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# Introduction to Research Methods

Prepared by Dr. Mona Moustafa Elashry

MGM 333

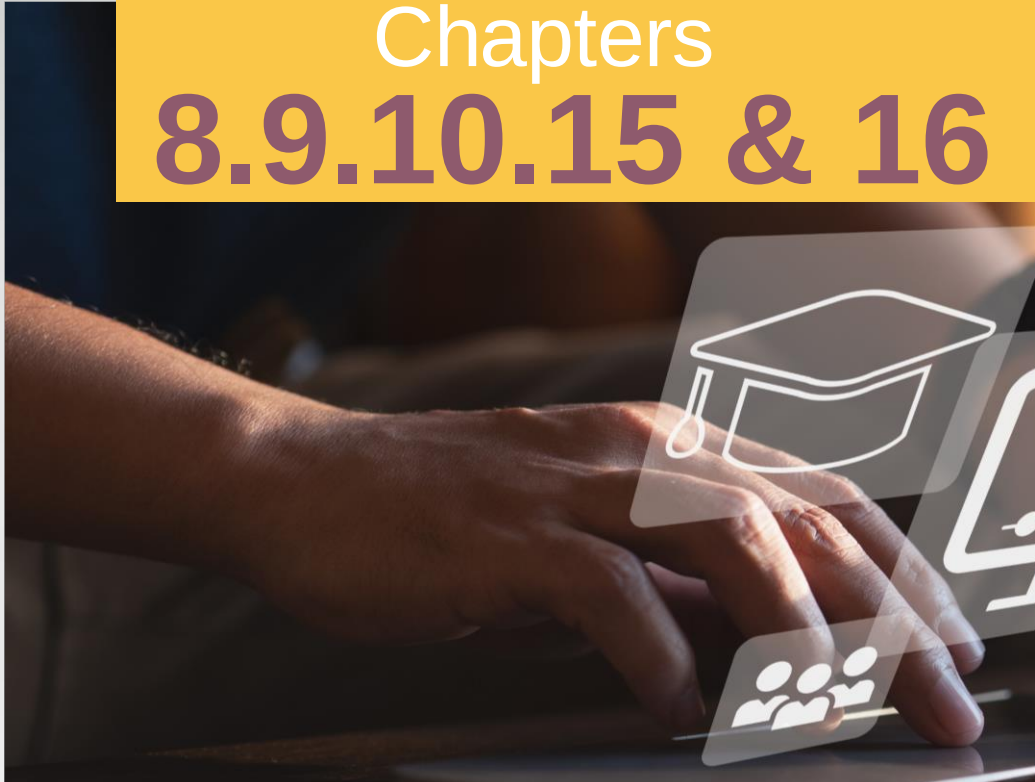
Part 2 Research methods

CHs: 8.9.10.15 & 16

**Lecture 9**

## Chapters 8.9.10.15 & 16

## Part 2 Research methods





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# Session Outline



## Part 2 Session Outline

- ☐ CH8- Case studies
- ☐ CH9- Surveys
- ☐ CH10- Experimental research
- ☐ CH15- Historical research
- ☐ CH16- Grounded theory
- ☐ Summary.



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# CH8- Case studies

- ❑ Case study research is a method designed to study the particular within context and has a very specific purpose.

- ❑ 'The case study has unfortunately been used as a “catch-all” category for anything that does not fit into experimental, survey or historical methods.
- ❑ The term has also been used loosely as a synonym for ethnography, participant observation, naturalist inquiry and fieldwork' (Burns, 2000, 458).

### □ Types of case study

Stake identifies three types of case study:

- ✓ The intrinsic case study
- ✓ The instrumental case study
- ✓ The collective case study.

### ❑ The intrinsic case study

is one that is carried out for no other purpose than to give us a better understanding of the case.

**For example**, you may wish to examine your own service or department in considerable depth; with an intrinsic case study you would be doing that for no other purpose than to acquire a deeper understanding of the service

### ❑ The intrinsic case study

If your service happened to be a learning resource centre in a school, your research would focus on the centre and all the associated complexities associated with it. You would not be conducting this study to gain knowledge of a particular phenomenon within the case, for example how the students search for information. This may be something that emerges from the study but it is not the purpose of the study.

### ❑ The instrumental case study

If we wish to examine a particular phenomenon then we would conduct an instrumental case study. In this case the purpose is to investigate a particular phenomenon or theory and the case itself becomes less important other than as a vehicle for our investigation

### ❑ The collective case study

The term collective case study is used to describe a research study that uses more than one case to investigate particular phenomena; usually the study is a collection of instrumental cases as it is rare for a study to focus on multiple cases for their own sake, although it is possible

### ❑ Triangulation

- Triangulation within a case study can be achieved by using multiple data collection techniques or multiple sources of evidence, or very commonly both.
- Triangulation can be used for two purposes within a case study, depending on the overall approach of the research.
- Yin (2008, 92) claims that the purpose of triangulation is ‘to collect information from multiple sources but aimed at corroborating the same facts or phenomenon’.

### The case study process:

Those phases are:

- phase 1 of the investigation, which should be the orientation and overview' phase
- phase 2, 'focused exploration'
- phase 3, 'member checking'.

## Example 8.1 Sample case study fieldwork schedule

### Phase 1: Maintain researcher's diary throughout all phases:

- Make initial contact
- Obtain consent via sign-off forms
- Interview to identify salient issues
- Observe the participant using electronic information sources
- Begin iterative analysis
- Identify subsequent participants using snowball sampling.

**Time: 3 months**

### Phase 2: Focused exploration, using:

- interviews
- observation
- non-human sources; content analysis of documentation
- interviews with experts, who are likely to be learning resource managers, librarians and/or teachers and librarians
- iterative analysis throughout.

**Time: 8 months**

### Phase 3: Compile preliminary case studies:

- Check members: case study is subject to scrutiny by participants individually and during workshops.

**Time: 2–3 months**

Write up final case studies.

(Pickard, 1998)



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# Ch9- Surveys

- ❑ The purpose of survey research is to gather and analyse information by questioning individuals who are either representative of the research population or are the entire research population.

- ❑ The term 'survey' usually refers to a study that has used a representative sample; if the entire population is involved in the study it is a 'census'. Questions must be asked using a standardized questioning procedure applied equally and consistently to all research participants

- ❑ The aim of survey research is to study relationships between specific variables, which are identified at the outset of the research and stated as either a hypothesis or a research question, or to describe certain characteristics of the population.

- ☐ The findings from the survey can then be generalized to the wider population.
- ☐ Survey research can include qualitative and quantitative research, but is usually quantitative with a limited qualitative element.

- ❑ The term 'survey' is often used interchangeably with 'questionnaire'; the two are not the same thing and it can lead to confusion if the distinction between the two is not made very obvious.

- ❑ **A survey** is a research method, the purpose and aims of which have already been stated; although data collection must be standardized, there are options for data collection within a survey.

- ❑ **A questionnaire** is a very specific data collection technique, which can be used within a variety of research methods.

- ❑ A survey, then, is the research method used to structure the collection and analysis of standardized information from a defined population using a representative sample of that population.

- ☐ Probability sampling is vital in order to make valid generalizations about the wider population. When non-probability sampling is used you must take care with any statements you make that attempt to generalize to the wider population

- ❑ **There are two types of survey:**
  - ❖ Descriptive surveys
  - ❖ Explanatory surveys.
  
- ❑ It is possible to apply both methods in the same study, as will become apparent when examining the nature of the two approaches.

### ❑ Descriptive surveys

- The purpose of a descriptive survey (see Example 9.1) is to describe a situation and/or look for trends and patterns within the sample group that can be generalized to the defined population of the study.

### ❑ Descriptive surveys

- The data gathered are analyzed using descriptive statistics such as measures of central tendency and standard deviation.
- It is usual for researchers to put some interpretation on the results based on a combination of the current facts gathered and previous research

**Example 9.1 A descriptive survey****Pay and status: latest survey results**

Presents the findings of the 2004 CILIP survey of UK library and information professionals conducted to gather information on salary levels relative to qualifications, responsibilities, employment sectors and solo working. Other information collected includes job titles and membership of professional organizations. Among the findings are that more than half of the 3,039 respondents earned less than £25,000 per year and that the median amount was £22,400. Also reports respondents' comments and suggestions for action by CILIP to campaign for improved salaries, promote the appreciation of the profession by employers and merge or work more closely with other LIS professional bodies.

Creaser, C. and White, S. (2005) Pay and Status: latest survey results, *Library and Information Update*, 4 (6), (June), 40–3.

This descriptive survey was conducted in order to describe the current situation within the library and information profession in the UK. Data was gathered on a variety of variables including salaries, qualifications and sector information. This survey presents a picture of the profession using descriptive statistics which provide an overview of current working standards and trends.

### ❑ Explanatory surveys

- The explanatory survey seeks to establish cause and effect relationships but without experimental manipulation; for example, the effects on teachers' motivation of merit schemes, the effects of social climate on adolescent values. (Burns, 2000, 566)

## ❑ The survey process

- Although there are differing types of survey, the process follows a very similar pattern whichever approach is being taken.
- Survey research usually follows a linear and structured process; steps in the process are clearly defined and rarely overlap, and **the survey process consists of the following stages:**

## □ The survey process

- Identify a general topic area
- Investigate the literature
- Establish an hypothesis or aims and objectives; identify variables
- Identify a suitable population
- Apply an appropriate sampling technique to draw your sample from that population
- Select and design data collection instrument(s)
- Pilot a data collection instrument
- Collect data
- Analyze data
- Present findings and conclusions



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## Ch10- Experimental research

- ❑ Experimental research epitomizes the positivist paradigm discussed in Chapter 1.
- ❑ The opening quote in this chapter may appear to be very negative; the reason it is here is to highlight that experimental research has its place in library and information science but I would rarely advocate the application of this method in a study that involved human subjects.

- ❑ This is not to say it has not been done – it has– but I would argue that there are too many unstable elements involved ever to be in a position to construct a true experiment involving human beings and all the complex internal and external variables they are subject to

- ❑ Experiments are possible on systems with stable functions, variables that can be systematically controlled; the human condition does not fall into this category. 'Effects studies' have been carried out in many branches of social science, but inference made from these studies is usually tenuous at best.

- ❑ Before you decide to embark on experimental research you need to be very sure about what you are doing and the level of control you have over the situation.

- ❑ An experiment is a controlled research situation, which means ‘(a) that unwanted variables and external influences can be kept out of the experimental environment, and (b) that the researcher can establish the experimental conditions down to the smallest details’ (Corbetta, 2003, 94).
- ❑ When these conditions are not entirely met then the researcher has a responsibility to identify the extent of the error.

- ❑ 'Experimental error occurs when a change in the DV (dependent variable) is produced by any variable other than the IV (independent variable)' (Burns, 2000, 134).

- ❑ As we can have no way of controlling all variables acting on a human subject at any one time, not only can we never avoid experimental error but the majority of the time we cannot locate the variable responsible for the error, therefore we are unable to measure the extent of error.

- ❑ In experimental research we are dealing with a number of different variables:
  - the independent variable (IV): the phenomenon or situation that is manipulated by the researcher
  - the dependent variable (DV): the behaviour or effect that is measured by the research as a result of the manipulation

- ❑ In experimental research we are dealing with a number of different variables:
  - the moderator variable (MV): the factor which is 'measured, manipulated or selected' by the researcher to determine whether or not it changes the relationship between the IV and DV
  - the control variable (CV): a potential IV that is artificially held constant by the researcher throughout the experiment.



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# Ch15- Historical research

- ❑ Historical research plays a vital role in the development of theory and practice; it has relevance as a research method in all subject disciplines and although very different from the other research methods discussed in this section, it is still a 'scientific' method, which must conform to standards of practice

- ❑ The most notable difference between historical research and all other methods available to the researcher is the nature of the 'evidence' used to generate theory or test a hypothesis.

- ❑ Historical research is essentially qualitative because of the interpretation that is inevitably involved; there are uses for quantifiable data in some investigations but because this approach depends so much on interpretation, by definition it becomes qualitative.

- ☐ Most historical studies deal with natural behaviour in real-life situations and the interpretations the researcher brings to the evidence.
- ☐ Quantifying evidence can be provided where suitable data exists but it can be difficult to justify quantification of anything other than tangible evidence, such as reported statistics or records.

- ❑ This research method is concerned with reconstructing the past, identifying pieces of a puzzle and putting them together to provide insight and understanding of a situation, event or process

- ❑ Many practitioners engage in this type of research every day as part of their normal working practice.
- ❑ The most obvious example of this would be those who work in local studies libraries or archives; a great deal of their time is spent tracing and recording historical documents, sometimes using them in the study of a specific topic or structuring, classifying and storing them for retrieval by others

## □ The historical research process:

- Identifying a topic
- Locating data
- Collecting and recording data (Collecting and recording data is different from creating new data)
- Completing interpretation
- Writing up



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# Ch16- Grounded theory

- ☐ I am not completely convinced that this is the right place in this book for a discussion of grounded theory; it is here because it is so often referred to as a 'research method'.

- ❑ **Grounded theory** is an approach that uses 'simultaneous data collection and analysis' (Charmaz, 2006, 20) and as such can be applied in case study, historical or action research.
- ❑ It is more about how data is collected and analyzed than about the entire research design.
- ❑ Grounded theory is a process of qualitative analysis, not a research method; it is a 'general method of comparative analysis'

- ❑ Grounded theory is described as ‘a strategy for handling data in research, providing modes of conceptualization for describing and explaining’ (Glaser and Strauss, 1967, 3).

- ❑ Although I do not see grounded theory as a method, the principles of grounded theory may influence the design of a method



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# Summary

- Using case studies is the most appropriate research method when the purpose of the research requires holistic, in-depth investigation of a phenomenon or a situation from the perspective of all stakeholders involved

- Surveys are used when the purpose of the research is to describe a population or characteristics of that population (descriptive survey), or determine the relationship between specific variables within a population (explanatory survey).

- It is important to distinguish between a survey as a research method and a questionnaire as a data collection technique.

- Although the terms are often used interchangeably within the literature, they are not synonymous. Surveys rely on representativeness and standardization in order to generalize findings from a sample to a wider population.

- Data collection techniques appropriate to survey research are questionnaires, structured interviews and direct, structured observation.

- True experiments are used to trace cause-and-effect relationships between pre -defined variables; as such they rely completely on controlled variables.
- This requires conditions where the researcher is in complete control of all independent variables, being in a position to add, remove or manipulate in some way every independent variable in order to trace effect

- Historical research is often criticized for lack of 'scientific' method because of the absence of control the researcher has over events that have already taken place

- Grounded theory is not a research method, it is a process for the logical analysis of qualitative data



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# Thank You

