

Methodological foundations of scientific research

Lesson 1

The Goal: to understand the content of scientific research, to know the basic terms and elements

Learning outcome: be able to identify the object of research, identify a problem and put forward a hypothesis

Questions:

- 1. Scientific research and its need for business**
- 2. Classification of scientific knowledge**
- 3. Research design**



Scientific research and its need for business

- *Scientific research is purposeful knowledge, the results of which appear in the form of a system of concepts, laws and theories.*
- *The goal of scientific research is a comprehensive and reliable study of an object, process or phenomenon, their structure, connections and relationships on the basis of scientific principles and methods of cognition developed in science, as well as obtaining and putting into practice results useful for humans.*

Scientific research and its need for business

Object

- process or phenomenon that generates a problem situation and is selected for study (company, fund, security,)

Subject

- Everything that is within the boundaries of the object of study in a certain aspect of consideration

Issue

- A large summarized set of formulated scientific questions that cover the area of future research

Hypothesis

- Scientific hypothesis put forward to explain any phenomena

To understand the importance of scientific research, it is important to observe the following concepts:

- 1. Scientific research should be systematic (not based on assumptions and guesses, but only on logically identified relationships and analysis).
- 2. Scientific research expands and multiplies knowledge (provides a basis for further research, searching for deeper causes and problems of a particular field of research)



Scientific research and its need for business

- *Business is one of the most effective mechanisms for the development of society. All economic and social processes taking place in the economy contribute to its development. Therefore, it is important to study all trends in the development of business processes, factors and conditions that can positively or negatively affect the economic growth of the economy.*
- Scientific research helps to identify all aspects of business processes, to give them the right direction in development and management.

Scientific research and its need for business

- The main role of business in the life of a person / society is due to its functions:
 - - economic
 - - innovative
 - - political
 - - leadership
 - - moral



Classification of scientific knowledge

The classification of sciences is the disclosure of their mutual connection on the basis of certain principles and the expression of these connections in the form of a logically justified arrangement or row.

The classification of sciences reveals the relationship between natural, technical, social sciences and philosophy.

Currently, sciences are distinguished depending on the sphere, subject and method of cognition:

- 1) about nature - natural;**
- 2) about society - humanitarian and social;**
- 3) about thinking and cognition - logic, epistemology, epistemology, etc.**

Science by the method of cognition is subdivided:

- to empirical sciences, which study in more depth the knowledge obtained as a result of material practice or through direct contact with reality. The main methods of the empirical sciences are observation, measurement and experiment. Science, which is at the empirical level, deals with the collection of facts, their initial generalization and classification. Empirical knowledge provides science with facts, while fixing stable connections and patterns of the world around us;**
- on theoretical knowledge, which is the result of generalization of empirical data. At the theoretical level, the laws of science are formulated, which make it possible to explain and predict empirical situations, i.e. cognition of the essence of phenomena.**

Science in relation to practice

Science in relation to practice

In relation to practice, sciences are subdivided into fundamental and applied.

The purpose of the fundamental sciences is the knowledge of the basic laws of nature, society and thinking,

and applied sciences - the practical implementation of the results of the activities of fundamental branches of science.

The importance of research

Reason 1: Research enables:

Fill existing knowledge gaps;

Expand your area of expertise;

Take into account the private opinions of people;

Reason 2: Research helps to increase the hands-on experience of teachers:

Teachers get new ideas;

Teachers get new opportunities in teaching methods;

The importance of research

- Reason 3: Research takes political debate to a qualitatively higher level:
- Research enables society to weigh different points of view on a particular problem;
- Research enables people / society to obtain the information they need to make political decisions;

- Reason 4: Research develops the student's practical ability, c. including:
 - Organization skills;
 - Analytical skills;
 - Skills of competent presentation of thoughts in writing;
 - Skills of presentations of the work done;

Scientific research scheme



Conclusions :

- Scientific research is a mechanism of action "goal-resources-result"
- The choice of research topic directly depends on the object
- There are some research elements (object, subject, problem, hypothesis), on the correct formulation of which the research result depends.
- The development of the economy and business determines the directions of scientific research that contribute to their improvement, expansion of the positive aspects, minimizing the influence of negative factors
- For a better understanding of the content of scientific research, it is important to read existing publications and clearly fix for yourself the algorithm for performing scientific research (for writing a scientific article / completing a scientific project, writing a dissertation)