

# Unit 12: Education Research

## AIM

The aim of this unit is to familiarise inspectors with the basics of education research which they can apply in their work situation.

## LEARNING OUTCOMES

By the end of this unit, inspectors will be able to:

- identify different types of research
- identify the need/problem to be researched
- state the purpose of the research
- plan and design research methodology
- identify sources of data
- collect and analyse data
- produce a research report with recommendations.

## CONTENT SUMMARY

- 12.1 Types of Research
- 12.2 Need/Problem Identification
- 12.3 Purpose of Research
- 12.4 Research Methodology
- 12.5 Sources of Data
- 12.6 Data Collection and Analysis
- 12.7 Research Report

## 12.1 TYPES OF RESEARCH

### *Key Information*

Inspectors from time to time will find situations which will demand that they conduct some form of research in order to contribute to the improvement of education standards in their various countries.

### **Activity 12a**

In pairs, list the different types of research that inspectors can be involved in.

### *Trainer's Note*

It should be noted that there are different types of research serving different purposes. These include:

- action research for classroom and school setting
- case study
- baseline study
- surveys

**Note:** For more information on these types of research, see Modules One and Four.

This unit focuses on survey type research because it is one of the common research types that inspectors are likely to be involved in. The other commonly met research type, action research, is sufficiently covered in Unit 8 of *“A Trainer’s Guide for Induction of Newly Appointed Inspectors.”*

Bell (1987:10) states that, “the aim of a survey is to obtain information which can be analysed and patterns extracted and comparisons made.” She further asserts that the main emphasis of surveys is on fact finding.

## **12.2 NEED/PROBLEM IDENTIFICATION**

### ***Key Information***

Before any research is undertaken, the researcher must identify an area of need, topic or problem to be investigated. Inspectors engaging in research will draw their topics or problems for investigation from current educational practice. The problems/topics must be clear, precise and researchable.

#### **Activity 12b**

In groups, brainstorm and come up with possible problem areas for investigation.

## **12.3 PURPOSE OF RESEARCH**

### ***Key Information***

Having identified the problem area to be investigated, the researcher must narrow it down and be clear about the purpose of the research.

The purpose of the research is an interpretation of the problem area in more specific terms and can take the form of objectives or questions to be addressed.

#### **Activity 12c**

Working in small groups, refer to Activity 12b and select one of the problem areas identified and develop the specific purpose in the form of objectives or questions to be investigated.

## **12.4 RESEARCH METHODOLOGY**

### ***Key Information***

Once a researcher has worked out the objectives of the research, it is important that decisions are made on the appropriate methodology for data collection. The methodology may include the following elements:

- identification of a sample from a selected population
  - the sample should be balanced, truly representative and manageable

- determination of the research methods.  
These may include:
  - questionnaires
  - interviews
  - observations
  - examination of documents

#### **Activity 12d**

In groups, refer to Activity 12c. Examine the purpose you have given yourselves for the research and construct a set of questions to go into a questionnaire to help you collect the data and share ideas with the whole group.

#### ***Trainer's Notes***

It is important that the trainees go through the following process when constructing questionnaires:

- list the specific research problems to be investigated
- determine the kind of data needed to address the problems
- formulate specific questions to draw out the required data.

Good questionnaires have:

- questions or items that are relevant to the purpose of the study
- questions that are clear, precise and concise
- questions that focus on single items (*i.e. avoid double-barrelled questions*)
- objective type questions and not leading questions *i.e. avoid bias*
- questions that are not offensive or presumptuous.

Also note that it is desirable to discuss the other methods cited above in some detail as has been done for questionnaires.

## **12.5 SOURCES OF DATA**

### ***Key Information***

Having identified the problem, clarified the purpose of the research, identified the type of data required, and the methodology to be used, it is important that the researcher identifies the possible sources of the data.

It is necessary for inspectors to develop appropriate interpersonal skills that help them negotiate access to the various sources of data.

#### **Activity 12e**

In small groups, refer to Activities 12c and 12d.

- Identify the types of data you require for this study and list the possible sources of such data.
- Report back to the whole group.

### ***Trainer's Note***

The sources identified in this activity should relate to the problem area and types of data identified earlier.

## **12.6 DATA COLLECTION AND ANALYSIS**

### ***Key Information***

As indicated earlier, it is important for researchers to develop positive qualities to help them access these data. It is equally important to effectively use the chosen research methods. As data collection is underway, the researchers must keep track of the quality and quantity of data.

Bell (1987:127) advises that, “raw data taken from questionnaires, interview schedules, checklists etc. need to be recorded, analysed and interpreted.”

The researcher will go through the following steps in analysing the data:

- tabulating the results from questionnaires, interviews and observation check-lists
- identifying similarities and differences
- noting deviations from the expected
- summarising the results
- making recommendations

Others may use statistical analysis to determine whether the results are statistically significant.

Once analysed and interpreted, the data may be presented using tables, bar charts, pie charts and others.

### **Activity 12f**

A survey was conducted among mature students at a college to determine their views on their chances of success in the final examinations. Below is a table showing levels of agreement among the mature students about their chances of success.

Most students have an excellent chance of doing well in their final examinations.

(N = 50)

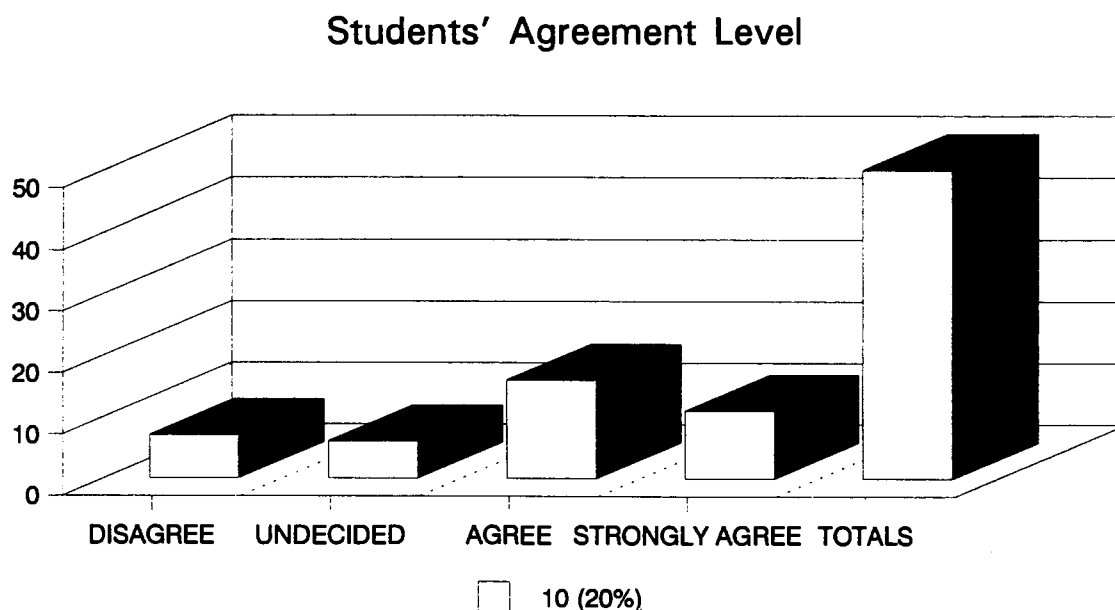
STRONGLY DISAGREE	DISAGREE	UNDECIDED	AGREE	STRONGLY AGREE	TOTALS
10 (20%)	7 (14%)	6 (12%)	16 (32%)	11 (22%)	50 (100%)

SOURCE: Bell, J. (1987: 140)

In pairs, present the data in the above table in the form of a bar chart.

### ***Trainer's Note***

Below is an illustration of the bar chart expected. Source: Bell, J. (1987: 141)



## **12.7 RESEARCH REPORT**

### ***Key Information***

Bless and Achola (1988:142) on research reports state, "Research reports will be quite different depending on their aims and their readership. The presentation, completeness and length, their emphasis on one or the other aspect, their level of scientific exposure will accordingly vary greatly."

Inspectors will mainly be concerned with research reports to be understood by the average education readership and will therefore present their findings in more general terms and will avoid scientific terminology. Such reports will have the following components:

- introduction
  - identification of the research problem
  - significance of the research
- methodology
  - population and sample
  - methods used
- data analysis
- findings (results)
- conclusions
- recommendations

### **Activity 12g**

Refer to the table and bar chart in Activity 12f.

In groups, write down possible conclusions and recommendations based on the data provided.

Clearly state the differences between conclusions and recommendations.

## **SUMMARY**

By the end of this unit, it is hoped that the following inspectors' skills will have been developed:

- problem identification
- planning
- data collection
- communication
- analysis
- data interpretation
- research report writing

## **REFLECTION**

Having gone through this unit, reflect on your experiences as an inspector and identify those aspects of educational research which this unit has helped to de-mystify.

## **REFERENCES**

Bell, J. (1987) *Doing your Research Project: A Guide for First-time Researchers in Education and Social Science*, OUP, Buckingham

Bless, C. and Achola, P. (1988) *Fundamentals of Social Research Methods: An African Perspective*, Government Printing Department, Lusaka