

Internal Assessment Test - I

Sub:	Research Methodology	Code:	20MBA23
Date:	27-05-2022	Duration:	90 mins
		Max Marks:	50
		Sem:	II
		Branch:	MBA

		Marks	OBE	
			CO	RBT
Part A - Answer Any Two Full Questions (2* 20 = 40 marks)				
1 (a)	<p>What is research?</p> <p>Research is defined as careful consideration of study regarding a particular concern or problem using scientific methods. According to the American sociologist Earl Robert Babbie, “research is a systematic inquiry to describe, explain, predict, and control the observed phenomenon.</p>	[03]	CO1	L1
(b)	<p>How do exploratory and descriptive research designs differ from each other?</p> <p>Exploratory research is usually conducted when a researcher has just begun an investigation and wishes to understand the topic generally. Descriptive research aims to describe or define the topic at hand. Explanatory research is aims to explain why particular phenomena work in the way that they do.</p> <p>The research design is defined as a framework for carrying out research activities in different fields of study. The research design is classified into two important categories i.e. exploratory and conclusive research. Conclusive research is further subdivided into descriptive and casual research. The people often juxtapose exploratory research and descriptive research, but the fact is that they are different.</p>	[07]	CO3	L3
(c)	<p>Explain the process of research in detail.</p> <p>Scientific research involves a systematic process that focuses on being objective and gathering a multitude of information for analysis so that the researcher can come to a conclusion. This process is used in all research and evaluation projects, regardless of the research method (scientific method of inquiry, evaluation research, or action research). The process focuses on testing hunches or ideas in a park and recreation setting through a systematic process. In this process, the study is documented in such a way that another individual can conduct the same study again. This is referred to as replicating the study. Any research done without documenting the study so that others can review the process and results is not an investigation using the scientific research process. The scientific research process is a multiple-step process where the steps are interlinked with the other steps in the process. If changes are made in one step of the process, the researcher must review all the other steps to ensure that the changes are reflected throughout the process. Parks and recreation professionals are often involved in conducting research or evaluation projects within the agency. These</p>	[10]	CO1	L2

professionals need to understand the eight steps of the research process as they apply to conducting a study. Table 2.4 lists the steps of the research process and provides an example of each step for a sample research study.

Step 1: Identify the Problem

The first step in the process is to identify a problem or develop a research question. The research problem may be something the agency identifies as a problem, some knowledge or information that is needed by the agency, or the desire to identify a recreation trend nationally. In the example in table 2.4, the problem that the agency has identified is childhood obesity, which is a local problem and concern within the community. This serves as the focus of the study.

Step 2: Review the Literature

Now that the problem has been identified, the researcher must learn more about the topic under investigation. To do this, the researcher must review the literature related to the research problem. This step provides foundational knowledge about the problem area. The review of literature also educates the researcher about what studies have been conducted in the past, how these studies were conducted, and the conclusions in the problem area. In the obesity study, the review of literature enables the programmer to discover horrifying statistics related to the long-term effects of childhood obesity in terms of health issues, death rates, and projected medical costs. In addition, the programmer finds several articles and information from the Centers for Disease Control and Prevention that describe the benefits of walking 10,000 steps a day. The information discovered during this step helps the programmer fully understand the magnitude of the problem, recognize the future consequences of obesity, and identify a strategy to combat obesity (i.e., walking).

Step 3: Clarify the Problem

Many times the initial problem identified in the first step of the process is too large or broad in scope. In step 3 of the process, the researcher clarifies the problem and narrows the scope of the study. This can only be done after the literature has been reviewed. The knowledge gained through the review of literature guides the researcher in clarifying and narrowing the research project. In the example, the programmer has identified childhood obesity as the problem and the purpose of the study. This topic is very broad and could be studied based on genetics, family environment, diet, exercise, self-confidence, leisure activities, or health issues. All of these areas cannot be investigated in a single study; therefore, the problem and purpose of the study must be more clearly defined. The programmer has decided that the purpose of the study is to determine if walking 10,000 steps a day for three days a week will improve the individual's health. This purpose is more narrowly focused and researchable than the original problem.

Step 4: Clearly Define Terms and Concepts

Terms and concepts are words or phrases used in the purpose statement of the study or the description of the study. These items need to be specifically

defined as they apply to the study. Terms or concepts often have different definitions depending on who is reading the study. To minimize confusion about what the terms and phrases mean, the researcher must specifically define them for the study. In the obesity study, the concept of “individual’s health” can be defined in hundreds of ways, such as physical, mental, emotional, or spiritual health. For this study, the individual’s health is defined as physical health. The concept of physical health may also be defined and measured in many ways. In this case, the programmer decides to more narrowly define “individual health” to refer to the areas of weight, percentage of body fat, and cholesterol. By defining the terms or concepts more narrowly, the scope of the study is more manageable for the programmer, making it easier to collect the necessary data for the study. This also makes the concepts more understandable to the reader.

Step 5: Define the Population

Research projects can focus on a specific group of people, facilities, park development, employee evaluations, programs, financial status, marketing efforts, or the integration of technology into the operations. For example, if a researcher wants to examine a specific group of people in the community, the study could examine a specific age group, males or females, people living in a specific geographic area, or a specific ethnic group. Literally thousands of options are available to the researcher to specifically identify the group to study. The research problem and the purpose of the study assist the researcher in identifying the group to involve in the study. In research terms, the group to involve in the study is always called the population. Defining the population assists the researcher in several ways. First, it narrows the scope of the study from a very large population to one that is manageable. Second, the population identifies the group that the researcher’s efforts will be focused on within the study. This helps ensure that the researcher stays on the right path during the study. Finally, by defining the population, the researcher identifies the group that the results will apply to at the conclusion of the study. In the example in table 2.4, the programmer has identified the population of the study as children ages 10 to 12 years. This narrower population makes the study more manageable in terms of time and resources.

Step 6: Develop the Instrumentation Plan

The plan for the study is referred to as the instrumentation plan. The instrumentation plan serves as the road map for the entire study, specifying who will participate in the study; how, when, and where data will be collected; and the content of the program. This plan is composed of numerous decisions and considerations that are addressed in chapter 8 of this text. In the obesity study, the researcher has decided to have the children participate in a walking program for six months. The group of participants is called the sample, which is a smaller group selected from the population specified for the study. The study cannot possibly include every 10- to 12-year-old child in the community, so a smaller group is used to represent the population. The researcher develops the plan for the walking program, indicating what data will be collected, when and how the data will be collected, who will collect the data, and how the data will be analyzed. The instrumentation plan specifies all the steps that must be completed for the

study. This ensures that the programmer has carefully thought through all these decisions and that she provides a step-by-step plan to be followed in the study.

Step 7: Collect Data

Once the instrumentation plan is completed, the actual study begins with the collection of data. The collection of data is a critical step in providing the information needed to answer the research question. Every study includes the collection of some type of data—whether it is from the literature or from subjects—to answer the research question. Data can be collected in the form of words on a survey, with a questionnaire, through observations, or from the literature. In the obesity study, the programmers will be collecting data on the defined variables: weight, percentage of body fat, cholesterol levels, and the number of days the person walked a total of 10,000 steps during the class.

The researcher collects these data at the first session and at the last session of the program. These two sets of data are necessary to determine the effect of the walking program on weight, body fat, and cholesterol level. Once the data are collected on the variables, the researcher is ready to move to the final step of the process, which is the data analysis.

Step 8: Analyze the Data

All the time, effort, and resources dedicated to steps 1 through 7 of the research process culminate in this final step. The researcher finally has data to analyze so that the research question can be answered. In the instrumentation plan, the researcher specified how the data will be analyzed. The researcher now analyzes the data according to the plan. The results of this analysis are then reviewed and summarized in a manner directly related to the research questions. In the obesity study, the researcher compares the measurements of weight, percentage of body fat, and cholesterol that were taken at the first meeting of the subjects to the measurements of the same variables at the final program session. These two sets of data will be analyzed to determine if there was a difference between the first measurement and the second measurement for each individual in the program. Then, the data will be analyzed to determine if the differences are statistically significant. If the differences are statistically significant, the study validates the theory that was the focus of the study. The results of the study also provide valuable information about one strategy to combat childhood obesity in the community.

As you have probably concluded, conducting studies using the eight steps of the scientific research process requires you to dedicate time and effort to the planning process. You cannot conduct a study using the scientific research process when time is limited or the study is done at the last minute. Researchers who do this conduct studies that result in either false conclusions or conclusions that are not of any value to the organization.

2 (a) What is research design?

[03]

CO1

L1

The research design refers to **the overall strategy that you choose to integrate the different components of the study in a coherent and logical way**, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data.

- (b) Explain the terms research methods and research methodology with examples. [07]
- Research methods are the methods used by researchers to collect data to conduct research on a particular research topic. A Research methodology is systematic approach to solve the research problem and to reach a new conclusion.

Basis of Comparison	Research Method	Research Methodology
Meaning	Research Method implies the methods employed by the researcher to conduct research.	Research methodology is the science of efficiently solving research problems.
What is it?	Behavior and instrument used in the selection and construction of the research technique.	Science of understanding how research is performed methodically.
Encompasses	Carrying out experiment, test, surveys and so on.	Study of different techniques utilized in the performance of research, experiment, test, surveys and so on.
Comprise of	Different investigation techniques.	Entire strategy toward achieving a research objective.
Objective	To discover solution to research problem.	To apply correct procedure to determine solutions.

- (c) Elaborate on the problems encountered by researchers in India. [10]

Problems Encountered by Researchers in India
 Research Methodology is a study subject in some of the under-graduate courses and most of the Post-graduate courses. Still, there is a lack of awareness of the purpose of research and the purpose of including research methodology in the curriculum. Many students hate this subject and the hatred is increased when they see the numerical in biostatistics when it is clubbed with research methodology. There are several problems encountered by students and novice researchers.

- Lack of scientific Training
- Insufficient Interaction
- Lack of Confidence in researchers
- Lack of Code of Conduct
- Dissatisfactory Library Management and functioning
- Difficulty of timely availability of published data
- Plagiarism

- 3 (a) What is the purpose of research in business? [03]
- The general purpose of business research is **to help an organization's**

CO3	L3
CO3	L3
CO1	L1

stakeholders make appropriate decisions. Gathering relevant data in various ways helps executives understand their target customers and organize the company's operations in ways that maximize the chances of improving customer satisfaction.

(b) Distinguish between inductive and deduction reasoning with examples.

[07]

CO3

L2

The main difference between inductive and deductive reasoning is that inductive reasoning aims at **developing a theory** while deductive reasoning aims at **testing an existing theory**.

Inductive reasoning moves from specific observations to broad generalizations, and deductive reasoning the other way around.

Both approaches are used in various types of research, and it's not uncommon to combine them in one large study.

Inductive research approach

When there is little to no existing literature on a topic, it is common to perform [inductive research](#) because there is no theory to test. The inductive approach consists of three stages:

1. **Observation**
 - A low-cost airline flight is delayed
 - Dogs A and B have fleas
 - Elephants depend on water to exist
2. **Observe a pattern**
 - Another 20 flights from low-cost airlines are delayed
 - All observed dogs have fleas
 - All observed animals depend on water to exist
3. **Develop a theory or general (preliminary) conclusion**
 - Low cost airlines always have delays
 - All dogs have fleas
 - All biological life depends on water to exist

Limitations of an inductive approach

A conclusion drawn on the basis of an inductive method can never be proven, but it can be invalidated.

Example

You observe 1000 flights from low-cost airlines. All of them experience a delay, which is in line with your theory. However, you can never prove that flight 1001 will also be delayed. Still, the larger your dataset, the more reliable the conclusion.

Deductive research approach

When conducting [deductive research](#), you always start with a theory (the result of inductive research). Reasoning deductively means testing these theories. If there is no theory yet, you cannot conduct deductive research.

The deductive research approach consists of four stages:

1. **Start with an existing theory (and create a problem statement)**
 - Low cost airlines always have delays
 - All dogs have fleas
 - All biological life depends on water to exist
2. **Formulate a falsifiable hypothesis based on existing theory**
 - If passengers fly with a low cost airline, then they will always experience delays
 - All pet dogs in my apartment building have fleas
 - All land mammals depend on water to exist
3. **Collect data to test the hypothesis**
 - Collect flight data of low-cost airlines
 - Test all dogs in the building for fleas
 - Study all land mammal species to see if they depend on water
4. **Analyze and test the data**
 - 5 out of 100 flights of low-cost airlines are not delayed
 - 10 out of 20 dogs didn't have fleas
 - All land mammal species depend on water
5. **Decide whether you can reject the null hypothesis**
 - 5 out of 100 flights of low-cost airlines are not delayed = reject hypothesis
 - 10 out of 20 dogs didn't have fleas = reject hypothesis
 - All land mammal species depend on water = support hypothesis

(c) Briefly explain the types of research.

[10]

CO1

L2

Different types of research studies are useful across industries and fields, including:

- Biology, chemistry and other science-related fields
- Government offices and agencies
- Education
- Business

Here are different types of research you may consider as you design your research methodology:

Fundamental research

Fundamental, or basic, research is designed to help researchers better understand certain phenomena in the world; it looks at how things work. This research attempts to broaden your understanding and expand scientific theories and explanations. For example, fundamental research could include a company's study of how different product placements affect product sales. This study provides information and is knowledge-based.

Applied research

Applied research is designed to identify solutions to specific problems or find answers to specific questions. The research is meant to offer knowledge

