AMERICAN JOURNALS
Open Access, Peer Reviewed Journals

American Journal of Pedagogical and Educational Research
ISSN (E): 2832-9791| Volume 31, | December - 2024

THE IMPORTANCE OF EMPIRICAL CONCEPTS AND METHODS OF THEIR FORMATION

M. Tirkashov
Qarshi State University

A B S T R A C T

The article examines the implementation of mental activity in the course of empirical cognition, collecting information about an object and making preliminary generalizations, creating a general description of an object, collecting data based on observations, systematizing and classifying data.

K E Y W O R D S

Empirical knowledge, scientific knowledge, empirical concepts, empiricism, observation, experiment, comparison, measurement.

Introduction

The study, knowledge and study of the world has been one of the central problems in philosophy, psychology and pedagogy. It is noted that when an individual generalizes from a philosophical point of view, despite the fact that the methods and forms of knowing the world are diverse, they are realized in two stages: that is, scientific cognition and empirical cognition.

Scientific knowledge is carried out based on logical thinking and inference, mathematical calculations. Empirical cognition, on the other hand, is based directly on the perception of the object being studied through the sensory organs. While both cognitive processes differ in some aspects, they are interrelated and complement each other in modern science.

Empirical cognition is a process of cognition based on the DiRECT study (research)of real objects, phenomena and processes, and in such a process of cognition, influence on the object under study through sensations is central. That is, information perceived on the basis of influencing the object under study through sensory organs is processed through thinking.

Empirical concepts are generalized symbolic representations of information about the external world based on observation, experimentation, analysis, comparison.

Empiricism is a practice-based stream of philosophy, whose founders and representatives believe that experience lies on the basis of knowledge. In their opinion, knowledge is obtained as a result of experience, and with the success of experience, the power of knowledge is determined.

The founder of the stream of empiricism was Francis Bacon, which developed widely in England in the 17th century, and later in America. The leading representatives of this stream are the likes of Thomas Gobbs, John Locke, John Dewey.

Empirical cognition in philosophy is based on perception. Perception is the process of knowing objects and phenomena in the universe that surrounds the subject itself with the help of sensations.

- During empirical knowledge, the following types of mental activity are carried out:

• collect information about the object and make preliminary generalizations;
* structure the general description of the object;
* data collection based on observations;
*systematization and classification of data.

In gnoseology, the level of empirical knowledge as a separate direction arose in the XVII-XVIII centuries. Proponents of this direction note that real knowledge occurs only on the basis of emotional knowledge and experience. That is, it implies the collection of information about the object being studied on the basis of experimentation and observation.In this, a person observes, studies, makes a comparative analysis and makes various measurements with the participation of sensory organs. In addition, in the process of empirical cognition, empirical laws are also determined. That is, the laws that are not theoretically substantiated, but have been proven to exist experimentally, are clarified.

Phorobius calls Man the greatest and most mature product of existence. He has the ability to comprehensively study the universe through his consciousness, mind, sense organs. With the help of the human mind, one understands the essence of the whole being. "The mind," he says, " when examining bodies without such qualities, it is only a b¢aimed at determining what the essence of the bodies consists of and what is abstracted from the senses.

The activity of the mind that separates the body from The Associated B¢lgan characters is carried out to verify only the essence of that body" [24;123].

In his treatise on reason, farobius gives special importance to the nature of human thinking, describing the "twelve innate qualities"of a moral person.

A scientist, an intelligent person who quickly and correctly understands the discussion and reasoning that is carried out on all issues, can quickly notice the purpose of the speaker and the truth of what is said by realizing its meaning, his memory is very energetic, he can remember, not forget, remember any of what he saw, Heard, felt, and keep in mind, , specifically states that knowledge will be easily assimilable [25;109].

A scientist, an intelligent person who quickly and correctly understands the discussion and reasoning that is carried out on all issues, can quickly notice the purpose of the speaker and the truth of what is said by realizing its meaning, his memory is very energetic, he can remember, not forget, remember any of what he saw, Heard, felt, and keep in mind, , specifically states that knowledge will be easily assimilable [25;109]. According to the scientist, only this knowledge will be real and solid if only the information heard, seen or generally received through the sensory organs is not perceived as such, but passed through the shell of the mind and the corresponding conclusions are drawn.

In the scientific heritage of berunius, a great place is also given to the scientific method of studying and knowing nature. The characteristic features of the berunian scientific method are an objectivity and a rational approach, observation, experiments, the study of oral and written monuments, a critical approach to evidence, their logical generalization in the form of mental conclusions and an analogy with the aim of determining the truth.

In the general case, the concept of empiricism is based on experience or expresses in itself the information that comes from experience. The term was introduced by Immanuel Kant in philosophy, and undun then many philosophers have interpreted the foundation of empirical knowledge as a wrong path in science. Because any experience acquires a private and casual character, they will not be of a universal and necessary character. Therefore, all empirical data can be approximated and temporal in

nature. But knowledge that has no empirical basis cannot be true knowledge. That is, any theoretical knowledge must necessarily be tested in experience. (26.)

- Empirical research methods include:kuzatish;
- * experiment;
- * comparison;

* measure.

Empirical knowledge is empirical data on real objects. Empirical knowledge is based on emotional knowledge.

In any theory, theoretical and empirical concepts are the basic logical units of the uing. Theoretical and empirical research, theoretical and empirical cognition, theoretical and empirical concepts are the main two “wings” of science as well as scientific research.

In scientific research, empirical methods are not used without deviations from scientific knowledge, since even for simple observation it is necessary to form preliminary theoretical foundations. That is, processes such as the selection of the object of observation, the preparation of the theoretical foundations of the problem, the development of a research hypothesis are recorded as theoretical studies.

The most important element in empirical research is reality. Any scientific study begins with the accumulation, systematization and generalization of facts about the object under study. A fact is some kind of fragment of the studied reality, information about an objective phenomenon, indicators that have been collected and determined by observation and experiments.

Scientific facts make up the main content of scientific knowledge and scientific work. They are undeniable and mandatory. Along with them, it is possible to distinguish a certain system of scientific facts, the main form of which is empirical generalizations.This is the main foundation of Science, Scientific Facts, their classifications and empirical generalizations, which, with its reliability, cannot raise doubts, sharply distinguishes science from philosophy and religion. Neither philosophy nor religion creates such facts and generalizations.

Therefore, during an empirical experiment, activities are clearly planned, built with reference to theory, and facts are always used theoretically based.

Therefore, empirical concepts are formed by the perception of information from the outside world through sensations, and the order of empirical methods includes observation, experiment, comparison, and generalization.

References

1. O‘zbek tilining izohli lug‘ati. O‘zbekiston Respublikasi fanlar akademiyasi A.Navoiy nomidagi til va adabiyot instituti. A.Madvaliyev tahriri ostida. O‘zbekiston milliy ensiklopediyasi. Davlat ilmiy nashriyoti. Toshkent. 2011.-231 b.
2. Karlibayeva G. YE. Bo‘lajak fizika o‘qituvchilarining metodik tayyorgarligini takomillashtirish. Pedagogika fanlari doktori diss. Avtoreferati. Nukus-2018. 58 b.
3. Nishonova Z.T, Kamolova N.G‘, Abdullayeva D.U, Xolnazarova M.X. Rivojlanish psixologiyasi. Pedagogik psixologiya. Toshkent: Print 25. bosmaxonasi. 2019.-216 b.
4. Zufarova M.E. Qiziqarli psixologiya. Toshkent: Faylasuflar. 2017.-197 b.

5. Ibodullayev.Z.R. Asab va ruhiyat. Ilmiy-ommabob risola. Toshkent: Zamin nashr. nashriyoti. 2019.-289 b
6. Ivanov.P.I, Zufarova.M.YE. Umumiy psixologiya. Toshkent: O‘zbek faylasuflari milliy jamiyati. 2015.-127 b.