

Marushkevych A.A. Postoyuk N.V.

D.L. Sergienko about polytechnic labor training of secondary school pupils

*Marushkevych Alla Adamivna, doctor of pedagogical sciences, professor
Postoyuk Natalia Valentynivna, Ph.D., Assistant
Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*

Abstract. The article analyzes the theoretical pedagogical model of labor polytechnic training of schoolchildren created on research of D.L. Sergienko's views. It includes polytechnic education and labor upbringing, the spheres of their using, pedagogical conditions for polytechnic labor training, principles of polytechnic education and its components: target, contents, operational and activity, as well as the intended result. This model can be used in the preparation of teachers of secondary schools for the implementation of educational material of polytechnic direction.

Keywords: *pedagogical model, labor polytechnic education, polytechnic education, labor upbringing*

Introduction. Modern pedagogical science says about the perspective of the idea of polytheism, which has been the subject of research of many scientists. One of these scientists was D.L. Sergienko (1911 - 1984), Ukrainian educator, scholar, social activist, deputy managing editor of the magazine "Young Naturalist", Dean of preparatory faculty, rector of the University of teachers, Republican member of the bureau of educational sections of society "Knowledge", the director of the Republican station of young naturalists, professor of pedagogy of modern Taras Shevchenko Kyiv National University. The learning of scientific and D.L. Sergienko's pedagogical legacy shows that his theoretical position can be used to reform the national system of education and training. Analysis of his ideas and socio-historical context in which he lived, allows to draw parallels to the present and use his educational achievements in modern practice. During his life the country needed specialists and skilled workers as well as our modern society.

Polytechnic education and labor upbringing of the young generation has always been in the focus of government of Ukraine. The primary objective of our country, as in any country, is to prepare young people for life, strengthening and preserving employment potential. Today there is a united state policy in the field of education, vocational education and scientific and technical activities governed by the laws of Ukraine "About Education" (23.05.1991 № 1060-XII, edition of 06.09.2014 p.) [3], "About Higher Education" (№1556-VII on 07/01/2014 p.) [4], "About Vocational education" (10.02.1998 p. №103 / 98-VR, edition of 01.05.2013 p.) [5], "The scientific and technical activities" (13.12.1991 №3714-VI, edition of 06.09.2014) [6]. These laws create conditions for the development of scientific and technical areas and technological development of the state. So D.L. Sergienko's pedagogical ideas are valuable, because he summarized the experience of training young people in socially useful work and developed a methodology of forming polytechnic knowledge and skills. He stated that science and improvement of modern production, mechanization and automation, scientific and technological progress can be successfully realized under the condition of general polytechnic education and labor upbringing of young people.

Overview of publications on the topic. Overview of educational activities and D.L. Sergienko's heritage has been presented in "Anthology of pedagogical thoughts of Ukrainian SSR" (1988), some scientists have mentioned his achievements, scientific and educational activities in their works, for example, V. Verbitsky, L. Manoryk,

L. Semenov, M. Fitsula, in dissertations – S. Demyanchuk, N. Kalinichenko, G. Kovalchuk, S. Masurenko, N. Terenteva. Despite the interest of the scientists to D.L. Sergienko's ideas, his scientific and pedagogical heritage requires further study to determine its significance in contemporary historical and educational science.

Goals. The goal of the article is to highlight the importance of pedagogical theoretical model of polytechnic labor training of pupils. This model was created on basis of learning of D.L. Sergienko's views.

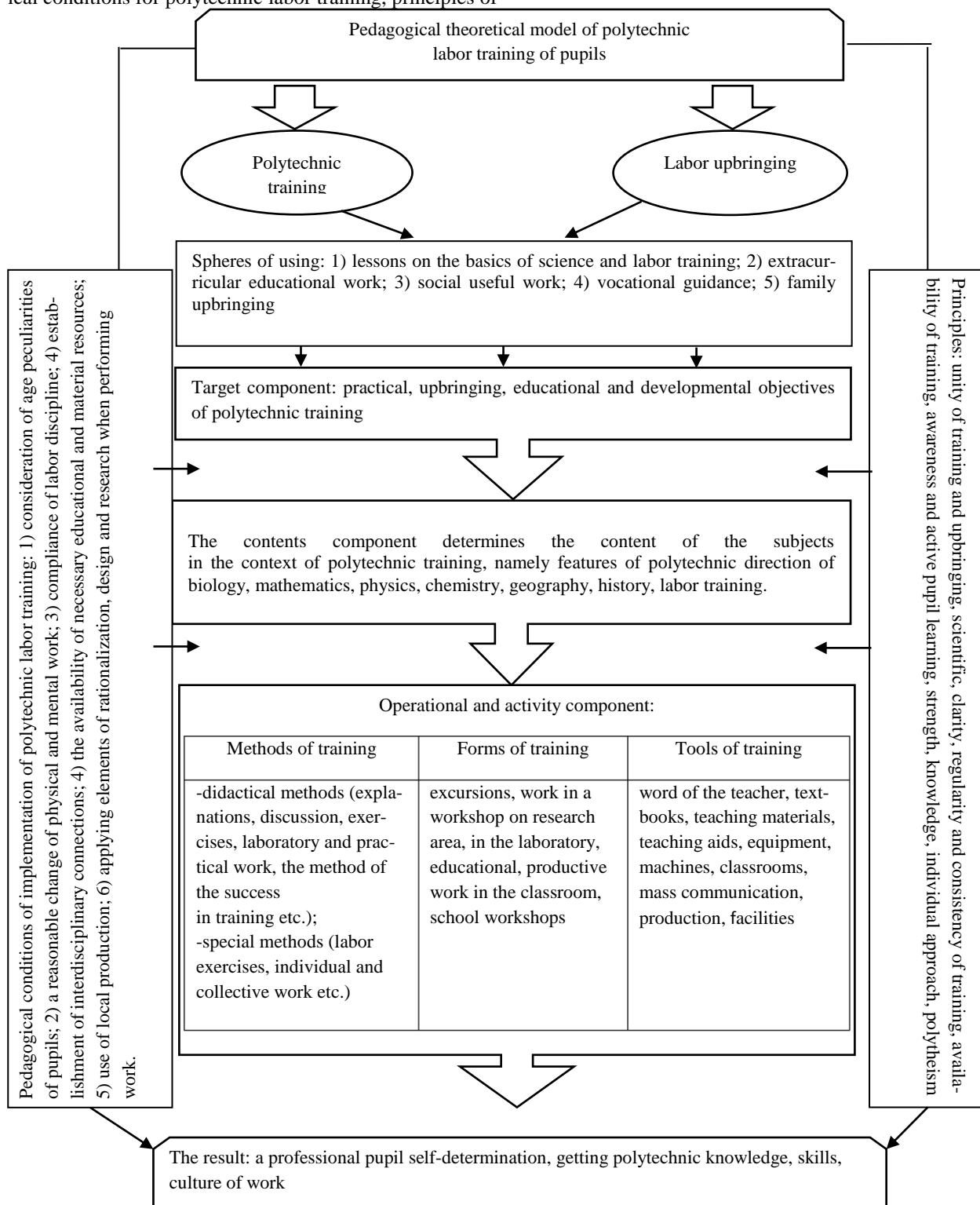
Materials and methods. Material of research is a scientific and D.L. Sergienko's educational heritage. We use the following methods: object-target, which contributed to the research of Sergienko's educational views, and the method of theoretical generalization, which allowed to formulate the basic ideas of scientific works of the scientist; modeling method which helped to create pedagogical theoretical model of polytechnic labor training of pupils.

Results and discussion. After learning D.L. Sergienko's creative achievements, we came to the conclusion that he had had a special interest to the problems of secondary school. He was analyzing the ways of implementation of polytechnic education in the study of the fundamentals sciences, during handicrafts, practical and laboratory classes. D.L. Sergienko summarized the best practices of schools of that time, and pointed how to combine theory with practice on the examples of school subjects (mathematics, physics, chemistry, biology, etc.) [1]. It will be useful for today's teachers to know D.L. Sergienko's views on methodology of polytechnic education, namely the system of polytechnic training (requirements for polytechnic education, purpose, contents, principles, tools and methods of polytechnic training) and the organization and maintenance of process of polytechnic training (especially the planning of the educational process of polytechnic education, forms of learning in the context of polytechnic education, requirements for teachers) [8-14]. Research of D.L. Sergienko's pedagogical ideas became the foundation for the creation of pedagogical theoretical model of polytechnic labor training of pupils. In "Encyclopedia of Education" the concept "model" is interpreted as "mentally or materially-implemented system that displays the object of study (natural or social) and is able to modify it so that its learning provides new information about this object" [2, p. 516].

On the basis of D.L. Sergienko's ideas and developed by him scheme of planning, contents of polytechnic education, handicraft, upbringing and profession counseling of pupils in the educational process of the school was

designed pedagogical theoretical model of polytechnic labor training of pupils, including polytechnic education and labor upbringing, the spheres of their using, pedagogical conditions for polytechnic labor training, principles of

polytechnic education and its components: target, contents, operational and activity, as well as the intended result. Schematic model is shown in Scheme 1.



Scheme 1. Pedagogical theoretical model of polytechnic labor training of pupils

Spheres of using of polytechnic education, labor training and education are the lessons on the basics of science, handicraft, extracurricular educational work, social useful work, vocational guidance, family upbringing. As shown in our research, pedagogical conditions for labor polytechnic training are the consideration of the age peculiarities

of pupils, a reasonable change of physical and mental work, compliance of labor discipline, establishment of interdisciplinary connections, availability of necessary educational and material resources, use of local production, applying elements of rationalization, design and research when doing simple work. From D.L. Ser-gienko's

point of view, implementation of polytechnic labor training should be guided by the principles of unity of training and upbringing, scientific, clarity, regularity and consistency of training, availability of training, awareness and active pupil learning, strength, knowledge, individual approach, politehnizm. Under the terms of modern pedagogy, we have identified the following components in the implementation of polytechnic education and labor education: 1) target, consisting of practical, upbringing, educational and developmental objectives of polytechnic training; 2) contents component that determines the content of the subjects in the context of polytechnic training, namely features of polytechnic direction of biology, mathematics, physics, chemistry, geography, history, labor training etc; 3) operational and activity component that provides a set of methods, forms and means of training. D.L. Sergienko determined didactical methods (explanations, discussion, exercises, laboratory and practical work, the method of the success in training etc.) and special methods (labor

exercises, individual and collective work etc.). Among the forms of training he preferred excursions, work in a workshop on research area, in the laboratory, educational, productive work in the classroom, school workshops. D.L. Sergienko offered such tools of training: word of the teacher, textbooks, teaching materials, teaching aids, equipment, machines, classrooms, mass communication, production, facilities. The result of polytechnic labor training of pupils includes a professional pupil self-determination, getting polytechnic knowledge, skills, culture of work etc. [7].

Conclusions. Thus, the presented pedagogical theoretical model of polytechnic labor training of pupils, based on the study of pedagogical D.L. Sergienko's views, is essential for polytechnic orientation of training material in a secondary school, and this model may be included in the contents of training teachers from different subjects.

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Марушкевич А.А., Постоюк Н В. Д.Л. Сергиенко о политехнической трудовой подготовке учащихся общеобразовательной школы

Аннотация. Статья посвящена анализу педагогической теоретической модели политехнической трудовой подготовки школьников, которая была создана на основе исследования педагогических взглядов Д. Л. Сергиенко. Она включает политехническое обучение и трудовое воспитание, сферы их применения, педагогические условия обеспечения политехнической трудовой подготовки, принципы политехнического обучения и следующие компоненты: целевой, содержательный, операционно-деятельностный, а также предполагаемый результат. Эта модель может быть использована в подготовке учителей общеобразовательных учреждений к внедрению учебного материала политехнической направленности, а также в процессе повышения квалификации педагогов.

Ключевые слова: педагогическая модель, политехническая трудовая подготовка, политехническое обучение, трудовое воспитание