UNIT 16    RESEARCH IN ODE

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16.0    INTRODUCTION

From Blocks 1, 2 and 3 you might have got a 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.

16.1    OBJECTIVES

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.

16.2 CONTRIBUTION TO THE BODY OF KNOWLEDGE

Like in any other filed, 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).

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.

### 16.3 RESEARCH TRENDS AND AREAS

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
Planning and Management of ODE 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

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

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 Mroczowski, 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 on 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>
<thead>
<tr>
<th>Table 16.2: Research Areas by Level</th>
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<tbody>
<tr>
<td><strong>Macro-level: ODeL</strong> Systems &amp; Theories</td>
</tr>
<tr>
<td>3. <strong>Open, distance and eLearning systems and institutions</strong></td>
</tr>
<tr>
<td>4. Theories and models</td>
</tr>
<tr>
<td>5. <strong>Research methods in ODeL and knowledge transfer</strong></td>
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In Table 16.2 above, you can notice that while two areas at points 3 and 5 are adapted from categorization of Zawacki-Ritcher (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 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 level-wise categorization of research areas in open and distance education.

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16.4 SYSTEMIC RESEARCH

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 of 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...
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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 ODEIs 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.

### 16.5 ACTION RESEARCH

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 McTaggert 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

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 contextural 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.

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**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.
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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.

16.7 LET US SUM UP

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.

16.8 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS

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.

16.9 REFERENCES


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16.10 UNIT END EXERCISES

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.