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He did M.Sc (Physics), M.Sc (Environmental Studies), M.Tech (Atmospheric Sciences), M.Ed., and Ph.D in Education. He presented many Research Papers in National and International Seminars and also well-known for his lectures in 'Physical Science Methodology', 'Educational Technology', 'Educational Psychology', and 'Measurement and Evaluation in Education and Psychology'. He invented A New Student Centred Method of Teaching, which is called as 'George Student Centred Plan of Teaching' for which Andhra University; Visakhapatnam awarded him Ph.D in Education.

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ACTION RESEARCH

Prof. Puvvada George Raja Kumar

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Prof. Puvvada George Raja Kumar

The fact that you picked up this book shows that there is something in common between us! If you are a student of education, so am I; if you are a teacher, so am I; if you are a human resource developer, so am I and if you are a professional, so am I as well. Together, we shall study the subject of Action Research in education and all other fields of practice.

It is my belief that Evaluation of student behaviour is an integral part of any teaching task. I believe that the learning should be useful, stimulating, and rewarding to the learner. In this book I have attempted to provide the reader with the basic theoretical and applied concepts essential to an understanding of Action Research in education and all other fields of practice; I hope that this has been done in a manner that will prove useful, stimulating and rewarding.

As the reader begins this book, he is encouraged to be receptive to the ideas presented and yet at the same time to be critical. Thoughtful consideration should lead to the fullest understanding of the various aspects of Action Research in education and all other fields of practice.

The supplementary readings are selected from a basic list of some books. The reader should study as many of these readings as possible for a broad, comprehensive understanding of Action Research in education and all other fields of practice.

This book is developed in the interest of Postgraduate students, Research scholars of Ph. D., D.Litt., & D.Sc., Professionals and Practitioners in all fields. Students of Education and other social sciences are expected to get special benefit as the method of presentation and contents of the book is being prepared to meet their changing needs. It is a sincere effort to bring conceptual clarity among young learners and is hoped that the book will be able to meet the requirements of the Professors, Students, Research Scholars, Professionals and Practitioners in all fields.

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DEDICATION

This book was dedicated to
My Beloved Chinni Aunty

Mrs. Thanuku Subhavathamma Jayanthi
Head Mistress
B.A.J.B School
Modhavalasa
Vizianagaram District, A.P., India.

W/O Mr. John Nirmal Kumar Choudhary
Electrical and Mechanical Engineering Department
Indian Army

FOREWORD

I am delighted to write foreword to this book authored by a scholar of mine, Prof. PUVVADA GEORGE RAJA KUMAR, on an important area of Education and other fields, with the title "ACTION RESEARCH". I found it to be of great value, to practitioners of all fields, students of education and pursuing their research, master's degree in general, and those who do this specialization in education and other subjects. I have no hesitation to say that it is well organized, precise and yet provided all the needed information and knowledge that adequately equips a practitioner and a student. This book 'Action Research' gives clear idea about research in action in all fields and also acts as torch in field of educational research. Further, I find it as a good reference work for a practitioner, teacher educator and research scholar too. I wish his all success and further wish that many of my other scholars too, would be able to turn out a work like this.

With warm regards and blessings,

Prof. Y.F.W. PRASADA RAO,
M.A (Psy), M.Ed., Ph.D.
Professor of Education &
Former Head, Principal, IASE, &
Dean, Faculty of Education
Andhra University, Visakhapatnam.

PREFACE

The fact that you picked up this book shows that there is something in common between us! If you are a student of education, so am I; if you are a teacher, so am I; if you are a human resource developer, so am I and if you are a professional, so am I as well. Together, we shall study the subject of Action Research in education and all other fields of practice.

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I am pleased to record my acknowledgements to Prof. Y.F.W. Prasada Rao, my Research Director, and former; Professor and Dean, Faculty of

Education & Principal, I.A.S.E, Andhra University, Visakhapatnam for his foreword. I am also indebted to all the students of Y.K.M College of Education, Emmanuel College of Education, Catherine College of Education, Karunya College of Education, S.S.R College of Education, J.E.S College of Education, Bennaiah P.G (M.Ed) College of Education, Bahir Dar University, Ethiopia, University of London, London, and University of Gondar, Ethiopia to whom I taught, and learnt the subject.

My heartfelt thanks to, my beloved wife Mrs. Ch. Ganga Bhavani, M.Sc **(Zoology)**, M.Ed., and my loving daughter Miss. Puvvada Curie Parimala for their co-operational ventures. I submit my regards to my beloved mother Mrs. Tanuku Parimala Devi; D/O Late Smt. P. Kruthagnatha Bai, Former Head Mistress and Correspondent, B.A.J.B. Aided School, Modavalasa and Sreeman. T. Prabhu Jayanthi, former; President, Bhagavan Ashramam Seva Samithi, Modavalasa. I submit my regards to my beloved and Good father, Late Sri. Puvvada James Devasahayam; S/O Late Smt. P. Dhimathamma, Former Teacher, Queen Mary's High School, Visakhapatnam and Late Rev. P.V. George, Field Missionary, CBCNC, and wishes to families of my brothers, and families of my wife's brother and sisters.

I am extending my sincere gratitude to Dr. K. B. Nangia, APH publishing Corporation, Ansari Road, New Delhi, deserves credit and thanks for publishing this book.

Suggestions for the improvement of the book and pointing out of errors and mistakes will be highly appreciated. **My E-Mail: kingsonpuvvada@rediffmail.com**

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M. Sc (Physics), M. Sc (Envi. Stu), M. Tech (Atm.Sc),
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Chapter-1

NATURE AND MEANING OF RESEARCH

Dear learners, in this section we are going to study the meaning of research, the characteristics of research, the different steps (process) of research, the types of research and the concept of action research. Under the concept of research, we are going to study the meaning of research and its major characteristics of research, importance of action research, stages in action research and approaches in action research in the teaching learning management cases in any type of academia.

OBJECTIVES

Dear learner, at the end of this chapter, you should be able to:

- Define the concept and meaning of research and action research;
- Describe the process of research;
- Identify the characteristics of research in general and action research in relation to education;
- Describe the concept of educational research;
- Distinguish the different types of research based on certain criteria;
- Appreciate the concern of research in general, educational research and action research in particular;
- Apply research to any academic life process.

1.1. MEANING OF RESEARCH

What does research mean?

Frankly speaking, various researchers have variety perspectives, backgrounds, inclinations and views on what research is. Research is a broad term. Hence, various professionals may define research in different ways.

Research can be visualized as a natural expansion of activities in which we engage in everyday lives of ours. Even for simple problems, we ask questions that enable us analyze the situation more carefully. Formal

research is an expansion of these day-to-day inquires. The success of scientific research can be considered to its instance on practice and rigorous formulation of observation, description and explanation.

Careful association of what is observed and what is explained provides explanations whose power and efficiency enable us predict and control many aspects of the Physical world.

The outcomes of scientific research are represented in the technical achievements that continue to transform our modern world. The miracles of construction, manufacture, communication and transport have now entered the daily lives of those living in wealth nations are testament to the advances in knowledge that have resulted from science /Stringer,2007:5/.

Research is an organized and deliberate effort in order to create new knowledge. It is directed towards seeking answers to important and fundamental questions by applying sound and acceptable methods. It is a systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles or theories. It is a human activity based on intellectual application in the investigation of matter. Generally, research is the systematic process of collecting and analyzing information in order to increase our understanding of the phenomena under study / Khan, 1990:3/.

1.2. CHARACTERISTICS OF RESEARCH

Dear learner, could you mention some of the main characteristics of research?

The main characteristics of research may be described as follows:

1. Research is directed towards the solution of a problem. It may attempt to answer a question or determine the relationship of variables.
2. Research is based upon observable experienced or empirical evidence. It is a scientific method of developing knowledge. It accepts only what can be verified by observation but it rejects dogma as a method of producing knowledge.
3. Research demands accurate observation and description. The researcher is expected to use appropriate data collecting instruments and data gathering procedures.
4. Research involves gathering new data from primary /first-hand/ sources or using existing data for a new purpose.

5. Research is characterized by carefully designed procedures, always applying rigorous analysis; however, it is sometimes somewhat random & unsystematic.
6. Research demands patience and courage since it is tedious process and sometimes frustrating.
7. Research requires expertise (who has personal skills in doing a research).
8. Research is carefully recorded and reported. Key terms are defined, limiting factors are recorded, procedures are described, references are mentioned, results are objectively expressed and conclusions are drawn.
9. Research strives to be objective and logical applying every possible test to validate the
   procedures employed, the data collected and the conclusions reached.
10. Research involves the quest for new knowledge. It tries to answer unsolved problems.
11. Research emphasizes the development of generalization, principles or theories that will
    be helpful in predicting future occurrences(Abiy and others, 2009:14)

1.3. THE RESEARCH PROCESS

There are a number of steps in the research process even though their number and description varies from one author to the other. One simplified view sees these in five stages. They are conceptualization, contextualization, data collection, data analysis and reporting conclusions (Ibid, 2009:75).

Conceptualization means defining the problem, formulating the research questions, identifying the aims, specifying the testable hypothesis, deciding on the research approach, understanding the way of data collection, etc.

Contextualization means putting the research in the context of similar research that has been done in the past time. If there is a similar research that was done somewhere, looking carefully the methodology used and the way data collected and the limitation of the work may help.

Data collection is the process of applying the chosen method (s).

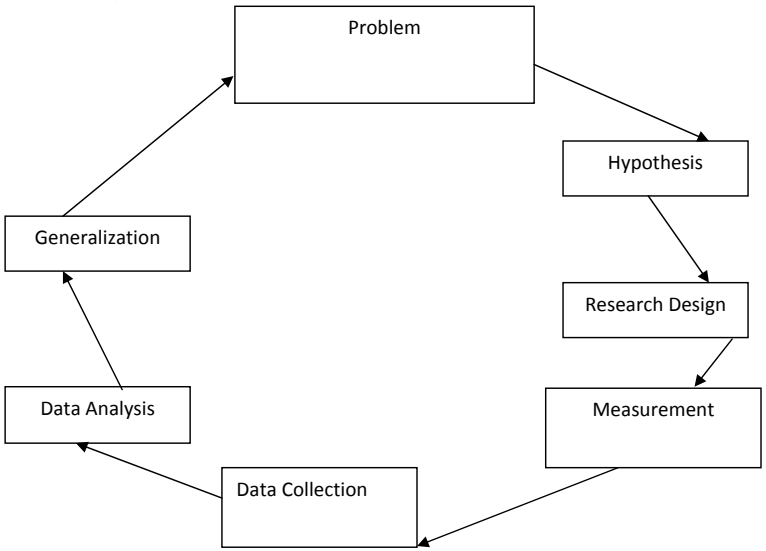
Data Analysis should match with data collection; occasionally, problem may emerge as one starts to do data analysis if it doesn't match with data collection.

Reporting conclusions refers to writing up and further dissemination.

Research process has cyclic nature. It often starts with a problem and ends with a tentative empirical generalization. The generalization ending one cycle is the beginning of the next cycle. This cyclic process continues indefinitely. The research process is self- correcting. Researchers test tentative generalizations they formulate and test new ones. A researcher will reject the generalization if it can't be logically validated and empirically verified. But generalizations can be rejected, even if it is true, if the procedures for validation & verification have deficient. To minimize the risk of rejecting true generalizations, a researcher examines each of the stages /described below/ in the research process prior to the formulation of new generalizations.

That is why research process is self correcting.

Figure 1. The main Stages of the Research Process



(Frankfort- Nachmias and Nachmias, 1996:19)

1.4. TYPES OF RESEARCH IN GENERAL AND IN EDUCATION IN PARTICULAR

Research in general and research in education in particular can be classified in to various types. Dear student, here before we go to discus about types of research in general and education in particular, let's see the development of educational research in this era. For we as educational planners and managers, the content of/ the theme of our research undertakings is education.

1.4.1 Development of Educational Research

When we see research in education, we would call it educational research which is becoming as the widely known field of study in various inland and foreign higher education institutions.

Early educational research was modeled on the methods of the natural sciences and had its origins in the work of psychologists in the late nineteenth century. The experimental method was widely used. The growth of the testing movement (e.g. intelligence tests, attitude tests and tests of academic achievement) led to work on test development and a focus on statistical analysis. The work of educational psychologists put education on a scientific footing and was believed to give objective information. Psychology (influenced by the approaches of the natural sciences) continues to influence educational thinking today. The scientific approach also influenced the sociology of education, established in the UK in the 1950's.The focus of this work was on social class and inequality: it made use of measurement techniques and statistical analysis. There were criticisms raised in educational research. The criticisms of the 'scientific approach' focused on validity and political and ethical issues. Validity was referred to doubts have been raised as to whether the so-called 'hard data' produced actually represents what it claims to represent. Political and ethical issues " In the 1970's and 1980's many educational researchers rejected earlier work in the psychology and sociology of education claiming that it had effectively served to preserve the political status quo, rather than challenging it"(Open University,2001).

What are some of the types of research applicable to education and in other professions in general?

There are different ways of classifying research. It is very difficult to propose a single classification methods that fits different fields (disciplines) and acceptable by all. For instance, some classify research as theoretical and applied research, descriptive and explanatory research, quantities and qualitative research, conceptual and empirical research and other types of research. Others classify research in different ways. It should also be recognized that there is no clear dividing line between one method and the other. There are always overlaps that one method somehow includes the other (Abiy and et.al, 2009:24).

Based on the purpose of research, it is possible to categorize research into 4 broad categories of research. They are:

1. Basic research 3. Evaluation Research
2. Applied research 4. Action Research

1. Basic Research

Basic research is also known as pure or fundamental research. The primary objective of basic research is the advancement of knowledge and it is basically concerned with the formulation of a theory or a contribution to the existing body of knowledge. It is designed to add an organized body of scientific knowledge and does not necessarily produce results of immediate practical value.

The major goals of basic research consist of:

- Getting and utilizing empirical data in order to formulate, expand and evaluate theory: and;
- Discovery of knowledge only for the sake of knowledge i.e., to fill knowledge gap

The driving force in basic research is a researcher's curiosity or interest in a scientific question. The motivation behind his/her curiosity is to expand human knowledge, but not to create or invent something that has practical value. Even though pure research has no direct benefits, it often has indirect benefits, which can contribute greatly to the advancement of humanity.

On the whole, basic research:

- Represents a rigorous and structured type of data analysis;
- Uses careful sampling procedures to extend the findings beyond the group or situation; and
- Has little concern for the application of the findings (Social usefulness of the findings).

2. Applied Research

Applied research is designed to solve practical problems rather than to acquire knowledge for its own sake. The goal is to improve the human condition. It is undertaken to solve immediate practical problem and the goal of adding to the scientific knowledge is secondary. Some scientists feel that the time has come for a shift in emphasis away from basic research and towards applied research.

Applied researchers might look for answers to specific questions that help humanity, for instance, medical research or environmental studies. Such type of research generally takes a specific question and tries to find a definite and comprehensive answer.

The purpose of applied research is about testing theories often generated by pure science and applying them to real situations. It can be about finding out the answers to a specific problem. Its primary purpose is discovering, interperating and the development of methods and systems for solving practical problems on a wide variety of real life situation. In general, applied research:

- Is conducted in relation to actual problems and under the conditions in which they are existed in practice;
- Uses methodology that is not as rigorous as that of pure research;
- Yields results that can be evaluated in relation to local applicability, not in terms of universal validity (Ibid, 2009:28).

3. Evaluation Research

Evaluation research is also another type of research which assesses the merits and worth of a particular practice in terms of the values operating at the site(s).The practice may be a program, a product, a policy, or a process. Evaluation determines whether the practice works –that is, does it do what is intended in the site.

4. Action Research

The fourth type of research, which is the great concern and emphasis of this course to educational managers, is action research. Action research involves mainly practitioners in the field, for example, teachers, counselors, and school administrators. But it does not mean that outsiders (consultants from other places) do not involve in this type of research. Its purpose is to investigate an existing problem in an attempt to seek solutions for the problem. Here the site is important because the research outcomes are applicable to that particular site. It is a research in action.

In brief statements, this type of research directed towards a solution of a day-to-day problem at the local level. Its focus is on immediate practical problems that occurred at a specific situation or locality. It is carried out mainly by the practitioners at the field such as teachers, administrators, managers or other educational professionals. It is less rigorous in terms of design and methodology than other educational researches.

1.5 CONCEPTS OF ACTION RESEARCH

1.5.1. Definition of Action Research

Action research is a type of applied research. It is a small-scale intervention in the functions of the real world and close examination of the effects of such kind of intervention. In relation to the definition of action research, Stringer (2007:1) expressed as follows:

Action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives. Unlike scientific (pure) research that looks for generalizable explanations that might be applied to all contexts, action research focuses on specific situations and localized solutions. Action research provides the means by which people in schools, business and community organizations; health and human services may increase the effectiveness of the work in which they are engaged. It assists them in working through, sometimes, puzzling complexity of the issues they confront to make their work more meaningful and fulfilling.

Generally action research is a type of applied research that focuses on a specific problem in a

practical setting. It is more concerned with immediate application rather than development theory.

1.5.2. Characteristics of Action Research

Action research has its own features (characteristics) that distinguish it from other types of researches. Some of the Common Characteristics of action research are the followings:

1. Action research is situational. It concerns with diagnosing and solving a problem in a specific context.
2. It is usually collaborative. Teams of researchers and practitioners work together on a project.
3. It is participatory. Team members take part directly or indirectly in implementing research.
4. Its goal is to produce valid information and knowledge that has immediate application. It is conducted by persons directly concerned with the social situation that is being researched.
5. It is characterized by a continuing effort closely interlink, restate and confront action and reflection.
6. It is self-evaluative. Modifications are continuously evaluated within the ongoing situation to improve Practice in some way or other (McKiernan, 1996:32).

1.5.3. Importance of Action Research

Action research plays many vital roles in different areas. Some of the common areas can be school based curriculum development, professional development strategy, understanding immediate social situation, self-evaluation and solving problems. In relation to this, NEC-I.C. (1999:155) described that the purpose of action research in school and classroom can be classified into five categories, they are:

1. It is a means of remedying problems diagnosed in specific situations.
2. It is a means of in-service training to equip the teacher with new skills and methods and sharpening his/her self-awareness and analytical powers.
3. It is a means of injecting additional or improved approaches of teaching and learning to an ongoing system.
4. It is a means of improving the relationship between the practicing teacher and the academic researcher.
5. It is a means of providing a preferable approach to problem solving in the classroom.

Generally, teacher research or classroom research is a good example of action research.

Teachers/managers in any academic work do action research to improve practice. Teachers as managers can make professional judgments about evaluating and improving their own work.

1.5.4. Stages in Action Research

Different authors stated different number of stages in action research. Ministry of Education summarized the steps in action research in the table below:

Steps	Procedures
1st step	Identification, evaluation and formulation of the problem in relation to day -to-day teaching situation
2nd step	Preliminary discussion among interested group (i.e. teachers, researchers, advisors, sponsors, etc.) for the draft proposal is conducted. This stage includes statement of the problem, objectives, purpose and assumption being clearly stated.
3rd step	Reviewing research literature to learn from comparable studies regarding to their objectives, procedures and problems treated
4th step	Modification or redefinition of the initial statement of the problem at the first step is done. Here it may emerge in the form of testable hypothesis.

Steps	Procedures
5th step	Selection of research procedures, sampling, administration, choice of materials, methods of teaching and learning, selection of resources and tasks, etc.
6th step	Choice of the evaluation procedures to be used
7th step	The implementation of the project itself over varying periods of time is specified. It will include the condition and methods of data collection (e.g. by weekly meetings, keeping records, reports, the submission of self –evaluation, and group evaluation report, etc.) The monitoring of tasks and giving feedback to the research team: the organization and analysis of data
8th step	Interpretation of data, inferences to be drawn, overall evolution of the project, and discussion on the findings on agreed evaluative criteria.

In relation to stages of action research, stringer (2007:9) Stated that the basic action research routine provides a simple yet powerful framework-look-think-act-that enables people to commence their inquires in a Straight forward manner and build greater details into procedures as the complexity of issues increases. (The terms in parentheses in the following box shows how the phrases of the routine relate to traditional research practices).

Look - Build a picture: Describe the situation (Defined & describe).
Gather relevant information
(Gather Data)
Think - Explore and analyze: What is happening here? (Analyze).
-Interpret and explain how and why things are as they are (Theorize)
Act - Plan (Report)
-Implement
- Evaluate

Box 1. A basic Action Research Routine

The look, think, act routine is one of the number of ways in which action research is envisaged. For example, action research can be presented as a spiral of activity: plan, act, observe & reflect (Kammis and McTaggart in Ibid, 1999, 2007: 10). Different formulations of action research reflect the diverse ways in which the same set of activities may be described. The look, think and act routine should be read as a continually recycling set of activities.

As participants work through the major steps, they will explore the details of their activities through a constant process of observation, reflection and action. At the completion of each set of activities, they will review (look again), reflect (reanalyze) and re-act (modify their actions). However, action research is not a neat, orderly activity that allows participants to proceed step- by–step to the end of the process. People will find themselves working backwards through the routines, repeating processes, revising procedures, re-thinking interpretations, leap forging steps & sometimes making radical changes in direction.

1.5.5. Approaches in Action Research

In spite of a profusion of theory, the application of scientific method to human events has failed to provide a means for predicting & controlling individual or social behavior. Teachers, health workers and other human service practitioners often find that the theoretical knowledge of the academic world has little relevance to the existing demands of their every day professional lives. The objective & generalizable knowledge embodies in social and behavioral research often is only limited relevant to the situations they encounter in their daily lives & has little application to the difficulties they face (Stringer, 2007:5).

Action research is based on the proposition that generalized solutions may not fit particular contexts or groups of people & that the purpose of inquiry is to find an appropriate solution for the particular dynamics at work in a local situation.

Although there are general processes involved, for example, in teaching, health care, social work, etc, there is always a need to modify & adopt those processes for the particular people involved & the place where they are applied. It means that though action research provides the means to systematically investigate issues in diverse contexts & to discover effective and efficient applications of more generalized practices, the primary purpose of it is to provide the means for people to engage in systematic inquiry & investigation, to design an appropriate way of accomplishing a desired goal & to evaluate its effectiveness.

An assumption of action research is that those who have previously been designated as subjects should participate directly in the research. Action research is participatory processes that involve all those who have a stake in the issue engage in systematic inquiry into the issue to be

investigated. Professional practitioners, as research facilitators, engage their communities of interest in careful and systematic explorations that provide them with knowledge & understanding that, in every direct ways, improve the quality of their lives.

Generally, action research envisages a collaborative approach to investigation that full participants in the research process. A fundamental promise of community- based action research is that is commences with an interest in the problem of group, a community, or an organization. Its purpose is to assist people in extending their understanding of their situation and thus in resolving problems that confront them. Community based action research provides a model for enhancing logical, action oriented approaches to inquiry applying small scale theorizing to specific problems in specific settings. In relation to an approach to action research, it was stated as follows:

Action research is a collaborative approach to inquiry or investigation that provides with the means to resolve specific problems. Action research is not a panacea for all ills & doesn't resolve all problems but provides a means for people to "get a handle" on their situations & formulate effective solution to problems they face in their public and professional lives (I bid, 2007:8).

Unit Summary

Research is a well planned and systematically organized investigation of natural behavioral and social phenomena. It enables people to create new knowledge, answer important and fundamental questions by applying scientific methods. It is a systematic process of collecting data & analyzing information to increase our understanding of the phenomena under investigation.

Research has several main characteristics, among those characteristics, research is directed towards the solution of a problem, is based upon observerable experiences or empirical evidence, demands accurate observation & description, involves gathering data, requires carefully designed procedures, demands patience & courage, requires expertise, is carefully recorded & reported, strives to be objective & logical, involves the quest for new knowledge & emphasizes the development of generalizations, principles or theories.

Different authors mentioned different steps in the process of research. Some of the common main steps in the process of research include: problem identification, formulating hypothesis, research design, data collection, data analysis and generalization,

There are different ways of classifying research. It can be classified based on goal of research- specific objectives of research, approaches of research, research designs, the type of data used in research and fields of study.

Action research is one of the types of research when research is classified based on the purpose of research and it is a type of applied research & it enables people find immediate solution to problems they confront in their day to day activities.

Action research has some characteristics: It is situational, conducted by persons directly concerned, collaborative, participatory, self-evaluative, etc.

Action research plays several vital roles in different areas. In education, it serves as a means of remedying problems, improving methods of teaching and learning, etc.

The basic action research routine provides a framework- look- think- act- that enables people to commence their inquiries in a straight forward manner. Action research is a participatory process that involves all the concerned bodies. It envisages a collaborative approach to investigation that seeks to engage subjects as equal and full participants in the research process.

SELF –CHECK EXERCISE 1

Answer the following questions

1. What is research?

_____

_____

2. What do you understand by basic research and applied research?

_____

_____

3. What is the step in doing a research?

_____

_____

4. When do we use basic research?

_____

_____

5. Is applied research different from action research? If your answer is 'Yes, it is', explain it.

6. When do we use applied research?

7. How do basic and applied researches differ?

8. What are some of the common characteristics of research?

9. What are the main uses of action research in education?

10. List down the major stages involved during action research?

Chapter-2

THE PRINCIPLES OF ACTION RESEARCH

Action research is a name given to a particular way of researching your own learning. It is a practical way of looking at your practice in order to check whether it is as you feel it should be. If you feel that your practice is satisfactory you will be able to explain how and why you believe this is the case; you will be able to produce evidence to support your claims. If you feel that your practice needs attention in some way you will be able to take action to improve it, and then produce evidence to show in what way the practice has improved.

Because action research is done by you, the practitioner, it is often referred to as practitioner research, or a similar name such as practitioner-led or practitioner based research. It is a form of research which can be undertaken by people in any context, regardless of their status or position. It involves you thinking carefully about what you are doing, so it can also be called a kind of self-reflective practice. The idea of self-reflection is central. In traditional (empirical) forms of research researchers do research on other people. In action research researchers do research on themselves in company with other people, and those others are doing the same.

No distinction is made between who is a researcher and who is a practitioner. Practitioners are potential researchers, and researchers are practitioners (some people who like to maintain their status as 'pure' researchers do not always see it this way, though). Traditional researchers enquire into other people's lives and speak about other people as data. Action researchers enquire into their own lives and speak with other people as colleagues. Action research is an enquiry by the self into the self, undertaken in company with others acting as research participants and critical learning partners.

Action research involves learning in and through action and reflection, and it is conducted in a variety of contexts, including the social and caring sciences, education, organization and administration studies, and management. Because action research is always to do with learning, and

learning is to do with education and growth, many people regard it as a form of educational research. In one sense, there is no such 'thing' as action research. It is important always to remember this. Sometimes people write about action research as if it were a self-contained object of enquiry, existing separate from themselves. I am doing so now. On this view, action research can become an abstract discipline, a set of procedures which can be applied to practice. It can then turn from being a living process to a linguistic abstraction, and this tends to distort the values of justice and individual autonomy which animate action research. It is important always to locate discussions about action research within the real-life experience of real-life people. The 'meaning' of action research is in the way people live together.

`While there might be no such thing as action research, there are people who are action researchers. They might not call themselves by that name, but if they wished to give their work a theoretical framework, they could well call the framework action research. When people first encounter the idea of action research they often say, 'This is what I do in any case, only now there is an organizing framework for it.' The idea of action research refers to the theoretical framework which guides practice. Action research is not a thing in itself; the term always implies a process of people interacting with one another.

Action researchers share certain sets of beliefs, commitments and hopes. What they do (action research) is a set of practices which demonstrates those beliefs, commitments and hopes in practice. They undertake research to help them learn how to create social hope and to take action to try to realize the hope in terms of social evolution.

Questions arise, therefore, about what action researchers do, and how and why they do it, questions to do with how we view ourselves (ontology), how we come to know (epistemology), how we do things (methodology), and what we hope to achieve (socio-political intent). These aspects are always interrelated.

2.1 ASPECTS OF RESEARCH

Action research (for that matter all kinds of research) is more than just doing activities. It is a form of practice which involves data gathering, reflection on the action as it is presented through the data, generating evidence from the data, and making claims to knowledge based on conclusions drawn from validated evidence. When we come to producing reports, it is not enough only to offer descriptions and activities lists. Explanations need to

be given for the activities, in terms of the researcher's values, intentions and purposes for doing the research. For example, if a researcher makes a claim that they have helped others become more confident, the values that inform their work include the idea that people should feel respected. So when people do demonstrate their confidence, such as asking a question in public, the researcher could claim that they had fulfilled their values, and that they had influenced the quality of someone's life for good.

It is helpful to be familiar with some key ideas and terms used in educational research.

Research is generally held to involve the following:

- **ontology–** the way we view ourselves, a theory of being
- **epistemology**– how we understand knowledge, including how knowledge is acquired
- **methodology**– how we do things.

Educational research also involves issues of politics, because it is always socially embedded; it is done by real people with the intent of illuminating, explaining and improving human interaction in education settings. Action research has as a main purpose the generation of knowledge which leads to improvement of understanding and experience for social benefit.

2.2 DOING ACTION RESEARCH

What do action researchers believe in? Ontological issues Action researchers believe that people are able to create their own identities and allow other people to create theirs. They try to find ways of accommodating multiple values perspectives. This is surely very difficult when one set of values is radically at odds with another. They try to find ways to live together in spite of their potential differences. Living together successfully requires hard work and considerable effort to understand the other's point of view; this means developing their potentials to care, and recognizing and suspending their own prejudices.

Creating the kind of societies they feel are good societies involves their personal commitment to action. This means having the courage to speak and act in ways which are often contested. They hold a vision of a future which is better than the present, characterized by creative, life-affirming ways of living. The future is embodied in the present; they can realize future potentialities by improving what they are doing in relation with others in the present. They know that if they abandon the vision of a better society in the light of the troubles of the present one, they will probably settle into stasis. However, if they try to do something, just one positive

life-enhancing action, there is hope. Improvement is still improvement, no matter how small.

Action researchers accept the responsibility of ensuring that their own lives are in order before they make judgments about other people's. This means honestly critiquing their practice, recognizing what is good and building on strengths, as well as understanding what needs attention and taking action to improve it. It involves commitment to the idea that learning will transform into purposeful personal action for social benefit.

They often express these ontological assumptions in the language of values. Action research rests on ideas to do with truth, social justice, compassionate ways of living, respect for pluralistic forms. Often action researchers live in social contexts where these values are prized in principle but denied in practice. The realities of their contexts often show preference for privileged elites rather than the underprivileged and marginalised. Action researchers aim to understand these issues in order to change present realities into futures which are more in tune with their values.

2.3 HOW DO ACTION RESEARCHERS COME TO KNOW? EPISTEMOLOGICAL ISSUES

Epistemology is the name given to the study of what we know and how we come to know it. Traditional views of scientific enquiry tend to see knowledge as a free-standing unit, with an existence of its own, residing 'out there' in books and databases. In this view knowledge is divorced from the people who create it.

Action researchers see knowledge as something they do, a living process. People can generate their own knowledge from their experience of living and learning. Knowledge is never static or complete; it is in a constant process of development as new understandings emerge. This view of knowledge regards reality as a process of evolution, surprising and unpredictable. There are no fixed answers, because answers would immediately become obsolete in a constantly changing future. The very idea of answer becomes meaningless; answers transform into new questions. Life is a process of asking questions to reveal new potentialities. Action researchers ask questions of the kind, 'I wonder what would happen if. . . ?' They aim to disturb fixed systems of knowing rather than maintain them.

Learning in this view is rooted in experience. It involves reflecting on the experience of practice (a process of critical discernment), deciding whether the practice was in line with your espoused values base, and then deciding on future action as a result of the reflection. If you consider

practice good, how can you develop it to deal with an uncertain future? If you consider it less than good, how can you improve it?

Some theorists believe that learning happens only in critical episodes. Certainly it does, but learning also happens all the time, in our moment-to-moment living. We learn how to walk, to catch a ball, to avoid trouble, to respond to our feelings. Learning, says Mary Catherine Bateson (1994), often happens peripherally; we learn a good deal without effort and without conscious intent. Learning can be accelerated and intensified through critical awareness, and reinforced through intellectual study. Learning mainly involves making new connections and reconfiguring present knowledge in terms of its potential use value, and this process is often carried out at a level not accessible to conscious awareness.

2.4 HOW DO ACTION RESEARCHERS ACT? METHODOLOGICAL ISSUES

Action researchers regard learning and experience as processes which enable individuals to make choices about who they are and how they are together. However, people's choices often conflict, so they have to be negotiated and accommodated. This can be very difficult, but it can be done if people try to see one another's point of view. The methodology of action research is that people ask questions such as 'How do I do this better? How do we understand?' They do not aim for consensus or harmony, but they do try to create spaces of tolerance to negotiate differences.

This can happen because reflection on action is an inherent part of an action research methodology. The idea of reflective practice was originally popularized by Donald Schön (1983). Reflection on action makes sense, however, only when practice is seen as in relation with others, a process of dialogue and encounter (Bryk et al., 1993). For some, myself included, the ideas of encounter, connectedness and relationship can be understood as a form of spirituality. Capra et al. (1992), for example, believe that relation should be understood as belonging. We are all connected in deep ways, and, because we are made of the same stuff as stars (Feynman, 1999), we are also connected to the whole of creation. We belong to one another and ultimately to the universe. These views have implications for how people understand their practice. In traditional epistemologies, practice tends to be seen as something separate from practitioners. People might imagine work as in a building or an office, for example. I used to think like this; I regarded work as a thing I did. On a relational view, work and practice are how we are in relationship with other people. The

focus of the work is how to nurture creative and life-giving encounters. Action researchers regard their work as ensuring that encounters with others are opportunities for learning and growth. When they reflect on practice they are reflecting on their relationships with others, and whether those others have benefited from the encounter. This can be a major test for judging the quality of the practice: has the other person benefited from the encounter? The implications are awesome. If we are always in relation and those relationships have potential influence for changing people's lives, even in small ways, how great is the responsibility to ensure that the influence is life-affirming. If we make ourselves who we are through our capacity for choosing, how important it is that we choose to avoid doing harm.

2.5 WHAT ARE THE SOCIO-POLITICAL IMPLICATIONS OF OUR KNOWLEDGE?

There are serious implications in these views. Here are some of them.

2.5.1 Challenging dominant epistemologies

The purpose of research is generally understood as gathering data and testing it in order to generate new knowledge which can produce new theories of how reality works. In traditional views theories exist as an abstract body of knowledge which informs practice, a theory-into-practice model. In traditional education settings, whether in formal schooling or professional education, there is an expectation that people will attend lessons and take notes, but not raise questions. Some researchers produce conceptual models which work in practice provided people are obedient and comply with how the model says they ought to behave. If people exercise their independence of mind and spirit, however, and disagree with the model itself or the fact that they are supposed to agree with abstract theory, they are often seen as disruptive and anarchic.

The traditional positivist view of research and theory has dominated Western institutional thinking and practice for centuries. New movements such as action research have challenged traditional views. Such challenges are naturally unwelcome to dominant elites, who then gather force to put down the insurgence. They use a range of control strategies including ridicule and marginalization, what Lyotard (1984) calls intellectual terrorism. The most characteristic response is to pretend that critique does not exist. When a critical mass builds up, however, sufficient to show that it does, other measures must be exercised. The most characteristic of these is to

use the language of 'radical', 'unorthodox' and 'alternative'. There is nothing radical or unorthodox about people wanting to have a say in their own lives. It is important not to let propaganda or fear of being labeled reactionary stand in the way of realising one's vision for what could be a better way of life.

The issue then becomes the legitimacy of forms of theory, which is entitled to generate theory, and how the theory is judged – 'who decides what knowledge is, and who knows what needs to be decided' (Lyotard, 1984: 9). Ball (1990: 17), drawing on the work of Michel Foucault, says that it is not only about 'what can be said and thought but also about who can speak, when, where and with what authority. Discourses embody meaning and social relationship; they constitute both subjectivity and power relations.' The issue then extends to not only what should be judged a worthwhile theory but also who should be judged a worthwhile person.

2.5.2 The topology of epistemological landscapes

Schön (1983, 1995) speaks of the topology of professional landscapes and their characteristic epistemologies. There is a high ground, he says, which favors technical rationality (what I have so far called propositional forms of knowledge), and a swampy lowlands which values intuitive, practical forms. The high ground tends to be found in institutions and is peopled mainly by elitist intelligentsias from the corporate and formal education worlds. Chomsky has often referred to these as a 'high priesthood'. The high priesthood is much occupied with generating abstract theories about issues which, while valuable in them, often have little to do with important aspects of everyday living. Because of the prestigious social positioning of the theorists, their abstract form of theory has come to be seen as dominant. Practitioners, on the other hand, deal with issues of everyday significance, but, because practitioners are not viewed as legitimate knowers, either by the high priesthood or by themselves (because 'ordinary' people are systematically taught to devalue their own contributions), their form of theory tends to be regarded as practical problem-solving rather than proper research.

The situation is topsy-turvy to the realities of daily living. Precisely those issues of daily significance which occupy practitioners are trivialized, along with the status of the practitioners as knowledge workers and theory generators, while abstract theorizing continues to maintain institutional legitimacy.

Schön calls for a reappraisal of what counts as scholarship. Research which addresses the important issues of daily living needs to be given as much prestige as traditional scholarship. Practical theorising is an important methodology for making holistic cultural, social and intellectual progress. Practical, experiential theorists should have status equal to abstract theorists in corporate and higher education contexts: they are in the front line of social theorising. Practical forms of theory are as legitimate as 'pure' conceptual forms. The most powerful and appropriate form of theory for dealing with contemporary social issues is one which is located in, and generated out of, practice, and which values tacit knowledge as much as cognitive knowledge. This all comes down to action research, a way of researching one's own practice and generating personal theories of practice which show the process of self-monitoring, evaluation of practice, and purposeful action to improve the practice for social benefit.

2.5.3 Levels of adequacy

In 1965, and focusing on linguistic analysis, Noam Chomsky explained that research can operate at three levels of adequacy: observational, descriptive and explanatory. In a sense, all research begins with observation, and most research offers descriptions of events. In 1960s linguistics the dominant research methodology was behaviouristic. The aim was to study a particular language, gather instances of its significant features, and provide descriptions of the language under study (Lyons, 1970). The same tendency is visible today across the social sciences, education research and organization study. Everywhere there are descriptions of how things work, or ought to work, and what needs to be done to make them work in this way. These are inert theoretical models. They work in principle, but often there is no live evidence to show that they work in practice.

It is not enough, in Schön's view, to stay at the level of hypothetical theorizing. It is necessary to move to explanation in Chomsky's sense. Moving from observation and description of action means moving to offering explanations for action. The focus of research then develops from observing and describing what is happening to considering why it is happening – that is, the reasons and intentions of the person which inform the behavior.

The issue remains, however, whose research is it? Some views of action research say it is acceptable for an external researcher to observe, describe and explain the actions of others who are doing action research. This belief animates an interpretive view of action research (see Chapter 3).

In my opinion, this is a distortion of the values of democracy and respect for others who should be regarded as thinking people who have the capacity to judge their own practice, also recognizing that the process of self-evaluation is likely to be enhanced within a community of critical friends. For action research to operate successfully as a methodology for social change, the locus of responsibility for conducting the research needs to shift from an 'external' researcher who is observing and describing other people's activities to practitioners themselves who give accounts of their own activities in terms of their values and hopes.

2.5.4 E-theories and I-theories

In his Knowledge of Language (1986) Chomsky developed the idea of E-language and I-language. The emphasis in traditional American linguistics in the 1970s and 1980s was still on the sound and word structure of sentences, and a language could be understood 'as a collection (or system) of actions or behaviors of some sort'. Chomsky refers to this as an 'externalized language' (E-language). An 'internalized language' (I-language), on the other hand, is 'some element of the mind of the person who knows the language acquired by the learner, and used by the speaker-hearer'. In 2000 Chomsky developed the concept of I-conceptual and I-belief systems, a concept that revolves around the internalized nature of beliefs and ideas. This indicates a shift away from description of language or thinking or theory generation, as an external object of study, towards an explanation of how language or thinking or theory generation informs the way a person creates their own version of reality.

This is a most important concept, and I wish to develop the notion of 'E' and 'I' to refer to different forms of theory and ways of coming to know. An E-theory exists as a form of theory external to its creator and which is generated from study of the properties of external objects. This is a propositional form of theory, much admired in social scientific analysis, behaviorists in orientation, and synchronic (in linguistics this is understood as abstracted from time). An I-theory is a dialectical form of theory, a property of an individual's belief system, and is diachronic (in linguistics this is understood as oriented in real time). This view is helpful for understanding different forms of theory, not only for linguistics but also for broad areas of human enquiry, including educational research. In this book I take the view that action research leads to the generation of I-theories of knowledge, theories which are already located within the practitioner's tacit forms of knowing, and which emerge in practice

as personal forms of acting and knowing. These theories are linked with other I-belief systems values, for example. The way the theories manifest as living practices is congruent with the belief systems of the knower.

Debates like this, to do with how we understand the process of research and the generation of theory, however, give rise to struggles about the nature and practice of action research – what it is and who owns it (or, when action research is taken as a term denoting people in company with one another, who we are and who creates our identities).

2.6 THE STRUGGLE FOR ACTION RESEARCH AS A LIVING PRACTICE

At the moment three distinct developmental trends are visible in the literature of action research: an interpretive, a critical theoretic and a living theory approach (see Chapter 3). Interpretive and critical theoretic approaches clearly work at the levels of observation and description: while they also offer explanations for practice, these explanations are offered within sets of propositional relationships. It also seems that many people offering action research courses in higher- and formal education contexts tend to operate within interpretive and critical theoretic rather than living theory frameworks. It is less problematic to observe other people doing action research than to do it oneself.

Engaging with living theory approaches means, as Whitehead says, placing the 'living I' at the centre of our enquiries and recognizing ourselves potentially as living contradictions. We might believe we are working in an effective and morally committed manner and then find from our own self-evaluation that we are denying much of what we believe in.

Here is an example from the doctoral work of Caroline Clarke as she speaks about trying to live out her values of care. Outlining her research, she says:

My study focuses on two main areas: my personal and professional journey as an educator and my attempt to change and influence the culture of my school with regard to discipline. . . I describe the 'epiphanies' that brought me to realise that I was outside my 'value world' and consequently experiencing a drain on my emotional and spiritual energy as a result of my workplace role. Following these realisations I began searching not only for answers but also for understanding of what was happening to me in those moments where my values were compromised and I became what Jack Whitehead (1989) describes as a 'living contradiction'. The answers came in the form of reading, observation and action on reflection, and the solution came in the form of change. The change was two-fold, in me and

in the wider educational system of which I was a part. My diary of the time (June, 2000) reads: 'To hope for a change is essential but it takes courage to go beyond hope and bring about change. It must be the kind of courage which not only seeks to change oneself, but also the circumstances and people around you, despite the opposition.'

Self-study is now widely recognised as a powerful influence for personal and social renewal. It does mean accepting the responsibility of accounting for our own practice, and, in work contexts, accounting for our own professionalism. We offer descriptions and explanations for our work by producing professional narratives to show that the work did impact beneficially on others. We gather and test data of our practice and produce evidence to show that our claims are well founded. Those with whom we work state that they have benefited (or not as the case may be), and those with whom they are working testify that they in turn are benefiting (or not). So it is possible to trace lines of influence from ourselves to others with whom we might have no personal contact, but whose lives we can claim to have touched. There are, says Bakhtin (1986), voices in everything. I am alone as I write, but I am influenced by the voices in the texts I have read and the seminars I have attended, as well as the voices in the supermarket and at the airport. You are listening to my voice as you read, and responding, and in turn others will hear your voice and be stirred. How can we ensure that we are speaking well, and using our influence for others' benefit? In some instances the lines of influence are too complex and it is impossible to know the extent of our influence. An implication is that, in all the contexts of our lives, whether its effects are visible or not, we need to ensure that our influence leads to life-enhancing growth for all.

Descriptive E-approaches cannot do this. They work from a behaviorist orientation in which an external researcher offers accounts of other people's action. In this view, as McNamara and O'Hara (2000) and Zuber-Skerritt (1996) rightly say, it is difficult to show how action research can influence organisational growth or collective action. The process of influencing social change begins with the process of personal change: 'change can only come about when the individuals who belong to a particular organization can see the point in changing'. It is pointless to produce abstract models of social change and expect other people to apply them to their own circumstances or locate themselves within the models. Bourdieu's (1990) idea about the reality of the model being more powerful than the model of reality becomes very real.

Don't think that observations and descriptions are unimportant. They are important, but they do not go far enough. It is not enough for an external observer to describe another person's actions and then to present an account of those actions as if to give a full explanation of their reality. The practice is also ethically questionable. I am saying that, while observation and description are essential first steps, it is important to go beyond and offer explanations. Explanations are the I-theories people generate to show their own process of learning and development. Moving on like this is a generative transformational process in which present forms transform into increasingly robust forms; observations turn into descriptions which turn into explanations. The whole developmental process is integrated within the life of the person who is telling the story. An approach which might be deemed educational would perhaps be to place evidence from living theory accounts alongside the propositional theories generated from spectator research, and so show the enhanced validity of those living theories which explain the practices and learning of individuals.

2.7 ACTION RESEARCH FOR EXPLANATORY ADEQUACY

Here is an example of how descriptions can turn into explanations, how propositional theory can turn into real-world action. The example is taken from the action research literature about the nature of action research.

There are many well-known descriptions of action research. Here are two of the most famous.

According to Kemmis and McTaggart, 1988 'Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out'.

According to Inclusive working definition drawn up collaboratively at the International Symposium on Action Research, Brisbane, March 1989,

If yours is a situation in which

- people reflect and improve (or develop) their own work and their own situations
- by tightly interlinking their reflection and action
- and also making their experience public not only to other participants but also to other persons interested in and concerned about the work and the situations (i.e. their (public) theories and practices of the work and the situation) and if yours is a situation in which there is increasingly
- data-gathering by participants themselves (or with the help of others) in relation to their own questions
- participation (in problem-posing and in answering questions) in decision making
- power-sharing and the relative suspension of hierarchical ways of working towards industrial democracy
- collaboration among members of the group as a 'critical community'
- self-reflection, self-evaluation and self-management by autonomous and responsible persons and groups
- learning progressively (and publicly) by doing and by making mistakes in a 'self reflective spiral' of planning, acting, observing, reflecting, replanning, etc.
- reflection which supports the idea of the (self-) reflective practitioner then yours is a situation in which action research is occurring.

So far, these are linguistic descriptions of action research. However, some of the authors go on to show how they turn their linguistic descriptions into real-life explanations (see Atweh et al., 1998); they show how they lived out the principles they spell out. More of such accounts are needed.

2.8 FUTURE DIRECTIONS IN ACTION RESEARCH

These issues are important for future developments. Action researchers need to show their collective intent to live out the values which inform their work. Because they write about action research they inevitably position themselves as action researchers, so they need to take care that they do not stay at the level of abstract analysis. If they write about practice but do not explain their own they are not engaging with the issues they are speaking about. Contradictory situations arise. The contradictions are methodological, in the same way as when we try to teach people how to swim on dry land; and also ethical, as when we talk at people about the value of dialogue. Action researchers cannot afford to be armchair philosophers if they wish to maintain their professional and ethical integrity. Action research means action, not by some, but by all, but this means honesty and courage, and is not easy for those positioned as members of intelligentsias. We are all judged by our actions, especially when action is part of our trade mark. We all make our own decisions about these things.

So what do we know?

The community of educational action researchers knows a great deal about the procedures and principles of action research. We do not know so much about how action research can be used as a form of living practice in the evolution of good social orders, although a good deal of work has appeared recently in this regard. Jack Whitehead, Pam Lomax, I and others have supported the development of networks of practitioners who have produced accounts of educational development, and who in turn support others to produce accounts of how they do the same. The support of this networking is managed in a non-hierarchical, non-coercive way. It is a question of educational influence, a dialogue of equals. We constitute educational communities who are hoping to transform themselves through learning for social benefit.

Lynn Davies's (1990: 210) view of the management of learning communities: 'to achieve equity and efficiency, out go coercion, streaming, hierarchies and leadership, and in come federalism, power-sharing, organizational responsiveness'. This view is shown in our educational networks. Impressive bodies of validated case studies now exist in the Universities of Bath, Kingston and the West of England in the UK; in Brock and Nipissing in Canada; in Limerick in Ireland. These case studies constitute a major body of educational research literature. The influence of practitioners' ideas is being felt in their contexts of practice.

Action research has been legitimated by the Academy as a powerful and valid form of learning. The task is now to extend the range of influence. While it is not too difficult to show influence within supportive communities, it is more problematic when it is a question of influencing others who are indifferent or hostile, or whose interests are to do with careerism and profit-making rather than education.

Chapter-3

DEFINITION AND NATURE OF ACTION RESEARCH

INTRODUCTION

In the previous chapter, we have discussed about the nature of educational research in which action research is a part. In this chapter, we will discuss the nature of action research, its definition, importance, and the different stages of action research in detail. This chapter will acquaint you with the fundamental skills about how teachers can resolve their problems in the classroom.

Objectives

At the end of this chapter students will be able to:

- Understand the nature of action research
- Value the general view s involved
- Recognize the stages of action research in depth

3.1 THE NATURE OF ACTION RESEARCH

Introduction

This section will focus on the different definitions of action research given by different scholars, its purpose, and importance to improve teaching. This section is the basis for the full understanding of the concept of action research. Try to be critical in analyzing the definitions and the different characteristics of action research given in this section.

Doing this activities will help you to clearly understand the difference between action research and other forms of educational researches.

Objectives

After reading this section, you will be able to

- Define the term Action research
- Explain the purpose of action research
- Explain the importance of action research for teachers

- Explain the difference between educational research and action research

Activity 3.1

Q. List down at least 10 problems that influence the teaching –learning situation in your school

Q. Then select the four major problems and put them in the order of their significance.

Q. Discuss with your colleague and write common problems from the two schools if any

Q. Extend your discussion with the other two colleagues following the same procedure

After listing down the major problems in which four of you have agreed upon and try to find the causes for such problems

Q. Next discuss in group about the possible solution of the stated problems

Q. Imagine the possible results of the researches. Are the solutions within the scope of the school teacher's ability to be implemented?

In this section, you will learn about action research where by the teachers become both researchers and practitioners. In other words, you will learn a kind of research that develops the skill of teachers to investigate their work.

3.2 DEFINITION OF ACTION RESEARCH IN DEPTH

Different scholars define the term action research differently. Some define it based on the purpose. Others define it based on the process it

involves. Still others define it by the nature of the participants. Let us see some of them.

Action Research is a three-step spiral process.

1. Planning which involves reconnaissance;
2. Taking action; and
3. Fact-finding about the results of the action (**Kurt Lewin, 1947).**

Action Research is the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decision and actions (**Stephen Corey, 1953).**

Action Research in education is study conducted by colleagues in a school setting of the results of their activities to improve instruction (**Carl Glickman, 1992).**

Action Research is a fancy way of saying let's study what's happening at our school and decide how to make it a better place (**Emily Calhoun, 1994).**

Activity 3.2

Students would you please explain the differences and similarities of the definitions of action research given above.

Action research is inquiry or research in the context of focused efforts to improve the quality of a school and its performance. It typically is designed and conducted by practitioners who analyze the data to improve their own practice. Action research can be done by individuals or by teams of colleagues. The team approach is called collaborative inquiry.

Action research has the potential to generate genuine and sustained improvements in schools. It gives educators new opportunities to reflect on and assess their teaching; to explore and test new ideas, methods, and materials; to assess how effective the new approaches were; to share feedback with fellow team members; and to make decisions about which new approaches to include in the team's curriculum, instruction, and assessment plans.

Action research is deliberate, solution-oriented investigation that is group or personally owned and conducted. Spiraling cycles of problem identification, systematic data collection, reflection, analysis, data driven action taken, and finally, problem redefinition characterize it. The linking of the terms" action" and "research" highlights the essential features of this method; trying out ideas in practice as a means of increasing knowledge

about and/or improving curriculum, teaching, and learning (Kemmis &McTaggart, 1982).

While the concept of action research can be traced back to the early works of John Dewey in the 1920s and Kurt Lewin in the 1940s, it is Stephen Corey and others at Teachers College of Columbia University who introduced the term action research to the educational community in 1949. Corey (1953) defined action research as the process through which practitioners study their own practice to solve their personal practical problems.

Very often action research is a collaborative activity where practitioners work together to help one another design and carry out investigations in their classrooms. Teacher action research is, according to John Elliott, concerned with the everyday practical problems experienced by teachers, rather than 'theoretical problems' defined by pure researchers within a discipline of knowledge (Elliott, 2001) Research is designed, conducted, and implemented by the teachers themselves to improve teaching in their own classrooms, sometimes becoming a staff development project in which teachers establish expertise in curriculum development and reflective teaching.

The prevailing focus Action research needs collaboration. As inquirer about teaching and learning through approach is naturalistic, using participant-observation techniques of ethnographic research, is generally collaborative, and includes characteristics of case study methodology (Belanger, 1992).

The research study team provides support and a forum for sharing questions, concerns, and results. Teachers advise each other and comment on the progress of individual efforts. Engaging in collaborative action research helps eliminate the isolation that has long characterized teaching, as it promotes professionals dialogue and thus, creates a more professional culture in schools. Action research is primarily applicable for the understanding of change processes in school System. "One of the best ways to understand the world is to try to change it"

Activity 3.3

Elaborate the statement in the box above by relating it with the definition of action research.

3.3 CHARACTERISTICS OF ACTION RESEARCH IN DETAIL

This part systematically explores the key characteristics of action research and shows, how it unifies activities often regarded as quite distinct. Such activities as teaching, educational research, Curriculum development and evaluation are integral aspects of an action research. The fundamental aim of action research is to improve practice rather than to produce knowledge. The production and utilization of knowledge is subordinate.

First, in action research diagnostic judgments about practical problems in teaching and action hypothesis about strategies for resolving them are reflectively tested and evaluated. Second, since it is action hypothesis about how to translate values in to practice that are being tested, one cannot separate the research process of testing hypothesis from the process of evaluating teaching. Evaluation is an integral part or component of action research. Third, the curriculum development is not a process, which occurs prior to teaching. The development of curriculum programs occurs through the reflection practices of teaching. The improvement of teaching is not so much a matter of implementing an externally designed curriculum, but of developing one, whether it be self initiated or initiated others.

From an action research perspective, the improvement of teaching and the development of teacher are integral dimensions of curriculum development. Action research integrates teaching and teacher development, curriculum development and evaluation into unified conception of reflection in educational practice. It negates a rigid division of labor in which specialized tasks and roles are distributed. It does not allow imposing on practitioners the ideas specially expertise with the aim of controlling teachers activities.

In action research, the teacher becomes both teacher and researcher and teachers collaborate each other to bring improvement in teaching. For instance, consider the following **case study**.

> The director planned to introduce mixed ability grouping. He organized a serious of staff meetings on the issue rather than present his own arguments against streaming. By the end of series meeting the general feeling amongst the staff was that streaming in the school was having undesirable effect. The head teacher suggested that a one-year pilot experiment should be established with the first years and thoroughly monitored by all the staff prior to any decision about establishing mixed groups throughout the school. At the end of the pilot experiment, the vast majority of teachers were prepared for whole-school innovations. This experience gave them opportunities to get to know one another.

The above case study portrays that action research follows a "bottom up" rather than a "top down" management structure. It follows collegial rather than an individualistic or bureaucratic form of accountabilities-Accountability to peers, as opposed to accountability to one self-alone.

The director didn't impose his ideas on school teachers; rather he arranged a series of meetings for teachers to arrive at a consensus.

Handy (1984) claims that management system threatens the professional autonomy of practitioners when policy is both generated and executed hierarchically. In action research, practices were not derived from theories, generated from and tested independently of that practice. It constituted the means by which teachers generated and tested their own and others theories.

Generally, the following features characterize action research

- Spiraling cycles of problem identification;
- A problem focus;
- Systematic stages of data collection,
- Reflection Analysis,
- Data-driven action taken, and,
- Problem redefinition;
- An action and change orientation;
- Collaboration among participants;
- It is a process, which is initiated by practicing teachers
- The practical situation is the source of problems; and
- It is not hierarchical.

It is necessary to elaborate some of these characteristics.

1. ***The first characteristics*** (Spiraling cycles of problem identification) imply that teachers always should be involved in improving their teaching. Therefore, they have to continuously identify areas of problems that require a solution or areas of teaching learning processes that need improvement. Solving one problem or improving some part of teaching will not be an end, rather it will help teachers develop an insight on the other parts of teaching learning process that requires improvement.
2. ***Systematic data collection***. Action Research always has to depend on valid and reliable data. In doing so the teacher has to employ systematic data collection methods. The different methods of data collection in action research will be discussed in chapter four.

3. ***Reflection*** refers to the practitioners' team based/individual investigation/ assessment of previous practical experience and then finding out better course of action to the present problem situation. This characteristic suggests that teachers are responsible to find out the possible ways of improving teaching or solving problems that may arise in their teaching. To do this first they identify their strengths and weaknesses.
4. ***Analysis.*** The data collected through different data collection instruments should be analyzed. That is it must be put in a meaningful way so that a certain conclusion could be arrived. The raw data collected trough different instruments should be organized and be changed in to one single datum that best represents the characteristics of the behavior of the total population.
5. ***Data-driven action taken.*** One of the major characteristics of action research is that the research is done for immediate practical use. In this case teachers or managers will apply the results to make decisions on how to improve their teaching, developing the curriculum and developing teachers' professional skills.
6. ***Action research is based on the epistemological assumption that knowledge changes.*** That is the data collected from a certain school or classroom cannot be applied to or generalized to the different setting. Besides, action research is targeted not only to solve practical problems of schools or classrooms but also to change or to continuously

improve the teaching learning process. As a result, teachers will always be involved in the change process either to solve their practical problems or improve their teaching.

3.4. ADVANTAGES OF ACTION RESEARCH IN DEPTH

Action Research Resolves Theory Practice Dilemma

Teachers believe that theory is threatening because it is produced by a group of outsiders who claim to be experts at generating valid knowledge about educational practices. The procedures, methods and techniques suggested by experts do not resemble the way teachers process information as a basis for their practical judgments. It negates teachers competence acquired through experience.

1. Form perspective of teaching, "Theory" is what outside researchers say about their practices after they have their special techniques of information processing.

2. The feeling of threat may be enhanced if the knowledge generated is presented in the form of generalizations about teachers. If it applies to all contexts of practice, then it implies what the experience of teachers operating in a particular circumstance is not an adequate basis on which to generate professional knowledge. The more the researchers claim is to be generalizable knowledge the more threatening to teachers because it will contradict their experience of themselves as sources of knowledge.
3. Feelings of threat are further enhanced by the researchers' employment of models of practice derived from some ideal of society or individual. Because, the ideal model may be far from the actual classroom situation and the teachers professional experience.

However, action research minimizes this theory practice gap. Because teachers are both teachers and researchers who are continuously engaged in professional development.

From an action research perspective, the improvement of teaching and the development of teacher are integral dimensions of curriculum development. Action research is not hierarchical

Action research integrates teaching and teacher development, curriculum development and evaluation into unified conception of reflection educational practice. It negates a rigid division of labor in which specialized tasks and roles are distributed. It does not allow imposing on practitioners the ideas specially expertise with the aim of controlling teachers activities.

Action Research helps in Experimenting by introducing changes in existing situations.

Action research helps to critically and deeply understand the situation where by the teaching learning process is taking place. Introducing changes, trying out new actions, and observing their results often deepen our view of the situation in which we find ourselves.

Advantages of Action Research

- Action research promotes collaboration
- Resolves theory practice dilemma
- It integrates educational research, curriculum development, and evaluation
- Integrates improvement of the teaching and teacher development
- Makes the teacher both the teacher and the researcher
- Deepens understanding of the teaching learning situation

3.5 FOUR MAJOR IMPORTANCE OF ACTION RESEARCH

1. Action research aims an increased understanding of an immediate school situation, with emphasis on the complex and multivariate nature of this school setting. The epistemological conception of knowledge in action research is that truth varies depending on time, place, and situation. The implication from this conception is that, the research results that are conducted in some other schools cannot be applied or generalized to the different schools where the data is not collected. Therefore, action research helps teacher to understand the school situation in-depth and develop strategies that are relevant to the particular school situation. Hence, action research is context based.
2. Action research simultaneously assists in practical problem solving and expands scientific knowledge. This goal extends into two important process characteristics: First, there are highly interpretive assumptions being made about observation; second, the researcher intervenes in the problem setting. As one part of an applied research the prime goal of action research is to find solutions for immediate practical use. However, this does not mean that action research does not serve the purpose of adding new knowledge to the field of education. That is, when teachers develop practical experience for a long period of time such accommodated experience may lead them to develop a theory in the field of education.
3. Action research is performed collaboratively and the competencies of the respective actors/teachers. A process of participatory observation is implied by this goal. Enhanced competencies (an inevitable result of collaboration) are relative to the previous competencies of the researchers and subjects and its balance between the actors, will depend upon the setting. In addition to the collaboration among teachers for shared professional development, in action research, teachers collaborate with their students, school principals, parents, etc to improve their teaching.
4. Action research is primarily applicable for the understanding of change processes in school systems. As a strategy for professional development action research is not aimed at solving problems that may arise in the classroom situation, it also aimed at continuously improving the teaching learning process. This implies that the basic assumption in action research is that knowledge changes through time. The solutions given at one time may not equally work at the other time. Therefore,

action research helps teachers to cope up with the changes that are taking place in the school. As compared to a traditional research that gives one solution that can be generalized to different situation, action research helps to find different options to a solution.

3.6 WHY IS TEACHER RESEARCH IMPORTANT?

The current school restructuring movement has school-based, shared decision-making at its core. With the newly acquired autonomy, come new responsibilities. Teachers, local schools, and school districts are accountable to all stakeholders for the policies, programs, and practices they implement. It is not enough for teachers merely to make decisions; they will be called-upon to make informed decisions, decisions which are data driven. Therefore, it is necessary for teachers to be much more deliberate in documenting and evaluating their efforts. Action research is one means to that end. It is very likely that is the emergence of school-based decision-making that has precipitated the resurgence of action research; the two seem to be complementary. Action research assists practitioners and other stakeholders in identifying the needs, assessing the development processes, and evaluating the outcomes of the changes they define, design, and implement. The self-evaluation aspect of action research (by educators and/0r students) is congruent with the philosophies contained in the Outcomes Based Education movements currently being advanced Elliot (2001)

The prevailing focus of teacher research is to expand the teacher's role as inquire about teaching and learning through systematic classroom research. The approach is naturalistic, using participant-observation techniques of ethnographic research, is generally collaborative, and includes characteristics of case study methodology.

Collaborative action research provides support and a forum for sharing questions, concerns, and results. Teachers advise each other and comment on the progress of individual efforts. Engaging

in collaborative action research helps eliminate the isolation that has long characterized teaching, as it promotes professional dialogue and thus, creates a more professional culture in schools. Action research comprises two terms "action" and research" that highlight the essential features of this methods: that is, trying out ideas in practice as a means of increasing knowledge about and/or improving curriculum, teaching, and learning.

3.7 WHAT IS THE PURPOSE OF TEACHER ACTION RESEARCH?

Action research has been employed for various purposes: for school-based curriculum development, as a professional development strategy,

in pre-service and graduate courses in education, and in systems planning and policy development. Some writers, Elliot (2001) advocate an action research approach for school restructuring. Action research can be used as an evaluate tool, which can assist in self-evaluation whether the "self be an individual or an institution."

The school-based curriculum is a curriculum developed by the school where by the curriculum is going to be implemented. Action research is therefore used to assess the previous experience (the strengths and weakness) by collecting data from teachers, students, parents, local community and other stakeholders to find ways of improving instruction in the particular context. As a professional development strategy, action research makes teachers not only to implement the objectives, contents, and methods of teaching given from the top or centrally, rather it keep teachers up-to-date. Because, action research makes teachers revisit their previous experiences, problems that need a particular solutions and continuously indentify areas that require improvements.

Purpose of Action Research

- School based Curriculum development
- Professional Development Strategy
- For self evaluation
- To understand the immediate social situation
- To solve practical problems

3.8 WHAT ARE THE EFFECTS OF ACTION RESEARCH?

There is a growing body of evidence of the positive personal and professional affects that engaging in action research has on the practitioner. Action research provides teachers with the opportunity to gain knowledge and skill in research methods and applications and to become more aware of the options and possibilities for change. Teachers participating in action research become more critical and reflective about their own practice Teachers engaging in action research attend more carefully to their methods, their perceptions and understanding, and their whole approach to the teaching process.

Lawrence Stenhouse once said, "It is teachers who, in the end, will change the world of the school by understanding it." As teachers engage in action research they are increasing their understanding of the schooling process. What they are learning will have great impact on what happens

in classrooms, schools, and districts in the future. The things teachers learn through the critical inquiry and rigorous examination of their own practice and their school programs that action research requires will impact the future directions of staff development programs, teacher preparation curricula, as well as school improvement initiatives.

Teachers' action research questions emerge from area they consider problematic, from discrepancies between what is intended and what actually occurs. As Smith (1968) suggest, the unique feature of teachers' question is that they emanate solely neither from theory nor from practice, but from "critical reflection on the intersection of the two"Teacher research will force the re-evaluation of current theories and it will significantly influence what is known about teaching, learning, and schooling.

It has been said, Teachers often leave a mark on their students, but they seldom leave a mark on their profession (Altrichter,1993). Through the process and products of action research teachers will do both.

Effects of Action research

- Provides knowledge and skills in a research
- Makes teacher more aware of the options and possibilities for change
- Makes teachers more to carefully attend their methods
- Makes teachers more critical and reflective about their teaching
- Gives a skill of providing solutions for practical problems
- Action research responds to particular problem domains

3.9 PARTICIPATORY ACTION RESEARCH

The traditional action research approach described above has been extended into a form known as "participatory action research". An important change is the realignment of the roles of researcher and those to be studied into more collaborative and synergistic forms. Formerly, responsibility for theorizing rested primarily on the shoulders of the researcher. In participatory action research, this responsibility is shared with client participants. In other words "…members of the organization we study are actively engaged in the quest for information and ideas to guide their future action.

This increased client participation is a major change. The single most distinguishing characteristic that contrasts participatory action research from earlier forms is the "co-researcher status" that is accorded to the client participants. Researchers and clients bring their own distinctive

sets of theoretical knowledge into the action research process. Action researchers bring their knowledge of action research and general information systems theories. Clients participants bring situated, practical theory into the action research process. As a result, control over the social setting is realigned. The setting is realigned. The setting is free to self –reorganize rather than be artificially determined by the external researchers. In this way, participatory action research is based on assumption that reality is situated and social systems are self-referencing.

In participatory action research, it is not necessary for researchers to extensively research theories surrounded the immediate problem setting in anticipation of action planning. It is assumed that the researcher cannot acquire the depth of understanding that client professionals will have already achieved through years of living within the social context under study. An indirect effect of the full collaboration of all participants is that participatory action research extends the social scope of action research.

3.10 LIMITATIONS OF ACTION RESEARCH

Action research is not without problems for the researcher. In the constellations of available research methods, action research is among the more qualitative approaches. It is parked solidly outside of valid positivist techniques. In qualitative and interpretive foundations make journal-length articles difficult. The lack of generally agreed criteria for evaluating action research furthers the publication review process. These constraints make the approach a difficult choice for academics tied tightly into the journal system of scholarly communication.

The action research collaborative framework diminishes the researcher's ability to control the process and the outcomes of the research. The lack of control makes it difficult to apply action research as an instrument in an orchestrated research program. Practitioners with serious problems typically drive the venue for action research. Scholars are not as free to : pick and choose" the problem they wish to investigate. This initiation problem makes action researchers appear opportunistic in their research programs. Further exacerbating this control issue, participatory action research empowers client members of the research team with partial control over theoretical developments. A researcher who does manage to find a problem suitable to their predefined research program may find that the theoretical emergence twists the research in an entirely different direction. Keeping their ethical responsibility to the client and their problem setting

in the fore means that the researchers cannot merely walk away from an unfinished project simply because they lost interest in the shifting theoretical domain.

Despite these problems, action research responds directly to the pronounced needs for relevance in and provides a rewarding experience for researchers who want to work closely with the practitioner community. It can be used in many research modes, both to generate new theory and to reinforce or contradict existing theory. It can be combined with other research methods for diversifying a research program. Participatory action research also enriches the research community by drawing researcher-practitioners into the research process.

3.11 DOMAINS OF ACTION RESEARCH

The type of learning created by action research represents enhanced understanding of complex school problem. The domain of action research is clearest when teachers interact each other to improve the school or the teaching learning process in the school… The domain must also be one where a contingent value can be attached to the findings. The research addresses a specific social setting, although it will generate knowledge that enhances the development of general theory. Action research aims for an understanding of a complex human process rather than prescribing a universal social law.

The domain does not include settings where the goals of the researcher differ seriously. The researcher must be of value to those being researched, and both parties must successfully negotiate their goals, or the tension will destroy the participative validity of the research. Both sets of goals must be satisfied in the study.

The domain excludes settings where explicit theoretical frameworks become excluded as the basis for action. A practical implication of this exclusion means that highly emotional social settings, were rational action planning cannot be shared among the participants, will interfere with the learning from the research. The researcher must impose a clear, mutually agreed theoretical framework on the situation, in order for explicit, general lessons to emerge the research.

The ideal domain of the action research method is characterized by a social setting where:

1. The researcher is *actively involved*, with expected benefit for both *researcher* and *organization*,
2. *The knowledge obtained can be immediately applied,* there is not the sense of the detached observer, but that of an active participant wishing to utilize any new knowledge based on an explicit, clear conceptual framework,
3. The research is a (typically cyclical) process linking theory and practice

One clear area of importance in the ideal domain of action research is new or changed systems development methodologies. Studying new or changed methodologies implicitly involves the introduction of such changes, and is necessarily interventionist. From a social-organizational viewpoint, the study of a newly invented technique into the practitioner environment, i.e., "go into the world and try them out" (Land as Quoted in wood-Harper, 1989). Action research is one of the few valid research approaches that we can legitimately employ to study the effects of specific alterations in systems development methodologies in human organizations (Altrichter, 1993).

3.12 THE KEY ASSUMPTION OF THE ACTION RESEARCHER

1. **Social setting cannot be reduced for study** and this is to mean that the results of research conducted in some other places cannot be applied to different situations. Because Situation difference is followed by many other related differences which can affect the effectiveness of the application of the research results. However, in action research, since the practitioner and the researchers is the same person and since the results of the action research are applied in the setting where the data is collected from one find accuracy and reliability of the results. This implies that in action research generalization of the research results is not recommended. Furthermore, a social setting cannot be reduced to different variables to be studied; rather it must be studied holistically.
2. **Action brings understanding**; Action research involves two terms, action and research that are complimentary. The teachers get problems for research from his/ her action and find a solution for his/her problems through research and finally, tests the results of the research trough action. This spiral process helps teachers to critically understand the profession and develop an insight in action research. Teachers are continuously involved in doing research either to solve problems that arise in his/her teaching or to improve some activities. This makes teachers to develop understanding of the profession and to develop an insight in the teaching learning process. Action research helps teachers identify areas of teaching learning process by critically analyzing the situation where the teaching learning is taking place and by finding the approach that goes together with the particular school situation

SUMMARY

The shortest and most straightforward definition of action research is given by John Elliot (1991): action research is " the study of social situation with a view to improving the quality of action within it". This simple definition directs attention to one of the most essential motives for doing action research. It lies in the will improve the quality of teaching and learning as well as the conditions under which teachers and students work in schools. Action research is intended to support teachers, and groups teachers in coping with the challenges and problems of practice and carrying through innovation in a reflective way.

Self-Test Exercise 1.2.1

Direction: Identify if the following statements are "True" or "False"

1. One of the best way to understand the world to redefine it
2. In action research, practices are often derived from theories
3. Action research is characterized by spiraling cycles of problem identification
4. Action researchers should understand that practical situation is not the source of problems
5. Action researches is best fit for solving practical problems but not self evaluation

Checklist

Direction: put ( ) for the tasks that you can perform in the space provided. If you could not do it go back and refer to the again

- Can you define the term Action research? ☐
- Can you list the characteristics of action research? ☐
- Can you explain the difference between educational research and action research? ☐
- Can you explain the purpose of action research? ☐

Chapter-4

LINKING THEORY AND PRACTICE

This chapter deals with issues about how knowledge is generated and its relationship with practice.

Educational research is socially and politically embedded. It is always undertaken by a real person or persons, within a particular context, for a designated purpose. Research does not just happen. It is planned to greater or lesser degrees, and has an overall design for what it hopes to show (a claim to knowledge), how it is going to gather and present data in support of the claim to knowledge, and how it is going to show the validity of the claim through some kind of legitimating process. Research aims to create new knowledge and gather data, and to test and generate new theories that are more appropriate for human living than previous theories. As soon as issues such as 'new knowledge' and 'more appropriate theories' surface, however, politics becomes prominent, because what counts as knowledge and theory is often contested by different theorists working in their particular contexts and with their own agendas. Research and theory generation involve tightly interlinked areas of influence, social purpose, justice, power, politics and personal identity. When speaking about educational research it is important to locate the conversation in historical, cultural and socio-political contexts.

Here, therefore, I wish to outline some of the main aspects that have led to the emergence of the action research movement, and suggest why the work is often hotly contested, and why, for me and others, a main task is to investigate what might be the form of logic (way of thinking) most appropriate for describing and explaining action enquiries.

The chapter is organized as three sections. First, I will outline some well established typologies of knowledge, human interests and research. Second, I hope to show the development of action research within these typologies. Third, I will suggest ways in which the areas could be developed in terms of what Schön (1995) identifies as the new scholarship.

4.1 TYPOLOGIES OF KNOWLEDGE, HUMAN INTERESTS AND RESEARCH

Typologies of knowledge

There are different kinds of knowledge and different ways of knowing. It is widely held that there are three main kinds of knowledge – know that, knowhow and personal knowledge; and two main systems of knowing, or forms of logic, by which knowledge is acquired and expressed propositional and dialectical.

Forms of knowledge

Know that, also called propositional and technical rational knowledge, refers to knowledge about facts and figures. Knowledge exists 'out there', external to a knower. It is an abstract body of information about the world which is found in books and other retrieval systems. Knowledge is often seen as a commodity to be acquired, moved around and exchanged for other goods. This is particularly so for post-industrial 'knowledge-creating' societies: 'Knowledge is and will be produced in order to be sold' (Lyotard, 1984: 4). The fixed body of knowledge holds truths about the way things are. When people claim, 'I know that x,' they can produce evidence to support the claim by referring to external sources. Know that is linked with the idea of E-theories, and refers to bodies of public knowledge which are external to the knower.

Know how, also called procedural knowledge, refers to procedures and also capabilities. Know how is not a fixed body of knowledge external to ourselves, but involves practical knowing. 'I know how to do this' refers to a way of acting in the world, and the claim to knowledge can be supported by demonstrating, for example, that one can ride a bike or do mathematics. On this view, know how is often linked with skills and competencies, though knowing how to do something does not guarantee that one can do it. Ryle (1949) contains an account of know that and know how.

Personal knowledge, also called tacit knowledge (Polanyi, 1958, 1967), refers to a subjective way of knowing that often cannot be rationalized. Often we cannot articulate what we know; we 'just know'. It seems that we all have a vast fund of tacit knowledge, possibly gleaned from experience, possibly part of our genetic inheritance that enables us to act in particular ways without recourse to external facts or authority. Personal knowledge is linked with the idea of I-theories, and refers to the latent knowledge which is within the individual's mind–brain.

Ways of knowing (forms of logic)

In speaking about ways of knowing, it is common to identify two major epistemological traditions: propositional (or formal) and dialectical.

Propositional (or formal) logic refers to abstract ways of knowing. We view reality and knowledge as external objects; we study them and make proposals about how they work. This is a conceptual system of knowing which uses an abstract form of logic; it regards theories as static models of reality which may be understood intellectually. When we think and express our knowledge in propositional ways, we make positive statements about the way we think about things. Abstract forms abstract from reality; the thinking is abstract, a conceptual exercise. This form of logic, often associated with Aristotle, who wanted to eliminate contradiction from rational thought, is much valued by the Western intellectual tradition and informs most of its social, particularly institutional, practices.

Dialectical logic refers to fluid, relational forms of knowing. We view reality as something we are part of. Knowing is a process of creating new forms out of previous ones, a process of becoming. It is a to-and-fro, ebb-and-flow process in which one thing transforms into another. Dialectics often takes the form of question and answer, where one answer generates a new question, so nothing is ever complete or final. This way of knowing is embodied in the knower and their practice. It is embodied, not abstract; real life, not conceptual. This view is part of an ancient tradition, often associated with but existing long before Plato, who saw contradiction as part of life processes, the need to hold the one and the many together at the same time, and it is at the heart of many non-Western ways of knowing.

Typologies of human interests

Habermas (1972, 1974), a major theorist in social science, rejected the view that knowledge generation is a neutral activity done by an external 'mind' somewhere, resulting in the production of 'pure' knowledge. Instead he suggested that knowledge is an activity undertaken by a real person who is driven by particular desires and interests. In this view, knowledge is always constituted of human interests. Habermas categorized personal–social practices in terms of three broad sets of interests: the technical, the practical and the emancipatory.

Technical interests are mainly concerned with controlling the environment through the production of technical rational knowledge.

The aim of knowledge is to support technical and scientific progress. Although this has come to be the dominant epistemology in technologised societies, it is a quite narrow view which sees knowledge as instrumental activity which can be measured quantitatively and precisely. Technical rationality is generally seen as the form of knowledge most appropriate for contemporary social and work practices. This book does not hold this view, suggesting that other forms of knowledge are also essential for human living.

Practical interests focus on understanding, meaning-making and interpretation. Habermas maintains that communicative action goes beyond rational interaction and scientific enquiry, and involves understanding other people and their life worlds. Communicative action aims to generate intersubjective agreement, where people come together to share their ideas and work towards agreement, even when this is possibly agreement within disagreement. This process, however, can distort the understandings we arrive at, for what we do and think are always subject to wider historical and cultural influences of which we may or may not be aware. It is important, says Habermas, to understand those forces and find ways of dealing with them.

Emancipatory interests help us to free ourselves from dominating forces which control our knowledge and actions. We learn how to recognize and deal with influences which try to force us to become the people others wish us to be, and we work consistently to create our own identities. We recognize the politically constituted nature of all our social practices, and work within those frameworks to liberate our own thinking in order to take more purposeful action in shaping our lives.

Typologies of research

Arising out of Habermas's work, which itself arose out of an investigation of the nature of knowledge and its acquisition, a three-paradigm approach has come to be widely accepted today (for detailed commentaries see Bassey, 1999; Carr and Kemmis, 1986; Ernest, 1994; Hitchcock and Hughes, 1995; McNiff, 2000). In research contexts, a paradigm (as the idea has been adapted from Kuhn, 1970) is understood as a set of ideas and approaches, mental models which influence the development of particular intellectual and social frameworks. The main research paradigms are the empirical, the interpretive and the critical theoretic, and these reflect the categories of technical, practical and emancipatory interests. These paradigms in turn may contain their own sub-sets.

Empirical research

Empirical research is rooted in the Newtonian–Cartesian worldview. In this view the natural world can be understood as a set of interrelated parts, and one part causes certain effects in others. Phenomena are often seen as pieces of machinery, which act in a predetermined way, with predeterminable outcomes (see, for example, Davies, 1992). Descartes said that the mind and body were separate entities. This view gave rise to a philosophy of dualism: that is, things could be understood in terms of binary opposites: either – or, not both – and. The worldview was one of fragmentation, isolation and alienation (Dawkins, 1987). In historical accounts of research the idea of 'empirical' as an objective methodology often changes to 'empiricist', with overtones of control and domination, particularly when the metaphors of the natural sciences are transferred to human activity. People are studied as objects. Like machine parts, they occupy particular places which they should keep to maintain the equilibrium of an established order.

Chapter-5

STAGES OF ACTION RESEARCH IN DETAIL

INTRODUCTION

Action research is one of the most popular methods of professional development for teachers. It provides a practical way for teachers to uncover some of the difficult condition of the teaching process and thereby to improve the quality of their students' learning. This chapter is assumed to equip teachers with the necessary skills of identifying their problems and gathering data necessary for finding solutions. It is divided into two sections. The chapter introduces the stages of action research and reporting the results of action research. The first section explains about the stages of action research which is sub divided into starting points, clarifying and starting points, data collection, analysis, and identifying strategies and putting them in to practice. The second chapter explains about ways of explaining the results of action research. Like the previous chapter, this one is organized with factual information and relevant activities to be done by students. To clearly understand the module, due emphasis should be given for the students activities. Each activity is deliberately designed to serve as a base for the next one. Therefore, students are advised to do all activities.

OBJECTIVES

After learning this module, students will be able to:

- Understand the stage of Action research
- Know the different data collection instruments
- Appreciate the role of action research in teachers professional development and in improving teaching

Elliot (2001) has classified the stages of action research as activities of action research and the proposed five steps. They are:

1. Identifying and clarifying the general idea
2. Reconnaissance
3. Constructing the general plan
4. Developing the next action step
5. Implementing the next action step

These stages suggested by Elliot will be discussed in depth. Another classification is the following. This classification also involves five phases However, this approach differs from that of Elliot in that it stresses that action research involves cyclical process.The approach first requires the establishment of a client-system infrastructure or research environment. Then, five identifiable phases are iterated:

1. Diagnosing
2. Action planning,
3. Action taking
4. Evaluating and
5. Specifying learning

Figure 1 illustrates this action research structural cycle. They are elaborated below

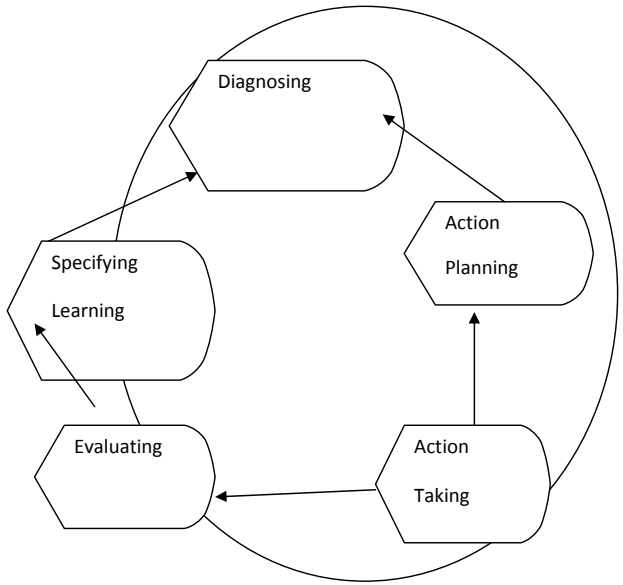


Figure 1: The Action Research Cycle

Client-System Infrastructure

The client-system infrastructure is the specification and agreement that constitutes the research environment. It provides the authority, or sanctions, under which the researchers and host practitioners may specify actions. It also legitimates those actions that express expectation that eventually will prove beneficial to the client or host organization. Consideration found within the agreement may include the boundaries of the research domain, and the entry and exit of the scientists. It may also patently recognize the latitude of the researchers to disseminate the learning that is gained in the research. This infrastructure should also define the responsibilities of the client and the researchers to one another. For example, the infrastructure will probably assume that the researchers will not purposely specify actions that are harmful to the organization.

A key aspect of the infrastructure is the collaborative nature of the undertaking. The research scientists work closely with practitioners who are located within the client-system. These individuals provide the subject system knowledge and insight necessary to understand the anomalies being studied "For convenience, it is useful to think of the practitioners as part of a set of factors who are oriented to solution of practical problems, who are essentially organizational scientists rather than academic scientists" (Clark, 1972:6).

Diagnosing

Diagnosing corresponding to the identification of the primary problems that are the underlying causes of the teacher's desire for change. Diagnosing involves self-interpretation of the complex classroom problem, not through reduction and simplification, but rather in a holistic fashion. This diagnosis will develop certain theoretical assumptions (i.e., a working hypothesis) about the nature of the classroom and its problem domain. This stage involves the critical evaluation of the nature of problems and the possible causes of such problems. After identifying the general idea that requires improvement the issues has to be seen from perspectives (describing the problem).

Action Planning

Researchers and practitioners then collaborate in the next activity, action planning. This activity specifies organizational actions that should relieve or improve these primary problems. The discovery of the planned actions is guided by the theoretical framework, which indicates both some desired future state of the organization, and the change would achieve such a state. The plan establishes the target for change and the approach to change.

Action Taking

Action taking then implements the planned. The researchers and practitioners collaborate in the active intervention into the school, causing certain changes to be made. Several forms of intervention strategy can be adopted. For example, the intervention might be directive, in which the research "directs: the change, or non-directive, in which the change is sought indirectly.

Intervention tactics can be adopted, such as recruiting intelligent laypersons as change catalysts and pacemakers.

Evaluating

After the actions are completed, the collaborative researchers and practitioners evaluate the outcomes. Evaluation includes determining whether the theoretical effects of the action were realized, and whether these effects relived the problems. Where the change was successful, the evaluation must critically question whether the action undertaken, among the myriad routine and non-routine organizational actions, was the sole cause of success. Where the change was unsuccessful, some framework for the next step of the action research cycle (including adjusting the hypotheses) should be established.

Specifying Learning

While the activity of specifying learning is formally undertaken last, it is usually an ongoing process. The knowledge gained in the action research (whether action was successful or unsuccessful) can be directed to three audiences:

- First, what Argyris and Schon (1978) call "double-loop learning," the restructuring of organizational norms to reflect the new knowledge gained by the organization during the research.
- Second, where the change was unsuccessful, the additional knowledge may provide foundations for diagnosing in preparation for further action research interventions.
- Finally, the success or failure of the theoretical framework provides important knowledge to the scientific community for dealing with future research settings.

The action research cycle can continue, whether the action proved successful or not, to develop further knowledge about the school and the validity of relevant theoretical frameworks. As a result of the studies, the school thus learns more about its nature and environment, and the

constellation of theoretical elements of the scientific community continues to benefit and evolve.

The third type of action research stage is given by Atrichter and his followers (1993).In this approach action research has four major stages in which each of them again are divided in to sub steps.

The stages of Action Research include;

A. Finding a starting point
B. Clarifying the situation
C. Data collection and analysis
D. Developing action strategies and putting them into practice

In this approach, the first step that is finding a starting point contains introduction and the problem to be solved and the issue to improve. Clarifying the situation involves analyzing the issue for better understanding. However data collection and analyses techniques are steps that are practiced at each steps of action research

Activity 5.1

Explain the difference and the similarities of the three-action research approaches suggested by different scholars?

Despite the existence of different ways of defining the stages of action research for this course we will consider the stages drawn from the three approaches explained above with a major emphasis given by Elliott and Altrichter for the reason that the two approaches follow similar steps with other steps used in other forms of educational research. Therefore, the stages of action research involve the following steps.

Stages of Action Research

- Finding the starting point/general idea
- Reconnaissance/ brain storming/ clarifying the starting point
- Data collection
- Data analysis
- Developing action strategies and putting them into action

Sample for Getting Started on Action Research and Data Collection Framework for Writing up Your Action Research Projects

Each student/group will be expected to hand in a word-processed report of their project. The report should include the following:

Briefly, during conducting and reporting the work of action research you all as action researchers could consider the following frame work.

Action Research

Session 3 Getting started on Action Research & Data Collection

Framework for writing up your Action Research Projects

Each group will be expected to hand in a word-processed report of their project. The report should include the following:

1. **Introduction**: Give a context to the report. Introduce yourselves and explain the background to the report. What is the research issue?
2. **Identifying the problem:** Wwrite a few sentences on how you decided upon your area of research. Include how you became aware of the problem. Why was it a problem? What needed changing? What were your values as a professional? Can you relate your research issue to this? What relevance does the research have for you?
3. **Collecting and analyzing the data:** A section on how you collected the evidence to Support your initial theory. How did you try your data collection tools? How did you ensure the data gathered was comprehensive and accurate? How did you categorize and analyze the data? Did the evidence confirm what you expected or did you find something else?
4. **Proposing action:** what ideas did you have to solve the problem you identified? Give all your possible solutions. Which one did you choose? Why did you choose this one over the others? How did you decide on the action you would take? How did you make sure it was Specific, measurable, Achievable, Relevant and Time-limited? Did you have to make adjustments to your first idea?
5. **Implementing Action:** How did you go about implementing your action? Which solution did you change your mind part way through? What changes did you have to make elements of your planning, teaching and assessment? Did this action involve any extra work? What elements of your planning, teaching and assessment were made easier when you implemented your action?
6. **Evaluating Action:** what data did you collect to evaluate the impact of your action? Did your action achieve what you intended it

to? Did it solve the problem you initially identified? What more effective? How did the students benefit from your action? How has your practice changed? What steps have you taken to validate your work (e.g. validation meetings, discussion with critical friends, tutor, etc…)

7. **Recommending change:** as a result of your action, what advice would you give to fellow instructors? What action do you think the TEL needs to take? Would your action work with other subjects?
8. **Appendices:** These should include copies of questionnaires, interviews, assessments, worksheets and anything else you did as part of your project. Refer to them in your answers to the above questions. You should also include your completed Action Research proposal; your action plans your group forms.

When answering these questions, explain your ideas as fully as you can. If you found there were problems which inhabited your research, try to suggest a solution.

(Notes developed by HDP team using "you and your Action Research Project" NcNiff, J., Lomax, P. and Whitehead, J. (1996) London: Hyde publications. A copy may be available from the HDP office)

ACTION RESEARCH

CHECK THAT YOUR PROPOSAL IS SMART.

Is your proposal SPECIFIC?.....Is it MEASURABLE?
Is your proposal ACHIEVABLE?..... Is your proposal RELEVANT?
Is your proposal TIME LIMITED?

If your answers to any of these questions is no or you are not sure, discuss the proposal further and rewrite it so that you are satisfied it is SMART. Your project needs to be small and manageable.

ACTION PLANNING SOME KEY QUESTIONS

What is your research issue?

Focus on one area that you want to investigate and be sure that you can do something about it. Remember that you are conducting research into your own practice. Start your research question 'How can I/we…?' Keep it small, focused and manageable.

Why have you chosen this issue?

Why are you interested in this area? What are you values regarding the issue?

What kind of evidence can you produce to show what is happing?

How can you help other people to see the situation? How can you show things as they are now, before you take action? Who will be your research participants? Which data will you collect? Remember that you are the main focus of your research; you are trying to show an improvement in your practice. Which criteria will be use to judge your work?

What will you do about what you find?

Question your interpretation of the data and discuss it with others. Decide on a strategy and try it out. If it doesn't work, try something else. Focus on your own thinking and learning.

What kind of evidence can you produce to show that what you are doing is having an impact?

Gather data regularly and keep records of how you are monitoring and evaluating each cycle. Triangulate the data-obtain data more than one sources and show how all the data supports your explanation.

How will you evaluate that impact?

Use the data to say how your practice has changed. Say what has improved and how and back up your have claims with evidence.

How will you ensure that any judgments you may make are reasonability fair and accurate?

Consider working with a critical friend or validation group to validate your work. Make sure you have evidence to support any claims you make.

How will you modify your practice in the light of your evaluation?

If the new way of working appears to be better, continue with it. You may want to continue to develop or to consider working on new, but related issues. If the new way doesn't seem to be working, stop and try something else.

Checklist

Direction: Underline '**Yes'** the tasks that you can perform in the space provided. If you could not

do it go back and refer to the text again:

Can you compare the three types of stages of action research? Yes/No
Can you list the stages of action research? Yes/No

Self-test Exercise 5.1

DIRECTION: Enumerate Answers for the following Questions

1. List down the five Phases in action research.

SECTION TWO

5.1. FINDING THE STARTING POINT

Introduction

The first step in action research process is to find and formulate a feasible starting point or a general idea. In this step the teacher finds issues that need improvement or problems that need a solution. Are there issues that require improvement or situation that influence the effectiveness of the teaching-learning situation in my practical experience? Am I capable of doing such a research? And the like are the questions a teacher needs to ask when beginning a research. This section elaborates the way teachers get answers for the above questions.

Objectives

At the end this section students will be able to

- Explain the term starting point
- Identify the starting points
- Write starting points of action research

5.2 IDENTIFYING THE STARTING POINT GENERAL IDEA

According to Altrichter (1993) those who need to engage in action research fall into one of the following three questions:

1. They have one specific question in mind, often needing urgent attention
2. They have many different questions in mind, none of which constitute an obvious starting point.
3. They have no concert idea from which to begin an investigation

To find ways of improving the problems in category 2 and 3 teachers are recommended to follow the following suggestions in the table below.

According to Altrichter (1993) usually stating points for action research begin with experience of discrepancies. Such a discrepancy includes;

Suggestion to Finding Starting Points

- Formulate more than one starting point
- Consider all potential starting points in relation to everyday practice
- Invest sufficient time to make the exploration of possible starting points

- Discrepancies between plans expectations on one hand and actual practices on the other hand(for example, regularly checking students home work to develop good working habits may result with a short and poor standard written work)
- Discrepancies between the present situation and a general value orientation (for example, a teacher may set very challenging questions in the home work to make students pass on the exams, but practically seen discouraged students active participation. Or a teacher may prepare handout to facilitate classroom discussion to facilitate the teaching learning process, however, getting the handout makes students to miss the class believing that they have something to study for the exam
- Discrepancies between the way in which different people view one or the same situation (for example, is ability grouping effective or not)

These discrepancies serve as a basis for action research. Action research begins with reflection upon such discrepancies. They become the focus for improving teaching process and development of one's own strengths and generating knowledge about that process. Such discrepancies need not always be negative and problematic for the teacher development of one's own strengths for example Marin Dadds (1985) mentions there types of starting points for research without prioritizing any one of them.

1. **An interest**-for example trying out a promising idea developing strength, or coping with routine obligation in a more considerate and economic way.
2. **A difficulty**-for example, wanting to improve a difficult situation, solves a problem, or compensates a deficiency.
3. **An 'unclear' situation**-teachers often begin research with bigger or smaller doubtful situation which are neither clearly positive nor negative, neither enjoyable nor burdensome. Sometimes teachers face experiences which they cannot interpret, but believe might serve as

a useful starting point for further developing their teaching. Besides, any professional situation about which teachers or others want to gain a deeper understanding and which they want to change is a potential starting point.

Activity 5.2

Dear Student Friends, please distinguish between topics of action research and educational research listed below. Justify your answers with reasons

1. A teacher investigating parents' perception of the innovatory relationship/she established with them.
2. A lecture at the university researched her/her/his own teaching of new courses and developed modifications of teaching and learning strategies.
3. A teacher researched to improve females' participation in the classroom.
4. A teacher who had taken over a difficult class in a vocational school studied relationships between pupil's behavior and his teaching.
5. A teacher experimented with a new form of assessment of her pupils' work and carried out research to improve and refine it.
6. The attitude of parents towards the provision of sex education.
7. Primary school teachers' attitude towards self contained classroom.
8. Assessing teachers' effectiveness on the implementation of new curriculum
9. Assessing Gender Difference in Mathematics Achievement
10. The relationship between parental Monthly income and students Awareness towards preventing the Spread of HIV/DIDS

Q. Students, what were your criteria to distinguish topics of action research from topics of other forms of educational research?

In general, the starting point can include both institutional and classroom cases. However, institutional issues are more difficult than classroom issues. The practical, theoretical and political problems of action research tend to increase greatly when the focus moves form classroom to institutional issues. In this case teamwork or collaboration among teachers is more useful.

The amount of time needed to formulate workable starting point differs on the ability of individual and the nature of the problem. However, the search for a starting point can be facilitated by the following exercises

5.3 WAYS OF FINDING STARTING POINTS

One step towards finding a starting point for your own research could be individual brainstorming: To apply a brainstorming step, do the following procedures:

1. Think of your practical experiences as a teacher. The following questions guide your thinking.
   - Is there any question that you have wanted to investigate for a long time already?
   - Which of your strengths do you like to develop?
   - Are there any activities of your own that surprised you while teaching?
   - Are there any situations which cause difficulties and which you would like to cope with more effectively?
2. Once you have recorded your initial ideas, you may be able to stimulate further ideas for starting points by using these incomplete sentences; (kemmis and Taggart, 1982)
   - I would like to improve the……..
   - Some people (pupils/parents/ colleagues) are unhappy about….. what can

   I do to change the situation?
   - I have an idea. I would like to try out in my class.
   - I have difficulties in managing this situation, what can I do?
3. Once you have recorded your initial ideas, you may be able to stimulate further ideas for starting points
4. Enrich your potential starting points by analyzing them using the following questions:
   - What happens in this situation?
   - Who does what?
   - Which contextual factors are especially important in understanding this situation?
5. Finally, summarize the results of your questions into possible starting points.

Activity 5.3.1

Think of your practical experiences as a teacher. For this purpose, answer the following questions.

- State the methods of teaching, evaluation mechanisms, or rules and regulations
- of the school that you wanted to change? Writ them in the space provided
- ---

- State the good qualities of your teaching or strong points of your teaching while you were teaching in schools?
- ---

- List dawn experiences that surprise you in your teaching? Write at least five of them.
- ---

- State the difficult situation you wanted to be changed in your school?

Activity 5.3.2

Based on the answers you gave to the question above; write at least four starting points, one from each category of your answers.

Check whether these starting points you have formulated indicate the real problem or the symptoms

To answer these questions see the following example.

A person who felt headache should not only try to solve the problem of headache, because the headache may be a symptom for malaria. Therefore, unless, we remove the malaria (the root cause) the problem cannot be resolved. Thus, the medical doctor has to identify the root cause of the headache.

5.4 APPROACHES TO CHOOSING A STARTING POINT

How can I choose a starting point from the many interests and questions that come to mind in relation to my own practical experience? Are some starting points more or less suitable than others? How can I identify the more suitable ones? Are some of the basic questions that teachers should

answer to find a workable starting point? To get refine the starting points, you listed you can examine them based on the following four points.

1. **Remember that action research has a development perspective**. To ensure the developmental nature check, whether your problems should indicate either issues to be improved or problems to be solved. For this purpose, check your starting point against these questions
   - What is your possible development?
   - What might you want to try out?
   - What might you want to change?

   Your answers to the activity 1.3.2.3. fall in one of these three types of questions

   Doing action research does not mean that you have to change everything. But, nevertheless, it is important that when you embark on action research you have to have a genuine interest in development. Sometimes the main change is in your perception rather than in adopting specific new strategies.
2. **Look at the starting point that you have formulated so far in the light of the following criteria.** After choosing your starting points, evaluate them based on the following criteria
   (a) **Scope for action:** Does the situation come from my own field of experience? Can I really do something about this? Do I have any possibility of influencing this situation and/or taking action? Or am I too dependent on other people and institutional structures?

   (b) Would an improvement in this situation depend primarily on changing the behavior of other people?

   (c) **Relevance:** How important is this situation to me and to any professional concerns? Is this issue worth the effort in an educational sense? Is it concerned with important educational values? Is it likely that this situation will still interest me in a few weeks' time? Am I willing to invest a certain amount of energy in dealing with this situation? Am I interested in this situation in order to change and improve something?

   (d) **Manageability:** Do I have the time to cope with this? Are there too many preparatory or related tasks to be coped with before I can start this project? Will it make too many?

   (e) Demands of me: When you begin research, don't choose a question that is 'too big'.

(f) When in doubt, opt for the smaller or more limited project: In general, it is better to build on successes, even if they are small, rather than having to reduce one's aims because they prove impossible to fulfill, there may be time later to extend your work.

(g) **Compatibility:** How compatible would this question is with the rest of my activities if I select it as my research focus? Would it involve things that I have to do anyway? How well does this intended research fit in with my forward planning? Would it be possible to build some research activities directly into my teaching (for example, Students interviewing each other, group discussions, etc.)? If you are in doubt, decide on a starting point that fits thematically with those things that you do anyway in your teaching.

3. **Now select the starting point that comes closest to these criteria:** The result will not always be clear-cut, but sometimes may involve weighing up the advantages and disadvantages of two or three options. However, we believe that this process in itself can be important in helping to identify the question that best fits your personal situation.
4. **Next, try to document your starting point as vividly as possibly in your research diary:** Formulating your starting point for research generally has two elements

(a) A short description of the situation: what happens in this situation? Who does what? Which contextual factors are especially important in understanding this situation?

(b) Questions which indicate the developmental perspective; what would I like to try out? What would I like to change/improve?

Activity 5.3.3

Which of the two examples of the general ideas below represent issues to be strengthened and issues to be improved? Justify your answer.

- When they are doing group work, the students seem to waste a lot of time. How can I increase the amount of task-oriented time for pupils engaging in-group work?
- My pupils are not satisfied with the methods I use to assess their work. How can I improve assessment methods with their help?

Kemmis and his co-workers warn one to avoid "issues which you can do nothing about. They argue that "Questions like the relationship between socio-economic status and achievement, between ability and a tendency to ask questions in class may be interesting but they have limited links with action.' There are certainly ideas, which cannot easily be linked with one's actions and should be avoided, even though one may find them theoretically interesting.

However, there are states of affairs that one can link with actions that remain unsure about the extent to which something can be done about them. For example, if pupils are dissatisfied with the way they are assessed this obviously affects a teacher's capacity to help them learn. But he or she may feel that the mode of assessment which prevails is something little can be done about, nevertheless it is worth the teachers suspending judgment for a time in order to explore whether there is some action he or she could take to improve or to change the situation.

The important criteria for selecting "general idea' are whether the situation it refers to (a) impinges on one's field of action and (b) is something one would like to change or improve on.

The extent to which one is able to change or improve on it is a question which action research should address, rather than assume an answer to the observed issue is a symptom of a problem or the real cause of the problem. That is, one has to check that the problem stated in the general idea is the real cause of the problem. That is, one has to check that the problem stated in the general idea is the real problem or the symptom. For instance, if one feels headache a headache is a symptom for another disease, Malaria. Unless the malaria is removed trying to solve the problem of the headache alone cannot resolve the problem from its root cause. Similarly, pupils' dissatisfaction with the way they are assessed may merely be a symptom of a much deeper problem, which may 'come to light' during the course of action research, in this case a teacher would want to undertake subsequent actions which tackle that deeper problem rather than merely treat the symptom. The original general idea may need to be constantly revised during the process of action research, this is why I have allowed for this possibility in every cycle of the spiral, rather that 'fixing' the focus for the research at its beginning.

Activity 5.3.4

Students evaluate the above four starting points have formulated based on the criteria given above. Are they within ones field of study? Are they relevant to improve teaching learning process? can a classroom teacher

manage to conduct research on those issues and can he/she apply the solution to improve teaching?

Students, have you tried the questions? Ok.. Now see the following three examples of starting points given by Kemmis and others (1982).

- Students are dissatisfied with the methods by which they are assessed. How can we collaborate to improve student's assessment?
- Students seem to waste a lot of time in class. How can I increase the time students spend 'on task'
- Parents are fairly keen to help the school with the provision of student's homework.

  How can we make their help more productive?

See the following Case study and let us evaluate it based on the above criteria

> Miss. Curie is a participant on an action research entitled " implementing active learning in a large class size' Halfway through the term he wants to give up his research because he doesn't see any meaning or possibilities for action and he is "getting sick of" the situation. By looking at the formulation of his starting point, we can examine the practicability of his choice.

- The situation comes from his field of experience as a teacher; the scope for Action initially seems considerable because applying active learning in large class faces challenges. (Criterion a).
- An interest in change is expressed, specifically in looking for a more
- Miss. Curie teaches a second year in an elementary school. He wants to focus on how to manage the class size for active learning. This statement seems to provide a promising starting point for action research; (criteria).
- Productive way of dealing with the situation: the problem seems to be important, because Miss. Curie talks about the situation with a lot of emotional involvement (criterion b)
- The focus seems manageable because within the complexity of classroom events there is a concentration on applying active learning (criterion c).
- In addition, the questions should be easily compatible with Miss. Curie's normal work because the problem recurs daily (criterion d).

Case Study Two

In-group sessions during the course, Aster reports on her research, primarily drawing on memos about her interactions with this girl. Little by little it becomes clear that she was already strongly involved with her in the first form, but at that time she had come to the conclusion that she was underdeveloped, physically and intellectually. This educational diagnosis, which would usually have led to a transfer of the child to a special school, had been rejected by all those concerned from the father of the girl, to the school's medical officer, to the principal of the school. Only the school people from whom Aster expected help, unfortunately she was mistaken because nobody wanted to admit the problem: she had given up hope improving her relationship with the child a long time ago; the question which obviously worried her, her "real issue' seemed to have been a different one; How can I persuade other in this school that my educational diagnosis was the right one?

Her interest in change obviously had nothing to do with the internal situation in the class, but was concerned instead with her relationships with colleagues in the school.

Although her problem appeared at first be very important (criterion b), she was unable to identify any real scope for action and, what was worse, the whole situation was interwoven with an unpleasant prior professional experience. This is a situation in which in reality she sees herself not as an actor in the field not as one who is acted upon (criterion a). The study Aster presented at the end of the term fits this retrospective analysis; in a vivid, moving narrative it documents a journey of personal and professional suffering, but it contains almost no new understandings reached by Aster through the process of her research. She formulated no new strategies to cope with the problematic situation, trying only to be more "persistent" to do the same again in a similar situation' trying only to more "persistent" in pursuing her aims and pushing them through. She concludes her study with the words" All in all believe that this case is unique and will not recur in the same way.

This example illustrates two further important characteristics of action research:

1. Whatever is formulated as the starting point can only be a first view of a situation that is very likely to change in the course of the research process. Action research tries to avoid the dogma of fixed hypotheses that, in more traditional research approaches, cannot be modified once the research has begun (Instead, the researcher remains open to new

ideas in this way, any development of the initial starting point becomes an important indication of the learning of the teacher carrying out the research.

Whatever is formulated as a starting point often touches only the surface of a problem. A more detailed clarification of the problem situation and a further development of this "first impression' develop a deeper understanding of all the related factors and opens up new possibilities for action. To collect additional information, it is important to remain clear that such explanation are hypothetical, providing stimuli for research and development rather than replacing them.

Self-test exercise 1.3.2.

1. What are the possible criteria one can apply to evaluate a starting point of an action research problem?

SECTION THREE

Reconnaissance

Introduction

The second step in action research is reconnaissance. This is a step where by a teacher clearly and critically understands the nature of the problem to be solved or the issue to be improved. Besides, at this stage the teacher tries to differentiate the symptoms form the root causes of the problem. This activity can be sub-divided into two. They are;

(*a*) Describing the facts of the situation

(*b*) Explaining the facts of the situation

5.5 DESCRIBING THE FACTS OF THE SITUATION

This step of action research refers to the fact that the issue stated in the general idea may not indicate the exact nature of the problem. Therefore, the action researcher has to analyze to understand the issue from its root causes. One needs to describe as fully as possible the nature of the situation one wants to be changed or to be improved on. In this step we try to identify the most important individual elements (problems to be solved or issues that require improvement) we need to find a pattern in the complexities of the situation identified as the starting point for research. First, we try to identify the most important individual elements of the situation, to distinguish them from less important elements, and describe them as vividly as possible. In doing so we ask the following questions

- What is happening in this situation?
- Which events, actions and features of the situation are important?
- Which people are involved, and in what kind of activities?

Let's try to illustrate the process of clarifying a situation by giving example. A possible starting point for the research could be the statement:

For example, if the teacher faces a problem of " pupils wasting time in class, to understand the real nature of the problem than the symptom the teacher has to analyze the following points

- Which pupils are wasting time?
- What are they doing when they are wasting time?
- Are they wasting time doing similar or different things?
- What are they be doing when they are wasting time?
- Is there a particular point in the lesson, or time of day, or set of topics, where pupils waste time the most?
- What are the different in which 'wasting time' manifests it?

The attempt to get answers for these questions helps the teacher to clarify the nature of the problem. The collection of this information can provide a basis for classifying the relevant facts and categories e.g. generating categories help for classifying the different kinds of time wasting which you haven't recognized before

Besides, such analysis helps the teacher to check his/her previous conception about wasting time. He/she might have perceived some acts of students as time wastage while practically the activities were real parts of the lesson.

Furthermore, this elaboration of the individual elements helps to identify whether the general idea focuses on the real problem or the symptoms. When we formulate important individual elements of the problem or the issue, we neither should nor restrict ourselves to what happened, but also take account of the context. Because, action research doesn't take place in a laboratory in which the researcher controls most of the context. Teachers do research in the real world of schools. Their own actions are embedded in a framework of other people's interests and actions. Their research and development activities in turn have consequences for others. To solve such problems teachers can find answers for the following guiding questions for clarifying the context.

They are;

- Which other people are affected by my research and development activities?

- Who do I need to consult to ensure that I have freedom to act with the greatest possibility of success?
- Which features of the institution in which I work are likely to have an influence on the question I want to investigate?
- What are the broad social and political determinates that I need to take in to account in relation to my question?

Activity 5.3.5

Using the above examples describe the following general ideas

1. Students are dissatisfied with the methods by which they are assessed. How can we collaborate to improve students' assessment?

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2. Parents are fairly keen to help the school with the supervision of students' homework. How can we make their help more productive?

   ---
3. Pupils seem to be very noisy during discussion in class. How can I organize the class so that it is less noisy?

5.6 EXPLAINING THE FACTS OF THE SITUATION

Having collected and described the relevant information about the general idea, there is a need to explain them. The explanation of the general idea involves asking the following questions. How do they arise? What are the relevant contingencies, or critical factors? Which have a bearing on the state of affairs described?

In asking these questions one moves from a description of the facts to a critical analysis of the context in which they arise. This involves:

(*i*) 'Brainstorming'-generating explanatory hypotheses

(*ii*) Hypothesis testing.

Generating Hypothesis

Hypothesis is a tentative statement to be proved at the end of the research. It shows the tentative causes of the problem or the tentative ways of improving the situation. It involves the description of certain contextual factors, description of either an improvement desired, or a situation that needs to be changed, and an explanation of the relationship (Koul, 1996). See the following example.

Hypothesis; Using words like "good', 'interesting', 'right', in response to ideas expressed by pupils in the class discussion can prevent the discussion of alternative ideas, since pupils tend to interpret them as attempts to legitimate the development of some ideas rater than others (Elliott, 2001).

The first is a description of certain contextual factors, e.g. the teacher's use of terms like "good', 'interesting', and 'right'.

The second is a description of ether an improvement desired-'**the discussion of alternative ideas'- or a situation which needs to be changed- pupils not evaluating the information available to them.**

The third aspect is an explanation for the relationship that is cited in the hypothesis. A hypothesis may cite a relationship between the facts to the problem situation and some other factor (s) operating in its context. In the above example, **the relationship is between the teacher's comments and the level of the pupils' participation in a discussion.**

While formulating a hypothesis, one can raise the following questions

- How does this situation come about?
- What important connections are there, in my opinion, between events, contextual factors, the actions of individuals and other elements of this situation?
- What is my instinctive personal interpretation of this situation?

On the basis of these questions, it is possible to formulate statements of this kind:

- The greater the expectation in a school that well-disciplined classrooms should be quiet places, the more difficult it will be to conduct classroom discussions without giving rise to discipline line problems.
- If a teacher always follows up the answer to a question with a supplemental question, pupils can be prevented from answering questions even if they are sure of the answer.

Sentences like these establish connections between individual elements of a situation (for example, between the teacher's comments and the level of the pupils' participation in a discussion); and they put forward a possible explanation for these connections.

In scientific literature, such statements are usually called hypotheses, and the term is useful in action research as well. Hypotheses can be used to express aspects of someone's practical knowledge. It is important to be clear about their nature:

- A hypothesis does not have to be correct. The term itself implies that the explanation needs to be tested against experience.
- A hypothesis throws light on only one aspect of a complex situation, rather than the whole situation. Even when they have been verified, they will still need to be re-examined in new situations.
- A hypothesis tells us about the relationship between specific features of the situation and actions or events which result from them. Therefore, they can be used as a basis for planning future action.

Activity 5.3.6

Students identify the relationship found in the following four hypotheses below Topic Rewarding students

Hypothesis: Using words like 'good', 'interesting', in response to ideas expressed by pupils in the class discussion can prevent the discussion of alternative ideas, since pupils tend to interpret them as attempts to legitimate the development of some ideas rather than others.

Topic: Introducing factual information

Hypothesis: When teachers introduce factual information in person, either in written or Verbal form, pupils may be prevented from, evaluating it, since they will tend to interpret such interventions as attempts to get them to accept its truth.

Topic: The concept of classroom discipline

Hypothesis: The greater the expectation a school that well-disciplined class-rooms should be quiet places, the more difficult it will be to conduct classroom discussions without giving rise to discipline line problems.

Topic: Teachers ways of feedback

Hypothesis: If a teacher always follows up the answer to a question, pupils can be prevented from answering questions even if they are sure of the answer.

Activity 5.3.2.2

Formulate hypothesis for the following two general ideas

A. Students are dissatisfied with the methods by which they are assessed. How can we collaborate to improve students' assessment?

1. Describe the contextual factors
2. Describe the kinds of improvement defined or the situation, which needs to be changed

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3. Explain the relationship between the factors of the problem situation and some other factors operating in its context

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B Parents are fairly keen to help the school with the supervision of students' homework. How can we make their help more productive?

1. Describe the contextual factors

---

2. Describe the kinds of improvement defined or the situation that needs to be changed

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---

3. Explain the relationship between the factors of the problem situation and some other factors operating in its context

---

Having a thorough brainstorming around a problem and generated some hypotheses, one can then proceed to gather information which is relevant to testing them, For example, evidence can be gathered about the extent to which one uses terms like " good', "interpret their use. The gathering of this evidence may also suggest further explanation of the problem situation, which in turn leads to more gathering of information, etc.

Evan turn to more gather hypotheses and found them to apply, they should retain the status of ' hypotheses' rather than' conclusions', since one can always encounter instance where they do not apply, and which will prompt a search for more comprehensive explanations. The process of analysis is an endless one, but in action research it must be interrupted for the sake of action. And the point of interruption should be when one has sufficient confidence in the hypotheses to allow them to guide action. Explanations do not tell one what to do, but they do suggest possibilities for action. Thus, in the 'introducing factual information 'hypothesis does not

tell one not to introduce factual information in person, and instead to give pupils independent access to it, e.g. looking it up in the library or resource center. But it does provide some guidance, It suggests. For example, that an alternative strategy would be to make one's expectations of how pupils are to use the information one introduces much clearer to them.

Sentences like these establish connection between individual elements of a situation (for example, between the teacher's comments and the level of the pupils' participation in a discussion); and they put forward a possible explanation for these connection.

On the other hand, many people, including teachers, see themselves as dependent on external forces and underestimate the contribution they can make to the situation. For these people, action research tends to challenge their self- concept, inviting them to explore possibilities for action and encouraging them to show greater autonomy. To understand the nature of problem in the second step of action research Alterichter (1993) suggested different approaches. They are casual or systematic view, holistic and analytic perspective, and conversation with critical friend, analytic discourse, using diagrams, and graphic reconstruction, and finding patterns in experience

A Causal or a Systemic View

Another approach that elaborates on these ideas in helpful in determining the starting point more precisely. Positive and negative influences are not seen as separate, but stand in either a causal or a systemic relationship to each other.

The causal relationship needs little explanation. Let's see the following examples

A is the cause of B. Pupil X disrupts the lesson because she knows that this gives her status with

her classmates. Pupils are not willing to take initiative because my authoritarian predecessor conditioned them to react only to pressure. The advantage of causal interpretations is that they suggest definite reasons and apparently simplify the complexity of a situation. They also help us to place a moral interpretation on events by assigning guilt (to the pupil, a colleague, the parents, or ourselves). However, causal interpretations have their problems. One is that situations are usually caused by a number of contributing factors: for example, a pupil's bad behavior might be traced back to preceding events involving other pupils, parents and two or three teachers. Her behavior can therefore be regarded partly as a reaction to other,

preceding events. This is not an argument against causal interpretations, but it does mean that we must be careful not to settle quickly for one, which is too simple, because may itself have layers of further causes.

Let's take the case a young teacher taking a new class for the first time. She will be a bit nervous and, either instinctively or consciously, wants to them over and gain control. This purpose will be expressed in their behavior. At the same time, they well watch every action of the teacher closely and their interpretation of her behavior will influence their own behavior.

The noisiness of some pupils is interpreted by the teacher as a threat to her control of the class. The pupils notice the irresolute appearance of the teacher and it makes feel insecure, Is the pupils' noisiness caused by the wavering appearance of the teacher or vice versa? This question cannot be answered, as there is some evidence for both possibilities. Looked at from the pupils' point of view, the first answer will be more plausible; from the teacher's the more plausible is the second. At it is impossible to know whether the noisiness or the wavering come first, we cannot tell which should be regarded as the cause of the other. If we identify a cause, it will be arbitrary.

What happens if we decide that there is no point in searching for causes and the people responsible? An alternative is the systematic view in view this; a class is regarded as a system in which each member of the class (the pupils and the teacher) has a relationship to one another.

Each person influences the other member leads to a change in the whole system. Every kind of behavior can be regarded as both the result of feedback from the behavior of others and as an influence on their further behavior. Even 'non-behavior' (for example, the silence of classmates when one pupil disturbs the lesson) can in this sense be seen as information for the 'troublemaker', the teacher and the pupils.

A system is a network of mutual relationships (expectations, kinds of behavior, perceptions) in which the teacher is caught up. It is easier to understand if we imagine the network consisting of threads, which are alive. A particular action of pupil, or of the teacher, is affected by all the threads of the network as well as influencing them, But there is limited room for each thread to move if the network is not to be destroyed. There are longer and shorter threads, and occurrence

in the classroom originates from the whole network, even if some parts of the network play a more important role than others. An extreme example of this is what happens when you introduce a computer disturbs

many different aspects of classroom life, all at the same time. For example, there is a shift in the pupil's attention away from the teacher towards the computer; whole-class teachings likely to have to be replaced to a large extent by group work; the nature of classroom work may need to change (pupil's energies can be devoted to interpreting graphs instead of drawing them – amore challenging task which does not have the same potential to keep them usefully occupied for a fair period of time); The teacher may no longer appear to know more than the pupils in everything and may become more of a partner in their learning (see Somekh, 1992). Of course as a'' Trojan horse' because it pulls on many threads of the web: it has the power to challenge us to make a number of changes, which together add up to a substantial shift in our teaching approach.

What can we learn form the systemic view? It enables us to ask new questions; not questions which search for causes of events, and attribute blame, but questions like: Which threads (for example,. Other pupils' and the teacher's expectations) contribute to the event (for example, a pupils disruptive action)? What is the function of a pupils' disruptive behavior for other pupils (and for the teacher)? Which are the sensitive spots (knots where many threads meet) in the event?

The systemic view also has another advantage: it can help us to arrive at a less emotional, more detached and, therefore, probably also fairer approach to situations in class, because it broadens our view beyond the concrete cause of trouble to its environment (of which the teacher is part). The interdependence of the elements in a system leads to a kind of balance (the tension of the net) to which the quiet pupils as well as the troublemakers contribute. (The actions of a troublemaker can cause the "normality' of the 'good' pupils and vice versa (thus many teachers have noticed that when a disruptive heaves the class, another will often emerge to take his or her palce.)

If we pursue this perspective, it also offer suggestions for action. In any situation, the system is kept in balance by feedback from its interacting elements (pupils and teachers). However, this feedback (from other pupils, or the teacher) reinforces a "Troublemaker' and what does not (it may be that any form of attention acts to reinforce the bad behaviors). We can start to solve the problem by influencing the nature of the feedback (for example, by giving other pupils a chance to express their opinions, or by the teacher voicing his or her perceptions of a situation).

A focus for analysis is to find the knots where the threads interact and particularly influence events. For example, there may be pupils whose

reactions are very important for pupil who disturbs the lesson, or there may be occasions, which bring about the kind of interacting that causes a difficult situation (such as, an occasion when the teacher-from the pupil's point of view has upset or humiliated a pupil).

Holistic and Analytic Perspectives

In this chapter we have given a number of hints for clarifying the starting point of research. This process of clarification is not value-free. By clarifying analyzing situations and problems, we are necessarily rather selective and reductionism. We reduce the complexity we face at school to a few central features whose relationships are then interpreted over simply. Often this results in a rather mechanistic view of reality. This tendency has to be counteracted from time to time during the research process. We must not equate the reductions and mechanistic model with the reality in which we live and act, which is much more complex than our model. The following suggestions may help to prevent this.

- Once you have developed hypothesis, don't view them in isolation from one another, but always look for possible links between them.
- Try to keep in mind the specific situation from which the hypothesis was derived initially, asking from time to time: under **what** conditions would the prediction of my hypothesis be likely to be valid.

5.7 SUGGESTED METHODS FOR CLARIFYING THE STARTING POINTS OF RESEARCH

Before introducing methods and exercises for clarifying the starting point, we want to present some experiences about this phase of research.

1. It is important to engage consciously in clarifying the starting point but at the same time, its importance should be exaggerated. After all, clarifying the situation is the task of the whole research process. If we aimed for absolute clarity about all aspects of a situation before beginning, we would never start at all. The process of analysis is an endless one, but in action research it must be interrupted for the sake of action. And the point of interruption should be when one has sufficient confidence in hypothesis to all them to guide action (Elliott, 2001)
2. The time needed for clarifying the situation can vary considerably. It will depend on the complexity of the problem to be investigated, the researcher's prior experience and depth of reflection, the accessibility of crucial information, the relative ease with which explanatory patterns and theories emerge, etc. There is a comforting rule of thumb. The

total time needed in research for clarifying the situation will always be nearly the same: if you take less time in the earlier stages, you will have to invest more time later on, and vice versa.

3. Even if a lot of effort is invested in clarifying the situation in considerable depth in the early phases of research, understanding will change standing was 'wrong', but because this is an outcome of the research. The researching teacher is interested not merely in confirming insights once they are gained, but in further development in depth and analysis of understanding. All actions- those that are primarily to do with teaching and those that relate to the research itself-can open new insights, on matter they happen at the beginning or at the end of the process. To neglect and discount these insights-as sometimes happens in academic research aimed at the end of the process. To neglect and discount these insights as sometimes happens in academic research aimed at confirming or refuting initial hypotheses is not sensible for the practitioner. Repressed problems will come back sooner or later and waste the time and energy of teacher and pupils.
4. Sometime clarifying the situation is the single most important result of the research. For example, for one teacher, a taped interview with an apparently difficult pupil led to clearing up a misunderstanding and seeing the pupate a new light. Because of seeing her in a new light, the relationship between the teachers treated the pupil become more relaxed, which in turn changed the way teacher treated the pupil. In this case, the situation changed at the time of clarifying the situation, because interview data enabled the teacher to see the pupil differently. In the following section, we suggested some concrete methods for clarifying the starting point of research.

Analytic Discourse in a Group

This procedure allows us to increase our awareness of the important characteristics of any situation and to enhance our understanding of their interdependencies. However, it presupposes that the analysis is carried out in a group rather than individually. In analytic discourse, a problem or issue is analyzed in the following way:

1. It is the task of the teacher who wants to analyzed a problem to basic information on the issue to be provided the group with the information on the issue to be discussed (in about 5 minutes): and subsequently to answer question put forward by the group as comprehensively as (s) he deems possible or feasible.

2. It is the task of the remaining participation to gain a comprehensive and consistent impression of the situation by means of asking questions. The following rules have proved to be important in carrying out analytic discourse:
   - There should be question only: statements concerning similar experiences should be avoided. This rule aims at focusing attention on the situation of the reporting teacher.
   - Critical comments (including those in the form of questions) should not be permitted. This rule of special importance at the beginning of a discourse, aims at preventing the reporting teacher from becoming defensive rather than reflective.
   - Suggestions for solution should not be permitted. This rule is to ensure that the search for an increasingly profound understanding of the problem is cut short by a compilation of recipes.
3. A moderator should monitor the rule discussed with all participants beforehand (usually one of the participants, who is prepared to assume that role). He or she is allowed to ask questions and may use this as a means of opening up new perspectives.
4. For the analysis of a situation, three types of questions are predominantly suitable:
   - Questions concerning of remarks (for example, the request to give an example or provide more details):
   - Questions concerning the concretization of remarks (for example, a request to give reasons for any action described, or any interpretations of events put forward).
   - Questions concerning an expansion of the system (for example, the request to give more information about people or events who may be related to the problem but have not so far been mentioned).

An analytic discourse has proved to be an effective method of gaining in-depth understanding of a problem. Through it, the interrelationships of the elements of the problem, including the "headache areas", become apparent. This can provide a basis for solutions or for a new line of enquiry. An analytic discourse can lead to a deeper understanding of the problem-particularly for the person reporting but also for the whole group.

It usually takes some time from an analytic discourse to open up a problem in depth and become an intellectually worthwhile and personally enriching experience, the personal enrichment has to do with the seriousness,

the sympathy and the personal concern that may develop in the group. The intellectual value derives from a growing understanding of the intricate relationship between observations, tacit assumptions and evaluations which are specific to one person's situation, but which have many implications for the other participants' self-understanding.

Usually the teacher for whom it is organized gains the greatest benefit from an analytic discourse. Apart from the deepening relationship with colleagues that results, the reporting teacher develops a clearer and more analytical view of the problem or issue. Sometimes this can be experienced quite dramatically, if the teacher's perception of the problem changes fundamentally, or if approaches to its solution emerge. At the same time, an emotional relief usually accompanies a more analytical view of a problem.

The role of the moderator is not always simple, because it involves seeing that rule are observed which are against the practice of everyday conversation and therefore are "forgotten' easily. The moderator must see the rules are kept or run the risk of discourse remaining at a superficial level.

It may sometimes be necessary to refuse to accept questions that go too deep and that invite a level of personal and emotional commitment unwarranted by the mutual trust in the group. Too much emotional involvement can also interfere with analysis, because it draws attention away from a systemic view of a situation to a one-sided, causal interpretation (possibly too personally focused).

In the course of an analytic discourse, progress should be made in three areas:

- The situation in which the research problem occurs should be clarified (Knowledge of surface symptoms).
- An understanding should develop of 'positive' and negative' factors and influences related to the problem (in-depth interpretation).
- An understanding should develop of the potential for change (in thinking and action). To this end coherence and holistic plausibility of analysis is of more important for a researching teacher than the 'objective' quality of individual arguments.

It has proved to be helpful, if there is still some left at the end of an analytic discourse for discussion without the rules. Often there is strong interest by the group in taking about the experience, if this opportunity is announced at the beginning of the discourse, when the moderator explains and negotiates the rules. It takes pressure of the process because participants who urgently want to 'tell their own story' now they get their chance later.

Conversation with a Critical Friend

If you have no group of fellow teachers willing to take part in an analytic discourse, you can confide in, of course, one-to-one conversations will not follow the rules as strictly as we have suggested for an analytic discourse. Nonetheless, it cans still be very useful to adopt a similar discipline:

If I want to assist a colleague in clarifying a situation, it is useful to devote a period of time to gaining an understanding of the situation and:

- Ask only question deepen this understanding:
- Refrain from any anecdotes, adverse criticism or suggested solutions that might distract or deflect the train of my colleague's reflective thinking.
- Conversation with colleagues plays an important part in action research. This holds not only for the stage of "clarifying the starting point' (discussed in this chapter) but also for the whole research process. The partners in this conversation should be critical friends: they should have empathy for the teacher's research situation and relate closely to his or her concerns, but at the same time be able to provide rich and honest feedback.

A small team of teacher-researchers will probably create better conditions for action research than a teacher working alone. Another good way of working is to from research tandems. The partners in each tandem have their own starting points for research but asset each other as critical friends, sharing experiences and helping with data collection (doing observations, interviews etc.)

Using Diagrams

Normally, theories start with a verbal description (written or spoken) of a situation. After a period of reflection and discussion/writing, the salient points are drawn out and expressed in succinct verbal statements (i.e. the hypotheses). Of necessity, these statements are reductionism, losing much of the complexity and detail of the situation they attempt to explain.

Miles and Huberman (1984) have suggested that narrative texts (and other ways of presenting theories linguistically) overstretch the human capability to digest information and therefore lead to over simplified interpretations. They make a plea for more frequent use of diagram and other graphical means of representing theories. Narrative texts organize interpretations. They make a plea for more frequent use of texts organize information according to the sequential structure of language and pose a problem for the representation of non-sequential events. Diagrams, on the

other hand, allow us to represent information and its interrelationships in a structured, rapidly accessible and compact form.

Miles and Huberman (ibid: 33) give some suggestions for constructing diagrams:

- Limit the diagram of chart, whenever possible, to an A4 page.
- Try out several may be necessary before you are satisfied. The graphical representation should not be thought of a straitjacket to limit future work but more like a map of the area, which has just been to limit future work but more researched. A main purpose of research is to contribute to the development of maps.
- Avoid the no-risk framework' if the elements of the situation are defined only in very general terms, and two way arrow connect everything to everything else, it will be easy to confirm to theory.

However, it is unlikely to have any explanatory value. It is better to express your ideas as concretely and definitely as possible. The more exactly a practical theory is formulated, the more helpful it will be for your further work (although it is likely to need considerable modification).

- Use the graphical representation for your own development. Outcomes of practical experience, existing theories, and the result of important research studies can be' mapped on to' it at a later stage. This will help to identify parallels, overlaps, contradictions and gaps, and in this way refine and deepen your understanding of the field of study.

In the following section, we suggest a practical method for creating a diagram.

Graphical Reconstructions

Graphical reconstruction helps in clarifying the situation, but also with data analysis in general.

Procedure

2, Read all the data (for example, your short description of the situation and questions that indicate the developmental perspective-see M6).

3, White the most important features, events and actions, which you identify in your data separately on small index cards. Then write on further cards the most important contextual conditions of the situation. Try not to have too many cards (particularly at first), or it may be too difficult to keep them all in view: 8-16 cards. For that purpose, you can use further cards with symbols for relationships. Probably you will need the following

ones most frequently. Other symbols for relationships frequently. Other symbols can be written on blank cards as needed.

(A)←→(B).....B follows A chronologically
(A)←→(B).....A causes B
(A)←→(B).....A and B interact
(A)——Ind.——*(B)*.....*B causes A*

The point of graphical reconstructions is that in presenting the essential elements geographically (and not in a linguistic flow of ideas), you have to restrict yourself essentials and be clear and concise. This helps to identify the most important features of a situation. Working with movable

cards makes it easy to try out different configurations until you find one that satisfactorily reconstructs the situation you are considering. As you move the cards, you go through a process of clarifying the relationship between all the elements of the situation.

4, When you have found a representation of the starting point that really satisfies you, copy the graphic diagram on to a single sheet of paper. Paper preserves this diagram. In the course of your research you will be able to see how your ideas change. You can also use the diagram to check how plans for actions fit your personal theory as represented in the diagram: From which elements of my theory do my plans for innovation actions originate? Why exactly do I think they originate there and not from other points on the diagram?

Example: See the following Case study

The students do not ask any questions. My last year's students did ask questions and everything went well. Now, because they are not asking any questions, I do not Know whether they have understood or not. If they articulated their problems, I could explain points again more clearly:

The teaching process is divided in to two phases. The lecturer thinks that her explanations during the first phases are not usually very well understood. But even if the student' not understand her explanations (and as a result cannot solve the problems correctly), they provide the material form which question can arise to create starting points for the second phase of the teaching process. In this phase the lecturer's explanations are much clearer as she can concentrate on specific aspects of the subject matter. If, however, the students do not ask any questions, she doubts whether they have understood everything and, in addition, she has no way of starting the second phase with her clearer explanations. In this case she believes

it is unlikely that the pupils will understand the subject matter and she finds this frustrating and worrying.

Finding Patterns in Experience

Diagrams are a means of exploring that relate to the starting point of research, of becoming aware of existing preconceptions and theories, and discovering areas in which information is lacking. The same result can also be achieved with the help of other methods.

A Story from Cards

Try to observe practical situations that are important in relation to your starting point of research over a defined period of time (for example, between one and three weeks depending on the research question).

1. After each observation, describe the situation as precisely as possible on a large index card.
2. At the end of the time, take all the cards and read through them.
3. Try to write a general explanatory statement that relates to all the situations you have observed.
4. Check this explanatory statement by answering the following questions for each card in turn:
   - Is it possible to present the situation described on this card using the concept in my general explanatory statements?
   - How?
   - If the situation I observed is distorted or fragmented by this attempt, what changes or additions do I need to make to the emplacement?

From Categories to Hypotheses

Hypotheses are formulated in order to make the researcher aware of his or her own tacit assumptions and to provide an orderly framework for the research. The starting point is usually a loosely structured information base (experiences, knowledge taken from books, or data) working on this information, the researcher tries to impose a pattern by identifying important characteristics or categories, as distinct from unimportant ones, and by making connections between these categories explicit. Unlike in graphical reconstruction the results of the analysis not expressed diagrammatically, but linguistically. In what follows, each illustrated by an example (see also the practical hints for coding data).

1. First try to identify your assumptions about the situation in question (for example, as they are documented in your research diary, in other data have already collected, or in your memories from reading or experience. A teacher made the following notes from memory after a video recording of one of lessons (for reasons of space only brief sections are quoted).

The recorded lesson once again shows the problem I have identified: in this class, there is no discussion that is kept alive by the pupils themselves for any length of time. Even if I ask questions of express provocative opinions, there is normally little response and the topic is closed …… Watching the video I became aware of a pattern that occurred.

Self-test Exercise 1.3.3

DIRECTION: Choose the best Answer

1. Which one comes first in action research?
   (a) Describing the facts
   (b) Explaining the facts of the situation
   (c) Generating hypothesis
2. Which one needs little explanation
   (a) Systemic view
   (b) Causal View
3. Which one of following can be used for clarifying a starting point in action research?
   (a) Analytic discourse
   (b) Conversation with critical friends
   (c) Graphical reconstruction
   (d) All

Chapter-6

DATA COLLECTION AND ANALYSIS, PUTTING ACTION STRATEGIES IN TO PRACTICE AND REPORTING ACTION RESEARCH

INTRODUCTION

The quality and the practicality of action research largely depend on the nature of data collected at each phase of its development and implementation. The teacher is expected to collect valid and reliable data regarding the issues to be improved or problems to be solved, about how each action step is being implemented, and the effects of the action. To collect data in action research a teacher can use a variety of methods. Furthermore, the raw data collected from different sources has to be analyzed and interpreted this chapter deals with data collected from different sources, ways of interpreting the data and implementing the action research strategies. Here is a list of techniques and methods, which can be used to gather evidence in the reconnaissance and monitoring phases of action research.

Objectives

- At the end of this section, students will be able to:
- Know the different methods of data collection instruments in action research.
- Apply the different data collection techniques.
- Understand action research strategies and ways of implementing them.

Introduction

This part describes the different data collection instruments in action research. This includes diaries, interviews, questionnaires, profiles, document analysis, etc. Each of these data collection methods in action research has certain advantages as well as some inherent limitations. For

example, if we observe behavior as it occurs (direct observation), we may miss the reasons for its occurrence (which may be understood from responses from structured questionnaire). Similarly, if we ask respondents to report on their behavior verbally (interview), we have no guarantee that their actual behavior (studied by direct observation) is identical to their reported behavior. Thus, to obtain adequate and valid data the teacher has to use different data collection instruments.

6.1 TECHNIQUES AND METHODS FOR GATHERING DATA (EVIDENCE)

This includes Some of them are following

1. **Diaries**
2. **Profiles**
3. **Document Analysis**
4. **Photographic Evidence**
5. **Tape/video recording and transcripts**
6. **Using an Outside Observer**
7. **The Running Commentary**
8. **Checklists**
9. **Rating scale**
10. **Inventories or Questionaires**
11. **Interviewing**

6.1.1. Diaries

The research diary is one of the most important research methods and is very commonly used by teachers doing research.

It is useful to keep a diary on a continuous basis. It should contain personal accounts of 'observations, feelings, reactions, interpretations. Reflections, hypotheses, and explanations. Accounts should not merely report the 'bold facts' of the situation, but convey a feeling of what it was like to be there participating in it. Anecdotes; near verbatim accounts of conversations and verbal exchanges; introspective accounts of one's feelings, attitudes, motives understandings in reacting to things. Events, circumstance, these, all help one to reconstruct what it was like at the time.

It is also suggested that teachers to undertaking their own classroom action research. They should keep diaries, and advise students to keep diaries of their teachers. As Kemmis and others (1981) argue, dairy enables a teacher to compare his or her experience of the situation with that of the pupils. However, it is important to remember that keeping a diary is necessarily a

personal and private matter, and that the disclosure of its contents should be under the control of its author. There should be no compulsory collection of diaries at the end of lessons. One way of ensuring pupil control is for the teacher and pupils to hold periodic 'evaluation sessions' after each party draws on 'diary evidence' to support the views expressed. But its 'disclosure' remains under the control of the authors. However, there is no reason why diaries could not be 'exchanged' if both parties agree.

Finally, the contents of diaries should be properly dated. In the context of classroom action research, details like from, time and subject should be cited at the beginning of an entry. Entries may vary in length and amount of detail.

They should probably be fullest at those points where the heaviest monitoring and reconnaissance is planned?

6.1.1.1. Characteristics of Diaries

According to Altrichter (1993) good diary has the following characteristics

1. Writing a diary is simpler, more familiar, and simpler to organize than other research methods. It is always possible to make a diary entry if paper and time are available; where as to carry out an interview you need someone willing to it.
2. A diary can also contain data collected by other research methods. For example, notes can be from unstructured observation.
3. Short ideas about research can be recorded frequently. It documents the development of perceptions and insights at the different stages of research process.
4. Diaries help for self-assessment and self-reflection.

Activity 6.1

Take a record of the participation of students at the end of each five consecutive lessons in a class. Then look back in to your recordings and answer the following questions.

1. Do you see similarity or difference in the participation of the students in the five lessons? Why?
2. In which of the lesson (s) that the students were (a) more active, and (a) more passive? What do you think is the reason?
3. Can you identify the student (s) who are active, and (b) who are passive?
4. At what of the lesson that students become (a) active, and (b) passive?

6.1.2 Profiles

A profile provides a view of a situation or person over time. In a teaching situation one can produce profiles of lessons, or of the performance of certain pupils. Walker and Adel man's Guide to Classroom Observation (1975) gives some excellent examples of lesson profiles.

6.1.3 Document Analysis

Document can provide information that is relevant to the issue and problem under investigation. For example, according to Altrichter (1993) in the context of classroom action research, relevant documents could include:

- Syllabuses and schemes of work
- 'Curriculum' reports of school working parties and committees
- Examination papers and tests used.
- Minutes of department meetings.
- Work cards and assignment sheets.
- Sections used from textbook.
- Samples of children's written work.

Activity 6.1.3.1

Suppose you have a student who is always disturbing your class while you are teaching. If you want to propose an action research project that helps this student, what possible documents do you look into in order to get relevant information about the problem?

6.1.4.Photographic Evidence

Photographs can capture the visual aspects of a situation. For example, in the context of classroom action research they can visually capture:

- Pupils working on classroom tasks.
- What is going on 'behind the teacher's back.
- The pattern of social organization in the classroom, e.g. whether pupils are working in groups, or spatially isolated, or sitting in rows facing the teacher.
- The teacher's physical posture and position when two children, e.g. sitting down at their level.

Some of this evidence can only be secured with help of an observer, but there is quite a lot the teacher can collect them by him or herself. Photographic evidence can provide a basis for discussion with other members

of an action research team or with other participants in situation under investigation.

6.1.5 Tape/video recording and transcripts

In the context of classroom action research tape or video can be used to record lessons in whole or in part, unless video is used by an observer, its use has limitations, Used by the teacher (or pupils), it can be very distracting, although this may diminish as the user becomes more skilful. If the cameras are fixed, they may not be able to pick certain things which are relevant and important e.g. the verbal exchange between the teacher and a particular pupil during a non class teaching episode.

Portable tape-recorders with built-in microphones are probably less distracting for the teacher to carry around the classroom.

A teacher will probably get more out of a recording if he or she listens to (or looks at) it, and then transcribes interesting and relevant episodes. This enables him or to move backwards and forwards through an episode more quickly and easily than constantly playing the recorder backwards and forwards. However, transcribing by hand is immensely time consuming. It concentrates the mind on what is happening to a greater degree than simply listening and watching. But restrictions on available time will limit the extent to which transcription is possible.

6.1.6 Using an Outside Observer

This technique can be useful if the outsider is well briefed by the insider, so that he or she knows the sort of information which will be of use to the latter. In the context of classroom action research, the outsider can collect information and convey it to the teacher in the following ways:

- Taking photographs and then passing them over (perhaps with comments attached).
- Making a video –recording and showing the teacher what he or she feels to be significant.
- Making detailed notes as he or she observes, and using them as basis of a short report for the teacher to read.
- Allowing the teacher to interview him or her, using a tape recording or taking notes.

The Outsider may be a fellow member of the action-research team but operating outside one's immediate field of action; a colleague who is not involved in the research; or an external person who visits the school (or site) as a consultant.

6.1.7 The Running Commentary

There are periods is most practical situation where a participant can pause to observe what is going on. This provides an opportunity for producing a running commentary on events in teaching situations. One useful application of this technique is when observing a pupil or group of pupils working at a task.

Observation should continue for at least five minutes. Do not intervene in the task the pupil is (or pupils are) engaged on. Sit as near as possible but try to angle your line of vision at a different angle to that of the pupil (s). For effective observation use the following procedures.

- Avoid sitting face to face.
- Avoid any posture or position that highlights the fact that a pupil is or pupils are being watched.
- Try to write down as literally and concretely as possible everything that is said and done.
- Note things like tone, gesture, etc.
- Keep the commentary as descriptive as possible, avoiding judgments and high-level interpretations from which it is difficult to tell what was actually happening (e.g. 'they worked well').

6.1.8 Checklists and Inventories

Checklists are basically sets of questions one answers oneself. According to Koul (1984) they are simple devices consisting of a prepared list of items which are thought by the researcher to be relevant to the problem being studied. Here the observer is required to check the presence or the absence of the item. A checklist draws the attention of the observer to relevant factors and enables the researcher to record the data quickly and systematically.. Thus, the responses in the checklist are a matter of fact not of judgment. The checklist is an important tool in gathering facts for educational survey that is for checking of library, laboratory, facilities, textbooks, etc. it structures observations by indicating the kinds of information needed to answer the questions. An exclusive reliance on checklists can blinker one to unanticipated effects of actions, and factors in their context, which may explain these effects. See the following example.

1. Did your teachers apply active learning? Yes---------- No---------
2. Does your university have a student's council? Yes-------- No-------
3. Are there adequate laboratory equipments? Yes---------- No ---------

The items of a checklist can also be phrased in such a way that they are discriminative in quality. See the following example.

1. Your teacher gives you an assignment daily, weekly, fortnightly, monthly not at all
2. How effective was the presentation given by the teacher? Very effective slightly effective, Average, Slightly ineffective, Very Ineffective
3. How the teacher did managed the discussion? Very participatory, sometimes participatory, Average, less Participatory, Not Participatory.

Checklists should always be used in conjunction with more open and less structured techniques of monitoring, e.g. recordings, free observation, running commentaries, unstructured interviews.

This recommendation also applies to questionnaires and inventories. Both are ways of eliciting other people's observations and interpretations of situations and events, as well as their attitudes towards them. But again others may have important observations, etc,, to make which one hasn't anticipated in designing these instruments.

A Questionnaire is a list of questions one wants to ask other people. It is one way of checking whether other participants in the situation would give the same answers to the kind of questions one has asked oneself on a checklist.

An inventory is a list of statements about a situation, which others may agree with, or not Responses can consist of a tick placed in one of the following categories: Strongly agree-agree uncertain-disagree-strongly disagrees. An inventory is quite a good way of discovering the extent to which others agree or disagree with one's observations and interpretations.

Questionnaires and inventories allow one to quantify people' observations, interpretations and attitudes. They should be used as follow-up techniques to more qualitative ones. For example, Elliot (2001) has explained the importance of inventories as follows. "I once interviewed a small sample of parents at a school on what they valued about schools. In these unstructured interviews I discovered to my surprise that more than half of the parents placed such considerations as 'concerned about children's person and social as well as their academic development', 'children are happy there', 'teachers care about individuals', way above my anticipated responses, namely, 'good exam results', 'good discipline' and 'uniform', if I had started with a questionnaire or inventory I would probably have missed out some of the former considerations. But, having elicited these considerations through unstructured interviews, I then incorporated them in to an inventory, which was circulated to a larger, more representative,

sample. This enabled me to assess how widely the particular values cited in interviews were shared by other parents of the school in question."

According to Elliot(1991), inventories, scaled in the way indicated, are better than questionnaires as techniques for gathering data which complements that collected through unstructured or Semi-structured interviews. Adwinter (1982) has pointed out the latter enable people to express ambivalent views, and so can inventories to some extent. But questionnaires tend to force people to present their views as if they were quite un ambivalently held.

Activity 6.1.6

Students prepare a checklist to observe one classroom in your school. The checklist has to be developed to assess the participation of students in the lesson.

6.1.9 Interviewing

Interview is a face-to face interpersonal role situation in which an interviewer asks respondents questions designed to elicit answers pertinent to a research hypothesis. The questions, their wording, and their sequence define the structure of the interview. Interviewing is a good way finding out what the situation looks like from other points of view. They give access to other people's perceptions, including crucially the thoughts Interview can be made an observer. But it is also important to interview those one normally interacts with in the situation. In the contest of classroom action research, a sample of pupils should be interviewed frequently. Eliciting' authentic' accounts from them is not easy initially, given a teacher's authority position. One way to overcome this is to ask an external consultant to do some initial interviews.

Types of Interview

Interviews can be structured, semi-structured, unstructured. In the structured interview the interviewer presets the questions. In this type of interview, the number of questions and wording of the questions are the same for all respondents.

The structured interview is based on three crucial assumptions:

1. The respondents have sufficiently common vocabulary so that it is possible to formulate questions which have the same meaning for each of them.
2. It is possible to phrase all questions in a form is equally meaningful to each respondent.

3. The sequence of questions is identical.

Unstructured interview is the most flexible type of interviewing. Here the researcher doesn't employ a pre specified type of questions, nor are the questions asked in a specified order. Respondents are encouraged to relate their experience, to describe whatever events seem significant to them, to provide their own definitions of the situations, and to reveal their own opinions and attitudes. In the unstructured interview, the initiative for raising the relevant topics and issues is left to the interviewee once the latter has raised a topic or issue, the interviewer can then ask him or her to expand, explain or clarify points. A useful device for helping the interviewee to raise issues and topics is for the interviewer to play a recording of the situation which the former then stop at points where he or she would like to about something A similar device would be to use some other kind of evidence as a basis for helping an interviewee to raise topics and issues (Altrichter, 1993)

During the initial stages of action research, when one wishes to remain as open as possible on the question of what information is relevant, an unstructured interview formation will be relevant, one can shift towards a more structured approach. But even here the interviewer should give room for the interviewees to raise their own topics and issues.

A semi-structured approach, where the interviewer asks certain preset questions but allows interviewees freedom to express and raise their own topics as the interview progresses is probably better than a rigidly structured approach. In this type of interview the encounter between the interviewer and the respondents is structured and major aspects of the study are explained. But the respondents are given considerable liberty in expressing their definitions of the situations that is presented to them. The semi-structured interview has four characteristics.

They are

1. It takes place with respondents known to have been involved in a particular experience.
2. It refers to situations that have been analyzed prior to the interview.
3. It precedes on the basis of an interview guide specifying topics related to research hypothesis.
4. It is focused on the subjects experience regarding the situations under study

Interviews have developed from everyday conversation. They give access to other people's perceptions, including crucially the thoughts

attitudes and opinions that lie behind their behavior. Behavior and its manifestations are ambiguous. Behavior that the teacher regards as disruptive in a pupil may mean something quite different to the pupil herself. Questioning, orally or in writing offers more direct access to the meaning it has for the pupil than do other methods.

However, even this access is limited. The interview, at its best, only brings to light what the interviewee thinks his or her interpretations at the time and under the circumstances of an interview. Even interviewees, who wish to tell the 'truth' will, in some sense, misinform the interviewer by 'withholding' information; they cannot be conscious of all the motives for their behavior and are engaged in their own process of reconstruction in answering the questions.

Interviews as a relationship between people

Interviews are communications that aim at getting to know points of view, interpretations and meanings in order to gain greater understanding of a situation. They key precondition for the success of an interview is to make it clear to the interviewee that what he or she has say will be important in at least one of two respects

- Important for the interviewer: the interviewee should feel that his or her views will' count' for the interviewer.
- Important for the interviewee; the interviewee should believe that the outcomes of the interview may be useful for him or her.

How can we set up the right preconditions for an interview? Watzawick, et al. (19980) distinguish between two levels of communication: the level of content and the level of relationship.. these levels influence each other; the relationship between two persons (e.g. mutual trust), influences their understanding of what is said (the content). Vice versa, the interpretation of what is said influences the relationship. The interviewer can exert influence on both levels, but only to a limited extent. If a teacher interviews a pupil, the interdependence of the two levels can cause problems: teacher and pupils do not just build up a relationship during the interview, but have already developed various attitudes towards each other (on a continuum of trust and mistrust, affection and animosity). This framework of relationships provides the context in which the interview starts. It influences the way in which the pupil understands what the teacher says. If the pupil sees the teacher as someone who is interested in answers to questions only in so far as they demonstrate what has been learnt (repeating what the teacher already knows), the interview questions will be viewed in that light: i.e.

the pupil will not assume that the teacher really wants to know something she does not yet know, for example, the pupil's own personal perceptions. This problem can be partly overcome by asking a third person to do the interviews (for example, a fellow teacher) someone the pupil does not know, or know well, and who will therefore have a better chance of building a new relationship during the interview. If relationship between the teacher and pupils are strained or difficult, a third person acting as interviewer can be indispensable in getting access to the perceptions and views of pupils. But, ultimately, the teacher-researcher should interview the pupils him or her. Although action research usually starts from the teacher's research interest, in the course of time it should become a common concern of the teacher and pupils. We suggest this not only for ethical reasons, but also because it is our experience that the quality of understanding and potential for development are greatly enhanced if teachers and pupils become research partners. An important side-effect of establishing the kind of relationship needed to interview pupils is almost always a permanent change in the relationship between teacher and pupils which is likely to be supportive of teaching and learning.

Preparing for an interview; the aim of an interview is to learn from one or more people what you do not yet know, but consider being important. So you need to reflect carefully on what you want to know and why. The aim is to decide upon the issues that will be the focus of the interview. We recommend that you formulate questions either that are central to the research question, or that will enable you to reflect more deeply on sensitive issues. However, this does not mean that you should ask the questions in this form in the interview, because pre formulated questions tend to take your attention away from the interviewee and the dynamics of communication.

In this chapter we will only discuss unstructured interviews. Unlike structured interviews, they give interviewees room to develop their own concerns in answering the questions. Hreon (1982: 119) distinguishes two kinds of open interviews: focused and narrative. For the teacher researcher, the focused interview is probably more useful. These interviews ask for perceptions and interpretations of specific events (e.g. things which occur during a lesson (the focus). However, they allow fluent transitions to the even more open narrative interview. The latter generally has very little structure. Often it simply put forward a broad topic (e.g. 'learning') which is then developed by the interviewee.

The choice of the interviewee depends on the research question. For some questions, it is important to interview several pupils who somehow

differ from one another (for example, some who are achieving well and others who are underachieving or working erratically, etc.) For some questions, individual interviews are more appropriate; for others, group interviews. The group interview is a more normal situation for students: the social pressure to talk is lower for the individual because of the presence of others, and if one student's talks, this can stimulate comments from the others. However, if there is a danger of pupils being ridiculed by others during the interview (for example, because they express themselves awkwardly), it is better to interview them individually.

The choice of place and time the interview also depends on the research question as well as on opportunity. Secondary teachers may be able to interview pupils during a free period if a colleague is prepared to release them from class for a short period. Primary teachers may be able to carry out interviews with the support of colleague in a team-teaching situation. Sometimes interviews can take place during teaching sessions by setting tasks, which require students to work independently of the teacher, either alone or in groups.

CARRYING OUT AN INTERVIEW

Starting the interview

It is important to explain the purpose of the interview at the start and to enlist the interviewee's help.

This does not take long and is recommended for several reasons:

- Ethical reasons: it is not ethical to use the information from the interview for any purpose without the knowledge of the interviewee
- Reasons relating to quality of the information; an interviewee who knows what it is all about is more likely (in most cases) to be able to give the information the interviewer needs;
- Motivational reasons: an interviewee who is treated as an equal fully informed (becoming a kind of partner) is more likely confide in the interviewer.

It is essential for pupils to be clear that the interview situation is different from other question and answer sessions with the teacher. If pupils perceive the interview as a kind of exam, they will probably say only what they believe the teacher wants to hear. We recommend tape recording interviews for two reasons; (1) the record of what was said will be more authentic; and (2) you will be able to concentrate fully on the interview and not be distracted by having to take notes.

It may not be possible to tape-record; interviewees' permission should be asked and may be refused; on some occasions the tape-recorder may

make interviewees so nervous that continuing will adversely affect the quality of the interview. In this case, the best strategy is to take brief notes during the interview and use these to write more detailed notes latter. It may help during the interview to use one half of a folded sheet for catchwords and the other half for quotations, as this makes the subsequent reconstruction easier.

Listening

It takes two people to generate the information: one who tells and one who understands what is said. Communicating honestly about complex matters required particular qualities of the listener: empathy, disciplined imagination, sympathy, attention, patience, distance, a feeling for truth, and a willingness to understand.

During an interview, listening is an important as asking questions. Non-verbal messages communicated by the interviewer's manner of listening are as important as the questions in indicating to the interviewee whether he or she is being taken seriously as a partner in the interview.

These are some of the ways of showing seriousness and respect: but not interrupting trainees of thought.

- By accepting pauses as a natural part of relation (this can be difficult for a teacher-researcher as pauses are often interpreted quite differently in the classroom);
- By accepting whatever is said, however unexpected and regardless of the interviewer's own views. This kind of neutral attentiveness can be difficult for teachers: the may not be used to accepting statements with which they do not agree nor, on the other hand, to withholding approval when the interviewee that the interviewer does not want to know what they really think but wants only confirmation of previously held views. This can lead to interviewees trying to gain the approval of the interviewer, perhaps by guessing what he or she wants to hear. Approval and appreciation should refer not to what is said, but to the interviewee's willingness to communicate.

Asking questions

The questions should make clear what the interviewer wants to know, while at the same time helping the interviewee to explore his or her mental space. The beginning of an interview is particularly important because it establishes a relationship between the interviewee and the interviewer. It indicates to the interviewee what the 'real' intentions of the interviewer are.

A good beginning may be to recount an event (for example, something that happened in the classroom) and ask; 'Why do you think that happened? What do you think lay behind it?' A personal approach of this kind shows that the researcher is interested in the interviewee's opinion.

It is important to ask open questions, especially at the beginning of an interview. They allow the interviewee to shape the answer and take responsibility for structuring the information. By telling the interviewee the issue and asking for comment, he or she is free to decide on the best linguistic form for presenting the ideas. This is another way of showing that it is what the interviewee thinks that counts. Closed questions (where the format and structure of the answer is already predefined) could tell the interviewee (irrespective of what has been said beforehand) that the prime purpose of the interview is to confirm or disconfirm the interviewer's expectations, or that the interviewer is not interested in any details. Closed questions are useful only if the interviewer knows exactly which answers are possible for a question and wants to cross-check possible interpretations. But if such questions (for example, expecting yes/no answers) open the interview, the whole discourse can became a '(short) question and (short) answer' game.

However, openness can also go too far, for example, if a bundle of issues is packed into one question. This may seem very open to the interviewer, but the interviewee will more likely regard it as a request to be superficial and-get the impression that the interviewer wants to know a little about a lot, but nothing in depth. It is better to focus on one issue at a time.

Answers to questions can be either more descriptive or more interpretative. The balance is part)determined by the way the interviewer asks the questions. It may be best to shift the direction as time goes on. At the start of an interview, it is often better to ask for matter-of fact and descriptive information, leaving room for more personal and interpretative comments when the necessary confidence has been built up. Questions should not be suggestive, and interviewers for the interview, as they undermine the credibility of the interviewer. The younger the pupils, the more sensitive and receptions they are to suggestions (e.g. 'don't you think….1') Transmitting the interviewer's expectations to the interviewee (sometimes without either of them being aware of it) is one of the most common pitfalls in carrying out an interview.

Expansion and Clarification

The process of expansion and clarification is one way of showing the interviewer's interest in what the interviewee is saying. It demonstrates a desire to learn about details, to clarify apparent contradictions, and so on. There are many ways of doing it:

- Repeat what the interviewee said in your own words to find out whether your understanding is in line with what he or she wanted to communicate (What I'm hearing you say is..'). This is especially important if the interviewee has difficulties with self expression.
- Ask the interviewee to give an example as illustration.
- Ask for interpretations of causes, reasons or aims.
- Ask for clarification of contradictions.
- Have a pen and paper to hand and ask for diagrammatic representations of some ideas.

There are some pitfalls. Attempts to expand and clarify can give contradictory messages: a request for more details can be interpreted either as a strong acknowledgement of the importance of what has been said, or as an indication that you are questioning its truth. When expanding and clarifying, it is important to make clear that you are interested neither in finding fault nor in confirming your own prejudices, but only in understanding.

After the interview

Students may suspect that the teacher and the female student do have a " romantic relationship.' And to avoid such rumors female students, even if they knew the answers for the questions asked in the classroom they said they prefer to keep quiet. The other cause, which they mentioned, was the imbalance between the number of female and students in the classroom.

Cultural and family influences are also among the most detrimental factors that they raised, for making female students passive listeners. The cultural background of female students does not encourage active participation, particularly in education. Parents do not encourage females to focus on educational activities. There is a strong belief in the society that an ideal woman is one "who keeps silent".

The focus group discussants put forward the following possible solutions for problems they raised.

- Encourage student's interaction in the classroom through group work, pair work and team study.

- Reduce class size, Increase enrollment of female students to overcome imbalance of numbers between female students and male students in the classroom.
- Consider sitting arrangement so that female students sit in between males.
- Bring attitude change in the society.
- Teachers should call female students by their names to take part in the discussion.
- Establish assertiveness clubs in the university.
- Teachers should show bring faces to students in the classrooms and during consultation.

REFLECTION

The issue of classroom participation by female students should not be overlooked because of its repercussions. Instead strategies should be devised to promote it aggressively if our university wants to empower its female students at tertiary education which in turn support assertiveness in their future professional career.

Attainment of Performance Indicators and objectives

As it is described under the strategies, all objectives and performance indicators of the action research were met.

CONCLUSION

After completing their study, female students are expected to shoulder social burdens. To carry the burdens of responsibility they must take active part in the teaching learning process and get unreserved support from their teachers. They should not seek shelter in the past wrongs for all their failures. Instead, build confidence and get out from their inhibitions. This can be achieved through collaborations with the instructors, the departments, the faculties, and the university; and more importantly with the female students themselves to take more responsibility for their own learning and develop their independence.

Action Research Project Questionnaire to be filled by Female Students

BAHIR DAR UNIVERSITY
EDUCATION FACULTY
HIGHER DIPLOMA PROGRAM

Dear Students: The purpose of this questionnaire is to find out information which will help the Action Research Group to investigate female students' participation in the classrooms. The responses that you give are useful to the success of the study. Therefore, please fill in the questionnaire correctly.

Thank you advance for your cooperation.

Instruction: Answer each question quickly by using "X" in the appropriate box below

No.	Items	Agree	Not sure	Disagree
	I think I have been very active in class discussion	16	13	6
	I believe that students' active involvement promotes learning	27	6	2
	Female and male students have different learning style	13	13	9
	Teachers call on male students more frequently	9	9	17
	I pretend to read something course related in order to	16	11	8
	Avoid teacher question in the classroom			
	Teachers tend to treat female students differently	7	17	14
	When female participate in classroom talk, their approach suggests to teachers they have less command over the subject matter than males.	8	11	16
	In the classroom, females speak more often than males	6	9	20
	In order to avoid teacher question in the classroom I do not keep eye-contact with her/him	14	8	13
	The climate for female students in the classroom is supportive	10	12	13
	Teacher interrupt female students before ending their responses	8	9	18
	Teachers give male students more eye-contact following questions	18	10	7
	Females lose their interest in classroom participation because they have low self confidence	21	4	10
	Teachers do not encourage females because their participation is less than males	14	9	12

	Teachers make more eye contact with males than females in the classroom	16	13	6
	I like my teacher to call me by name in the classroom	19	3	13
	Teachers wait longer for male students to respond to questions	14	10	11
	Female students tend to focus on beatifying their bodies rather than focusing on their lessons	10	8	17
	Teachers more often direct very difficult questions to male students rather than to female students	15	11	9
	Teachers appreciate the potential ability of male students who are assertive and vocal, but characterize female students who exhibit such qualities as " rude"			

OUTLINE FOR BEGINNING AN ACTION RESEARCH PROJECT

Although it is not necessary to write a formal plan for an action research project, writing can help to formulate thoughts. The following outline might be a helpful guide:

1. What is my concern?

(*a*) Write down some statements of concern about your practice.

(*b*) Try specify what it is about the concern that you with to change. (e.g. changes in the language used, changes in the activities, changes in social relationships.)

2. Reconnaissance

(*a*) What are the reasons for the present situation?

(*b*) Identify who is involved in the present situation and who would be most directly affected by any actions taken.

(*c*) Identify who could help. Who should be involved? Who could be involved? (note that ideally action research means the active involvement of those who are affected in the process of action and reflection.)

(*d*) Identify the resources (time and Materials) that you have available to devote to the project.

3. Creating a plan for the first Action Research Cycle

(*a*) Describe the specific change that you want to make.

(*b*) Identify the initial action step.

(*c*) Describe the methods you will use to observe and record what happens as the result of the first action step.

(*d*) Indicate a timeline for the first Action and reflection cycle.

4. Planning for subsequent Action Research Cycles

It is important to remember that action research proceeds in a dialectical way through moments of action and refection. It doesn't' end (as problem solving does) with a single planning and acting cycle but continues on in a spiral of action and reflection:

- The second subsequent action research cycles will be based on the reflection of the previous cycle (s)
- Because action research is collaborative there is a need to consider how you would continue to involve others in this action research process.

6.2. Action Research Project Report

Based on the problem you have selected and wrote a proposal on, conduct an exhaustive action research and write thorough report on what you accomplished in the whole process. Your report is expected to discuss what you did in all the action research stages. That is, it has to have the following parts.

(*a*) Identification of the problem

(*b*) Description of the facts of the situation

(*c*) Explanation of the facts of the situation

(*d*) Suggestion of methods for clarifying the problem

(*e*) Presenting and analyzing the collected data

(*f*) Strategies on actions to be taken to solve the issue

(*g*) General plan for taking the actions

(*h*) Results and evaluation of action implemented

(*i*) Changes recommended

(*j*) Reflection of the action researcher (the skills, knowledge and attitude gained by the researcher because of doing the action research).

You are advised to efficiently study the whole contents of the course material before preparing your action research proposal and conduct the action research. Besides, if you complete the reading in the first six of seven months of the year, it will give you enough time to carry through the research and the action and prepare the report in the remaining three months before coming for the summer classes.

ASSIGNMENT PACKAGE ON THE COURSE ACTION RESEARCH

Introduction

Students taking the course "Action Research' on distance basis are going to be assessed for their performance for the final grade basically on two forms, namely: final examination and assignment. The final exam is done on face-to- face situation. The assignments are to be done throughout the winter after the provision of the course material. For example, if distance learner is given the course module by the end of Nehase, 2005 E.c., she/he is expected to deal with assignments for the next 10 months and submit them, when coming to the summer study in Hamle, 2006 E.C.

For this purpose, we have included this assignment package in your course material (module). The package is meant to assess on:

- Your level of theoretical (conceptual) understanding on the various aspects of Action Research mostly discussed in the course material
- Your skill in conducting a complete action research to solve a practical problem you encountered in your job.

It is known that there are several activities and exercises in the course module. They all are there to help you keep track of and assimilate what you have been reading in the course material. You are not required to submit these activities to us for correction since they are to function as study tools to help you.

Thus, the assignments to be done and submitted by all students taking this course are only those included in this Assignment Package. The responses you give and submit for the questions and projects in this package will be evaluated out of 50%. There are THREE parts of assignments give in the bunch. Each part of the lot is to be SEPATELY answered, compiled and submitted. That is, by the end of the day, you are expected to come-up with 3 booklets of done assignments.

Besides, we suggest the following norms to be strictly practiced while you are working through the assignments.

- Never attempt to copy from someone's work. Unoriginal work is unquestionably discarded
- Write legibly your
- Name (including father's)
- I.D.No.
- Department (program of Study)
- Batch (1st, 2nd Summers)
- Make the best use of your course module and activities you did in there.

Assignment One

Direction: Answer the following seven questions as required and compile your answer in one booklet separately from the other assignments.

1. (a) Define Educational Research and Actions Research in your own words(b)Based on the definitions you gave, compare and contrast the two, showing the differences and similarities they have.
2. List the basic characteristics of educational research and action research side-by-side and sort out those which are common for both and unique to each of them.
3. Explain (a)What action research is and,(b.)What action research is not give practical example supporting your explanations in both cases
4. In the earlier teacher education program, the trainees were give the course "EDUCATIONAL RESERCH". However, in the new (TESO) program it is replaced by "Action Research". Are you for or against this replacement? Give your logical and organized argument supporting the side you take. Each peace of your argument ought to be backed-up by rules, principles, characteristics, importance, nature etc. reflecting the two courses respectively. Besides, you have to give practical examples whenever you show the merits of one over the other.
5. List at least seven techniques and methods used to collect data in action research and explain when and where they are best used and why they are more preferable in that situation.
6. When finding action strategies, there could be several alternatives. How can we select the more appropriate on out of the several alternatives?
7. Explain basic principles to be followed while interviewing to get the best out of it during each of the following stages.

(*a*) When starting the interview

(*b*) While asking the questions

(*c*) When listening the responses

(*d*) While expanding (probing) on the responses

(*e*) After the interview

ASSIGNMENT TWO

Evaluation Action Research Report Samples

Direction: there are three action research reports given below. The examples are from Action Research projects done by teacher educators

at Robe College of Teachers Education during the summer program and presented in the HDP February 18-20, 2005 regional workshop in BDU. Read all the 3 examples thoroughly and evaluate the strength and weaknesses each of them have based on the following questions.

(A) Are the problems on which the action researches done:

(*a*) *Specific*,if so why, if not why?

(*b*) Measurable, if so, why, if not, why?

(*c*) Achievable, if so why, if not why?

(*d*) Relevant, if so why, if not why?

(*e*) Time limited, if so why, if not why?

(B) Did each of the action research project apply proper

(*a*) Data gathering?

(*b*) Data collection?

(*c*) Data analysis? Explain by citing evidences from the examples.

(C) Are the proposals for action in each report

(*a*) Relevant to solve or minimize the problem?

(*b*) Can be put in to practice by the researchers?

(*c*) Time limited? Give reasons for your answers citing evidences from the examples

(*d*) Are the action proposals in each example properly implemented? If so, how? If no, how?

(*e*) Do the researchers in each example properly evaluate the actions taken?

(D) Are the evaluations they used on the actions taken

(*a*) Exhaustive?

(*b*) Valid?

(*c*) Relevant? Show if they are or not by citing example from the test of the examples

(E) Are the recommended changes in each example:

(*a*) Based on the action evaluation results they reported? How?

(*b*) Possible to be practical (feasible) at the college level by these teachers?

ARR EXAMPLE 1: THE USE OF ACTIVE LEARNING METHODS IN 'BULKY' COURSES

Identify the problem

- Many courses have a great deal of content to cover in a given period of time (‘bulky courses)
- Traditionally, teachers use the lecture method to pass on a predetermine body of knowledge to student.

COLLECT AND ANALYZE EVIDENCE

Evidence: prevalence of lecture method in many courses

Proposal for action

- Meeting of group members (representing Physics, Geography and Afan Oromo) to identify ‘bulky’ course and discuss active learning methods that could be adoped
- Action Plan to try active learning methods in delivering course content, Action Plan and timetable for implementation devised
- Review of active learning methods used and course contents covered

Implement action

Deliver lessons using active methods and evaluate

- In Physics, after students had been introduced to writing electronic configurations, students are given a series of problems to solve
- In Geography, the following activities were organized: learning by drawing maps, role play (solar system, current social issues), use of video clips
- In Afan Oromo, quiz, brainstorm and role play.

Evaluate action

The main advantages were identified as:

- Learning by doing enables bulky courses to be covered
- Students were interested and highly motivated by new methods
- This resulted in a larger amount of content covered in a short time by organizing material differently and not as straight lecture
- Quiz was not done as an assessment, so students were relaxed
- Role plays were much enjoyed and incorporated many ideas and student
- Teachers enjoyed classes more, as students were active and interested
- Recognition that if a whole course is well planned, a lot can be delivered in a short time using active methods

- Active learning can be applied in every subject; methods need to be selected to suit content.

Recommend change

- Before teaching a course, identify appropriate active learning methods that can be employed. This can reduce the time needed to deliver some of the content and improve student learning and understanding.

ARR EXAMPLE 2: DOMINANCE OF STUDENTS IN DISCUSSION GROUPS

IDENTIFY THE PROBLEM

The dominance of a few students in class discussion was identified as a major problem in the process of teaching. If there is dominance in class discussion the participation of the majority will be affected. Its impact on learning is not simple.

Objectives

- To reduce the dominance of a few students during class discussion
- To find ways to help group members participate equally in discussion
- To encourage cooperative learning amongst students

By the end of the project

- Nearly all group members will have equal participation
- All students will understand the way in which their participation in the group has increased
- Nearly all students will show cooperative behavior.

Collect and analyze evidence

Observation of student behavior in group discussion during module 1

- Some students assume responsibility for the group and think that he/she knows best
- Some students have a low opinion of others knowledge and experience
- Some students do not listen to or consider others viewpoints
- Some students interrupt discussion or contradict others
- Some students contribute nothing to discussion

Dominant students were identified from those elected as group chairmen in a series of classes.

Proposal for action

Students were given orientation on the purpose of discussion and the way in which they would be grouped. Various strategies were prioritized:

- Putting dominant students in a group together
- Grouping by ability
- Rearranging seats
- Encouraging cooperative learning

Implement action

- Dominant students were grouped together
- The most able trainees were distributed amongst the other groups
- There was a gender balance in each other group
- All groups were seated in a circle to facilitate cooperation and free participation

Evaluate action

The number of trainees involved in discussion increased from a few to nearly all the class. The quality of discussion also improved.

During the 3 weeks of the project, the number of trainees activity involved in presentation increased:

Observation	% trainees active 1 involved in presentation
Week 1	11.1
Week 2	44.4
Week 3	66.2

Recommend change

When forming groups in class for discussion and project work:

- Bring dominators together
- Encourage cooperative learning
- Rearrange seating and ability groups

ARP EXAMPLE 3: STANDARDISATION OF CONTINUOUS ASSESSMENT IN ONE SUBJECT

Identify the problem

Continuous Assessment is not used uniformly by teachers within a department There is a great deal of subjectivity in the way in which continuous assessment is used.

Objectives

- To identify feasible continuous assessment for selected classes
- To implement these methods uniformly across the department
- To assess the effectiveness of the continuous assessment used

Collect and analyze evidence

Evidence: no uniform methods of assessment were made by teachers teaching the same courses

Proposal for action

- Meeting of group members; research carried out in departments of Chemistry, English and HPE
- Action Plan and timetable for implementation devised
- Meeting of teachers involved in teaching the same course
- Identification of feasible continuous assessment methods (test, project work, assignment, class and field exercise) Implement action Implementation of methods of continuous assessment in identified classes
- In Chemistry, a standard assignment (20%) and test (30%) were used with 2 classes (methods were limited by credit hours available)
- In English, there was 50% continuous assessment with 8 classes, including homework, assignment, project work and field work
- In HPE, 3 teachers used 75% continuous assessment, divided between practical activity (40%), project work (20%) and test (15%)

Evaluate action

The main advantages were identified as:

- Students in different section with similar ability achieved similar grades
- Complaints by students their grades was minimized
- Teachers delivered the course content in similar and well-organized ways
- Relationships between teachers teaching the same subject were facilitated Problems identified:

- Where there are many teachers in a department it is difficult to discuss and exchange information frequently
- Differences in the speed of teaching some problems, such as exchange of information between students in different groups resulting in unfair grades
- Time issues (use of credit hours rather than contact hours) Recommend change
- Prepare a timetable for continuous assessment at the stream level and follow up its implementation
- Arrange frequent meetings for teachers teaching the same subject and exchange information on how to carry out continuous assessment uniformly
- College to arrange classes and materials to facilitate the implementation of continuous assessment.

Chapter-7

ACTION RESEARCH AND GOOD SOCIAL ORDERS

It is not enough to ask questions about knowledge production and dissemination without placing those questions within broader questions to do with human purposes. The questions 'What do we know?', 'How do we come to know?' and 'How do we share our knowledge?' need to be contextualised within questions which ask, 'Knowledge for what?' And it is important to remember that 'what' does not necessarily imply human benefit. If we believe that education is about encouraging people to see that they have choices about how they recreate themselves, we have to accept that they will often use their choices in ways with which we do not necessarily agree. In this view the 'what' could be to do with distribution of instruments of torture as much as with distribution of human aid. The 'what' in 'knowledge for what?' is the heart of the matter.

As noted earlier, putting the prefix 'educational' before 'action research' is considered by some a sufficient strategy to ensure that the idea of action research will refer only to humanitarian practices. This is no safeguard, nor should it be. One person's idea of education is no more and no less legitimate than another's; Hitler's is as valid as Dewey's. Whether we agree with what they have to say is not at issue. What is at issue is who decides the legitimacy of their opinion and how this is done.

Mandating on issues about legitimation raises problematics about whose criteria and parameters are valid. There are no universal guidelines here. Pragmatists would say that what works is its own legitimation; relativists would say that each culture has its own norms and standards by which legitimacy is legitimated. There is, however, no single overarching structure of values by which to judge such things. If we are all different, and claim the right to be different, we all have a right to be who we are within our own terms of reference. This is the point made by Berlin and others who believe in agonistic pluralism, and it is a key premise of this book. People are different and social lives are prone to conflict. Who can claim absolute knowledge about what counts as 'the good', and on what grounds?

It is to have come to abandon ideas about 'the good' as a situation to be aimed for. People simply disagree about things, and no one person can legislate. I doubt it is ever possible to come to a consensus about what counts as 'the good' in a substantive sense, and I would be worried if that were the case, for critique then disappears. I have abandoned the idea that 'the good' can be understood only as an abstract concept. Instead, I have come to see the idea of 'the good' always as related to people's lives. In coming to understand my own practice, and accepting that it is never fixed my very ideas shift from one moment to the next as I think and rethink I have come especially to see how processes of enquiry might themselves be construed as good orders. When people work with ideas, what is important, in my view, is the process of engagement, whether they treat ideas and the people who hold those ideas with respect or disdain; whether they see the ideas as holding merit or reject the ideas and their creators and close out critique. These views have informed my own practices of working with people who often hold conflicting opinions, and also led me to recognise that their ideas are frequently in conflict with my own.

I have come to see a dialectical relationship between the ideas of research and conflict. For me, these are not only abstract terms. They are human processes. As people try to find out and create new knowledge, what they present as true for them is inevitably contested by others who hold different beliefs. The process of research is always potentially conflictual (people disagree about what they come to know), and conflict is the site for new research (people try to find out how they can generate further knowledge, find ways of validating their claims, persuade others of their truth, and so work towards resolving the conflict). The process of research can be destructive, when one person closes down the opportunities of others for learning and negotiation, or life-affirming, when all parties recognize the potential value of one another's contribution.

I have come to understand that people live with conflict and work out their differences through conflict. Conflict in this view is not pathological; it is inevitable, and the site for negotiated settlements. For me, 'the good' is to do with processes which are life-affirming for all. Working through the conflict calls us to exercise our best efforts at tolerance, to suspend our prejudices and really try to understand the other. It requires us to see the other as a person, a 'thou' rather than an 'it' (Buber, 1937). By trying to understand and relate we realise our own potentialities for relation. The good order is not something we aim to create in the future; it is where we are now as we try to live in ways which are mutually respectful. 'The good' does not belong to any one person, though each person has to have a vision of what constitutes it. 'The good' is a collective process, in which life-affirming practices are enacted reciprocally. We create the future as we live the present.

The good society is here, as we make it. In terms of this book, I believe this is the heart of the matter – knowledge for what? – as the point on which action research stands or falls. If it is possible to make a case for what counts as a good social order (in terms of the discussion above, how the process of enquiry might be construed as such) and if it is possible to show how a person-centred dialectical process of enquiry can generate such a good social order, then the legitimacy of action research as a form of enquiry which leads to 'the good' can be established.

THE RELATIONSHIP BETWEEN INDIVIDUAL KNOWING AND COLLECTIVE KNOWING

Interesting movements are taking place in the literatures of the social sciences and education research in terms of the focus, or object, of enquiry (what is studied) and the methods of enquiry (how it is studied). Until quite recently there was a seemingly unquestionable assumption that the object of enquiry was a concept. Educational research aimed to understand 'education'; management and organisation studies focused on 'management' and 'organisation'. These concepts were seen as representing everyone's experience of education, management or organisation. The concepts became the things that researchers studied. The concepts had a life of their own; they were 'out there', separated from the researchers who were studying them.

Of course, this perception does not mirror reality. Reality is that education, management and organisation are about the real-life experiences of real people. In a commonsense view it is impossible to investigate concepts such as education, management and organisation without taking real experiences into account. However, the situation remained throughout much of human enquiry that it was sufficient and acceptable to study and analyse the concept without any recognition of real people. This has given rise to what is often called 'the theory–practice gap', the traditional separation of theory (how a concept is understood) and practice (what people do as educators, managers and practitioners).

The situation is changing in a good deal of contemporary work. In the foreword to their seminal text on new paradigm research, Rowan and Reason (1981) describe the shift away from traditional texts 'which spend a page or two on theory, ending with a statement that the experimental

method is what it is all about really' to those which see 'the nature of the inquiry process itself as a particular form of human endeavour' (p. xii). In education studies the shift has been happening for a long time, and is demonstrated in comments such as this one from Usher. 'Nowadays there is a general scepticism about the very possibility of value neutrality and a "disinterested" science.. . In educational research the need to problematise the practice of research is. . . now fairly common practice, particularly in the emphasis on action research and practitioner-based enquiry'. Pettinger's (1999: 1) text is an example of how the shift is happening in organization studies, 'All organizations are communities of human beings.. . Human communities must be founded on common belief, and must symbolize the cohesion in common principles and mutuality of interest'. And Golding and Currie (2000: 1) emphasise that management should not be perceived as a unified set of techniques but rather as a problematic practice; and this view, radically 'contra' to traditional views, needs new methodologies to research it: 'a cyclical approach towards understanding the nature of management may be more appropriate than any approach that attempts to produce definitive statements about management'.

The shifts in these literatures are representative of a new focus on the individual throughout human enquiry. This point was made in Chapter 1, when I discussed how, in the second cognitive revolution which began in the 1950s, the focus of enquiry moved away from study of the behaviours of people by external researchers to trying to understand the reasons and intentions of those behaviours. Making public these reasons and intentions and efforts at understanding became the responsibility of people themselves who were making their own choices about how they lived their lives.

However, the new focus on the individual brings with it its own dilemmas, particularly in discussions about how individuals are located within groups of other individuals, the kinds of relationship they forge, and what the relationships are for. The dilemmas are particularly deep when the issue is one of knowledge. When an individual claims that they know something, how does that claim come to be accepted and legitimated by others?

When Margaret Thatcher said, 'There is no such thing as society,' she was in one sense right; in another, profoundly mistaken. Groups, or societies, wherever they are found, are always made up of individuals, so in one sense there are only collections of individuals. How individuals think and behave when they are on their own, however, is often quite different from how they think and behave when they are in company. The way that people organise

themselves and develop their patterns of interaction and the principles which guide choices about which patterns to develop come to constitute social, cultural and political norms. If people fail to maintain a critical watchful eye on the norms they have agreed, the norms can become reified as systems, and, as Habermas (1973, 1979) has explained, the 'system' can take on a life of its own and move beyond the consciousness of the people who created it in the first place. Consequently, people come to serve the needs of the system, rather than the system serving the needs of the people. An example of this happened recently. Two years ago I had negotiated to develop a particular professional learning course with a university. University personnel agreed with my suggestion that the learning support provision would be one three hour group meeting per month, and one hour's tutorial support per course member per month. From our experience of managing such courses, we felt this was an appropriate level of learning support. Now, two years after the course began, my own circumstances have changed, and I wanted to discuss with course participants how we might renegotiate times. My overtures were met with resistance by some who expressed concern that their learning support provision was being reconfigured. I found myself held hostage to an idea which I had proposed and developed but which had now become a reified system in its own right, beyond me and other users.

This issue is central: how the relationships between individuals and groups might be perceived as the performance context within which are embedded the relationships between individual knowing and collective knowing. How is it possible for an individual's I-system of knowledge to be recognised and legitimated? It is possible only if people are willing to recognise that other people think in ways different from themselves, and are prepared to be tolerant of individual differences. If some people operate from within one system of knowledge (an E-system, say), they might find it hard to accept an I-system of knowledge, in the same way that some teachers do not understand that students might think in ways differently from the ways they the teachers do. When we are caught up in established ways of knowing it is hard to move out of those ways and see that other ways exist that are more suited to others' needs. Often we do not even see that there is another way. We get trapped by our own stereotypes. Sometimes managers cannot perceive themselves as workers, and academics cannot see themselves as teachers. Getting stuck in bounded ways of knowing, getting stuck in the very idea that there is only one way of knowing and the way one already operates is right, is to shut down one's own potentiality for new learning; not, in my philosophy, a good thing.

KNOWLEDGE OF AND FOR THE GOOD

Knowledge is neither good nor bad. However, when it manifests as social practice it becomes value laden, for it is in social practice that issues of what counts as good or bad arise. How knowledge is used decides whether it should be designated 'of the good' or 'for the good'. This raises questions of how we understand 'good'.

I recently drove to one place, a journey I have not undertaken for some time. At the border is the town, where a military checkpoint was located. All my previous experience of driving through the checkpoint has been one of eerie silence, a place holding its breath, 'No photography allowed', unseen watchers as you weave through the dark green corrugated iron and concrete. Amazingly, the checkpoint has disappeared. The land is sweet, grass smoothed out, no sign of occupation or shooting or fear. People come and go openly, and my journey from south to north and back again is as uneventful as the settling of snow on snow.

What has happened here to bring this place from silence to sound? Whatever has happened, and however it has happened, it has been of the good and for the good. The ideas of freedom and pluralism have become real in the lives of people; communities have chosen to live with conflict, not as a pathology, but as a site in which they have reached understanding through the struggle and can all go about their daily business on that basis.

We know what has happened a peace process which has lurched forward amid torrents of blame and recriminations, amid the subversive and violent actions of last-stand die-harders who continue to make their point and strive for dominance. We know that somehow voices of compassion have remained consistent: we cannot agree on everything, we do not want to agree on everything, but we can agree to get on with our differences and stay alive. We can agree to keep talking, knowing that through our talk we will get to know one another better and see ourselves as persons in relation with other persons.

Peace is a process to be worked through, not a position to be arrived at. It is the same methodological principle as with action research. We find understanding by engaging with the problematic; we find forgiveness by developing the capacity to be compassionate and working through the hate; and we find hope in the capacity for self-renewal by embracing despair. These things are not at a distance from us. They are within us, part of a reality of which we also are a part and which we create from choice.

Libraries of books exist which try to define 'the good'. For me, it is within the relationships that people create together as they try to do the best they can to make life good for one another, a process always located within the intentionality of the individual, and always negotiated and enacted reciprocally with others.

EDUCATION FOR GOOD SOCIETIES

In this sense Dewey wins. Dewey's idea of education is that it is a process which leads to further education, a life-affirming process for all. Individual people are recognised as autonomous agents capable of infinite self-transformation who are working together as collectives of similarly capable autonomous agents, not out of a wish for consensus (which is frequently a source of un freedom) but out of a sense of responsible committed action to create the kind of society in which they would wish to live. This vision is said well by Chomsky, who shares, with Dewey and Russell, a vision of what Russell called 'the humanistic conception': quoting Dewey, the belief that the 'ultimate aim' of production is not production of goods, but 'of free human beings associated with one another on terms of equality'. The goal of education, as Russell put it, is 'to give a sense of the value of things other than domination', to help create 'wise citizens of a free community' in which both liberty and 'individual creativeness' will flourish, and working people will be the masters of their fate, not tools of production.

In my view the methodologies by which we find the means to realise the vision are methodologies of responsible best guess, doing the best we can with what we have. The struggle is not to find the best way; the struggle isthe best way, provided we recognise one another as part of the same struggle, similarly engaged in doing the best we can.

KNOWLEDGE FOR WHAT

The what, the heart of the matter, becomes how to create social orders in which the values of freedom and agonistic pluralism can become reality. In education research it is not how to demonstrate that one set of conditions leads to specific outcomes; it is how to show one's educative influence such that one child's quality of learning was improved. In professional education it is not to perform according to a checklist of competencies; it is how to demonstrate through the production of validated evidence that one accepts the responsibility of professional excellence as a form of accountability. In our approach to understanding what we are doing, it is not the production of linguistic reports about what should be done but the production of living reports to show what has been done and its potential to transform into new forms of good practice.

While the disciplines of human enquiry generate their specific bodies of factual knowledge, the ideas of knowledge production and its dissemination remain in the domain of education, the broad encompassing arena within which the disciplines are located.

In the view expressed in this chapter educational enquiry is not a procedure which leads to eventual understanding; it is a process of understanding itself, a speculative, adventurous process of creating ideas, testing them out to see if they might work, modifying them, and creating new ideas out of present ones. Theory is not the product of a process of critical discernment but itself a process of critical discernment. This view is in keeping with Schoon's (1995) idea of the new scholarship, an approach to human enquiry which has its being within practice. Scholarship, says Schoon, needs to move beyond the traditional categories of hard scientific analysis and technique, 'rigorously controlled experimentation, statistical analysis of observed correlation of variables, or disinterested speculation' (p. 29). It needs to develop new approaches, new principles to show the relational nature of practice and the lines of influence between people as they work out their lives together. This, he says, is action research, and, as demonstrated within this book, action research can happen anywhere, though it is not, and should not, always be called action research.

For me, the 'what' is to do with helping people to develop insights about their own living, and how they can develop their knowledge as a form of practice. I take pleasure in the idea that one's knowledge is constantly developing, and I encourage others to regard their thinking and practice as already good but always capable of modification and upgrading. This is an important issue in my main work contexts, where the culture is one which finds it hard to recognise excellence as a mark of responsible accountability rather than of arrogant self-aggrandizement.

I like the evaluation of Paul Murphy of my own practice: 'Jean McNiff, my tutor,. demanded that I give according to my ability and was never satisfied with less' (Murphy, 2000). I think it is important to demand of others according to their ability, and not be satisfied with less, provided one has the same expectations of oneself. In Senge's (emphasis in original) idea of how learning organisations may be characterised, 'The organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization.' I regard it as an ethical requirement that I struggle along with those I support, and also make my far from smooth process of coming to know public. It must not be assumed that all my encounters with course participants are

easy. Sometimes there are clashes of opinion, personality, expectations; and it remains my responsibility to let others know that it is their responsibility, as well as mine, to work out our differences and move on.

ACTION RESEARCH – WHAT'S IN A NAME?

The research in Action is in the name of action research. I do not think it matters what name we give to a concept as long as we all agree what we are talking about. As explained members of the action research family see action research in different ways, and they all call it action research. This situation is fine provided what one person says does not close down the opportunities for others also to have their say. In this book I am setting out my ideas, and also showing how critical reflection on their underpinning assumptions has led me to modify the ideas over time. While I respect the right of others to claim that their view of what counts as action research is a legitimate standpoint, I do require them to show their own critical reflection on the assumptions that inform their views. Otherwise, we get caught up in debates whose rules are arbitrary and reflect asymmetrical power relationships, and which reveal how some are explaining how they are living their values in their practice while others do not feel they have to. I also want to say that, like Kevin McDermott, I do not regard myself as an 'action researcher', in the sense that this is an identity, or that I am a member of a club. I dislike the idea of group identity; I have always resisted being corralled into one camp or another. This resistance to labeling also makes me not call myself a feminist, although I entirely agree with what feminists stand for. In normal usage we need terms and concepts as shorthand forms for effective communication; hence I write books about this idea which goes by the name of action research. That does not mean that I have the monopoly on truth about what action research is, but it does mean that I tell my truth as I see it. I do not believe that action research is a rigidly definable form of practice. I believe the term communicates values which I endorse, so to that extent I am prepared to engage with the ideas.

For me, it is all about Plato's questions of who we are, and how we are with one another. I believe, like Elton John, that we should never take more than we give; and for those in the privileged position of having the resources to think and act with relative freedom, it is our responsibility to give as much as is necessary in our efforts to tell the truth. This can be uncomfortable at times. If we are going to talk about action research and good social orders we need to step into the light of day and show how we are prepared to live out our rhetoric in our practice, otherwise we should be silent about these matters.

Chapter-8

SIGNIFICANCE OF THE ACTION RESEARCH WORK

Action research reports need to explain the significance of the work in terms of its potential for personal practice, institutional influence and the wider body of educational knowledge. **Potentials for personal practice**

The overall research question for my life work is 'How do I contribute to the development of a good social order through education?'

I have explained, how the metaphors of unbounded generative transformational processes animate my view of personal social enquiry. Each research project is itself a generative transformational process of enquiry which is part of wider generative transformational processes of enquiry. My overall research question embeds within itself more localised research questions such as 'How do I help this organisation to encourage more active public participation in decisionmaking?' or 'How do I help you to make sense of your practice?' Each project, however, is integrated within my own system of values as they manifest in my hope to contribute to social well-being at local and universal levels. No aspect of my work is separate from any other aspect, though sometimes I present it as such for clarity of analysis. Whatever happens in one area of life is bound to impact on another. My learning is transformative, my practice integrated.

At the same time I remember that the focus of the enquiry is me. I cannot take responsibility for anyone else. To think I could would be arrogant and educationally unsound. People are capable of making their own decisions, and need to if they are to be confident in their capacity to change personal and social situations. Definitions of action research everywhere emphasise that it is to bring about social change, which begins in individuals' minds. If action researchers are to effect change, the place to start is their own lives. Accepting the responsibility for one's own life and choices, however, can be very hard for some. John O'Donohue (2000) speaks of the prisons we choose to live in, and those prisons include the way we think and 'the cage of frightened identity'. Erich Fromm described

the same tendencies in his Fear of Freedom(1942). It is understandable that people are intimidated by the unknown, that we wish others to make choices and create our identities for us. If the world is to change, however, we have to do it ourselves. We might seek the advice and comfort of others who reassure us that we are making the right choices, but those choices ultimately have to be our own. And if they turn out to be the wrong ones, we also have to accept the responsibility of putting things right. There are, of course, people who are not able to make choices for reasons of pathology or coercion, and it is then the responsibility of those in positions of influence to support them and fight to arrange circumstances such that their voices are heard.

These are the kinds of broad values that today inform my work at a personal level. They have grown out of practice; I have learnt from experience (Winter, 1989). The experiential learning has been refined and extended by intellectual learning; the two are complementary, not separate, as many dominant theories would have us believe. My responsibility as a professional educator is to help people come to the same sorts of understandings about their lives. I am not here claiming that I have all the answers and am a model of good practice. I am claiming, however, that I am learning, which I believe is good practice, and my learning has led to social benefit. Learning has to begin in the individual mind – where else can it happen? – and learning of its nature is to be open to the possibilities of transforming present ideas into new ones. My work is in education, and I try to encourage people to see their capacity for good and take steps in new directions, and to offer emotional, intellectual, practical and political support to them as they progress. Professional learning which impacts on social situations, as action research does, is potentially hazardous as internal mental structures and external social structures are destabilised, and people need to be encouraged to be tenacious, and be reassured that they will be supported through uncomfortable times.

As a professional educator has less to do with imparting a body of knowledge and everything to do with helping people to help themselves, by challenging and encouraging them to challenge their own assumptions and those of others; by caring for them in ways that they feel valued and supported in time of trouble; by not accepting less than their best; and by having faith and trust that they can do what they want to do. I think the shift in my own thinking and practice demonstrates a move from traditional E-theorising to the development of my own I-theory of education.

POTENTIALS FOR WORKPLACE PRACTICE

Work, as Hannah Arendt (1990) and Christopher Mc Cormack tell us, is not labour. It is productive practice which contributes to our sense of identity. In this view work takes a variety of forms: mental, relational, practical in a variety of places – the home, bus queues, industry. Work is never carried out in isolation, though it is often carried out alone. Paul Gray (2000: 99), for example, commenting on the work of Saul Bellow, speaks of writers as 'alone in rooms, filling up blank pages'. The impact of those words can, however, influence countless others to change their lives. When we work, we are always in relation with others, though they might be distant in time and space. Even what are often regarded as the most abstract of concepts, such as 'information' and 'the economy', are not abstract but refer to people interacting with one another. Information can be people exchanging and developing ideas (Castells, 1997); an economy can be people interacting to fulfill one another's needs (Henderson, 1996; Hutton, 1996). Similarly, workplace practices refer to the processes whereby people exchange and develop ideas and interact with one another. Practices, however, are always informed by values. When practices are informed by the values of greed and personal aggrandizement, the practices become those of the selfish accumulation of resources by which people positioned as superior to others maintain their power. When the practices are informed by the values of tolerance and freedom, the practices become those of the shared knowledge of people participating on an equal footing in exercising their personal and collective choices about how they wish to create their identities.

There is considerable debate in the literatures of sociology and political science about whether it is possible for one person to influence wider social change. I do not see any other way. Social change is not an abstract concept; it is a lived process of people interacting and doing things differently from before, an everyday process of real life. When a person decides to shop at one supermarket rather than another, this is a factor of social change.

However, the dynamic of the relationships between individuals and the systems (themselves constituted of relationships) that others subscribe to can be problematic. Relationships between people, say Berlin (1998) and Gray (1995) and the new theorists of discourse are always potentially politically constructed. Even when two people come into contact a process of persuasion can develop (in extreme forms this can manifest as domination). Individuals are persuaded to become the people other people want them to be.

In an action research reading each person is capable of recreating themselves as the person they wish to be in negotiation with others; they

need not necessarily conform to outmoded practices or expectations. In professional contexts such personal decision-making can be highly effective. Margaret Cahill (2000), for example, tells how she withstood considerable institutional pressure to prevent her from developing her practice in what she understood as educational ways. History is full of the stories of heroes and heroines who refused to give in to external pressure to conform. 'The hero is the opposite to the fatalist: he [sic] is on the side of the revolutionary, never the conservative, for he has no particular respect for the status quo and believes people can achieve any goal they choose, provided they have the will to do so' (Todorov, 1999). It is well to remember, however, that in Dewey's view the idea of heroic self-recreation through personal decision making from a kind of Nietzschean perspective is not appropriate in education or educational research. Education refers to a process of people interacting for mutual benefit, and encouraging development towards the good. Personal decisions always need to be made from within the contexts of social evolution, when the litmus test is the sustainable welfare of the most vulnerable member of a particular society as a contributor to its growth.

When these ideas are realised in practice they can generate amazing change. Let me take the dissertation work (for which she was awarded a distinction) of Caitríona Mc Donagh as an example. Studying her practice as a learning support teacher, she explains how she resisted dominant ideas that children were un problematically categorised as 'dyslexic' or 'reading deficient': Three years ago, when I was appointed as a learning support teacher in my school, I decided to focus on my concern that, despite my best efforts, such pupils had not made the expected progress in norm references tests. I also questioned if my teaching could address their underlying difficulties. This dissertation was planned to address the idea that if my pupils could not learn using the form of thinking that I use when I teach, could I discover their thinking on learning, and could I adjust my teaching to accommodate it? In other words, since my pupils didn't learn to read and write in the way in which I taught, could I learn to teach in the way in which they learned? She goes on to show that she did learn to teach in such a way that her pupils learned, and how she achieved this. This is a good example of how one person's determination to change existing systems of knowledge and practice impacts on wider practices. Later, Caitríona (Mc Donagh, 2000) writes: I believe that class teachers involved in this project benefited from a greater awareness and understanding of dyslexia. This could be evidenced in the addition of

expressive and receptive language tutorials to the curriculum of a local voluntary workshop for children with dyslexia. This change occurred on the advice of a tutor who was also a colleague closely connected with my research. She also writes, 'I believe that the full significance of my work is not the published end paper but the living interdependent growing initiatives it began in [the different areas of school life]'.

Hero innovators (Rosser), however, should never be naive or foolhardy. They should not believe that they achieve educational gains entirely on their own or without due recognition of the potential danger of institutional resistance. 'I encountered some teachers who still considered themselves gatekeepers of knowledge and were not open to change' (Mc Donagh, 2000). How we deal with gate keeping and arrange our own supports is also a matter of personal decision-making, which can especially benefit from the support of managers, as they exercise their responsibility as professional educators. People need to come together in community to build up their individual and corporate intellectual defenses against efforts to close down their learning, and to press on with their educational and social intent.

This I believe is the way to develop learning organisations in the sense expressed by Senge (1990) that all participants at all levels of workplaces need to learn. What they learn is at issue: knowledge for what? The peer support I experienced during the course of this research gave rise to a new confidence in me. In the past I had viewed colleagues in terms of their positions in schools and colleges. I naively considered a class teacher inferior to a college lecturer. During this project, I came to value them as people. This encouraged me to propose changes in a spirit of community and support. My long held practices were destabilised following reflection. I found a methodology, which created a context of discovery and ways to move forward. I like to think that I have contributed to the development of a learning community among the participants I support. The reports and dissertations that course members produce show how I have encouraged them to think and act independently and interdependently in order to realise their own potentials for personal and institutional change. The network of practitioners so engaged has become a powerful force in Irish education contexts. Perhaps a key reason for its potential as an educationally transformative organisation – a collection of people who aim to act collaboratively in order to realise collectively agreed educational values for social benefit – is that we are all open to our own learning, as Senge says. 'Never underestimate the power of groups of committed

citizens to change the world. In fact, it is the only thing that ever has'. It does, though, all begin in the individual mind. Mc Donagh ends her dissertation:

The joy of this research was that changes occurred like a waltz in the double motion of a dance between pupil development and my own learning. . . [The report is] an account of my own learning. I have discovered that educational theory can best be understood by developing my own theory. And the form of action research I chose facilitated this. It renewed in me weary from a quarter of a century of teaching the enthusiasm which drew me into teaching originally.

The same might also be experienced by those who are not content to be action research watchers but prefer to do action research as a lived practice and make their research findings public.

POTENTIALS FOR EDUCATIONAL THEORY

Ernest Boyer, when director of the Carnegie Foundation, spoke of the need for US universities to focus on teaching for learning, and to arrange for the systematic ongoing professional learning of university faculty (Boyer, 1990, 1991). University work, he says, should be about real-life teaching for learning, not only the generation of learned papers produced within traditional forms of scholarship. Developing the theme, Donald Schoon (1995) explains that this focus on teaching for learning requires a new scholarship, one which is located within practice and which shows the reality of practical theorising.

What is studied in traditional scholarship are concrete subject matters and their accompanying bodies of literature. It is assumed that the theories contained therein can be universally applied to practice. Once the theories are applied, as a form of input, certain behaviours will occur, as a form of output. These behaviours can be manipulated as variables and their validity as acceptable forms can be tested using the standardised methods of traditional scientific approaches. What is studied in the new scholarship is personal practice, and theories are generated about the practice from within the practice. Practitioners are required to account for their practice by producing reports to show that they can explain how their work has improved in terms of enhancing the quality of learning and experience for themselves and others. The reports may be presented via multiple forms: written, oral, visual or combinations of these. Such accounts appear in this book; the book itself is such an account, a personal theory of practice. A serious implication is that a new focus is developing in what counts as

educational theory. Increasingly theory is being theorised as embodied in the lives of real practitioners, a systematically increasing focus on I-theories. This also has considerable political implications. Theory is now within the remit of all, and, if so, is no longer the province only of those positioned as knowledge workers at the Academy. All practitioners are potentially knowledge workers, capable of generating valid theory and having that theory recognised as legitimate within all personal or professional forums.

The awesome respect in which I had held educational research and theories prior to my engagement with this project has given way to a new critical understanding of dilemmas of practice and theory. Living through the contradictions that arose has led me to appreciate the words of Elliott: 'Theoretical abstraction plays a subordinate role in the development of practical wisdom grounded in reflective experiences of concrete cases'... Prior to this project I would not have considered my educational values or epistemology of practice worth sharing within the institution of the school. Living through the process of this research I have found a voice in the educational world. This teacher voice was seldom heard. The practising teacher tended to bow to academic educational theorists, to psychologists, to departmental inspectors, to parent bodies, yet where is the teacher's voice heard? Teacher craft was not valued by institutions of education professionals. This form of research has given colleagues and me a voice and method to articulate our theories.

Are we contributing to the evolution of a good social order through education

Good social orders are those in which all people may make their contribution and have it valued. In this view all are potential contributors, and all may participate in public debate and decision-making. The university is to be found in supermarkets as much as in traditional halls of learning. Knowledge is what people generate as they interact with one another for mutual benefit.

Let me return to the questions which have formed the organising principles for this book: What do I/we know? How do I/we come to know? What do I/we need to do? What do I/we need to know? What is my/our knowledge for? I have produced my own report on knowledge, as it is constituted in this research report, this book. I have produced a book which attempts to show in practice the ideas it is aiming to communicate in words. In this sense the book is part of my own ongoing practice; it shows the development of my own living theory of education. You may accept it in part or whole; you may draw from it whatever might help you

in your own learning. By sharing our practice, critiquing and learning from one another, I believe we are developing new forms of educational theory which are squarely rooted in the experienced reality of people's lives. Traditional forms are embedded within and transcended by newer forms, and those newer forms contain the potential already to be developing in yet newer forms as our changing life circumstances direct. I believe that it is the responsibility of all citizens, and particularly those positioned as public intellectuals academics, managers, professional educators to make our research reports available for public scrutiny, and to show how our theories are generated from within our creative and problematic practices as we try to make our educational visions come true for social good.

WRITING A REPORT ON YOUR ACTION RESEARCH

Whether you are writing a report as part of the requirement of an accredited course or for the purpose of just making it available for others to read, here are some factors to consider. Remind yourself that the mode of study that you have selected is action research and the purpose of action research is to improve practice or to implement change for the purpose of professional development. The intention of the action researcher is not to make generalisable claims, but to tell a story which is of interest to other practitioners who may want to learn from it, or replicate the study or apply your findings to their situations.

What kind of report

From the outset, it is important to consider the audience, the requirements and the purpose of your report.

Audience

First the audience. Ask yourself: who is my audience? You may have obtained funding from an external source for your action research and, in such cases, you may have been given a specific format to follow. The case studies of teacher-researchers reporting their findings, funded by the Teacher Training Agency in 1997, all started with the following four common subheadings and then the writers selected headings which were appropriate for the work they were reporting.

- **Aims**
- **Dimensions of the case study**
- **Summary of findings of the case study**
- **Background**

It may be that you are writing a report or dissertation as part of the requirement for a qualification. In this case, your dissertation will be read by academic tutors and sometimes by an external examiner. If this is the purpose of your report you will be expected to follow a particular format and the conventions of scholarship. In a long study or a dissertation you will also be expected to show some knowledge of recent and relevant research literature. Whatever the purpose of your report, it is important to be clear and consistent and demonstrate a good understanding of the issues you are researching. In the case of a dissertation for accreditation purposes, the expectation will be that the study is extensive as you would be considering yourself an expert in your chosen area of study. While reporting an action research, the quality of your writing can be enhanced by writing in an authentic and personal style. I have always felt that reporting action research is often powerful for one's own professional development because of the personal nature of the writing. It is helpful to remember that you are reporting your own story that you have constructed from your experiences and collaborations with other people.

Think of the reader

- A useful strategy to adopt when writing your report is to consider the potential readers of your report. The following guidance may be of help: Always provide the background of the study and the context of the action researcher. This helps the reader to relate to your report and possibly apply the findings to their own circumstances.
- It is important to present your aims at the outset and present your findings within the context of what you have set out to achieve.
- Readers appreciate realism and honesty. It makes sense to report what has progressed magnificently as well as any difficulties you may have experienced.
- Present your plans and outlines of action clearly. It is possible that others may want to replicate what you did or report your findings to their colleagues.
- As action research is often a personal journey, writing the report in the first person is more effective. Sentences such as 'I chose this method because I had the opportunity to study this as part of our school based professional development…' or 'I changed direction after finding out…' makes the text reader-friendly and more accessible.
- Don't assume that readers always know what you are discussing. Try and explain items in simple, clear language. Keep the target audience in mind. If your report is going to be read by parents and governors, it would be inadvisable to use education jargon which you may effectively have used to disseminate information to your colleagues.
- Use subheadings where possible. It is easier to read text with subheadings. Be creative in your presentation. This is possible within any given format. Some of my students use bubbles, cartoons and photographs containing evidence when they present their findings.

WRITING A DISSERTATION

In this section I will try to provide some guidance on writing a dissertation based on your action research. It is not, by any means, meant to be a definitive document. I don't believe that a fixed set of rules can ever be applicable when you write up action research, because at the very heart of an action research project is the opportunity to be flexible, emergent and creative. However, if you are writing a dissertation for accreditation purposes, you need to follow the format given by the institution. Within that set format, there is still plenty of opportunity to be original.

A dissertation is the culmination of the work you have undertaken which should demonstrate to your reader your personal understanding of an issue, what action you have taken and how these actions have informed and developed your professional life. The emphasis is on personal learning and not in providing generalisations about education.

As your study is likely to be an enquiry into your own practice you need to pay attention to the following:

- Acknowledge your own beliefs, prior assumptions and values within the report, at the start.
- You need to acknowledge your inevitable subjectivity, up front.
- Say, at the outset, that the interpretations are personal and that others may interpret your data differently.
- State clearly what methods were used for data-gathering and how multiple perspectives were sought.
- Discuss ethical issues and how they have been addressed.

Maintaining quality

If you have a set of criteria for grading your dissertation, you must read them first. The following general guidance should help to monitor the quality of your work. You must:

- make your aims and objectives clear;
- justify why you are undertaking the work – provide a rationale;

- acknowledge your own perspectives and beliefs;
- make the context clear – this is important as action research, in most cases, is located within a distinct situation of the practitioner;
- demonstrate your understanding of issues;
- show that you have made efforts to read work carried out by others in your area of research and any theoretical literature relating to your study;
- show how you collected data and how you have made efforts to triangulate the information;
- present the data in an accessible manner and in such a way that the reader can identify the evidence for your conclusions;
- make coherent arguments;
- demonstrate your personal learning.

All dissertations should have the following features

- clear formulation of the research question or topic of study;
- a critical account of theories and research, including your own viewpoints and commentary;
- justified methods of enquiry;
- clearly presented data;
- robust analysis of data;
- discussion of findings and emerging issues;
- reflection on both your findings and the methodology used;
- limitations;
- enhancement of personal knowledge;
- reflection on personal action and future directions;
- an organised bibliography.

Structuring a Dissertation

As mentioned previously, higher education institutions usually provide a basic format for writing a dissertation. A close study of the formats issued by a few institutions showed that although there were differences in the words used to describe the different parts of a dissertation, they all seemed to require similar content. In the following section, I will present a set of guidelines that I provide my students. They are in the form of chapter headings for writing a dissertation (with approximately 15,000 words in total). These guidance notes may be adapted for all courses leading to a qualification. Remember, I am referring to the format of a dissertation which arises from carrying out an action research project.

Abstract

This section will provide a short summary of the aims, methodology, findings and implications for practice. This must be a brief section about 200 words should be sufficient. I ask my students to complete it on two sides of a postcard and show it to me before they write the abstract. Many of my students finalise their abstract after writing the rest of the dissertation – this is wise because during the writing up process your thoughts come together and help you to present an effective abstract. Do remember that the abstract is the first section of your study read by your supervisor or examiner and first impressions are important. Don't forget your study may be placed in the library where others who are interested may read it. It is customary to use the past tense here, as you are reporting what has already been done.

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Chapter 1 – Introduction

In this chapter the writer sets the context of the study and discusses the reasons for undertaking the study. What was the personal motivation? Why at this time? What are the trends in the topic of study in terms of recent local, national or international developments, using some references to the literature? What specific aspect of the topic do you intend to study? If it is a research question, or hypothesis, present it clearly. New initiatives? What are your aims? This chapter also provides a guide, as signposts, for the reader about what to expect in each chapter; this needs to be in a short summarised form. (About 1,500 words)

Chapter 2 – Review the literature

This chapter should present the reader with a comprehensive review of the literature relating to your topic of study. References are made to recent and relevant literature theory and research on your topic. Are there any current debates on your choice of topic? What has been written about the topic and who wrote it? I often ask my students to present the literature in themes. The ideas you have gathered from your literature search should be analysed. The purpose of this chapter is to locate your study within a framework informed by what is out there and what has already been found out. This is, therefore, an important chapter which needs careful planning and organisation. Rather than listing each writer's views or theories, try to connect different perspectives of different authors by drawing on similarities and contrasts in their thinking. Presenting a summary of what each author

has said without pulling the ideas together makes tedious reading. Use subheadings where you can and make a brief critical commentary of your own on what is being presented. (About 3,000 words)

Chapter 3 – Methodology

In your dissertation you would acknowledge action research as your mode of study. Why did you choose action research? Here you need to discuss the features of action research which make it suitable for your study. What is action research? Discuss very briefly how action research evolved, over the years, as a method of enquiry for practitioners. What models of action research do you know about and what is your understanding of these models? What are the advantages of action research as a method? Relate these specifically to your project. Show the reader that you are also aware of the limitations of action research and respond to these in terms of the study you are about to embark on. You should describe the design of the study and the preparations and planning that preceeded action. How did you collect the data? Did you use observations? Interviews? Videos? Diaries? Why did you select the methods? Justify your choices and also show that you are aware of the limitations of each method you used. Ethical considerations should be included in this chapter. (About 2,500 words)

Chapter 4 – Action and data collection

For this chapter you may use a different title such as 'Activities', 'What did I do?' or 'Implementing action' or 'gathering data', or any other phrase which you feel most appropriately reflects what you did for your project. In this chapter you must give sufficient detail for others to understand what you have done. Bear in mind that others may want to replicate your project. Explain your data-gathering methods, your first trials and report any modifications you had to make. This chapter would contain detailed narratives of what you did, highlighting outcomes using a range of techniques. Transcripts of tape recordings, observation notes and references to photographs can be used to provide evidence for any claims you may make later. Your aim is to present a detailed and effective account of what happened during the action stage and to present your findings. If you revised your action, you may want to refer to the succession of action cycles within your action research. Don't forget to justify how you addressed the issues of validity and reliability. Who did you share your data with? Did you use critical friends or colleagues to achieve triangulation of your data? (About 3,000–4,000 words)

Chapter 5 – Analysis of data and results

What did you find out? Include evidence to back up your claims. Extracts from tape recordings, observations and personal logs may be used. Documentary evidence can also be presented. What has changed? Your claims must always be supported by robust data. You may find it useful to follow the guidelines provided in Chapter 6 of this book. The findings you present in this chapter must inform the reader of the impact your project has made. (About 2,500 words)

Chapter 6 – Conclusions and discussion

What are your conclusions? What themes have emerged from your study? How does it relate to your professional situation? Do your findings reflect what others have found out? Has your study generated evidence which contradicts the outcomes of studies carried out by others? In this chapter, you need to give an account of your own personal learning. Reflect on the outcomes of the project. What personal theories can you make on the basis of your study? How will your findings influence your practice? What are the implications of your research for you and for others? Were there any parts of the study which posed problems? What do you think of your methods of data collection? Were they suitable? List and discuss any limitations of your study. What future direction does the study suggest? (About 3,000 words)

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APPENDICES

Test Your Understanding of Report Structure

Below is an exercise for you which should help you to internalise the structure of a report.

The following extracts are taken from the MA dissertation of a student who obtained high marks from an external examiner, and was written using the above format. The title of the dissertation is: 'The role of speaking and writing in mathematics as a way of enhancing mathematical understanding'. The personalised and reflective nature of the writing was given special credit. (Note that full references were provided in the original dissertation but are not reproduced here.)

Try to write down the number of the chapter where you think each of the extracts appeared. For obvious reasons the chapter extracts are not

in any special order. I have provided a list of the chapters where these appeared at the end of the section. I must remind you that this is an example of just one dissertation, and that this format may not be suitable for all reports. I hope it will still help you to think about the structure and style of writing of a dissertation or report.

A. My interest in the topic began when I listened to a lecture on the role of language in mathematics. I felt excited and wanted to find out more about it.

B. Here I acknowledge the inevitable subjectivity in interpreting the data. But I feel reassured by the fact that action research allows me to draw personal insights from this project. Any claims I make are only applicable to my study. However, others who read this report may be able to identify features which are applicable to them.

C. I found out that literature on mathematics communication is sparse, especially in the United Kingdom. I found Brissenden's (1986) argument that communication and discussion in mathematics are essential ingredients in promoting mathematics learning very convincing. His views are similar to what Vygotsky (1976). My own experience with Year 4 children has shown .

D. Natalie, age 9, emphatically told me that you only write diaries in English lessons. The conversation I taped during a lesson with a group of four children provided evidence of their perception of mathematics as a discipline which is about numbers and doing sums. Here is an extract from Natalie's conversation with me.

Teacher: What I would like you to do is to keep a mathematics diary for the next few weeks, where I would like you to write down what you have learnt and what you think of a lesson.

Natalie: But, miss, we keep a diary for our news every week. Isn't diary writing for English lessons?

Teacher: What makes you think that a diary is only used for an English lesson?

Natalie: Because, mathematics is really all about numbers. We do sums in maths lessons. How can I write a diary in mathematics. There is nothing to write. You don't talk in mathematics. Do you?.

E. The key questions I wish to investigate are:

- Can more discussions in mathematics lessons enhance children's mathematical understanding of concepts?
- What changes may occur in terms of children's confidence and attitudes by introducing more talk and writing in mathematics lessons?

F. What I am still not sure of is how one can structure mathematical talk as part of the National Numeracy Strategy. The strategy does encourage discussion, but I am always aware of the timed three-part lesson which is at odds with a natural flow of unconstrained discussion. I will need to resolve this .

G. Looking back at my study, I realise how my practice has changed in terms of making my questions more open-ended. An analysis of the type of questions I had asked the children showed that I didn't really give them many opportunities to talk, I was too passive myself …

H. As part of my action research, I planned two types of intervention. This I will refer to as my first cycle of activities. Monitoring the effects of these interventions, I knew I would be able to plan other activities or modify my ideas.

I. One of the findings which emerged was the increased level of confidence demonstrated by the children. Their talk quite often reflected a higher level of learning. As I began to discuss more in their group time, they started using more sophisticated language and seemed to better understand the concepts relating to the words. With reference to Vygotsky's (1978) Zone of Proximal Development highlighting the role of an adult scaffolding children in supporting their learning was in evidence .

J. What have I learnt Changing my practice was a challenge. For years, my own perception of the nature of mathematics had been that it was a structured but lifeless discipline consisting of numbers, four rules of number and correct answers. I needed a lot of guidance before I could embark on this project. But the result was worth the effort. My perceptions have changed and this was brought about by watching my children grow in confidence. Both my children and I now 'speak' mathematics .

K. My way forward is to share my ideas with my colleagues. I would feel that I have not really completed my story until I have told it to some more people and find out if they feel as excited about it as I do .

L. The methods I used had to be appropriate for the context I am working in. I was a class teacher. I had an opportunity to undertake a project based in my classroom. I could collect information by listening and observing my children. I also had access to their written work which I could monitor over a period. Then I also needed an ongoing record of my experiences. I could clearly see what Carr and Kemmis (1986) meant by action research offering real opportunities for reflecting on practice based on evidence. I drew up an observation schedule and justified the value and advantages of this method of collecting data in real setting .

CREATIVE PRESENTATIONS OF ACTION RESEARCH

Here I draw on my experience of working with action researchers using creative ways of presenting their findings. Some practitioners presented their research findings to colleagues and others at conferences before writing their final reports as they believed that the preparation for the presentation helped to bring their thoughts together. Others presented their research outcomes after writing their reports. Some of the researchers did not actually write a formal report, but disseminated their research in other ways, which still served the purpose of bringing their ideas together and reflecting on them before sharing their work with others. So what forms of presentations are possible? Here are some examples of how you may present the outcomes of your action research, but for an imaginative practitioner there must be many other ways of designing an effective presentation.

Displays

Andrew, a Year 9 teacher, displayed the outcomes of his research on introducing Critical Thinking to his students, as an exhibition at the local teachers' centre. Titles of the different sections of his display were:

Main title: Introducing Critical Thinking to students in Year 9 Subtitles:
– What is Critical Thinking?
–Why use Critical Thinking with students?
--Critical Thinking in action
– What did the children say and do?
– What did I observe?
– High and low days
– What did my colleagues think?
– My thoughts on the influence of Critical Thinking on student learning

The exhibition gave Andrew plenty of opportunities to display his evidence and pose questions and include his own reflective commentary (in bubbles). With the rapid advancement of software packages these days it is possible to create impressive displays.

Conference presentations

Another way of disseminating action research is for the researchers to make presentations to interested audiences. Three examples of such presentations, arising out of projects I have guided, come to mind. One was a presentation of a project by a group of teachers, also guided by two LEA advisers from Kent, to explore ways in which talented young children's emotional needs could be met. The teacher-researchers shared their project at a national conference, with an audience of 120 early years practitioners. Using PowerPoint slides and clips of video recordings, the presenters brought the project to life. The story being told by class teachers, using powerful images, added to the interest in the project which led to many of the participants wanting them to share their experiences in their local venues.

The second presentation at a DfES conference – researching the possibility of introducing the well-known Italian early years 'Reggio Emelia' programme in Key Stage 1 classrooms in the UK – involved an academic at Exeter University working with a group of teachers. This too led to considerable interest among practitioners who either wished to participate in the project or replicate it in their local contexts. The third presentation of a mathematics enrichment project was presented by two practitioners alongside a group of children who convincingly portrayed the impact of an intervention study on children's learning and attitudes. They used examples of video clips of work, transcripts of interviews and a series of before and afterimages of the improvement in their spoken and written work.

Telling a story as a case study

In recent times many case studies of action research are posted on websites (see the section on Useful websites at the end of the book). Within the interpretive and emergent methodology of action research, the process of writing case studies can often help the researcher to reconstruct a convincing story. These stories are often found more accessible to readers than research reports.Walker (1986: 189) describes a case study as a study of Particular incidents and events, and the selective collection of information on biography, personality, intentions and values [which] allows the case study worker to capture and portray those elements of a situation and give it meaning. I feel that writing case studies is an ideal way of disseminating action research, as it can offer a meaningful story to the reader in a style suited for readers who are interested in the practical implications of an action research project.

USEFUL WEBSITES FOR AN ACTION RESEARCHER

The following websites are useful resources for an action researcher:

- www.bera.ac.uk – the British Educational Research Association website provides a list of ethical guidelines.
- www. standards.dfes.gov.uk/research – the DfES website provides summaries of the latest research and case studies.
- www.nfer.ac.uk – the National Foundation for Educational Research provides research summaries and reports of recent research projects.

- www.ncsl.org.uk – the National College of School Leadership website includes details of teachers using research.
- www.triangle.co.uk – Action Research, an academic journal which publishes studies of interest to action researchers.
- www.did.stu.mmu.ac.uk/carn – the Collaborative Action Research Network provides details of research publications and research conferences

END NOTES

I hope you now appreciate that action research methodology has been steered throughout its evolution by some talented academics responsible for conceptual instruments and the refinement of their use. The major ongoing value of action research is in the hands of readers such as yourself. Action research methodology in the hands of practitioner researchers has become the DIY of education research. I emphasize, however, that successful engagement requires the researcher to be Determined, Industrious and Yearning for transformations. Writing this book has been a pleasurable journey for me. It has offered me an opportunity to reflect on the benefits of practitioner research for both the individual and for their institutions. I wish you luck in your own action research.

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