

नोट:-Vocational Subject- रिसर्च सर्वे वाले विद्यार्थी इस संबंध में किसी भी तरह की Guidance के लिए प्रभारी, एम0एड0 विभाग से संपर्क कर सकते हैं ।

RESEARCH SURVEY

Syllabus

1. Introduction to Research:

- Meaning,
- objectives, and
- significance of research and surveys in various disciplines.

2. Research Process: Steps involved in formulating a research problem and designing a survey.

3. Population and Sampling:

- Meaning of population,
- criteria for defining population, and
- types of sampling methods (random, stratified, systematic, etc.).

4. Data Collection: Methods of gathering primary and secondary data (questionnaires, interviews, observation).

5. Analysis and Interpretation:

Basic statistical application, processing data, and summarizing results

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SHORT NOTES

1. Introduction to Research

Meaning of Research

Research is a **systematic and scientific process of collecting, analyzing, and interpreting information** to discover new knowledge, verify existing facts, solve problems, or understand relationships between different factors.

Objectives of Research

1. To discover new facts and knowledge.
2. To verify and test existing theories or findings.
3. To identify and solve problems.
4. To understand relationships between variables.
5. To predict future trends or outcomes.
6. To provide a basis for decision-making and policy formulation.

Significance of Research

Research is important because it:

- Expands existing knowledge.
- Helps solve practical and social problems.
- Supports evidence-based decision-making.
- Improves policies, practices, and services.
- Helps identify social, economic, scientific, and technological trends.

Surveys in Various Disciplines

A **survey** is a systematic method of collecting information from individuals or groups, usually through questionnaires or interviews.

Surveys are used in:

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- **Social sciences:** studying attitudes, opinions, and social behavior.
 - **Business:** understanding customers and markets.
 - **Education:** evaluating teaching, learning, and student experiences.
 - **Health sciences:** studying health behavior and public-health conditions.
 - **Political science:** measuring public opinion and civic attitudes.
 - **Economics:** collecting information about income, employment, consumption, and living conditions.
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2. Research Process

The research process generally involves the following steps:

1. Identification of the Research Problem

Select a clear and meaningful problem that requires investigation.

2. Review of Literature

Study books, journals, reports, and previous research to understand what is already known.

3. Formulation of Objectives

Clearly state what the research intends to discover or measure.

4. Research Questions or Hypothesis

Develop questions to be answered or hypotheses to be tested.

5. Research Design

Decide how the research will be conducted, including the methods of data collection and analysis.

6. Define the Population

Identify the complete group about which conclusions are intended.

7. Select the Sample

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Choose a suitable sample from the population using an appropriate sampling method.

8. Design the Survey Instrument

Prepare a questionnaire or interview schedule with clear and relevant questions.

9. Pilot Testing

Test the questionnaire on a small group to identify unclear questions or problems.

10. Data Collection

Collect primary or secondary data according to the research design.

11. Data Processing and Analysis

Edit, code, classify, tabulate, and statistically analyze the collected information.

12. Interpretation and Reporting

Explain the findings, draw conclusions based on the evidence, and prepare the research report.

3. Population and Sampling

Meaning of Population

In research, a **population** is the complete set of individuals, objects, organizations, or observations that possess the characteristics relevant to a study.

For example, if a study examines college students in a university, all eligible students constitute the research population.

Criteria for Defining a Population

A population should be clearly defined according to:

- **Elements:** Who or what is being studied.
- **Geographical area:** Where the population is located.
- **Time period:** When the study applies.

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- **Characteristics:** Relevant features such as age, occupation, education, or income.
- **Scope:** The specific boundaries of the study.

Sampling

Sampling is the process of selecting a smaller group, called a **sample**, from the population to obtain information about the population.

Types of Sampling

A. Random/Probability Sampling

Every population member has a known probability of being selected.

1. Simple Random Sampling:

Members are selected entirely by chance, giving each eligible member an equal chance of selection.

2. Stratified Sampling:

The population is divided into subgroups or **strata** based on relevant characteristics, and samples are selected from each stratum.

3. Systematic Sampling:

Researchers select members at regular intervals from an ordered population list, usually after choosing a random starting point.

4. Cluster Sampling:

The population is divided into groups or clusters, and some clusters are selected for study.

5. Multistage Sampling:

Sampling is carried out in multiple stages, often combining two or more sampling methods.

B. Non-Probability Sampling

The probability of selection is not known for every population member.

1. Convenience Sampling:

Participants are selected because they are easily accessible.

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2. Purposive/Judgment Sampling:

Participants are deliberately selected because they meet specific research requirements.

3. Quota Sampling:

Participants are selected to fill predetermined categories or quotas.

4. Snowball Sampling:

Existing participants help researchers identify or recruit additional participants.

4. Data Collection

Data may be **primary** or **secondary**.

Primary Data

Primary data are collected directly by the researcher for a particular study.

Methods of Collecting Primary Data

1. Questionnaire:

A structured set of questions completed by respondents. It can be administered online, on paper, or through other methods.

2. Interview:

The researcher asks questions directly to participants. Interviews may be structured, semi-structured, or unstructured.

3. Observation:

The researcher systematically watches and records behaviors, events, or conditions.

Secondary Data

Secondary data are information that has already been collected by another person or organization for another purpose.

Examples include:

- Government publications
- Census reports

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- Research articles
 - Books and journals
 - Institutional reports
 - Company records
 - Official databases
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5. Analysis and Interpretation

Data Processing

Before analysis, collected data generally go through:

1. **Editing:** Checking data for errors and completeness.
2. **Coding:** Assigning codes or numerical values to responses.
3. **Classification:** Grouping similar information together.
4. **Tabulation:** Arranging data systematically in tables.
5. **Data Cleaning:** Identifying and correcting inconsistencies or invalid entries.

Basic Statistical Applications

- **Frequency:** Shows how often a particular value or response occurs.
- **Percentage:** Expresses a frequency as a proportion of the total.
- **Mean:** The arithmetic average.
- **Median:** The middle value when observations are arranged in order.
- **Mode:** The value occurring most frequently.
- **Range:** Difference between the highest and lowest values.
- **Standard Deviation:** Measures how widely observations are spread around the mean.
- Tables, charts, and graphs can also be used to present findings clearly.

Interpretation of Results

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Interpretation means explaining what the analyzed data indicate in relation to the research objectives or questions.

A good interpretation should:

- Focus on the evidence obtained.
- Relate findings to the research objectives.
- Identify important patterns and relationships.
- Avoid unsupported conclusions.
- Mention relevant limitations.

Summarizing Results

The final results are commonly presented through:

- Tables
- Percentages
- Charts and graphs
- Descriptive statistics
- Key findings
- Conclusions and recommendations