# Research Methodology S3 / Chapter 1: Introduction to Research

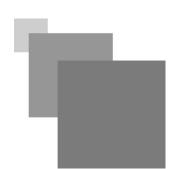
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#### Caption

- Glossary entry
- A Abbreviation
- Bibliographical reference
- General reference



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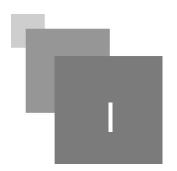




By the end of this chapter, learners will be able to:

- *Discover* basic terminology and fundamental concepts related to academic research.
- Identify the main objectives of research and the motivations behind its conduct.
- Recognize the relevance of learning about research as an academic activity.
- Contrast academic research from other activities in the domain of English language and literature.

# Introduction to Research



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#### 1. Defining Research

What is Research?	5
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#### 1.1. What is Research?

#### ✓ Definition

- "Research as 'a systematic investigation to find answers to a problem" Burns (1997)<sup>p.18</sup>
- "Research is a procedure by which we attempt to find systematically, and with the support of demonstrable fact, the answer to a question or the resolution of a problem". Leedy (1989)
- The Oxford Encyclopedic English Dictionary p.18 4 defines it as:
- 1. the systematic investigation into the study of materials, sources etc. in order to establish facts and reach new conclusions
  - 2. an endeavour to discover new or collate old facts etc. by the scientific study of a subject or by a course of critical investigation.
- "The word research is composed of two syllables, re and search. The dictionary defines the former as a prefix meaning again, anew or over again and the latter as a verb meaning to examine closely and carefully, to test and try, or to probe. Together they form a noun describing a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles." Grinnell (1993)<sup>p.18</sup>
- "Research is a structured inquiry that utilises acceptable scientific methodology to solve problems and creates new knowledge that is generally applicable." Grinnell (1993)<sup>p.18</sup>
- "Scientific methods consist of systematic observation, classification and interpretation of data.

Now, obviously, this process is one in which nearly all people engage in the course of their daily lives. The main difference between our day-to-day generalisations and the conclusions usually recognised as scientific method lies in the degree of formality, rigorousness, verifiability and general validity of the latter". Lundberg (1942)<sup>p.18</sup> <sup>c</sup>

#### Note:Research is not

- a personal work based on one's feelings, opinions and ideas.
- a collection of long quotes or paragraphs copied from different sources from the Internet, books and articles.
- a mere summary of information found in different sources.

#### 1.2. Characteristics and Requirements of Research

- Generated by a question or a problem.
- Goal- oriented: research needs to have clear statement of objectives and what is intended to be done to attain them.
- Reiterative: it is based on previous knowledge. This knowledge is expanded by the research work. A resolution a problem by a specific research will also give rise to new questions and problems.
- Rigorous: the procedures used to find answers to the research questions need to be relevant, appropriate, and justified.
- Systematic: research procedures need to follow logical sequence. They cannot be done haphazardly.
- Valid and verifiable: the findings and the conclusion of the research need to be correct and can be verified by the researcher and others in the field.
- *Empirical*: conclusions need to be based on evidence gathered from information collected from real life or from observation.
- Critical: doing research requires the ability to analyse, synthesise and evaluate information.

Exercice: Task1: Defining Research

#### 1.3. Exercice: Task1: Defining Research

[solution n°1 p.14]

#### 1.3.1. Exercice

Research constitutes of presenting summarized information about a topic found in different resources.

- O True
- O False

#### 1.3.2. Exercice

Research is based on rigorous and systematic procedures.

- O True
- O False

#### 1.3.3. Exercice

The aim of research is to reach a new conclusion through the collection of evidence in order to solve a problem or answer a question.

- O True
- O False

#### 1.3.4. Exercice

Research conclusion need to be based the researcher's personal opinions.

- O True
- O False

#### 2. Why Doing Research?

The Objectives of Research

Motivations Behind Research

Exercice: Task 2: Research objectives

#### 2.1. The Objectives of Research

- Study and describe accurately the characteristics of situations, problems, phenomena, services, groups, or individuals.
- Discover and establish the existence of relationship, association, and independence between two or more aspects of a situation or phenomenon.
- Propose and test certain hypotheses.

- Test reported findings and conclusions on new data and novel conclusions on previously reported data.
- Understand different phenomena and develop new perceptions about it.
- Explain unexplored horizons of knowledge.

#### 2.2. Motivations Behind Research

Research is a long process, so the main driving factor is motivation. For some researchers and post-graduate students, the main objective behind the research is to earn a degree. To philosophers and thinkers, research may mean the outlet for new ideas and insights, whereas to intellectual people research may mean the development of new styles and creative work. Irrespective of the domain, research is conducted to increase understanding of professions, advance the professional knowledge and perfect its practices. What people do nowadays in their professions has been tested and developed by others over a long period.

#### 2.3. Exercice: Task 2: Research objectives

[solution n°2 p.14]

Which of the following serve as research objective

Discover and establish the existence of relationship, association, and independence between two or more aspects of a situation or phenomenon.

Summarize and present different opinions about a topic.

Understand different phenomena and develop new perceptions about it.

Report the most recent research done in a specific domain.

#### 3. Types of Research

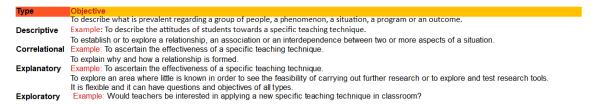
Types of research according to their objectives

Types of research according to their inquiry mode

Exercice: Task 3: Research Types

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#### 3.1. Types of research according to their objectives



Types of research according to their objectives

Research can be classified according to its objectives into these four types. The first three ones are not exclusive.

A research can be a combination of two or the three of them.

#### 3.2. Types of research according to their inquiry mode

Type Mode of inquiry
Predetermined and structured process where Information is measured and quantified for the aim of studying the extent of a variation of a phenomenon.

Example: What is the extent of the use of a specific classroom management technique for large classes among teachers of A specific school?

Flexible and unstructured process where information is described and narrated in order to explore the nature of a phenomenon. Example: What classroom management techniques do teachers in a specific school use in large classes?

#### Types of research according to their inquiry mode

The choice of a specific problem entails the choice of a specific type of inquiry. However, some researches involve both, quantitative and qualitative inquiry modes. For example, if a researcher wants to investigate the types of classroom management techniques and the extent of their use in a specific school, they cannot restrict themselves with one mode of inquiry.

#### 3.3. Exercice: Task 3: Research Types

[solution n°3 p.15]

A research that seeks to establish a relationship between two or more aspects.

A research conducted for the aim of testing the feasibility of doing research in a certain domain or situation.

A research that is interested in the nature of a phenomenon. It uses descriptive or narrative data.

A research that is interested in the extent of variation in a phenomenon. It uses quantified data.

A research that attempts to describe a group, a phenomenon, a problem or a situation.

A research interested in answering why and how a relationship is formed.

Descriptive	Correlational	Explanatory	Exploratory	Quantitative	Qualitative
Research	Research	Research	Research	research	Research

#### 4. Research Methodology

Defining Research Methodology 10
Exercice: Task4: Interests of Research Methodology 10

#### 4.1. Defining Research Methodology

Research methodology refers to the way a research problem is studied systematically. It may be understood as a science of studying how research is done scientifically. It is interested in the various steps that are adopted by a researcher in conducting the research along with the logic, assumptions, justification, and rationale behind these steps. It is concerned with why a research study has been undertaken, how the research problem has been defined, in what way and why the hypothesis has been formulated, what data have been collected and what particular method has been adopted, why particular technique of analysing data has been used and a host of similar other questions. Thus, it has many dimensions and research methods constitute a part of them. Research methodology explains more about the research process in general whereas research methods refer to the different methods used in performing research operations. All of the methods, approaches, processes and techniques used by researcher during research process can be referred to as research methods. They can be methods applied during dataset creation, data collection and data analysis. Therefore, the scope of research methodology is wider than that of research methods.

See "Ontology, Epistemology, Methodology and Methods"

#### 4.2. Exercice: Task4: Interests of Research Methodology

[solution n°4 p.15]

Research Methodology is interested in

Only research methods

Research steps

Justifications of undertaking specific steps and methods

All of the above

None of the above

## 5. Why Learning about Research and Research Methodology?

Why Learning about Research and Research Methodology? Exercice: Task 5: Acquired skills

Exercice: Task 5: Acquired skills

## 5.1. Why Learning about Research and Research Methodology?

- Methods of discovery
- Investigative skills
- Inquiry based techniques
- Critical thinking
- Logic
- Argumentation

#### 5.2. Exercice: Task 5: Acquired skills

[solution n°5 p.15]

What skills can students learn from studying about research and research methodology?

# Test1



#### Exercice

[solution n°6 p.16]

Check the correct statements
☐ Research is a summary of different opinions about a topic.
Research is an activity that involves evaluation of facts based on one's personal opinions and feelings.
Research requires the use of acceptable scientific methodology for the aim of solving a problem or answering a question.
☐ Academic research needs to be systematic and rigorous.
Research objectives can be flexible. Therefore, they can be changed during any step of the research process.
Research methodology is interested in the various methods used during research operations as well as the different steps of the research process
☐ Exploratory research is interested in explaining why and how a relationship is formed
<ul> <li>Qualitative research is interested in the nature of a certain phenomenon.</li> </ul>

1 1 1

[solution n°7 p.16]

A research that is interested in the nature of a phenomenon. It uses descriptive or narrative data.

A research interested in answering why and how a relationship is formed.

A research that is interested in the extent of variation in a phenomenon. It uses quantified data.

A research conducted for the aim of testing the feasibility of doing research in a certain domain or situation.

A research that seeks to establish a relationship between two or more aspects.

A research that attempts to describe a group, a phenomenon, a problem or a situation.

Descriptive	Correlational	Explanatory	Exploratory	Quantitative	Qualitative
Research	Research	Research	Research	research	Research

## **Exercises solution**



> **Solution** n°1 Exercice p. 7

Exe	ercice	
Re	search constitutes of presenting summarized information about a topic found in different resources.	
0	True	
0	False	
Exe	ercice	
Re	search is based on rigorous and systematic procedures.	
0	True	
0	False	
Exe	ercice	
	e aim of research is to reach a new conclusion through the collection of evidence in order to solv blem or answer a question.	re a
0	True	
0	False	
Exe	ercice	
Re	search conclusion need to be based the researcher's personal opinions.	
0	True	
0	False	
> \$	Solution n°2 Exercice p. 8	3

Which of the following serve as research objective

 $\mathbf{Z}$ 

interested in

the nature of

phenomenon.

descriptive or

It uses

narrative

data.

	Discover and establish the existence of relationship, association, and independence between two or more aspects of a situation or phenomenon.							
	Summarize and	present different	opinions about a	topic.				
☑	Understand diff	erent phenomena	and develop nev	v perceptions ab	out it.			
	☐ Report the most recent research done in a specific domain.							
> <b>Solution</b> n°3								
	Descriptive Correlational Explanatory Exploratory Quantitative Qualitative							
	Research	Research	Research	Research	research	Research		
	A research that attempts	A research that seeks	A research interested	A research conducted	A research that is	A research that is		

for the aim

of testing

feasibility

of doing

research in a certain

domain or

situation.

the

interested in

the extent of

variation in a

phenomenon.

It uses

data.

quantified

answering

relationship

is formed.

why and

how a

in

to establish

relationship

two or more

between

aspects.

> Solution n°4 Exercice p. 10

Re	Research Methodology is interested in				
	Only research methods				
	Research steps				
	Justifications of undertaking specific steps and methods				
	All of the above				
<b>Y</b>	None of the above				

to describe a

phenomenon,

a problem or

a situation.

group, a

> Solution n°5 Exercice p. 11 What skills can students learn from studying about research and research methodology? Methods of discovery Exercice p. 12 > Solution n°6 Check the correct statements ☐ Research is a summary of different opinions about a topic. Research is an activity that involves evaluation of facts based on one's personal opinions and feelings.  $\mathbf{S}$ Research requires the use of acceptable scientific methodology for the aim of solving a problem or answering a question. Academic research needs to be systematic and rigorous. Research objectives can be flexible. Therefore, they can be changed during any step of the research process.  $\mathbf{V}$ Research methodology is interested in the various methods used during research operations as well as the different steps of the research process Exploratory research is interested in explaining why and how a relationship is formed ☑ Qualitative research is interested in the nature of a certain phenomenon.

> **Solution** n°7

Descriptive	Correlational	Explanatory	Exploratory	Quantitative research	Qualitative
Research	Research	Research	Research		Research
A research that attempts to describe a group, a phenomenon, a problem or a situation.	A research that seeks to establish a relationship between two or more aspects.	A research interested in answering why and how a relationship is formed.	A research conducted for the aim of testing the feasibility of doing research in a certain domain or situation.	A research that is interested in the extent of variation in a phenomenon. It uses quantified data.	A research that is interested in the nature of a phenomenon. It uses descriptive or narrative data.

# References



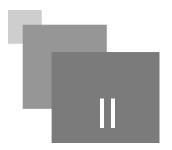
(Kumar, 2011, p.7) Reference

(Kumar, 2011, p. 8) Reference

(William and Baiche,

2001, p.7) Reference

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