

УДК 373.013.3(477)

DOI: <http://doi.org/10.5281/zenodo.2175004>

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## **IMPLEMENTATION OF THE IDEA OF POLYTECHNIC EDUCATION AS INNOVATIVE DIRECTION OF SCHOOL EDUCATION DEVELOPMENT IN UKRAINE**

Розкрито історіографічні (етапи – імперський, радянський, пострадянський; напрями – філософсько-педагогічний, історико-виховний, історико-нарративний; конкретнонауковий; науково-методичний) та методолого-теоретичні основи (сутність, закономірності, позитивні та негативні тенденції та суперечності) генези ідеї політехнізму в шкільній освіті України ХХ століття; обґрунтовано перспективні шляхи реалізації ідеї політехнізму в сучасній вітчизняній освітній практиці.

**Ключові слова:** *ідея політехнізму, реалізація, шкільна освіта, особистість, навчання, виховання, трудова діяльність, виробництво.*

The beginning of the third millennium was marked by the following dynamic processes as integration and intellectualization of the economy, by a free action of the law on labor changes and reorientation of work functions, widespread integration of information and communication technologies with all spheres of society.

Thus, the need to implement the idea of polytechnic education as strategic direction of the schooling development is dictated by the requirements of integration of knowledge based technologies with industrial production, as well as by the exceptional importance of human capital of the country.

A problem of theory and practice of polytechnic education in schools has been studied thoroughly enough. Analysis of the reference literature allows to single out the following stages of scientific research:

Imperial stage (late 19th century – 1916). At this time, the following areas were determined:

— emergence of philosophical and pedagogical works which analyzed socio-cultural phenomenon of labor and its importance for development of the personality (S.Vladimirsky, I. Vyshnegradsky, P. Kapterev, K. Marx, M. Peskovski, N. Pirogov, K. Ushinsky, V. Farmakovsky, K. Tsiur, etc.);

— historical and educational area consisting in research of the historical aspects of labor education in the context of the genesis of the national school of educational thought and practice (I. Anopov, A. Bykov, M. Demkov, V. Eliseev, P. Miliukov, A. Nebolsin, O. Pogozhev, S. Rusova, Ya. Chepiga, W. Schrader, etc.

The Soviet stage (1917 – 1990). It was characterized by formation of the following areas:

— concrete scientific area containing the results of scientific research used to develop pedagogical framework (objective, tasks, content) of polytechnic education (P. Atutov, S. Batsyshev, Yu. Vasilyev, A. Gastev, V. Gusev, V. Zubov, A. Kalashnikov, N. Krupskaya, V. Lednev, A. Lunacharsky, V. Polyakov, M. Skatkin, P. Stawski, etc.);

— historical and narrative area comprising scientific research aimed at highlighting the various aspects of the evolution of the idea of polytechnic education (Sh. Ganelin, M. Gritsenko, E. Dneprov, R. Dovator, M. Konstantinov, T. Kornichuk, F. Korolev, M. Kotryakov, S. Litvinov, F. Panachin, M. Hitaryan etc.);

— scientific and methodological area consisting of the research carried out in order to support educational tools that provide polytechnic orientation of educational branches of learning of Natural Science and Mathematics and the Humanities, as well as labor training (K. Akhiyarov, I. Zverev, D. Epstein, V. Korotov, A. Makarenko, V. Polyakov, V. Sukhomlinsky, G. Tagar, I. Tkachenko, S. Shabalov, etc.).

The post-Soviet stage (1991 – early 21st century). This period is associated with the development of the following areas:

— theoretical and methodological area comprising scientific work related to the justification of the philosophical and pedagogical basis of labor education and polytechnic education (V. Akimov, A. Amirov, A. Boyko, V. Borisov, A. Kobernik, V. Myagkov, A. Petrov, A. Savchenko, V. Steshenko etc.);

— historical and pedagogical area comprising theoretical studies on the history of polytechnic education and vocational training for pupils (A. Abalov, Yu. Averichev, A. Vyhrusch, N. Dichek, R. Dovator, N. Kalinichenko, V. Kurylo, V. Mayboroda, S. Mazurenko, V. Medvedev, E. Osovski, N. Pobirchenko, O. Sukhomlinskaya, etc.);

— general didactic area consisting of the research carried out in order to substantiate the content of polytechnic education and the main ways of its implementation (K. Kathanov, V. Lednev, V. Sidorenko, G. Tereshchuk, etc.);

— practice-oriented area comprising the scientific and methodological advances in the field of educational technology, methods and forms that are used to implement the idea of polytechnical education in the school (W. Burdun, I. Gushel, V. Didukh, V. Komelina, V. Steshenko, D. Chernyshov, etc.).

Nowadays, there is a wide range of positive and negative trends observed in the development of modern society. On the one hand, the processes of humanization and democratization are strengthened in the context of which the importance of the individual as a subject of social, labor and industrial relations increases, while the concept of technological determinism of the industrial age is refuted. Development of technology has been acquiring high human and cultural value, so the interaction of technology and society takes place not only in the process of material production, but also in all social spheres. Post-industrial stage of development of civilization is focused on the person, the importance of the result of his/her work, as well as on the efficiency of a work method that takes into account social, environmental, psychological, economic, aesthetic, and other factors. Alongside traditional subject-oriented engineering and the humanities sciences the following areas are intensively developing: problem oriented innovative integrated scientific, technical and socio-technical areas (ergonomics, programming, engineering ecology, engineering pedagogy, life safety, etc.). The importance of technical and human knowledge increases in their unity.

On the other hand, a consequence of social stratification is in a tendency of alienation of young people from productive work. It is against the background of the system of values transformation, that the influence of the philosophy of consumption, the lack of respect for the workers becomes stronger. This leads to certain personal and social deformations, which are reflected in the environment of young people of all ages. Particularly, according to data provided by the Ministry of Social Policy of Ukraine, the students are loyal to racketeering, gambling, and drug dealing as to a way of earning wealth quickly and without working hard.

The following indicators bring about considerable concern: 12.2% of pupils have negative attitude towards productive work, 43.1% of pupils are indifferent to it, 33.8% of recipients perceive production career satisfactorily, and only 10.9% of pupils evaluate the prospects of being engaged in productive labor to the maximum positive extent [2].

At the same time the needs of industry for skilled workers (turners, fitters, milling workers, etc.) are now increasing. The structure of the labor market shows that more than 70% of labor vacancies consist in working specialties for engineering, construction industry and service sectors [1].

We are convinced that such a crisis was caused by a number of socio-economic factors, but to a large extent it is due to poor state of the polytechnic and labor education in schools, imperfect educational content of the discipline «Technology».

In secondary schools polytechnic orientation of school subjects is not provided, the scope of organized socially useful, productive labor of pupils narrows, extracurricular form of technical, project-oriented and research activities of pupils are simplified.

All these factors lead to the formation of negative attitude of the children to work in manufacturing industries. Schools slowly develop innovative forms of organization of polytechnic and practice-oriented interaction between teachers and pupils, which would be adequate to the spirit of market economy, which would stimulate the activity of the individual and entrepreneurial personality, and would allow to prepare the pupils to work in an environment of high competitiveness and professional mobility on practical examples.

The above mentioned factors reinforce the urgency of the development of theoretical approaches and practical tools for the progress of school education in view of the national historical and educational experience, and particularly the labor polytechnic school.

The genesis of the idea of polytechnic education was characterized by change in the periods of boom and bust. It originated in philosophy in connection with the improvement of mechanisms of social and economic growth of society. Polytechnic education was substantially transformed and developed further in the works of prominent Ukrainian teachers of the 20th century (P. Atutov [1], V. Lednev [3], A. Makarenko [4], V. Sidorenko [6], O. Sukhomlinskiy [7], G. Tereshchuk [8], I. Tkachenko [9], and others).

At a time when there was an objective need for the state to raise the importance of the general educational institutions in training of skilled workers, the polytechnic education became the main direction of development of the national school system.

Severity of social needs for the training of specialists of higher education was followed by a temporary decline in the attention of educational theory and practice to implementation of the idea of a polytechnic school education. The dynamics of development of the polytechnic education phenomenon was dictated by the law of variation of labor and reorientation of labor functions and, therefore, was directly related to the improvement of the system of «education – production – economy».

In the post-Soviet period the idea of polytechnic education undergone deformation. The crisis in theory and practice of polytechnic education of pupils was due, above all, to the abolition of the mandatory initial training of pupils and the shift of emphasis to an instructional work at school.

Implementation of the idea of a modern polytechnic education in schooling is compounded by the absence of the legal framework, the imperfection of the didactic, organizational and pedagogical basis, low logistics due to a loss of communication between schools and enterprises, inadequate number of staff and limited pedagogical features of the educational process of specific general education institutions.

By having analyzed historical and educational experience of the 20th century, we identified the main trends in development of ideas of polytechnic education. Among the positive trends the following should be highlighted:

- the continuous and dynamic nature of the development of polytechnic education idea;
- the dominance of socially important goal that determined the development of the whole system of polytechnic education;
- the harmonization of educational and training activities through polytechnic education;
- the hierarchical subordination of polytechnic education system of labor education for pupils, and the dependence of substantial and procedural components of the polytechnic education on the level and rate of technological progress, and economic organization;
- the presence of a leading component of polytechnic education in the different periods of development;
- the provision of compensatory function between the main genetic structures of polytechnic education, strengthening the connection of the educational process and industrial production;
- the strengthening the material and technical base with the support of the industrial enterprises;
- reinforcing the professional orientation of the content of polytechnic education of pupils in accordance with the gradual transition to universal secondary education.

The negative aspects should be considered to be the following:

- the dependence of development of the idea of polytechnic education on ideological assumptions in line with the values of Soviet society;
- exaggeration of a meaning of labor in educational activities; and
- an increase in the gap between socially useful, productive labor and pupil learning activities.

A set of positive trends was identified that indicate a promising appeal of the idea of polytechnic education as a methodological basis for strategic development of the school [5].

In our view, the implementation of the ideas of polytechnic education in schooling is an important factor for the development of the content of educational activities and becomes a tool for its optimization. Idea of polytechnic education is a definite expression of the evolution of society and shows strengthening social and economic functions of education.

Society affects the development of education directly. It shows the relationship of social, economic, cultural and ideological processes with determining role of historical and educational experience, the level of scientific and technological development of society and its relationship towards education as to a major social institution for training human resources of the state that can provide social economic growth of society.

Thus, it was found within the framework of the study that the implementation of the idea in polytechnic school education will allow: to increase the number of ideals and values that consolidate the society, that are the basis for the patriotic education of pupils; to integrate into the society the young people who find themselves in difficult situations, to form a positive attitude to work in young people; to strengthen the world-view aspects of the organization of production and employment, to reform economic education of pupils, to get rid of the idea of the vulgarization of the market economy; to develop entrepreneurial activity, to optimize vocational guidance and vocational training for young people, to encourage innovation of young scientists, to realize their scientific, technical and creative potential; to harmonize the use of information and telecommunication technologies and practical self-employment in order to update the scientific knowledge of pupils obtained in a virtual educational environment; to strengthen the mechanisms of continuity of knowledge and accumulated experience, the relationship of new technologies and the established industrial relations in the sectors of employment which are «unpopular» among the youth, which, in turn, would ensure the effective development of steel making, heavy machine building, and agriculture.

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LARYSA SEMENOVSKA

#### IMPLEMENTATION OF THE IDEA OF POLYTECHNIC EDUCATION AS INNOVATIVE DIRECTION OF SCHOOL EDUCATION DEVELOPMENT IN UKRAINE

The degree and basic trends in the elaboration of the problem researched have been analyzed (imperial stage, before 1917, trends being – philosophic-pedagogical, historical-educative; the Soviet stage, 1917 – 1990, trends being – historical-narrative, scientific proper; scientific-methodical; post-Soviet stage, 1991 – the beginning of the XXI-st cent, trends being – methodological-theoretic, historical-pedagogical, general didactic). The socio-economic factors and organizational-pedagogic prerequisites of polytechnic education idea genesis have been determined; its legislative and regulatory framework has been examined. The phased process of polytechnic education idea realization in the national school education of the XX-th century has been substantiated and characterized by its regularity, conceptualism variance, contradiction, instability, periodicity of ascension and decline. Its consecutive stages have been established: I (1901-1918) – search-empirical (polytechnical illiteracy elimination as a prerequisite of socio-economic development); II (1919-1933) – experimental-innovative (school polytechnization in connection with the implementation of compulsory elementary education); III (1934-1957) – theoretic-analytical (pupils' polytechnic training during the period of compulsory 7-year-long education implementation); IV (1958-1983) – professional-manufacturing (specific sectoral and practical orientation of

polytechnism on the stage of transition to the compulsory secondary education); V (1984-1999) – economic-reformist (polytechnic education idea modification in the context of general secondary education modernization on the basis of market model, shifting the emphasis on the pupils' educational work). The regularities, contradictions and the leading tendencies in the process of polytechnic education idea realization have been revealed. Its specificity has been characterized as reflected in preserving labor traditions (1901-1918); carrying out the industrialization and agronomization (1919-1933); scientific fundamentalization and singling out polytechnic grounds of school subjects (1934-1957); professional bias and mechanization (1958-1983); automation and striving for labor intellectualization (1984-1999). The stages (initial, sufficient, high and advanced) and conditions of the process of polytechnic education idea realization have been determined; the progressive achievements of the XX-th cent. polytechnism in current conditions have been actualized (pedagogically expedient use of polytechnic individual and socially oriented potential of all secondary school subjects, especially general technical subjects, different labor types, class and out-of-class activities; establishing close cooperation of school and production on the terms of voluntariness and state support; involving pupils in real social and labor; cost accounting relations; joint efforts of school, family and the public in pupils' labor training and education etc.).

**Key words:** *polytechnic education idea, process, realization, theory, practice, school education, personality, instruction, education, work activity, production.*

Одержано 01.09.2018р.