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PROBLEMS OF SCIENCE-EDUCATION-PRODUCTION COOPERATION IN MODERN EDUCATION

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Abstract: This article deals with the social, cultural, economic, political and pedagogical problems of science education and the problems of science education and production in the XXI century, which affect and affect the methodology of teaching in the educational process. Understanding its role because it affects individual, social organizational, and social development and functions. Based on the strong practical, philosophical, pedagogical-methodological and theoretical ideas and proposals put forward by our scientists, it is essentially the answer to this extremely rich scientific development in scientific literacy. By supporting action-oriented and problem-based curricula as a key to updating and activating scientific literacy to enhance student performance and national competitiveness in the global economy, the scientific literature provides a strong foundation for updating and transforming science education not only in perspective and approach. Not only that, but the main way of teaching is to study some of his ideas on strategies for solving socio-economic-scientific problems, such as the study of science-education-production cooperation.

Keywords: science, education, scientific literacy, curriculum, social activism, economic activity, problem-based curriculum, action-oriented, mono-methodology, globalization, nature of science – (NS), nature of technology (NT), philosophy of science (PS), socio-scientific issue (SSI).

INTRODUCTION

We will consider the problems and new opportunities that have arisen and are emerging in modern economic, environmental, social, cultural and political contexts

for science education to undergo change: as a field of education, as a complex of practical knowledge, as a competitive tool and strategy that is important for lifestyle and national goals and generations.

On No. PD-3151 of the President of the Republic of Uzbekistan dated 27.07.2017 Resolution "On measures to further expand the participation of industries and sectors of the economy in improving the quality of Higher Education" was recorded that in particular, the United Nations Committee on Education, Science and Culture (UNESCO) and a group of leading foreign experts in collaboration with the consulting organization (DGP Research & Consulting) based on the results of the analysis of a comprehensive study of the education system of the Republic of Uzbekistan in January-June 2017 Due to the lack of integrity of theory and practice, the inefficient organization of student internships in manufacturing enterprises, the majority of graduates, instead of becoming trained professionals, re-learn their profession after employment, as well as , modern requirements for the quality control mechanism of education There is a lack of qualified teachers and management staff in educational institutions, and insufficient cooperation with foreign educational institutions.

At the same time, in accordance with Annex 2 to the Model Action Plan (Roadmap) to ensure the quality of education in higher education institutions for the implementation of the law, the following tasks are listed in paragraph 4 : “Formation of orders for the training of higher education personnel of ministries and departments of the Cabinet of Ministers of the Republic of Uzbekistan, radical improvement of the level and quality of training in higher education institutions and student internships at enterprises and organizations in the system, joint research To approve the program of measures for implementation, employment of graduates of higher education institutions. ”

MATERIALS AND METHODS

The need to teach science in conjunction with practice has intensified efforts to help teachers understand what knowledge and skills are needed to engage young

people in effective learning in the science classroom [1]. More and more scholars in various fields are recognizing the importance and impact of education in the use of enterprise practices in teaching science, as well as the current and emerging challenges and opportunities of science education. One such expert is Derek Hodgson, an honorary professor of science education at the Ontario Institute for Educational Research (University of Toronto), an assistant professor of science education at the University of Auckland, and a visiting professor of science education at the University of Hong Kong. scientific-academic rigor, comprehensiveness, intellectual prowess, richness of ideas, philosophical skills of the book "Looking to the Future: Creating a Curriculum for Social Activity" focused on the problems of "industrial cooperation" from the breadth and depth of his knowledge and experience indicates Hodgson's scientific writings represent a high level of intellectual activity to better understand and enhance scientific literature and improved methods in developing a more realistic and action-oriented approach to teaching science.

The first of the conceptual foundations of Hodson's work is described in what he describes as the four basic elements of science education:

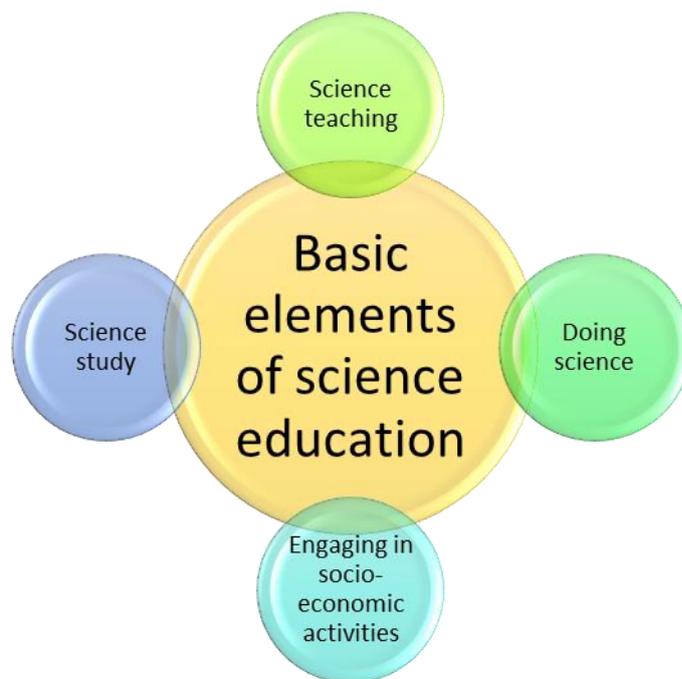


Figure 1. Basic elements of science education

- a) study of science: acquisition and development of conceptual and theoretical knowledge;
- b) teaching science: developing an understanding of the nature and methods of science, appreciating its history and development, knowing the complex interactions of science, technology, society and the environment, developing sensitivity to the personal, social and moral consequences of science, special technologies;
- c) engaging in science: developing experience in scientific research and problem solving, as well as developing confidence in solving a wide range of “real world” tasks and problems;
- d) engaging in socio-economic activities: the ability and commitment to take appropriate, responsible and effective action on social, economic, environmental and ethical issues related to science / technology (through management participation) [2,3].

The set of knowledge that constitutes the development of science, education and production in modern contexts is approached using six topics that include these four elements:

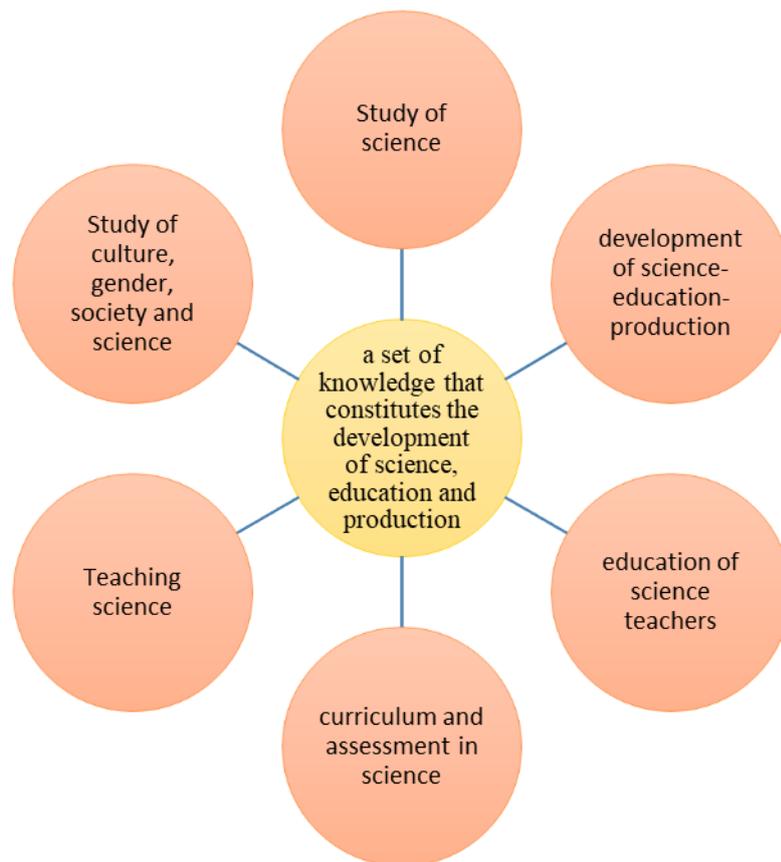


Figure 2. The set of knowledge that makes up the development of science, education and industry

RESULTS AND DISCUSSION

The competitive value of science education in the audience of teachers, economists and administrators and in enterprises and the need to re-engage curricula to make them more powerful and useful to solve our countless problems.

In order to redesign science education and science literacy programs, science teachers and other interdisciplinary integrations should be created, taking into account the views and needs of education professionals and enterprise staff. The developed curricula reflect the transformation of science literacy into an action-oriented approach in creating curricula for socio-economic change and activism. Science education in the 21st century should focus on developing strategies and solutions for our common problems, taking into account the importance of

collaborative and participatory pedagogy-based approaches. We live in a global society where diversity affects science, where students and citizens use different perspectives to assess the different educational needs and methods they use to understand science, even at the simplest level, and these assessments require different perspectives. As teachers, there is a need to change our understanding of the approach to the problem of “science-education-production cooperation” in modern education, as we see that the platform for applying the knowledge package has changed and is constantly evolving. we recognize that it is changing.

In a similar way to recognizing the importance of science education in the world economy and the important factors influencing learning opportunities, Ash and Klein [4] recognize that the means of developing science-education-production are not limited. The importance of developing science-education-production can be seen in the formal academic or audience environment, but in what they call the ‘informal learning environment’. This supports Hodson’s idea of action-oriented science teaching based on understanding and applying learning experiences and encounters in the real world or in an everyday environment to understand the methodology and process of science.

Computer animation, graphics software, and other photographic technologies are very useful in many audiences to study the practice of all levels of science. However, it is no exaggeration to say that the integration of science, education and industry is a modern requirement, given that in order to educate students to be successful professionals, they will not have to look for work in the future and will need skilled workers.

Science is real and focuses on the realism and reality of progress and survival in relation to individual and socio-economic experience in modern conditions. Participatory pedagogy requires research-based efforts by students and teachers to address issues of economic and scientific importance that provide the human and technical elements of science as a field of study [5].

Bartholomew, Osborne, and Ratcliffe [6] emphasized that the idea of supporting "diversity of scientific thinking" was that "students should be taught to use a number of methods and approaches in science and not to have a single scientific method or approach." Based on the following idea, they emphasize cooperation with production in the development of scientific knowledge in individuals.

Science and science and industry must play a role in developing solutions and strategies to solve the common problems we all face, and this can only be achieved if science is put into practice in conjunction with the production of enterprises, rather than as a reinforcement of theory.

CONCLUSION

Based on the above, we can say that in order to change the current topic and the existing system, we need to change ourselves, that is, each teacher combines the practice of educational processes with production, the conclusion of cooperation agreements and the correct interpretation of innovation.

Every teacher is happy to see and hear their students' achievements. Therefore, if our students get a job after graduation or work while studying, these achievements of the students will serve both the family and the university.

REFERENCES:

- [1]. Ratcliffe M. Pedagogical content knowledge for teaching concepts of the nature of science, 2011. Retrieved from www.mennta.hi.is/malthing_radstefnur/symposium9/.../nfsun9_submission_5.doc
- [2]. Hodson D., Looking to the Future: Building a Curriculum for Social Activism, Rotterdam, The Netherlands: Sense Publishers, 2011.
- [3]. Hodson D., International Journal of Science Education 25(6) (2003) 645-670.

- [4]. Ash D., Klein C., Inquiry in the informal learning environment. In J. Minstrell & E. H.van Zee (Eds.), *Inquiring into Inquiry Learning in Science*, 2000, pp. 216-240, Washington, D.C: American Association for the Advancement of Science.
- [5]. Bencze J. L., Alsop S., Bowen G. M., *Journal of Activist Science and Technology Education* 1(2) (2009) 78-112.
- [6]. Bartholomew H., Osborne J., Ratcliffe M., *Science Education* 88(5) (2004) 655-682.