



Research in Geography: Meaning, types and significance

1. Meaning of Research

Research is a search of knowledge. It is defined as scientific and systematic search for relevant information on a specific topic. In fact, research is an art of scientific investigation.

Accordingly to Woody “research accumulated formulating research problem, formulating hypothesis, collecting and evaluation data and making hypothesis and suggested research conclusion and finally testing the hypothesis”.

2. Characteristics of Research

- ❖ Research is directed toward the solution of problem.
- ❖ Research emphasizes the development of generalizations principles or theories that will be helpful in predicting future occurrences.
- ❖ Research emphasizes both qualitative and quantitative.
- ❖ Research strives to be objective and logical, applying every possible test to be validating the procedures employed.

3. Objectives of Research

- ❖ The main objective is to find out the truth which is hidden and which has not been discovered yet.
- ❖ To gain up knowledge of a phenomena or to accomplish new experiences into it.
- ❖ Discover the solution of the problems.
- ❖ To test a hypothesis of a casual relationship between variables.
- ❖ Research is to discovered the unsolved problems and formulating a new theory which should be accepted by the globally.

4. Types of Research

John W. Best and James V. Kahn have mentioned three different purpose of research-

- I. **Fundamental research:** The fundamental research is also known as basic research. The goal of this research is to find out the basic truth or principles. For example, Newton's law of universal gravitation, Newton's laws of motion, Albert Einstein's general theory of relativity, etc.
- II. **Applied research:** Applied research involves finding new applications of scientific knowledge to the solution of a problem such as development of the new system.



- III. **Action research:** Action research is either initiated to solve immediate problem or a reflective process of progressive problem solving led by individual working with others in teams or as part of community of practice to improve the way they address the issue and solve the problem. It is also known as participatory action research.

According to John W. Best and James V. Kahn educational research are as follows –

- I. **Historical research:** Historical research is the process of systematically examining past events to give an account of what has happened in the past.
- II. **Quantitative research:** Quantitative research is the systematic empirical investigation of observation based on statistical, mathematical or computational techniques. The objective of quantitative research is to develop and employ mathematical models, theories or hypothesis pertaining to phenomena.
- III. **Qualitative research:** Qualitative research dealing with phenomena that are difficult or impossible to quantify mathematically, such as beliefs, emotions, symbols, etc. For examples, investigating the reasons for human behaviour.
- IV. **Conceptual research:** Conceptual research is that related to some abstract idea(s) or theory. It is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones.
- V. **Empirical research:** Empirical research based on observation and experience to get research result. The researchers are formulating a hypothesis and tested the hypothesis for the establishment of research result.

5. Meaning of research in geography

Identifying a natural or human problem using scientific methods and techniques and solving that problem from a geographical point of view is called a geographical research. In another word, the research problem should be a geographical problem. The observation of the research study should emphasize how the geographical problems act and leads to deterioration of physical or human environment.

6. Types of research in geography

A. Research areas in physical geography

- Processes of landform development.
- River basin development and management.
- Stream flow alternation and consequences.



- Environmental quality assessment and consequences- water quality, air quality, ecological environmental quality, Climate change.
- Ecological risk assessment- wetland landscape, vegetation community.
- Ecosystem services of wetlands, vegetation, rivers, etc.
- Hazard Assessment - landslide prone zone, flood prone zone.
- Spatial modelling of soil erosion.
- Soil erosion susceptibility assessment.

B. Research areas in human geography

- Urbanization- process and threats, consequences, Urban sprawl, etc.
- Deprivation - Multi dimensional poverty, Infrastructural deprivation, Socio-economic deprivation
- Quality of life.
- Land use land cover change assessment and their implementation in different perspectives – biodiversity.

7. Significance of research in geography

- i. Helps to know about the nature and extent of the research problem and suggested the possible solutions on the specific area.
- ii. Helps to make predictions about the future scenario.
- iii. The outcomes of the research studies can establish new ideas and helps to other researchers to construct the theoretical basis of their study.
- iv. Helps to establish the relationship human and nature.
- v. The outcomes of research observations help to the policy makers and planners to formulate new plan and policies or guidelines for solving the problem.