

What is research?



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What is research?

“ Systematic effort to gain knowledge”

- Redman and Mory.

Or

Research is a process of “ manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge,

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Defining research

In general research comprises the following:

- Defining and redefining the problem
- Formulating hypothesis
- Collecting data, and evaluating data
- Making analysis and reaching conclusions
- Carefully testing the conclusions to prove the hypothesis

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Type of Research

- | | |
|-----------------|-------------------|
| ❖ Physical | ❖ Clinical |
| ❖ Biological | ❖ Environmental |
| ❖ Psychological | ❖ Anthropological |
| ❖ Sociological | ❖ Historical |
| ❖ Economical | ❖ Political |

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Different Purposes for Research

- ❖ **Pure Research** : Discovery of knowledge for the sake of knowledge.
- ❖ **Applied Research**: Conducted with some practical purposes in mind.
- ❖ **Exploratory Research**: Conducted in order to explore the phenomena.
- ❖ **Explanatory Research** : Conducted in order to explain the phenomena.
- ❖ **Evaluation Research**: Conducted in order to develop and “evaluate” programs

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Objectives of Research

1. **Exploratory research**: To gain familiarity with a certain phenomenon or gain new insights.
2. **Descriptive**: To portray accurately the characteristics of a particular individual, group or situation.
3. **Diagnostic**: To see the frequency with which some phenomenon is associated with something else
4. **Hypothesis-testing**: Hypothesis of causal relationship between variables

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Research procedure

- ❖ Research is all about addressing an issue and answering a question or solving a problem.
- ❖ Identify an issue, question, or problem.
- ❖ Find out what's already known about it.
- ❖ Talk with supervisor experts, reviews other researches on the topic.
- ❖ Plan, cost, and do your study accordingly.
- ❖ Prepare synopsis.
- ❖ Collect data for the research and analyse them.
- ❖ Write it up and submit research for assessment.
- ❖ After the award , Submit your research for publication
- ❖ Your work will benefit more people if you publish it.
- ❖ Rule No. 1 in academia is publish or perish.

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Research Methodology

Methodology means the systematic study of the methods, procedures, principles and rules applied within a given discipline/subject.

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Data collection

Majority of data collected by two methods:

1. **Primary data:** collected by researcher through various data collection method.
2. **Secondary data:** collected through Library research, references, bibliography, abstract, etc.

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Data collection

Through

- ❖ Experiments
- ❖ Field observation
- ❖ Survey
- ❖ Participant observation
- ❖ Open interviews
- ❖ Review of literature through content Analysis

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Experiments

Experiments measure the effect of one or more independent variables on one or more dependent variables under controlled conditions.

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Field Observation

Field observation is the systematic counting and recording of events in a natural (uncontrolled) conditions.

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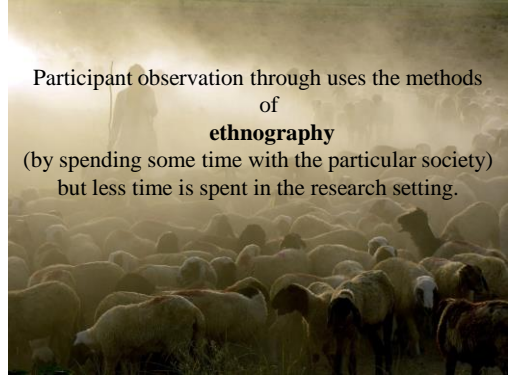
Survey

A survey is with series of questions used to gather data from a sample that can be generalized to a population.

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Participant Observation

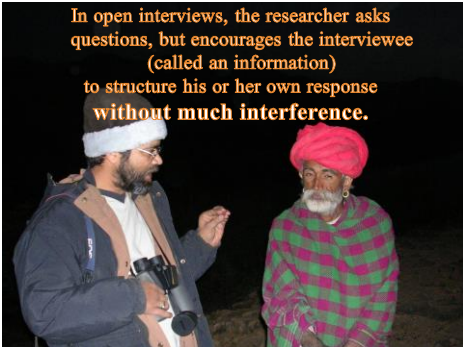
Participant observation through uses the methods of **ethnography** (by spending some time with the particular society) but less time is spent in the research setting.



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Open Interviews

In open interviews, the researcher asks questions, but encourages the interviewee (called an informant) to structure his or her own response **without much interference.**



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Data analysis techniques

- ❖ Data analysis techniques can be qualitative and quantitative
- ❖ Analysis for testing hypothesis and to prove the hypothesis.
- ❖ Through statistic tests like: Chi-square, T-test, Correlation & Regression, Analysis of variance etc.

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Research phase: 1

- ❖ Clarification of the issue to be researched, because a question that is unclear or cannot be answered.
- ❖ Selection of research method(s). The research method allows the research to be conducted according to a plan or design.
- ❖ Clarification of the question and method enables the researcher to be more clear in the data collection and to make a decision about the sample size, or the amount of data, is needed.

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Research phase: 2

- ❖ Collection of the data through surveys, interviews, literature review, participant observation, etc.
- ❖ Summarising and organising the data through analysis and interpretation.
- ❖ Relating the data to the research question and drawing conclusions

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Research phase: 3

- ❖ Assessing the limitations of the study and writing of the results obtained by data.
- ❖ The research report summarises the activities in such a way that they are clear to the reader.
- ❖ Publish your work to benefit people and society.
- ❖ So the reader could repeat the research.

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Research Report

A Research Report should *generally* include:

1. **Introduction:** Statement of problem, review of relevant literature.
2. **Material and methods:** Statement of hypothesis or research objectives, description of research design, description of methods how data was collected.
3. **Results:** Data presented and summarised in words.
4. **Discussion:** Limitations, and implications
5. **Conclusion:** summarises the activities
6. **Bibliography:** References
7. **Appendices:** Interview forms, data sheets, maps, etc.

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Criteria of good research

1. **Purpose** should be clearly defined.
2. **Process** should be described in sufficient.
3. **Design** (Sampling, questionnaire, observation etc) should be thoroughly planned to obtain good results.
4. **Ethical standards** must be very high from collection information , to forcing respondents to answering questions. (animal rights and human dignity).
5. **Limitations** should be frankly revealed (e-g., flaws in design) so that the user of research is made aware.
6. **Adequate** Analysis of data and methods of analysis must be appropriate. Should check for reliability and validity, and probability of errors.
7. **Good** presentation.
8. **Conclusions** should be justified by the data of the research.
9. **Publications** in the referred journal with high impact.

Thanks

