.7 Let Us Sum Up
- 16.8 Answers to ‘Check Your Progress’ Questions
- 16.9 References
- 16.10 Unit End Exercises

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## 16.0 INTRODUCTION

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From Blocks 1, 2 and 3 you might have got fair understanding of theory and practice of ODL at national and global levels. In Unit-14, we discussed quality assurance in ODE with emphasis on how programme evaluation in distance education helps as a tool in quality assurance. Research is another important means for sustainability through quality improvement. Research in ODE indicates the current trends, possible innovations in theory and practice and new directions in the field.

In this unit, we will discuss research contribution to theory and practice of distance education and overall development of the ODE system at large. You will also get to know the scope, potential and growing research opportunities for innovation, reflection and action for improved performance of the system of ODE.

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## 16.1 OBJECTIVES

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After going through this Unit, you should be able to:

- Appreciate the contribution of research to the body of knowledge in ODE;

- Identify the broad current trends and areas of research in ODE;
- Discuss the role of systemic research in development of ODE system; and
- Apply action research in improving the teaching-learning and other practices in ODE.

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## 16.2 CONTRIBUTION TO THE BODY OF KNOWLEDGE

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Like in any other field, studies in distance education did make ‘contribution to the body of knowledge’. Before we discuss it further, let us first understand what ‘a body of knowledge’ means or constitutes.

A body of knowledge is the complete set of concepts, terms and activities that make up a professional domain, as defined by the relevant learned society or professional association. It is a type of knowledge representation by any knowledge organization. It is the accepted ontology for a specific domain and a stepping stone to unifying community. It is the structured knowledge that is used by members of a discipline to guide their practice or work.” ([https://en.wikipedia.org/wiki/Body\\_of\\_knowledge](https://en.wikipedia.org/wiki/Body_of_knowledge)). In any field, such body of knowledge becomes possible by way of collaboration through networking and partnership as well as building research capacity and disseminating research findings.

In this section, we will attempt to make you understand how such knowledge contribution and representation in distance education becomes accepted ontology to foster further continuing contribution to it.

### a) Collaboration through Networking and Partnership

Research collaboration means the working together of researchers to achieve the common goal of generating new scientific knowledge while partnership means the existence of formalized bodies established by two or more autonomous partners, none of whom is under contract to another, with the purpose of attaining substantive or symbolic goals that no partner could achieve independently. Collaboration and partnership occurs at various levels including individuals, groups, departments, institutions, sectors and countries.

What is the need for research collaboration and partnership? Working in partnership with other organizations / institutions is fundamental to the way in which we can satisfy our strategic aims and contribute to regional economic growth. Collaboration is required and is greatly promoted in order to remove the barriers between and among universities, governments, and private sectors at national and international levels. The main motives for collaboration are: to promote the growth of the knowledge economy, to make a shift towards a mass higher education system and lifelong learning, and to strengthen the efforts for economic and social contribution of research. Education in general and ODE in particular have been doing a lot and have much to do in this regard.

You need to know in what forms is research collaboration and partnership possible? In the present educational set up researchers understand, the importance of collaboration and partnership with other national and international universities. Collaboration at its basic level occurs when researchers informally enter into consultations, participate in site visits, giving advice and participate in conferences, seminars, workshops and other fora. Other collaborative forms include creating

complementary research agendas, joint research projects, sharing of research facilities, sharing of infrastructure, promoting faculty exchange programmes, allowing access to research data and discoveries and linking of research centers and virtual networks. National and international research collaboration can take different forms such as development of collaborative networks for information exchange, funding, partnership and facilities for scholarship and research and professional development through exchanges.

A number of factors promote collaboration and partnership. The growing complexity and cost of research, especially in disciplines requiring specialized instrumentation or facilities, tend to make collaboration an imperative. Simultaneously interdisciplinary and multidisciplinary research has gained greater significance, as public expectations about the outcome of research look to more holistic and global approaches to research challenges. Collaborative ventures deliver mutual benefit for both partners in areas such as research and education. Collaborative partnerships often bring together individuals with very different knowledge bases, experiences, attitudes, and assumptions. Each partner possesses unique knowledge and skills that can benefit the others. As partners organize, plan strategies, and move forward, they create learning opportunities for themselves and also others. Developing countries make use of the expertise, equipment and financial resources of developed country partners while underdeveloped countries can get benefited from developing and developed countries.

In this context, you can revisit Unit-4 of Block-1 that provides you comprehensive picture of collaborations and partnerships among different institutions, associations and agencies at national, regional and global levels.

### **b) Building Research Capacity and Disseminating Research Findings**

For any higher education institutions including ODEIs, research plays a major role in the systematic development of knowledge. One of the primary functions of higher education institutions is to advance, create and disseminate knowledge through research activities. An innovation in mobilization of resources is possible through research. Though there is tremendous increase in research activities still there is lack in building research capacity in India. Research capacity building is a process of individual and institutional development to acquire more skills and abilities to conduct research effectively and efficiently and to sustain further research through effective utilization of the results of research already done.

Communicating findings of research serve as a window through which information is reached to the public through printed form and its electronic form in websites. When researchers share their information, it leads to wide sharing of findings among scholars, professionals and policy-makers. Such sharing helps to set better standards for potential researchers in the field.

A number of attempts have been made by the members of ODE to organize the body of knowledge as well as to use the organized body of knowledge to guide their practice. Some of the prominent studies include: Scriven (1991); Panda (1992); Jegede (1994); Koble and Bunker (1997); Mishra (1997); Berge and Mrozowski (2001); Rourke and Szabo (2002); Lee, Driscoll, and Nelson (2004); and Richter, Backer and Vogt (2009); Zawacki-Ritcher (2009); Ritzhaupt, Stewart, Smith and Barron (2010); Yuen, Jing and Chun (2016); and Zawacki-Richter and Naidu (2016). However, remarkable contribution made to organize the body of knowledge can be noticed in Zawacki-Ritcher (2009) in a follow-up investigation of its kind to help organize research

in open and distance learning. In his investigation, Zawacki sought to: (i) develop a categorization of research areas in distance education; (ii) identify the most important research areas in distance education; and (iii) identify the most neglected research areas in distance education. Based on an extensive literature review till then and by using a Delphi study, three broad research levels — macro, meso and micro — with 15 research areas were derived to organize the body of knowledge in distance education. Zawacki-Richter & Anderson (2014) note that the Delphi study has initiated fruitful discussions about the structure of research areas in distance education and subsequent literature reviews have referred to it and built upon this framework. They highlight the example of a research consortium of some universities in Australia and New Zealand established and funded by the Australian government which developed a research program for 2011–2021 with research themes categorized by the main research levels — macro, meso and micro — and by the 15 research areas identified in the Delphi study.

In section 16.3 we attempt to provide an improved understanding of contribution to the body of knowledge in ODE by focusing on the specific research trends and areas.

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## 16.3 RESEARCH TRENDS AND AREAS

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Research in open, flexible and distance education is relatively young, which started in 1960s. Initially, research grew out of the practice of distance teaching and learning in the open and flexible manner. A lot of this research was predominantly descriptive in nature and much of it was often criticized for being atheoretical, unsystematic and poorly designed (e.g. Moore, 1985). However, Peters (2014, p.xii), one of the pioneers of the theory and practice of distance education, observed that starting in the 1960s remarkable progress was made in distance education research and scholarship. Over these years, the literature of distance education has matured and improved substantially, contributing to the professionalization of the field.

### 16.3.1 Research Trends

In the early 1950s, despite the efforts of leaders in the field, correspondence study struggled to gain acceptance, and it was still seen as suspect by academics. During this period, research helped to further the acceptance and extension of correspondence study. During the 1960s and 1970s, a number of alternatives to traditional higher education developed. In the late 1970s and early 1980s, cable and satellite television came into use as a delivery medium for distance education courses (Wright, 1991, mentioned in Bizhan Nasseh). During this period the research studies ranged from atheoretical comparative studies to theory-based research studies. In the 1980s, the reporting of the use of ‘audiovisual aids’ indicated a ‘gadget approach’ to the use of technologies. With increasing application of ICTs to ODL the ODL theory and practices have evolved at an unprecedented pace thus gained momentum. The use of Internet and websites, e-learning and open educational resources (OER) in transforming information have found a major place in the research trend these days. Over the years there has been a significant move towards integrating media into the learning experiences to enrich learning materials. Currently, introduction of the e-learning and on-line learning has become more of a subject for research in the ODL system. While m-learning is becoming important internationally, and the use of SMS, podcast, etc., form part of the present acceptable research landscape. In the late 1990s and early 2000s, a variety of ICTs were available to individual learners and institutions to use. Thus, you can visualize that with the change of technology, the focus of research in distance

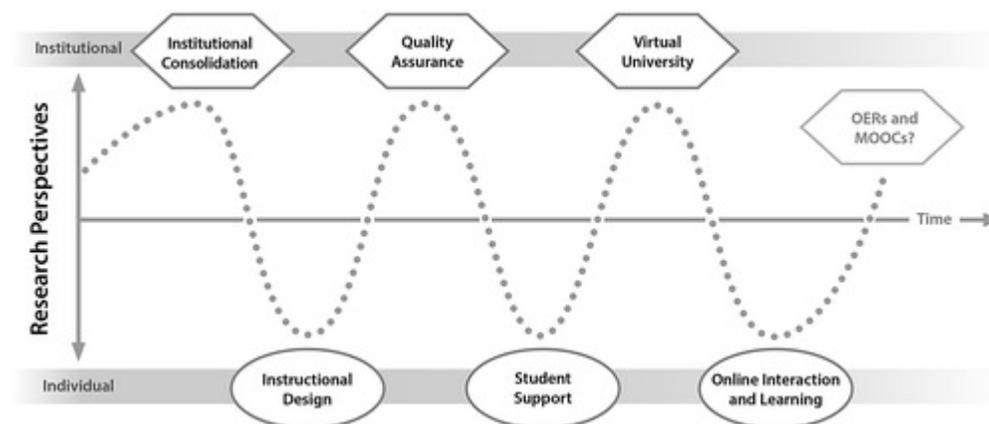
education has shifted towards innovative methods of designing, preparing and delivering self-learning inputs which boosted the development of the ODL, system.

By analyzing the titles and abstracts of articles published in *Distance Education* over a period of 35 years from 1980-2014, Zawacki-Richter and Naidu (2016) found the broad emerging themes over the seven five-year time periods starting from 1980-1984 to 2010-2014. These themes included: professionalization and institutional consolidation; instructional design and educational technology; quality assurance in distance education; student support and early stages of online learning; the emergence of the virtual university; collaborative learning and online interaction patterns; and interactive learning, MOOCs and OERs. The relevant time periods and themes that emerged are presented in Table 16.1.

**Table 16.1: Research Trends in Distance Education**

5-Year Period	Emerging theme
1980–1984	Professionalization and institutional consolidation
1985–1989	Instructional design and educational technology
1990–1994	Quality assurance in distance education
1995–1999	Student support and early stages of online learning
2000–2004	The emergence of the virtual university
2005–2009	Collaborative learning and online interaction patterns
2010–2014	Interactive learning, MOOCs and OERs

Nevertheless, the mapping of the contents of *Distance Education* (a major journal in the field) over the first 35 years of its existence offered them important insights into the development and progress of research and scholarship in the field. As they say, the application of software Leximancer™ for interrogating a large body of text such as this has been instrumental in revealing these insights. Further, from the above trends of seven five-year periods, they observed three waves of alternating institutional and individual research perspectives as shown in Figure 16.1.



**Figure 16.1: Alternating institutional and individual research perspectives over time**  
 Source: Zawacki-Richter and Naidu. (2016).

From Fig. 16.1 we can notice three alternative waves (of themes) of research with OERs and MOOCs as the current emerging area.

Let us now have a closer look at the specific areas of research in distance education.

### 16.3.2 Research Areas

Over the years a number of reviews of distance education literature have been published (See Scriven, 1991; Panda, 1992; Jegede, 1994; Koble and Bunker, 1997; Mishra, 1997; Berge and Mrozowski, 2001; Rourke and Szabo, 2002; Lee, Driscoll, and Nelson, 2004; Richter, Backer and Vogt, 2009; and Ritzhaupt, Stewart, Smith and Barron, 2010), in which the respective authors developed categorization schemes of research areas that they mapped based the articles in the selected journal(s) under review. During the 20th and 21st centuries these studies provided classifications or categorization of research areas in distance education. Fact is that, most of the classifications included many common areas, but within a range of research areas, and also with some new areas across these studies attributable to changing and evolving practices of ODL. Further, there has been varying focus on different areas of research in different journals over different time periods.

In contrast to the listings of various research themes or areas described in the above studies, Zawacki-Richter (2009) attempted to structure the broad and interdisciplinary research areas in the field of distance education based on a systematic analysis of expert responses in a Delphi study, which resulted in comprehensive categorization scheme of 15 areas under three levels as follows.

- 1) Macro-level: Distance education systems and theories
  - Access, equity, and ethics
  - Globalization of education and cross-cultural aspects
  - Distance teaching systems and institutions
  - Theories and models
  - Research methods in distance education and knowledge transfer
- 2) Meso-level: Management, organization, and technology
  - Management and organization
  - Costs and benefits
  - Educational technology
  - Innovation and change
  - Professional development and faculty support
  - Learner support services
  - Quality assurance
- 3) Micro-level: Teaching and learning in distance education
  - Instructional design
  - Interaction and communication in learning communities
  - Learner characteristics

Also, as Zawacki-Richter (2009) points out, a clear and non-ambiguous separation of research areas into categories is not easy in all cases. Some areas are considered on different levels. Cross-sectional fields are concerned with issues that refer to quality assurance and evaluation, educational technologies, and cross-cultural aspects.

Subsequently, while some studies such as Yuen, Jing and Chun (2016) could find the varying focus of research in the areas across the levels as categorized by Zawacki-

Ritcher (2009) others such as Zawacki-Richter and Naidu (2016) could find the shifting, changing or alternating waves of research within and across the same levels and areas of research as categorized by Zawacki-Ritcher (2009).

Nevertheless, Paul and Ubwa (2013), for instance, explored how solar energy can be used to power distance learning centers in the rural areas of Tanzania. Keeping such development, among others in view, the African Virtual University (AVU) adopted and adapted the comprehensive research framework having 15 research areas (See Zawacki-Ritcher, 2009) for the benefit of its research community. The term open, distance and eLearning (ODeL) has been adopted and an additional research area (infrastructure) has been added at the meso level in the framework to capture the philosophical, foundational and the increasingly technological aspects of the field (<http://www.avu.org/avuweb/en/open-distance-e-learning-odel-research-framework/>). Table 16.2 is an overview of the research areas, sixteen in total, organized into the 3 levels — macro, meso and micro — and is used by the African Virtual University (AVU) for the benefit of its research community.

**Table 16.2: Research Areas by Level**

<b>Macro-level: ODeL Systems &amp; Theories</b>	<b>Meso-level: Management, Organization &amp; Technology</b>	<b>Micro-level: Teaching &amp; Learning</b>
1. Access, equity, and ethics	6. Management and organization	14. Instructional or learning design
2. Globalization of education and cross-cultural aspects	7. Costs and benefits	15. Interaction and communication in learning communities
3. <i>Open, distance and eLearning systems and institutions</i>	8. <i>Infrastructure</i>	16. Learner characteristics
4. Theories and models	9. Educational technology	
5. <i>Research methods in ODeL and knowledge transfer</i>	10. Innovation and change	
	11. Professional development & faculty support	
	12. Learner support services	
	13. Quality assurance	

**Source:** <http://www.avu.org/avuweb/en/open-distance-e-learning-odel-research-framework/>

In Table 16.2 above, you can notice that while two areas at points 3 and 5 are adapted from categorization of Zawacki-Richter (2009), an area “Infrastructure” at point 8 has been added to it under meso level, making the categorization framework more comprehensive till date.

The above framework of African Virtual University (AVU) is particularly considered helpful to the research community for a number of reasons including (<http://www.avu.org/avuweb/en/open-distance-e-learning-odel-research-framework/>):

- identify gaps, priority areas and explore potential research directions;
- calling for papers for journal articles including themes for special issues;
- helping to highlight relationship and draw connections across levels, research areas and issues;
- engaging with further developed and refined research; and
- providing opportunities for collaboration.

**Check Your Progress**

**Note:** a) Write you answer in the space given below.  
 b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

1) Describe level-wise categorization of research areas in open and distance education.

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## 16.4 SYSTEMIC RESEARCH

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In section 16.3 we have focused on research in the field of ODE. ODE has become a matter of increasing interest in higher education and is seen by many as the opportunity for systemic change in higher education. You know that ODE system is thus an emerging system as compared to conventional education system. ODE system is very much dependent upon research initiatives or activities, both systemic and applied, by ODE institutions or practitioners, other individuals and their groups for its growth and development. Let us try to understand what systemic research is.

The term ‘systemic’ means system-wide, affecting or relating to a group or system (such as a body, economy or market) as a whole, instead of its individual members or parts. Systemic is not to be confused with ‘systematic’ which means ‘methodical.’ (<http://www.businessdictionary.com/definition/systemic.html>). With this clarity of the term “systemic” let us look at systemic research in ODE.

### 16.4.1 Areas and Concerns

Systemic research promotes the body of systemic knowledge and thus development ODE system. As we know, advancements in Information and communication technologies (ICTs) made the ODE system increasingly learner-centered, open and flexible. The systemic research pertains to philosophy, nature, process and practices of ODE system. You have seen in section 16.3 above that a lot of research has been done in ODE globally covering different themes and areas. However, the institutional culture and focus of ODE institutions in India is not very encouraging in research front since research is either not given due focus or it is not considered the primary activity of these institutions. As a result, most of ODE institutions in India still engage more in developing academic programmes and contributing to the national goal of increasing

gross enrollment ratio (GER) in higher education than in research. Consequently, we find comparatively less research in ODE system than that in conventional system of higher education.

There is growing need to take up more and more systemic studies in ODE focusing on various aspects of institutional operations for bringing in improvements in their practices.

- i) As you know, a wide variety of personnel is associated with planning, implementation, and monitoring and evaluation of distance education programmes. Given the complex industrial nature of the ODE system, people with various specialized skills are required and accordingly functionaries such as teachers, media producers, academic counselors, and others are involved in different sub-systems and at different levels of the system. Sound studies on their needs, constraints, problems and support requirements will give adequate feedback for improvement of their functioning and of the system as a whole.
- ii) Growing enrolment in ODEs indicate that there is tremendous demand and scope for enhancing its reach and benefits to students and other stakeholders by exploring and exploiting new ways of marketing and branding of ODL system through research inputs.
- iii) Production of skilled people for global markets is another emerging phenomenon. There is growing emphasis on skill development by various governments across the world in the form of skill development missions. Role, potential and effectiveness of the ODE system in this regard need to be explored and exploited through research inputs.
- iv) There is growing concern about issues of quantity vs. quality in ODE. Current emphasis on quantity has been adversely impacting the quality of ODE. Studies on issues of quantity and quality will have promising impact on the system.
- v) ODE system needs to look into deteriorating value system among the staff and the students, particularly those in the developing countries. There is a strong need for research inputs to improve ODE system for value development among them for enhancing the credibility of the system.
- vi) Research related to students' dropout, retention and successful completion of academic programmes will give an insight into the effectiveness and efficiency of the programme implementation and of the system at large. These areas require greater attentions as very little research is done in this regard.
- vii) Students' characteristics, study patterns and ability to adapt to the changing circumstances (practices) of ODE system have determining effect on student motivation, attrition, control and achievement. Therefore, systemic research focusing on these aspects of students of different programmes will provide valuable inputs for promotion of sustainable learning among the students.
- viii) ODE system requires a continuous venture of experimentation and innovations based on adoption and application of ICT for improvement in curriculum designing and development, orientation and training of course writers, and other academic staff, teaching and learning environment, and other aspects of delivery. This can be done in terms of relative advantage, benefits, comparability, compatibility, complexity, trial, potential, etc. of the innovations vis-à-vis the ongoing practices.

The better practices that emerged need to be adopted and promoted in the systemic interest of effectiveness and efficiency.

- ix) ODE system needs to focus on new developments wherein experiments and innovations contribute to its growth and development. Studies on the emerging trends like Open Educational Resources (OERs), Massive Open Online Courses (MOOCs), Virtual Universities and Collaborative Educational Opportunities, and new models including consortia at different levels need encouragement by the ODEIs.
- x) Research on financing and comparative cost-effectiveness of existing programmes and the emergent trends (new programmes) is more promising in terms of enhancing the access, reach and sustainability and success of the ODE system.
- xi) Research efforts may be focused on using more than one social media tools to showcase distance educational projects/practices in reinforcing the learning environment of ODE.
- xii) Potential areas of collaboration and overlap and the impact of analytics on teaching, learning, and training system also need focused study for improvement in the systemic practices.

There is thus a strong need to create a favourable climate for research in and by ODE Institutions by way of:

- Shifting the focus of the institutional policies and programmes towards promoting systemic research in ODE;
- Institutional financing or sponsoring of systemic research for improved practices;
- Developing research-oriented work culture among the faculty, the academic administrators and the research students.
- Encouraging and supporting research collaborations between and among (the practitioners and researchers of) the ODEIs and conventional institutions at different levels.
- Funding and facilitating conduct of research seminars, workshops and other events and disseminating of research findings.

While the above are suggestive, many more research initiatives are required to be promoted for enhancing the contribution to improvement of the systemic practices of ODEIs including action research.

We will discuss action research in section 16.5.

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## **16.5 ACTION RESEARCH**

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Action research can be a worthwhile pursuit for distance teachers, teacher educators, educationists, and educational administrators/managers for a number of reasons. Foremost among these is simply the desire to know more about ways to expand upon their existing knowledge of their own practices to solve their own problems as individuals or in groups with a view to bring in improvement in their actions or functioning.

In this section we focus on the concept, process, principles and other aspects of action research. This would help you have better understanding of (distance) educational action research in section 16.6.

## 16.5.1 Concept

Kurt Lewin, considered the ‘father of action research’, first coined the term ‘action research’ in 1946 in his paper “Action Research and Minority Problems”. He characterised action research as “a comparative research on the conditions and effects of various forms of social action and research leading to social action”, using a process of “a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action” (O’Brien, 1998).

“Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework” (Rapoport 1970:499, cited in McKernan 1991:4). There is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. This requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process” (Thomas Gilmore, Jim Krantz and Rafael Ramirez, 1986, cited in O’Brien, 1998). It is a “systemic inquiry that is collective, collaborative, self-reflective, critical and undertaken by participants in the inquiry” (McCutcheon and Jung 1990:148). It is a process of uncovering solutions through progressive problem-solving activities. The outcome is intended to improve practices and address issues. Often performed by a group of participants, the process involves investigation through activity rather than theoretical response (<http://www.businessdictionary.com/definition/action-research.html>).

What separates action research from other types of research and general professional practices, consulting, daily problem-solving and the like? There are several attributes of action research such as the following which make it distinct.

- The emphasis in action research is on scientific study — the researcher studies the problem systematically and ensures the intervention is informed by theoretical considerations.
- It has a social dimension — the research takes place in real-world situations and aims to solve real problems..
- It turns the people involved into researchers-cum-active participants in action.
- Much of the researcher’s time is spent on refining the methodological tools to suit the exigencies of the situation, and on collecting, analyzing and presenting data on an ongoing cyclical basis.
- It is more collaborative and participants will willingly apply what they have learned, as they do it themselves.
- Finally, the initiating researchers, unlike in other researches, makes no attempt to remain objective, but openly acknowledges their bias to the other participants.

Zuber-Skerrit (1991:2) finds four basic themes in action research: empowerment of participants; collaboration through participation; acquisition of knowledge; and social change. The process that the researcher goes through to achieve these themes is a spiral of action research cycles consisting of four major phrases: planning, acting, observing and reflecting.

Let us now understand process of action research in detail.

### 16.5.2 Process

Kurt Lewin, in the mid 1940s constructed a theory of action research, which described action research as “proceeding in a spiral of steps, each of which is composed of planning, action and the evaluation of the result of action” (Kemmis and McTaggart 1990:8). Stephen Kemmis has developed a simple model of the cyclical nature of the typical action research process with each cycle having four steps: plan, act, observe, reflect as depicted in Figure 16.2 (MacIsaac, 1995; as given in O’Brien, 1998).

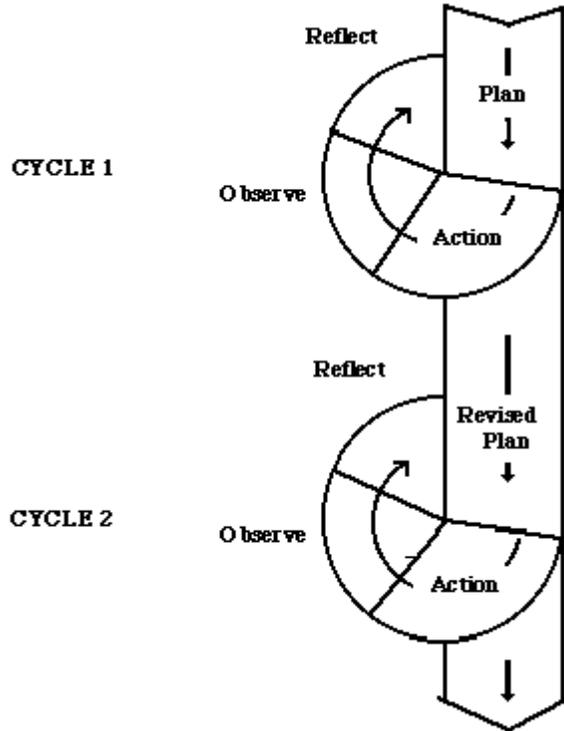
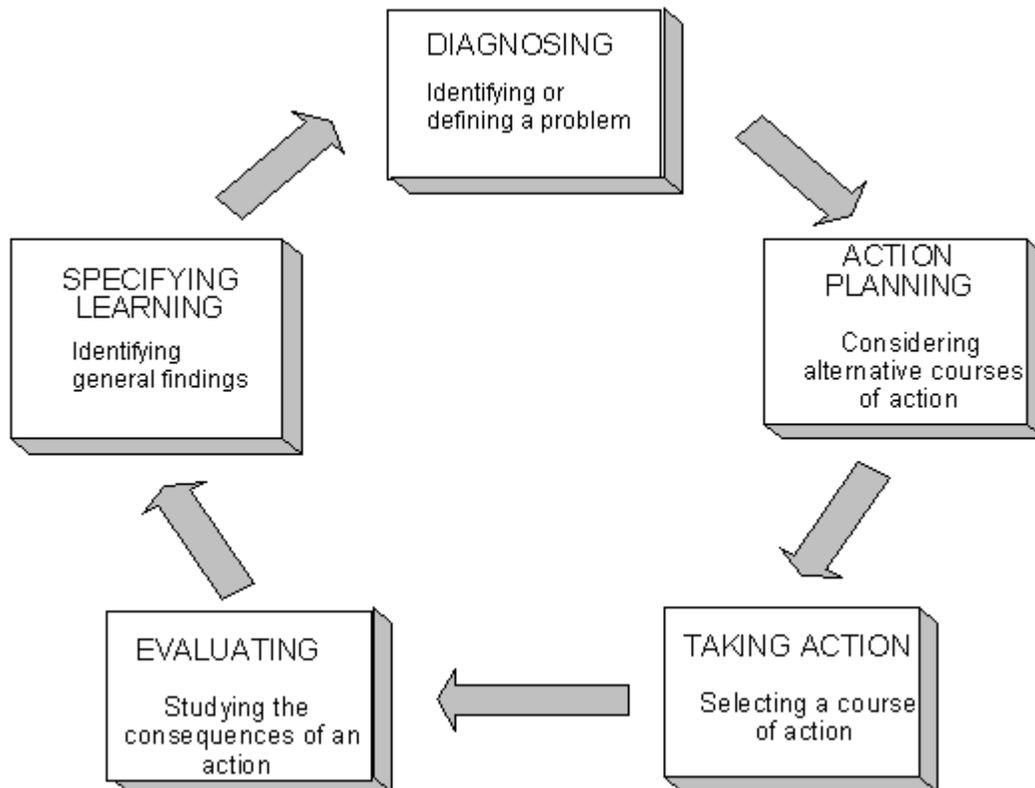


Fig. 16.2: Simple Action Research Model



Source: Rory O’Brien (1998). <http://www.web.ca/~robrien/papers/arfinal.html>

Fig. 16.3: Action Research Cycle

Susman (1983, mentioned in O'Brien, 1998) gives a somewhat more elaborate listing. He distinguishes five phases to be conducted within each research cycle, specified in Figure 16.3. Initially, a problem is identified and data is collected for a more detailed diagnosis. This is followed by a collective postulation of several possible solutions, from which a single plan of action emerges and is implemented. Data on the results of the intervention are collected and analyzed, and the findings are interpreted in light of how successful the action has been. At this point, the problem is re-assessed and the process begins another cycle. This process of diagnosing (identifying or defining a problem), action planning (considering alternative courses of action), taking action (selecting a course of action), evaluating (studying the consequences of an action), and specifying learning (identifying general findings) continues until the problem is resolved.

### 16.5.3 Principles

Winter (1989) provides a comprehensive overview of six key guiding principles of action research.

- 1) *Reflexive critique*: This principle ensures people to reflect on issues and processes and make explicit the interpretations, biases, assumptions and concerns upon which judgments are made. In this way, factual, true and practical accounts can give rise to theoretical considerations.
- 2) *Dialectical critique*: It is essential to understand the set of relationships both between the phenomenon and its context, and between the elements constituting the phenomenon. The key elements to focus attention on are those constituent elements that are unstable, or in opposition to one another. These are the ones that are most likely to create changes.
- 3) *Collaborative Resource*: This principle presupposes that the ideas of each participant as co-researcher are equally significant as potential resources for creating interpretive categories of analysis, negotiated among the participants. It strives to avoid the skewing of credibility stemming from the prior status of an idea-holder.
- 4) *Risk*: Initiators of action research will use this principle to allay each others' fears and invite participation by pointing out that they, too, will be subject to the same process, and that whatever the outcome, learning will take place.
- 5) *Plural Structure*: The nature of action research embodies plural structure representing multiplicity of views, commentaries and critiques, leading to multiple possible actions and interpretations. This means that there will be many accounts made explicit, with commentaries on their contradictions, and a range of options for action presented. A report, therefore, acts as a support for ongoing discussion among collaborators, rather than a final conclusion of fact.
- 6) *Theory, Practice and Transformation*: For action researchers, theory informs practice, practice refines theory, in a continuous transformation. People's actions are based on implicitly held assumptions, theories and hypotheses, and with every observed result, theoretical knowledge is enhanced. It is up to the researchers to make explicit the theoretical justifications for the actions, and to question the bases of those justifications. The ensuing practical applications that follow are subjected to further analysis, in a transformative cycle that continuously alternates emphasis between theory and practice.

These principles are to be kept in mind by all action researchers in the field of social sciences, education or ODE.

#### 16.5.4 When is it Used?

Since the primary focus of action research is on solving real problems it is used in real situations, and not in contrived and experimental studies. However, it can be used by social scientists for preliminary or pilot research, especially when the situation is too ambiguous to frame a precise research question. It is used in circumstances requiring flexibility and involvement of the people in the research, or when change is needed quickly or holistically.

Action research is by social change activists trying to mount an action campaign, or by the academics who have been invited into an organization (or other domain) by decision-makers aware of a problem requiring action research, but lacking the requisite methodological knowledge to deal with it.

In ODE system the practitioners who wish to improve their practices or improve understanding of their practices can resort to action research.

#### 16.5.5 Role of the Action Researcher

The role of an action researcher varies depending upon the whether the action research is being conducted as a single individual, or as a group with mutual collaboration or at what level it is being conducted, i.e. whether the classroom, institution or system, or local or other level. It also depends upon the purpose, nature and level of participants involved in it and the consequent actions required in subsequent cycle(s).

If it is at societal level, the main role of an action researcher is to nurture local leaders to the point where they can take responsibility for the action process. In many action research situations, the hired researcher's role is primarily to take the time to facilitate dialogue and foster reflective analysis among the participants, provide them with periodic reports, and write a final report when the researcher's involvement has ended. At this point, they need to have an understanding of the methods and be able to carry on when the initiating researcher leaves. So, upon invitation into a domain, the outside researcher's role is to implement the action research method in such a manner as to produce a mutually agreeable outcome for all participants, with the process being maintained by them afterwards. To accomplish such diverse tasks, it may necessitate the action researcher to adopt many different roles at various stages of the process, including those of: planner, leader, catalyser, facilitator, teacher, designer, listener, observer, synthesizer and reporter.

#### 16.5.6 Types

By the mid-1970s, the field of action research had emerged/evolved into 4 main 'streams': traditional, contextural (action learning), radical, and educational.

- i) **Traditional Action Research:** This approach tends toward the conservative, generally maintaining the status quo with regards to organizational power structures.
- ii) **Contextural (Action Learning) Research:** It entails reconstituting the structural relations among actors in a social environment; domain-based, in that it tries to involve all affected parties and stakeholders; holographic, as each participant

understands the working of the whole; and it stresses that participants act as project designers and co-researchers. The concept of organizational ecology, and the use of search conferences come out of contextual action research, which is more of a liberal philosophy, with social transformation occurring by consensus and normative incrementalism.

- iii) **Radical Action Research:** The radical stream, with its roots in Marxian ‘dialectical materialism’ and the praxis orientations of Antonio Gramsci, has a strong focus on emancipation and overcoming of the power imbalances. Examples include: Participatory Action Research, often found in liberationist movements and international development circles, and Feminist Action Research — both strive for social transformation via an advocacy process to strengthen peripheral groups in society.
- iv) **Educational Action Research:** This stream has its foundations in the writings of John Dewey, the great American educational philosopher of the 1920s and 30s, who believed that professional educators should become involved in community problem-solving. Its practitioners, not surprisingly, operate mainly out of educational institutions, and focus on development of curriculum, professional development, and applying learning in a social context. It is often the case that university-based action researchers work with primary and secondary school teachers and students on community projects. We will discuss educational action research in greater details in Section 16.6.

**Check Your Progress**

**Note:** a) Write your answer in the space given below.  
b) Compare your answer with the one given at the end of this unit under “Answers to ‘Check Your Progress’ Questions”.

2) i) Explain the concept of action research.

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ii) What are the steps involved in action research process?

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## 16.6 EDUCATIONAL ACTION RESEARCH

According to Ferrance (2000) action research is a process in which participants examine their own educational practice systematically and carefully, using the techniques of research. A plan of action research in education can involve a single teacher investigating an issue in his/her classroom, or a group of teachers working on a common problem, or a team of teachers and others focusing on a school-wide or district-wide issue. Keeping this in view Ferrance identified *four types of educational action research*.

- *Individual teacher research:* It usually focuses on a single issue in the classroom. The teacher may be seeking solutions to problems of classroom management, instructional strategies, use of materials, or student learning. One of the drawbacks of individual research is that it may not be shared with others unless the teacher chooses to present findings at a faculty meeting, make a formal presentation at a conference, or submit written material to a listserv, journal, or newsletter.
- *Collaborative action research:* It may include two or more teachers and others interested in addressing a classroom or department issue. This issue may involve one classroom or a common problem shared by many classrooms. These teachers may be supported by individuals outside of the school, such as a university or community partner.
- *School-wide research:* It focuses on issues common to all. For example, a school may have a concern about the lack of parental involvement in activities, and is looking for a way to reach more parents to involve them in meaningful ways. If this research is successfully accomplished there will be a sense of ownership and accomplishment in the results that come from this school-wide effort.
- *District-wide research:* It is far more complex and utilizes more resources, but the rewards can be great. Issues can be organizational, community-based, performance-based, or processes for decision-making. A district may choose to address a problem common to several schools or one of organizational management. Downsides are the documentation requirements (communication) to keep everyone in the loop, and the ability to keep the process in motion. The involvement of multiple constituent groups can lend energy to the process and create an environment of genuine stakeholders.

The field of education often uses action research for collecting information that's used to explore topics of teaching, curriculum development and student behavior in the classroom. Action research is very popular in the field of education because there is always room for improvement when it comes to teaching and educating others. Action research is also beneficial in areas of teaching practice that need to be explored or settings in which continued improvement is the focus (<http://study.com/academy/lesson/action-research-in-education-examples-methods-quiz.html>). Other benefits include bringing focus on school issues, problems, or areas of collective interest, promoting different forms of teacher/professional development, collegial interactions reflecting on own practice to impact classroom/school environment, improving communications, building mutual cooperation amongst the employees, promoting scientific outlook, enhancing students' participation in learning activities, improving standards in evaluation, among others.

### 16.6.1 Models

There are three models of Action Research viz. technical, practical, and critical (Villacañas de Castro, 2014).

- i) *Technical Action Research Model*: It refers to experiences from joint projects between schools and universities where the former bring to the table initial ideas and interests.
- ii) *Practical Action Research Model*: It is about the “here and now” and it is usually ignited by teachers themselves or their institution. They seek to maximise performance within the opportunities and constraints of their educational institution. These experiences are generally small in scope and may not be published in peer-reviewed journals.
- iii) *Critical Action Research Model*: This model carries political and emancipatory undertones, the objectification of which is normally dependent on AR allowing for an expansion of the participants’ self-awareness as individuals in society.

### 16.6.2 Ethical Considerations

According to Banegas and Villacañas de Castro (2015) there exist a wide range of ethical issues which are bound to arise when teacher-researchers engage in technical, practical or critical models of action research. Ethical dilemmas are an intrinsic part of action research, precisely on account of its collaborative nature and of the diverse motivations, perspectives, and institutional roles held by its participants. Many of these pertain to negotiating the relationships between people involved in a given study.

- ***Collaboration and participation***: Both collaboration and participation need to be voluntary and participants must be free to withdraw at any time without any consequences.
- ***When young learners are involved***: Pinter (2013, cited in Banegas and Villacañas de Castro, 2015) includes three constructions when children are part of AR: children as objects, children as subjects, and children as co-researchers. One particular aspect that Doyle (2007) observes in this regard is: Will a teacher manipulate the learners to obtain “positive” data while the research may be part of the teacher’s professional development, because the children are not there for the teacher’s development? The opposite is the case. The teacher is there for the development of the children (p.77).
- ***Power***: The ethical dilemmas behind collaboration are linked to pre-established roles, positions, and relationships. For example, a school principal researching his/her school including teachers.
- ***Confidentiality and anonymity***: These are usually addressed together with informed consent and respect for participants.
- ***Authorship and ownership***: Anonymity is associated to ethical issues of authorship and ownership. It may be the case that participants do wish to appear under their real names as they believe they own the data provided, particularly if the experience places them under a positive light.
- ***Representation and voice***: Issues behind ownership are linked to representation and voice. Participant’s right to corroborate data and interpretation and to have data analysis revisited if they feel they have been misinterpreted or placed under a negative light must be respected.

- **Benefits:** All AR projects have consequences and benefits. Discussing benefits depend on principles of honesty and transparency. Benefits are to be discussed and outweighed from the start and while the research project unfolds in order to ensure that participants acknowledge their different motivations.
- **Sustainability:** When an AR project aims at improving already good practices or transforming a challenging landscape, care should be taken in relation to whether action will continue after the research is completed, funding stops, and external facilitators return to their universities.

Because action research is carried out in real-world circumstances, and involves very close and open communication among the people involved, the researchers must pay due attention to ethical considerations in the conduct of their work. Winter (1996) lists a number of ethical principles as follows:

- Make sure that the relevant persons, committees and authorities have been consulted, and that the principles guiding the work are accepted in advance by all.
- All participants must be allowed to influence the work, and the wishes of those who do not wish to participate must be respected.
- The development of the work must remain visible and open to suggestions from others.
- Permission must be obtained before making observations or examining documents produced for other purposes.
- Descriptions of others' work and points of view must be negotiated with those concerned before being published.
- The researcher must accept responsibility for maintaining confidentiality.
- Ensure that the decisions made about the direction of the research and the probable outcomes are collective.
- Ensure that the researchers are explicit about the nature of the research process from the beginning, including all personal biases and interests.
- Ensure that there is equal access to information generated by the process for all participants.
- The outside researcher and the initial design team must create a process that maximizes the opportunities for involvement of all participants.

### 16.6.3 Advantages

There are several advantages such as the following for teachers and educators conducting action research (Kerry Dyke).

- i) It helps both teachers and educators use data to guide improvement efforts. This makes the process of action research more scientific in nature, proposing ideas and theories that can be backed up by data. This gives teachers something more concrete to work with instead of just relying on the principles that teachers have used in the past.
- ii) It addresses both the quality of students' education and the professional growth of teachers. Logically, this would be the ideal strategy for students to learn most effectively and for teachers to teach most effectively.

- iii) It leads the teachers and educators directly to actions that change the environment. Once a teacher begins reflecting on the classroom situation, a thoughtful educator will usually not waste much time in implementing actions based on the action research he/she conducted.
- iv) It plays an important role in improvement of specific pedagogical practices. There have been a lot of changes to the way subjects are taught in schools because of action research. One example that illustrates how action research has changed a curriculum would be in the physical education program. The classic stereotype of physical education is a course where you did militaristic things like climbing a rope, push-ups, sit-ups, laps, and played games in sports like basketball, soccer, hockey, and so on. It has changed through the work of action research, where educators realized that students were not getting enough just by playing sports. They realized there was a need to implement social, affective, and cognitive domains into the physical education curriculum.
- v) It develops a culture of inquiry in the school and reflective educational practice on the part of the classroom teacher. Through action research several new techniques have developed which help increase the level of inquiry in the classroom. One example is the technique of concept mapping, where students take a major concept and, in a web or chart format, break down the major concept into smaller concepts and link all these concepts together with the use of connecting words. Another is the learning cycle. This technique involves introducing a concept by first giving students information on a concept and giving time for them to explore it on their own or in groups. Then, the educator comes back and asks about what the students have gathered about the concepts and fills in any details the students may have missed. The final stage involves further exploration of the concept. Both these approaches have a higher level of participation and inquiry than teacher-centred teaching techniques such as lecturing.

Action research though beneficial tool, it takes a lot of time to conduct and to be done well. It is also to note that not all problems can be solved overnight, so results are not as immediate as one might expect. But the fact remains that action research is an essential process for educational practices to evolve to meet the needs of the students of today and tomorrow.

#### **16.6.4 Some Case Studies from ODL**

Distance education has become a matter of increasing interest in higher education and is seen by many as the opportunity for systemic change in higher education. For a number of reasons, action research can be a worthwhile pursuit for teachers, educators, educational administrators and managers in ODE. Foremost among these is simply the desire to know more about ways to expand upon their existing knowledge, practices and problems with a view to bring in improvement in their actions or functioning. Further, action research helps in examining faculty, students and staff experiences in dealing with different problems and issues of ODE system.

- 1) Given in Box 16.1 is a case study of a teacher's (Alison A. Carr-Chellman, 2000) reflective action research.
- 2) Action research has grown in popularity and has become more accepted tool for teachers to assess their own teaching strategies and reflect upon their effectiveness. Little research exists on the evaluation of student perception of on-line versus traditional classroom learning environments and their corresponding learning

outcomes, in particular, when the course material was to be delivered simultaneously by the same instructor. Schmidt (2002 <http://scholar.lib.vt.edu/ejournals/JITE/v40n1/schmidt.html>) made an attempt in this direction (See Box. 16.2).

**Box 16.1: Distance Education: A Reflective Action Research Project and Its Systemic Implications for Higher Education.**

This reflective action research study examines a faculty member's experience with distance education. This study examined the author's (teacher's) own experiences in teaching a distance version of a basic instructional design course at the same time teaching it as a residential version of that same course. The examination finds significant faculty issues that emerged during the experience and specifically found concerns with the distance education learner. In the end, the study finds that as a tool for systemic change of higher education; distance delivery will have to engage faculty with their concerns in more substantive ways than they have to date. In essence, this study asserts that the current demands on distance educators are not motivating for traditional faculty members because of increased time demands, lack of traditional rhythm, lack of personal contact with students, and less evident interest among distant students in the areas that faculty value.

**Source:** <https://link.springer.com/article/10.1023/A:1009501716697>

**Box 16.2: A Case Study Assessing Students' Perceptions and Learning Outcomes of Classroom Teaching Versus On-line Teaching**

In this action research project the teacher branched Classroom Teaching into the on-line teaching. A case study approach was used to compare on-line teaching versus traditional classroom teaching and their corresponding learning outcomes. The case study did not only allow the teacher to reflect on his own teaching and learning style, but it also had the potential to impact faculty members in their efforts to incorporate on-line technology into their industrial teacher education classrooms. The dialog among colleagues throughout the department and the college, initiated by various presentations on campus, encouraged faculty to reflect on their teaching and learning style, and to enrich their teaching portfolio with on-line teaching and learning tools.

It concluded that the teacher learned more about his own teaching style, not only in an on-line environment, but also in the traditional classroom. Based on the information provided by the students, the teacher developed ability to address specific teaching issues in both the traditional classroom and in the virtual classroom. No statistically significant differences in learning outcomes were identified in this case study, thus indicating that students participating in this project learned as well on-line as they did in the traditional classroom setting. The incorporation of on-line teaching and learning tools in the traditional classroom can be considered successful, particularly in light of the similarity of learning outcomes and classroom perceptions. However, the teacher will continue to research the benefits of on-line teaching and learning and see if the findings of this study can be further corroborated. The teacher will also continue to use the Web as a teaching and learning tool, and will try to identify additional creative ways to combine on-line and traditional classroom teaching and learning. The teacher finally said that on-line teaching and learning technology is manifesting itself in the classroom.

**Source:** <http://scholar.lib.vt.edu/ejournals/JITE/v40n1/schmidt.html>

In order to support the persistent evolution of Continuing Professional Distance Education (CPDE), an action research approach must be taken. For action research to be successful, explicit research models must be formulated and used. Nunes and McPherson (2003) presents Educational Management Action Research (EMAR) model that conjugates pedagogical thinking, curriculum design and organisational context. This action research model is proposed as basis for the management of change in CPDE. The model proposed emerged from the need to manage a complex change process from traditional paper-based distance education to e-learning. In order to illustrate and support the model proposed, the authors describe and discuss such a change process in a CPDE Masters programme. This model facilitates dialogue of all parties engaged in the design and delivery of CPDE. This enables educational managers to effectively lead change in their courses. However, the complexities and precise specifications required by Educational Systems Design (ESD) call for better support through development frameworks that incorporate educational and systems development philosophies.

You have thus noticed that action research offers tremendous scope for systemic research and development of ODE system. It has high potential that needs to be explored and exploited on continuing basis.

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## 16.7 LET US SUM UP

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In this Unit, efforts have been made to discuss different aspects research in ODE. We have highlighted how research in distance education has contributed to the body of knowledge and its proper representation to make it accepted ontology to foster continuing contribution to the discipline of distance education and also to development of ODE system. We have presented an overview of trends and areas of research in distance education broadly categorized by many researchers, prominently by Richter and others. We emphasised the need to foster favourable climate for promoting systemic research with focus on emerging areas and concerns to bring in improvement in the existing practices and processes at various levels of the system. We discussed different aspects of action research, which is systemic research of crucial importance in ODE. The utility of educational action research to teachers, teacher educators, educational administrators and managers and also to the students has been explained. Some case studies of educational action research have been presented to highlight their implications for ODE system and practices.

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## 16.8 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS

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- 1) Zawacki-Richter and others attempted to structure the broad and interdisciplinary research areas in the field of distance education based on a systematic analysis of expert responses in a Delphi study which resulted in comprehensive categorization scheme of 15 areas under the following three levels.
  - a) Macro-level: Distance education systems and theories
    - Access, equity, and ethics
    - Globalization of education and cross-cultural aspects
    - Distance teaching systems and institutions

- Theories and models
  - Research methods in distance education and knowledge transfer
- b) Meso-level: Management, organization, and technology
- Management and organization
  - Costs and benefits
  - Educational technology
  - Innovation and change
  - Professional development and faculty support
  - Learner support services
  - Quality assurance.
- c) Micro-level: Teaching and learning in distance education
- Instructional design
  - Interaction and communication in learning communities
  - Learner characteristics.

In order to accommodate certain developments in ODL in Africa and elsewhere and to make these areas more comprehensive African Virtual University (AVU) adopted and adapted these areas for the benefit of its research community. Accordingly, it adapted the area “Distance teaching systems and institutions” as “Open, distance and eLearning systems and institutions”, and area “Research methods in distance education and knowledge transfer” as “Research methods in ODeL and knowledge transfer” under Macro level; and added new area “Infrastructure” in between the areas “Costs and benefits” and “Educational technology” under meso-level mentioned above.

- 2) i) Kurt Lewin characterized Action Research as “a comparative research on the conditions and effects of various forms of social action and research leading to social action”, using a process of “a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action”. Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework. This requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process. It is a “systemic inquiry that is collective, collaborative, self-reflective, critical and undertaken by participants in the inquiry. It is a process of uncovering solutions through progressive problem-solving activities. The outcome is intended to improve practices and address issues. Often performed by a group of participants, the process involves investigation through activity rather than theoretical response.
- ii) Typical action research process is cyclical in nature with each cycle having four steps: plan, act, observe and reflect. Action research focuses on four basic themes: empowerment of participants; collaboration through participation; acquisition of knowledge; and social change. The process that the researcher goes through involves a spiral of action research cycles

consisting of four major phases: planning, acting, observing and reflecting. To elaborate further, it includes the processes of diagnosing (identifying or defining a problem), action planning (considering alternative courses of action), taking action (selecting a course of action), evaluating (studying the consequences of an action), and specifying learning (identifying general findings) continues until the problem is resolved.

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## 16.9 REFERENCES

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Banegas, D. L., and Villacañas de Castro, L. S. (2015). A look at ethical issues in action research in education, *Argentinian Journal of Applied Linguistics*, Vol.3, No.1, May, pp.58-67 [http://www.faapi.org.ar/ajal/issues/301/BanegasAJALVol3\(1\).pdf](http://www.faapi.org.ar/ajal/issues/301/BanegasAJALVol3(1).pdf) — Accessed on 04-04-2017.

Berge, Z., and Mrozowski, S. (2001). Review of research in distance education. *American Journal of Distance Education*, 15(3), 5-19.

Bizhan Nasseh <https://www.seniornet.org/edu/art/history.html> — Accessed on 01-04-2017.

Carr-Chellman, A. A. (2000). Distance Education: A Reflective Action Research Project and Its Systemic Implications for Higher Education, *Systemic Practice and Action Research*, August 2000, Vol.13, Issue 4, pp.587–612 <https://link.springer.com/article/10.1023/A:1009501716697> – Accessed on 31-03-2017.

Doyle, D. (2007). Transdisciplinary enquiry: Researching with rather than on. In A. Campbell & S. Groundwater-Smith (Eds.). *An ethical approach to practitioner research - dealing with issues and dilemmas in action research*, (pp. 75-87), Routledge, London.

Ferrance, E. (2000). Action Research: Themes in Education. Suite: LAB Northeast and Islands Regional Educational Laboratory at Brown University.

<http://scholar.lib.vt.edu/ejournals/JITE/v40n1/schmidt.html> — Accessed on 30-03-2017.

<http://study.com/academy/lesson/action-research-in-education-examples-methods-quiz.html>.

<http://www.avu.org/avuweb/en/open-distance-e-learning-odel-research-framework/> — Accessed on 30-03-2017.

<http://www.businessdictionary.com/definition/action-research.html> — Accessed on 02-04-2017.

<http://www.businessdictionary.com/definition/systemic.html> — Accessed on 31-03-2017.

[https://en.wikipedia.org/wiki/Body\\_of\\_knowledge](https://en.wikipedia.org/wiki/Body_of_knowledge) — Accessed on 23-03-2017.

Jegede, O. J. (1994). Distance education research priorities for Australia: A study of the opinions of distance educators and practitioners. *Distance Education*, 15(2), 234-253.

Kerry Dyke. [http://www.mun.ca/educ/courses/ed4361/virtual\\_academy/campus\\_aresearcher/chapter3.html](http://www.mun.ca/educ/courses/ed4361/virtual_academy/campus_aresearcher/chapter3.html) – Accessed on 02-04-2017.

- Koble, M. A., and Bunker, E. L. (1997). Trends in research and practice: An examination of The American Journal of Distance Education 1987-1995. *American Journal of Distance Education*, 11(2), 19-38.
- Lee, Y., Driscoll, M. P., and Nelson, D. W. (2004). The past, present, and future of research in distance education: Results of a content analysis. *American Journal of distance Education*, 18(4), 225-241.
- MacIsaac, D. (1995). "An Introduction to Action Research," <http://www.phy.nau.edu/~danmac/actionrsch.html> (22/03/1998).
- McCutcheon, G., and Jurg, B., (1990). Alternative Perspectives on Action Research, *Theory into Practice*. Volume 24, Number 3, Summer.
- McKernan, J. (1991). Curriculum Action Research, *A Handbook of Methods and Resources for the Reflective Practitioner*. Kogan Page, London.
- Mishra, S. (1997). A critical analysis of periodical literature in distance education. *Indian Journal of Open Learning*, 6(1&2), 39-54.
- Moore, M. G. (1985). Some observations on current research in distance education. *Epistolodidaktika*, 1985, 35–62.
- Nunes, J. M., and McPherson, M. A. (2003). "Action Research in Continuing Professional Distance Education". *The Journal of Computer Assisted Learning*, 19(4), 429-437.
- O'Brien, R. (1998). An Overview of the Methodological Approach of Action Research, In Roberto Richardson (Ed.), *Theory and Practice of Action Research*. <http://www.web.ca/~robrien/papers/arfinal.html> — Retrieved on 02-04-2017.
- Panda, S. (1992). Distance educational research in India: Stock-taking, concerns and prospects. *Distance Education*, 13(2), 309-326.
- Paul, D. P., and Fatma Ubwa, F. (2013). The role of photovoltaic powered ICT centers on ODL programs in rural areas in Tanzania. Paper presented at the 1st International Conference of the AVU, Nairobi Kenya under the session on Infrastructure & Capacity. <http://www.avu.org/avuwweb/en/open-distance-e-learning-odel-research-framework/> — Accessed on 30-03-2017.
- Peters, O. (2014). 'Foreword' In O. Zawacki-Richter & T. Anderson (Eds.), *Online distance education: Towards a research agenda*, (pp. ix–xii). Athabasca: Athabasca University Press. doi:10.15215/aupress/9781927356623.01.
- Pinter, A. (2013). Child participant roles in applied linguistics research, *Applied Linguistics*, 35(2), 168–183.
- Rapoport, R. N. (1970). Three Dilemmas in Action Research. *Human Relations*, 23:6; 499, cited in McKernan J., (1991). *Curriculum Action Research. A Handbook of Methods and Resources for the Reflective Practitioner*. Kogan Page, London.
- Richter O. Z., Backer E. M., and Vogt. S. (2009). Review of distance education research (2000 to 2008): Analysis of research areas, methods, and authorship patterns, *The International Review of Research in Open and Distance Learning*, 10(6), December, Retrieved from <http://www.inudorg/index.php/irrodllarticle/view/71/1433>.

- Ritzhaupt, A. D., Stewart, M., Smith, P., and Barron, A. E. (2010). An Investigation of Distance Education in North American Research Literature Using Co-word Analysis, *The International Review of Research in Open and Distance Learning*, Vol.11, No.1 (2010).
- Rourke, L., and Szabo, M. (2002). A content analysis of the Journal of Distance Education 1986-2001, *Journal of Distance Education*, 17(1), 63-74.
- Schmidt, K. (2002). Classroom Action Research: A Case Study Assessing Students' Perceptions and Learning Outcomes of Classroom Teaching Versus On-line Teaching. *Journal of Industrial Teacher Education*. Vol.40, No.1. <http://scholar.lib.vt.edu/ejournals/JITE/v40n1/schmidt.html>.
- Scriven, B. (1991). Ten years of 'Distance Education'. *Distance Education*, 12(1), 137-153.
- Susman, G. I. (1983). "Action Research: A Sociotechnical Systems Perspective." In G. Morgan (Ed). *Beyond Method: Strategies for Social Research*. Sage Publications, London, 95-113.
- Thomas Gilmore, Jim Krantz and Rafael Ramirez, (1986). "Action Based Modes of Inquiry and the Host-Researcher Relationship," *Consultation* 5.3 (Fall 1986): 161, cited in O'Brien, R. (1998). op. cit.
- Winter, R. (1989). Learning From Experience: Principles and Practice in Action-Research. The Falmer Press, Philadelphia, pp.43-67.
- Wright (1991), mentioned in Bizhan Nasseh <https://www.seniornet.org/edu/art/history.html>. Accessed on 01-04-2017.
- Yuen Yee Wong, Jing Zeng, Chun Kit Ho, (2016) "Trends in open and distance learning research: 2005 vs 2015", *Asian Association of Open Universities Journal*, Vol.11 Issue 2, pp.216-227, doi: 10.1108/AAOUJ-09-2016-0035 <http://www.emeraldinsight.com/doi/full/10.1108/AAOUJ-09-2016-0035> — Accessed on 30-03-2017.
- Zawacki-Richter, O. (2009). Research Areas in Distance Education: A Delphi Study. *The International Review of Research in Open and Distance Learning*, Vol.10, No.3, June, <http://www.irrodl.org/index.php/irrodl/article/view/674/1260> — Accessed on 30-03-2017).
- Zawacki-Richter, O., and Anderson, T. (2014). Introduction: Research Areas in Online Distance Education. In Zawacki-Richter Olaf & Anderson, T. (Eds.). *Online distance education: Towards a research agenda* Pp.1-35. AU Press, Athabasca University, Edmonton, AB. <http://www.avu.org/avuwweb/en/open-distance-e-learning-odel-research-framework/> — Accessed on 30-03-2017.
- Zawacki-Richter, O., and Naidu, S. (2016). Mapping research trends from 35 years of publications in Distance Education, *Journal of Distance Education*, Volume 37, Issue 3, <http://www.tandfonline.com/doi/full/10.1080/01587919.2016.1185079> — Accessed on 01-04-2017.
- Zuber-Skerrit, O. (1992). Improving Learning and Teaching Through Action Learning and Action Research Draft paper for the HERDSA Conference 1992 University of Queensland, cited in Masters, J. (1995) 'The History of Action Research' in I. Hughes (ed) *Action Research Electronic Reader*, The University of Sydney, on-line. <http://www.behs.cchs.usyd.edu.au/arow/Reader/rmasters.htm> — Accessed on 31.03.2017.

## Suggested Readings



Garrison, D., and Shale, D. (1987). Mapping the boundaries of distance education: Problems in defining the field. *The American Journal of Distance Education*, (1), 4-13.

George Siemens. (2011). Learning Analytics: Envisioning a research discipline and a domain of practice. [learninganalytics.net/LAK12\\_keynote\\_Siemens.pdf](http://learninganalytics.net/LAK12_keynote_Siemens.pdf).

Lakshmi Reddy, M. V. (2002). Students' Pass Rates: A Case Study of Indira Gandhi National Open University Programmes. *Indian Journal of Open Learning*, Vol.11, No.1, January, pp.103-125. [http://cemca.org.in/ckfinder/userfiles/Lakshmi%20Reddy\\_MV\\_\\_0249.pdf](http://cemca.org.in/ckfinder/userfiles/Lakshmi%20Reddy_MV__0249.pdf).

Lakshmi Reddy, M. V. (2011). E-mail Technology-enabled Course Team Model for Development of Self-instructional (Self-learning) Materials. *University News — A Weekly Journal of Higher Education*, Vol.49, No.40, October 3-9, pp.7-18.

Masters, J. (1995). 'The History of Action Research' in I. Hughes (ed.). *Action Research Electronic Reader*, The University of Sydney, on-line <http://www.behs.cchs.usyd.edu.au/arow/Reader/rmasters.htm>.

McNiff, J. (1999). *Action Research: Principles and Practice*. London: Routledge.

Sheeja, S.R. (2011). Major trends and issues in the field of distance education. *Indian Journal of Science and Technology*, 4(3), pp. 201-203.

Simonson, M., Schlosser, C., & Orellana, A. (2011). Distance education research: A review of the literature. *Journal of Computing in Higher Education*, 23, 124–142. doi:10.1007/s12528-011-9045-8. [10.1007/s12528-011-9045-8](http://dx.doi.org/10.1007/s12528-011-9045-8).

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## 16.10 UNIT END EXERCISES

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You may write brief notes or full-length answers to the questions given here in your own interest. Such notes or answers might help you during your preparation for term-end examination.

### Unit End Questions

- 1) Explain how research in distance education has contributed to the body of knowledge. (500 words).
- 2) Analyse the trends and areas of research in distance education. (1000 words).
- 3) What is systemic research? Discuss different areas and concerns of systemic research. (1000 words).
- 4) What are the ethical considerations in action research. (500 words).
- 5) Discuss different types and advantages of educational action research. (1000 words).
- 6) Mention in brief about two case studies of action research from ODL. (500 words).



## Questions for Critical Reflection

- 1) Knowledge contribution and representation in distance education over the decades made it accepted ontology to foster further continuing contribution to it. Justify the statement.

### Activity



Identify the problem that has been pressing you for long as a teacher in your school. Conduct action research and try to solve it. Prepare a report of your action research and discuss it with your school principal for its implications, if any for the entire school as well.



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