

PROBLEMS OF SCIENCE IN THE INTERPRETATION OF RESEARCHERS

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<https://doi.org/10.5281/zenodo.20823560>

Abstract

This article highlights the main problems encountered in the development of science and their interpretation by researchers. Modern science is an important factor in the development of society, and economic, social, technological and moral factors affecting its development are analyzed. Also, proposals aimed at increasing the quality of scientific research and accelerating the development of science are given.

Key words: science, research, innovation, scientific problems, education, technology, development.

Introduction

Science is one of the main driving forces of human development. In each period, as a result of scientific research, new discoveries were made and served the development of society. Advances in science have made it possible to improve health care, transportation, communication, agriculture, and many other areas of human life. As a result, people live longer, healthier and more prosperous lives than in the past. However, with the development of science, various problems arise, such as environmental pollution, ethical concerns related to genetic engineering and artificial intelligence, and the misuse of scientific technology. Researchers interpret these problems in different ways and propose different approaches to solve them. Therefore, it is important to responsibly use the achievements of science and ensure that they contribute to the well-being of mankind, to minimize possible risks.

Literature Review

The problems of science and its development prospects have been researched by many local and foreign scientists. Views about the nature of scientific knowledge, the laws of scientific development, and the role of scientific activity in the development of society have been formed since ancient times. One of the Eastern thinkers, Abu Rayhan Beruni, emphasized the need to rely on observation, experience and evidence in scientific research. Issues of reliability and objectivity of knowledge occupy an important place in his scientific heritage. Abu Nasr Farabi highlighted the role of science in the development of society and noted that scientific knowledge is one of the main factors of human development and state development. Thomas Kuhn, one of the representatives of the modern philosophy of science, emphasizes that scientific progress is not continuous, but is realized through scientific revolutions. In his opinion, in the development of science, existing paradigms are replaced by new scientific views over time. Karl Popper argued that the scientificity of scientific theories is determined by their verifiability and refutation. In the researches of recent years, special attention is paid to the issues of financing, scientific infrastructure, innovative activities, international cooperation and academic integrity as factors affecting the development of science. Researchers emphasize that the quality of scientific results largely depends on the availability of modern technologies, qualified personnel and an effective scientific environment. The analysis of the literature shows that although the problems of science have been interpreted differently in different periods, most of them are related to increasing the efficiency of scientific

activity, supporting scientific research and developing innovative solutions that meet the needs of society.

Methodology

Theoretical and analytical methods of scientific research were used during the preparation of this article. During the research, scientific works, articles and scientific literature of local and foreign scientists related to the problems of science were studied and analyzed. Through the comparative analysis of sources on the topic, the views and approaches of researchers to the problems of science were clarified. Also, the main factors hindering the development of science were highlighted using the methods of generalization, systematization and logical analysis. In the course of the research, scientific literature, electronic sources and information presented in scientific articles were used, and their content was analyzed from a scientific point of view. On the basis of the obtained results, conclusions were drawn on current problems in the field of science and their elimination.

The main part According to researchers, one of the most important problems affecting the development of science is the issue of funding. Lack of sufficient funding for scientific research causes many scientific projects to be incomplete. Especially in developing countries, funds allocated for scientific research are limited, which has a negative impact on the development of science. Another important problem is the issue of scientific personnel training. Modern researchers emphasize that the development of science depends on qualified specialists. One of the important tasks is to increase the interest of young people in scientific activities, to create the necessary conditions for them and to support scientific research. The rapid development of information technologies also creates new problems. Researchers pay special attention to the issues of processing large amounts of data, ensuring information security and maintaining the reliability of scientific results. At the same time, the introduction of artificial intelligence and digital technologies into science creates new opportunities, but also raises ethical and legal issues. Many scientists point to the issue of academic honesty as another important problem in science. Plagiarism, falsification of data and misinterpretation of scientific results have a negative impact on the development of science. Therefore, it is necessary to strictly observe the principles of honesty and impartiality in scientific research. At the global level, environmental problems, climate change, depletion of energy resources, and issues related to health care are considered as urgent tasks facing science. Researchers emphasize that international cooperation and an interdisciplinary approach are important in solving these problems.

Results

Guidelines of the research field, problems affecting the development of science are multifaceted, protected by the document, related to the organizational and social process. In the analyzed scientific sources, researchers are supported under the influence of not supporting scientific activity to the extent that it can be achieved. , issues of safe personnel production and scientific support of young scientists were also noted as problems. It helps to develop modern, scientific centers and innovative environment for increasing research resources, support for scientific research. The analysis found that the development of information and communication technologies has created scientific experience, but also brought new information related to data sources, reliability and academic integrity. it was noted that personal, plagiarism and misinterpretation of scientific data will affect scientific quality. The results also show that international scientific cooperation plays an important role in solving modern global problems -

climate change, cleaning, health and energy issues. Researchers emphasize the need for interdisciplinary and innovative technologies for effective solutions.

Discussion

Research results and literature analysis showed that the problems affecting the development of science are multifaceted and interrelated. In particular, problems related to financing have a direct impact on the effectiveness of scientific activity. According to researchers, the availability of sufficient material and technical base, laboratory equipment and scientific grants is important for conducting modern scientific research. Also, the issue of training of scientific personnel and support of young scientists appeared as one of the main factors of the development of science. Increasing the interest of young people in scientific research, involving them in scientific projects and expanding the opportunities to study international experiences will serve to increase the scientific potential. During the research, along with the positive impact of information and communication technologies on the development of science, some negative aspects were also identified. In particular, checking the reliability of information, ensuring information security, and observing the principles of academic honesty are one of the urgent issues of modern science. In addition, the role of science in solving global issues related to environmental problems, climate change, energy and health is increasing. To effectively solve these problems, it is necessary to develop international cooperation, support interdisciplinary research and wide introduction of innovative technologies.

Conclusion

In conclusion, despite the fact that the development of science is an important factor in the development of society, it faces a number of problems. Researchers interpret these issues in relation to funding, training, access to information technology, academic integrity, and global issues. The effective solution of these issues makes it possible to accelerate the development of science, implement innovative ideas, and make new discoveries that serve the development of society.

Adabiyotlar, References, Литературы:

1. Abu Rayhan al-Biruni. The Remaining Signs of Past Centuries. Tashkent: Fan Publishing House, 1968.
2. Al-Farabi. The Virtuous City. Tashkent: Yangi Asr Avlodi, 2016.
3. Thomas Kuhn. The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1962.
4. Karl Popper. The Logic of Scientific Discovery. London: Routledge, 1959.
5. Robert K. Merton. The Sociology of Science: Theoretical and Empirical Investigations. Chicago: University of Chicago Press, 1973.
6. Francis Bacon. Novum Organum. London, 1620.
7. René Descartes. Discourse on the Method. Leiden, 1637.
8. UNESCO. UNESCO Science Report: The Race Against Time for Smarter Development. Paris: UNESCO Publishing, 2021.
9. OECD. Main Science and Technology Indicators. Paris: OECD Publishing, 2023.
10. World Bank. World Development Report 2021: Data for Better Lives. Washington, DC: World Bank Publications, 2021.