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The Meaning and Significance of the Concept of Technological Determinism in Technical Education

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ANNOTATION

This article examines the essence of the concept of technological determinism, its definition in dictionaries and views of scientists of various fields, its importance in the technical development and the process of technical education today.

KEYWORDS: technical, determinism, technological determinism, concept, Education, Technical Education, Technical Field, professional knowledge.

INTRODUCTION

Today, one of the urgent tasks is to provide students of technical educational institutions with in-depth teaching of concepts of high scientific importance and, on this basis, to develop their competence and outlook. In this regard, the role of the concept of technological determinism in the development of professional knowledge and skills of students of technical education is high. On the basis of changes in the higher education system in our country, educational reforms are being carried out in various areas aimed at in-depth teaching of scientific concepts and increasing the theoretical knowledge and scientific outlook of future professionals. “According to research from Harvard University, our country has all the opportunities and relative advantages in the production of more than 50 industrial products. In particular, there are all the necessary conditions for the petrochemical, metallurgical, mechanical engineering, electrical engineering, pharmaceuticals, construction materials, textiles, leather and footwear, food and "green economy" industries to become "drivers" of our economy "[1]. It is important to deepen the scientific analysis of the concepts of technical development, increase their knowledge in higher technical education, as well as the use of technological concepts in production and industry.

RESEARCH MATERIALS AND METHODOLOGY

Numerous sociological and pedagogical researches on the negative aspects of man-made civilization, the process of human automation and robotics, the competition of artificial intelligence with the human mind have been conducted and are still being conducted.

Scientists J. Martin, H. Beck, F. Dessauer, S. Hawking, N. Wig, J. Elliul, M. Heidegger, K. Jaspers, studied in the research work of D. Medous.

In the countries of the Commonwealth of Independent States in the scientific research of such scientists as VS Stepanov, B.Stepin, M.I.Shchadov, Yu.A.Chernegov, N.Yu.Chernegov Socio-pedagogical aspects of the development of the methodology are also covered.

Theoretical, conceptual and technological bases of increasing the knowledge of students of higher technical education institutions in Uzbekistan on the basics of the concept of technological determinism RH Djuraev, AR Khodjabaev, UI Inoyatov, NA Muslimov, KT

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Olimov, E.O.Turdikulov, M.B.Urazova, J.A.Hamidov, M.Toshov, O.A.Abdukuddusov, M.Jumaniyozova, R.A.Mavlonova and others.

RESEARCH RESULTS

The term "technological determinism" was formed in the 1920s on the basis of rapid advances in science and technology, increasing the efficiency of mass application in the development of machinery and technology. The author of the term is the American sociologist Thorstein Veblan, who in his works argues that technical and technological developments create a "governance revolution" as a decisive factor not only in the development of the economy, but also in political decision-making. In his view, “the machine changes the anthroporphic habits of thinking” [2]. Hence, the problem of understanding technique and technology with a new spirit has influenced the creation of different theories and concepts about technological development.

The concept of technological determinism or technostatics approaches technology as a self-governing force. This means that technology develops according to its own logic and shapes its development rather than serving human goals. The concept of technostatics is much more common today. In essence, it is based on a natural-scientific approach that promises to determine the laws of technological activity or evolution. In turn, the ability to determine the laws of technology, in the opinion of proponents of this view, serves as a factor in the effective impact of technology itself. Even acknowledging the existence of external social factors influencing technology, proponents of this approach impose immanent laws on technological evolution. According to some authors, the development of technological systems occurs not only under the influence of human needs, the accumulation of knowledge about nature, but also in accordance with the internal laws of technological evolution. Attempts to define these laws have been noted many times. Knowing the laws of technology change, it is possible to effectively formulate a strategy to strengthen the technological level of the national economy.

The high-tech production systems created in the new period of development of our country, the system of continuing education on a modern basis and its constant improvement ensure the constant penetration of the latest technologies based on innovations in all spheres of society. However, the concept of rapid development promotes the active participation of our country in the global competitive environment and the formation of a competitive national innovation system. In this development process, human capital emerges as an important factor in socio-economic development. The current state of innovative socio-economic indicators is directly related to the activities of qualified personnel with high potential, high spirituality and moral culture. Innovative development is also reflected as a unifying factor in the cooperation of governmental and non-governmental organizations. This process, in turn, leads to an increase in the human factor in the innovative activity of the individual, which is an important factor in increasing his social status and improving the living conditions of the population. Achieving innovative development and continuous improvement of the national education system will strengthen the confidence of the population, especially young people, in the future. This process, in turn, requires young people, future professionals to pay special attention to the factors that ensure innovative activity.

The concept of technological determinism suggests that it is mainly aimed at solving two tasks. The first task - to understand technology, to form a clear idea of its nature and essence -

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is determined not by the crisis of technology, but by the crisis of modern "man-made civilization." In the process of solving it, it is understood that the ecological, eschatological, anthropological (spiritual) and cultural crises of our civilization are inextricably linked, with technology and, in a broader sense, the technical approach to all things and events being one of these factors of global instability. That is why the number of those who call our civilization "man-made civilization" is growing. This implies the impact of technology on all aspects of civilization and man, as well as the deep technical foundations of the development of civilization "[3]. Therefore, one of the important pedagogical tasks is to carefully study the approaches of the concept of technological determinism on the nature of technology and how it is connected with social development, to increase knowledge about it.

The second task is more methodological in nature: it is to look for ways to solve the problem of technical crisis. It goes without saying that "the search for these paths is first and foremost carried out in the intellectual field of new ideas, knowledge and projects. For example, many scientists associate the crisis of human culture and civilization with technology and technological progress. "[4] Unfortunately, as a result, both nature and man are degraded and destroyed, because the inanimate machine is becoming a simple functional element and material of the factor of production. The crisis of man-made civilization is exacerbating the need to develop futurological approaches to future technological development. This increases the importance of the concept of technological determinism, and one of the important tasks is to consider the negative effects of technological progress on social development, its place in the changes that are taking place.

Any achievement of today's scientific progress should serve to ease the problem of humanity, to solve its problems, at least in part. It goes on to say that "over the years, from sending information to Earth independently from space to reaching places inaccessible to humans during natural and man-made disasters, surgeons have been able to examine in detail and without error the tiny tissues of the eye and fingers." , machines and equipment. Originally designed to help service areas, patients and the lonely elderly, such 'iron people' are improving year by year in every way and are ready to argue with humanity in their thinking ". In other words, the generations of human beings, who once dreamed of flying with wings on their wings, are now struggling to "give life" to iron. Such an attitude is due to the fact that the development of society is influenced by the existence of causal links with the development of technology, the development of interdependence, and the development of technology in a dialectical relationship, rather than causing a social crisis.

The rapid introduction of modern innovative technologies in the economy and social spheres, with the widespread application of scientific and technical achievements in practice, is an important condition for the development of our country in the new era. It emphasizes the need for activities based on modern innovative ideas, developments and technologies that will ensure rapid and high-quality progress of our country on the path to becoming one of the leading countries in the world. At the same time, "scientific analysis confirms that there are shortcomings in the work on modernization, diversification of modern production, increasing its volume and expanding the range of competitive products in domestic and foreign markets. Due to the lack of innovation indicators in some areas and the lack of effective coordination of research, in recent years, our country does not participate in the ranking of the global innovation index, compiled by leading international organizations. The low level of cooperation between the economic and social sectors and scientific institutions, the lack of

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coordination of ministries and departments, as well as local authorities in the field of innovative development did not allow to achieve the priority goals in this area "[5]. One of the features of the new stage of development is the steady increase in social demand for qualified personnel. The acceleration of the country's development in socio-economic relations has increased the demand for personnel who are well-versed in their specialties, fluent in foreign languages and have high moral qualities. At the suggestion of the President, free industrial zones, new factories, joint ventures, finance, banking, radical reforms in agricultural development, significant changes in culture, services and entrepreneurship will create a new corps of personnel in higher education. requires. This process, in turn, promotes the task of radically improving the work of departments and faculties of higher education institutions, providing them with professors and teachers who can work in accordance with the new era.

DISCUSSION

Today, by studying the concept of technological determinism and increasing students' knowledge of this concept, it is possible to form approaches to issues such as defining the foundations of scientific and technical policy, developing a methodology of scientific and technical and humanitarian examinations, creating a methodology of scientific and technical forecasting. Also, the principles of historical reconstruction of technology and the practical importance of technology (machines, technical inventions, some areas of technical knowledge) in the study also serve to protect technology from evil.

Analytical analysis of the essence of the concept of technological determinism gives rise to the obligation to reflect on the idea of technology, to determine the idea and essence of this phenomenon, to understand its place in cultural and social life. According to J. Martin, a theorist of technological determinism, “many social problems are created by technical progress and the technological revolution, but the only solution is not to hinder the development of technology, but to develop it in all its aspects. For this, it is necessary to select and develop technologies that are in harmony with nature in social development. ”[6] So, it is necessary to humanize the technique and technology, to harmonize it with nature and man. At the same time, any attempt to humanize modern man-made civilization should be interpreted as a manifestation of the concept of technological determinism.

Also, according to the ideas of the concept of modern technological determinism, in the context of globalization, a new methodological problem has emerged through technological development, that is, the need to reduce technology to non-technical: activity, forms of technical rationality, values, certain aspects of culture. And new tariffs on technology began to form: According to him, technology is a means to an end, a specific human activity, everything that materializes human desire, as well as technology is a real existence of ideas, which arises from the processing of natural materials and objects. Technology is the art of finding the right path to the goal in the subjective sense, and in the objective sense - a set of tools and methods of action in the context of a particular area of human activity. A narrow interpretation of the concept of technology, for example, in the Polytechnic Dictionary and the Great Encyclopedic Dictionary, is defined as "a set of rules, methods and techniques for obtaining, processing or recycling of raw materials, intermediates, industrial materials." Technology has begun to play a central role in human existence and lifestyle, which is why it must be studied as a fundamental characteristic of man. When thinking about technology, it is important to keep in mind that the relevant word is used in different senses. "Technology"

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can refer to any of the following: a) a set of technical knowledge, rules and concepts; b) engineering practice and other technical professions, including certain positions in the profession, rules and norms for the application of technical knowledge; c) physical means, equipment or artifacts resulting from this practice; g) to integrate and organize the work and processes of technical personnel into large (industrial, military, medical, communication, transport, etc.) systems and institutions; d) the result of the integration of technological activity may depend on the nature and quality of the listed social life or "technological conditions" [7]. It follows from these ideas that, according to the proponents of technological indeterminism, technology seems to disappear and be replaced by certain forms of activity, values, the human spirit, various aspects of culture. Sometimes technology manifests itself as a deep and universal aspect of any human activity and culture.

At present, several problems related to technology, in particular the nature and social significance of technology and technology, are discussed based on the concept of technological determinism. According to the famous scientist Norman Vig, most of the debates about the nature of technology revolve around three concepts - “instrumentalist”, “socio-deterministic” and “autonomous technology”. Instrumentalism implies that technology acts as a means to an end. Any technological innovation is intended to solve a specific problem or to serve a specific human purpose. This raises the following questions: "Is the initial goal socially acceptable, is the project technically feasible, and is the invention being used to achieve the stated goals" [7]. Although this view is widespread, it is currently facing a lot of criticism.

CONCLUSION

Most scholars of technology, primarily historians and sociologists, advocate a view that can be called a socio-deterministic or contextual approach. According to this approach, “technology is not a neutral means of solving problems, but an expression of social, political and cultural values. Technology embodies not only technical ideas, but also the broad social values and interests of its designers and users. ”[7] Finally, “the concept of technological determinism, or autonomous technology, approaches technology as a self-governing force.

In conclusion, technological determinism means that the essence of the concept is that technology depends on social development, economic stability, develops on the basis of mutual causal links, and manifests itself as a separate value. In this sense, teaching the concept of technological determinism in higher education and increasing students' knowledge of this concept, making more use of the opportunities of the age of technology, will further clarify the role of technology in human life.

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