

Economic Laws of Division and Changing the Labor in the System of Contemporary Vocational Education Determination

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ABSTRACT

The topical character of the problem in question is stipulated by the demand of highly skilled competitive personnel in the vocational education sphere of modern society, which is determined by the totality of objective and subjective factors of its development. The goal of the present research consists in the verification of the economic laws of division and change of the labor, that produce an immediate impact on the vocational education development strategy and a mediated impact on the requirements made to the personality of a student within this system. The primary method of investigation in the given area is the modelling method that allows to identify specific features of these laws' operation depending on the historical period of social development and extrapolate their functioning on the present-day reality as well as make scientifically-based forecasts of its future development. Research outcomes: the article presents a structural functional model of the interaction of the economic laws of division and changing the labor during the industrial and post-industrial periods of social development; an algorithm of competently mature personality's character formation in the modern system of vocational education. Materials of the research may prove useful to the rule-making specialists and practitioners in the educational sphere - in elaborating and upgrading educational and professional standards, in developing a model for the preparation of future competitive workers in the system of vocational education based on the objective factors of its development, such as the economic laws of division and change of the labor.

KEYWORDS

Economic laws; highly competent personality; structural functional model; vocational education

ARTICLE HISTORY

Received 13 May 2016
Revised 24 July 2016
Accepted 24 July 2016

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Introduction

Russia's transition to market economy, our joining the Bologna process at the beginning of the XXI century and the ensuing vocational education reform, the new structure of vocational education reflected in the federal law "On education in the Russian Federation", competence-based educational paradigm, the idea of continuing education and many other changes became a decisive factor in raising theoretical research of the interaction between economics and education today to a new level. Equally important is the issue of practical implementation of new models of interaction between scientific theory, methodology and education proper and development models of highly competent, competitive professionals ready to meet the challenges of tomorrow.

Considering, that modern society is often called "society of knowledge" it is obvious that knowledge today constitutes an important part of economic and social evolution. At the present time strong overbalance of the practical, pragmatic and utilitarian approach prevails in education (Yarkova, 2016), transforming the human being into "a product of the market economy and market system" (Benin & Frolov, 2014), while theory and methodology are lagging behind the dynamic world changes. Thereby a contradiction between the ever-growing acceleration of economy, production, development and reformation processes in education on the one hand, and theoretical and research perception of these phenomena on the other comes to the fore.

Hence, the malfunctioning of the reforms, absence or insufficiency of expected results, etc. In our view this situation indicates an imminent necessity of finding out a solution of this problem. Research in the areas of educational economics, pedagogics and other scientific spheres provide additional evidence of this (Botneva & Filatkin, 2010; Gileva, Solousova & Safronova, 2015; Zagvyazinsky, 2015; Pyastolov, Balashov & Tolmachev, 2009; Chapaev, 2008).

The present research is of theoretical methodological and interdisciplinary nature, involving analytical materials on philosophy, pedagogics, acmeology, economics of labor, economics of education. Issues of personality formation have always been the research object of these sciences but today they call insistently for integration of joint effort to treat this problem. At the same time, personality development and education issues are the domain of ideology because the kind of personality formed in the process of education and the sort of economic effect achieved by a certain educational paradigm are among the state's primary concerns.

It is the state that sets before education the task of bringing up a personality endowed with a summation of essential qualities, knowledge, competences, etc. Nowadays education is oriented onto the competence-based paradigm and formation of a highly competent personality. In this connection, a question arises about personality development factors in the light of interaction between economics and education. In the course of history, this problem had different solutions but it was usually tied up with the material sphere and social economic interests.

The modern period is no exception to the rule in that the interests of society proper are still strategically important but this period has also its own peculiarity: transition from the stage of sociocentrism to the stage of anthropocentrism poses the problem in a new light and suggests its completely

different decision. Identification of factors conducive to a personality's development in society, a personality's position in the system of vocational education, determination of correlation between economic processes and vocational education and the objective and subjective factors involved – make up the essence of the current problems that require new approaches at this stage of social development.

Needs of the production sphere dictate their own demands to vocational education, giving priority not just to teaching workers how to use modern production instruments and technologies but cultivating their ability to assimilate new skills independently. This demand is called forth by a special manifestation and operation of the law of the labor change in modern society that is expressed by such evolving feature of a worker's personality as professional mobility (Chapaev, 2008).

The economic laws of division and change of the labor applied to vocational education development give this research firm foothold and provide its transition to a new quality level of preparation of specialists with excellent workmanship skills, ready for social and professional mobility and the role of carriers of universal and professional cultural norms.

Methodological framework

Research methods

In the process of our investigation the following methods were involved: theoretical (analysis; synthesis; specification; generalization; analogy; modelling; method of historical logics; methods of project work and social prognostics modelling) and empirical (observation, description, document study). The methodological framework of the research was based on the philosophical anthropological approach used while treating the problem of a highly competent personality formation in the system of contemporary social relations, activity and systems approaches promoted identification of the position and role of a learner's personality (a would-be specialist) in the modern economic and social context on the whole.

Experimental research basis

The pilot experimental basis for the research was provided by the system of vocational pedagogical educational institutions of the Russian Federation.

Stages of research

Investigation of the problem was carried out in three stages:

The first *theoretical search stage* was devoted to the analysis of the current methodological approaches in philosophical, economic and pedagogical scientific literature, the main problem, goal and research techniques were established, determination of conceptual and methodological apparatus criticus was specified.

The second *theoretical modelling stage* involved developing a highly competent personality formation model in the system of vocational education in the light of the economic laws of division and change of the labor in modern society, experimental research work was done on the basis of educational

establishments of various types, results of the experiment were analyzed, verified and specified.

The third – *theoretical and analytical stage*- consisted in finalizing the experiment, clarifying theoretical and practical conclusions, generalizing and systematizing the results achieved, their approbation carried out by way of scientific presentations and publications.

Results

The results of this research were used to provide the educational institutions' strategic development in the system of vocational pedagogical education in conditions of the new socio-economic environment. They were next implemented in the higher schools' teaching process in the form of methodological teaching aids for the students' professional and method learning, teachers' in-service training and recommendations for general education institutions to carry out more effective career guidance of the learners.

At the present time the results of the research are introduced as a part of the Government program of the Ministry of education and science of the Russian Federation "Investigation of theoretical and methodological problems of vocational pedagogical education in contemporary conditions" (2014-2018).

It has been established that the laws of division and change of the labor, formulated by K. Marx (1867) have not lost their significance in modern society and economics since labor division has been and will probably be in existence for a long time to come due to a great variety of human activity. Thus, a requirement for labor change sets conditions for the preparation of staff in the vocational education sphere endowed with a complex of universal skills, cultural and professional competences.

A theoretical proposition was substantiated to the effect that the modern production demand of the universal character of potential workers' labor activities determines the specificity of their preparation in the system of vocational education that can be defined by the law of labor iniversality.

List of requirements to the modern specialist has been elaborated including the general labor features that he should be ready to apply in practice after finishing his vocational education: computer literacy, creativity, mobility (readiness for change), ability for self-growth and self-education, and a number of others requirements. Hence, the necessity to address the issue of designing and creating a contemporary model of a personality endowed with professional and universal competences.

Speaking of the economic laws' analysis as a personality development factor it should pointed out that they differ in the level and degree of their impact on other social spheres: universal, general and specific. As long as social processes are connected by certain types of interaction, economic laws in their turn have their own different impact on the personality formation during each historical period while playing their decisive role in public production and extending their influence on other spheres of social life. Historical analysis gives grounds to an attempt to define the role played by the laws of division and change of the labor in a contemporary personality's development. Economists treat the economic laws of division and change of the labor as universal laws; they appear in social history in a successive order and they continue to play an important part in social development in the present period of time.

The majority of scholars today accept the thesis suggested by the founder of the post-industrial conception D. Bell (1999) that the basis of post-industrial production development is provided by the progress of theoretical knowledge. New economy nowadays is confidently progressing from information-based economy to the knowledge-based type. Considering post-industrial production in the sphere of science and industry, mention should be made of the following statement. Transition of society to the stage of post-industrial economy is marked by a special accent on studying the information processes taking place in smaller and medium-size financial, commercial and insurance companies. However, one cannot ignore the fact that the traditional kind of production is still prevailing in the world and according to D. Bell (1999) who consistently underlined this fact - "post-industrial society cannot completely replace the industrial type or even the agrarian type...it can only add new features to it". By making this statement, D. Bell (1999) meant continuous and sequential character of production development and accordingly of the economic laws inherent in this type of society.

The initial stages of social development involved two kinds of labor division: first, the separation of cattle-breeding from land cultivation and then division of intellectual (spiritual) and physical (material) labor. This is the period of the trades and crafts emergence as well as the appearance of professionals in different trades and people involved primarily in intellectual activity (governors, political bureaucracy, philosophers). According to this division, the preparation of a tradesman and a politician or philosopher was clearly different, and vocational training also had its own peculiar features, methods and forms of education. Professional mentality of a tradesman was distinctly utilitarian aimed at satisfying the basic human needs while a governor's, politician's or philosopher's mentality was oriented already onto intellectual and spiritual development. Both intellectual and physical kinds of labor could become a professional and hereditary occupations.

A traditional Hindu caste system is a striking example of this. The system secures for each social stratum not only definite privileges and legal status but gives an opportunity to get an education and choose a certain number of nomenclature professions. European tradition also provides examples of securing rights and duties including occupation for the citizens belonging to a definite social class.

The rapid upsurge of industry in the XVIII-XIX centuries calls forth new social and economic expectations, such as human resource possessing new qualities and knowledge as compared to the previous period.

Another economic law – the law of labor change - takes foothold and starts dominating, however without ruling out the law of labor division but raising it to a new level in the framework of new production relations. There is a want of a universal worker, versatile in his personal and professional development. But large-scale industrial production required of the worker conveyer skills, an ability to fulfil the same functions, bringing his performance to automatic perfection and thereby increasing labor productivity and surplus product.

Genuine personality development was not among the major social development priorities. The legal and social status determined a personality's professional position as before. It is at the time of emerging large-scale industry that issues of social inequality gain weight in society, new social classes appear,

they are made up of people of unequal descent who the have unequal access to public benefits produced by them.

“But if labor change is now paving its way as an inevitable natural law of life, with the blind devastating force of a natural law running against all sorts of obstacles, the major industries with their own disasters lead to the recognition of labor change process being a matter of life and death. This recognition consequently implies a higher degree of the workers’ versatility, in terms of the universal public production law that requires relations adjustment to be normally exercised. The labor change issue raises the problem of replacing a horribly miserable working population - that serves as a reserve for future use to satisfy the ever-changing capital’s labor needs - by completely qualified workforce prepared for these changes. It also means replacing a partial worker, capable only of a partial social function, by a versatile individual for whom different social functions are actually just various interchangeable kinds of his life activity” (Marx,1867). According to K. Marx (1867), the personality of “a professional idiot” must be replaced by a totally all-round personality.

In this connection, another important feature of the period in question should be brought to our attention and that is the final alienation of the worker from labor means, and the ensuing exploitation of one man by another, described by K. Marx (1867). This circumstance gave birth to the objective social contradiction in terms of the law of correlation of productive forces and production relations. The contradiction was resolved by political activities such as strikes, walkouts, revolutions.

Gradual improvement of labor tools, created by man, contributed to the transition from natural to social productive forces. This kind of progress enabled man to overcome human dependence on elemental forces of nature while technological progress on the contrary increased human control over external environment. Technology took up the role of a “second natural environment”, an environment subjected to active transformation by man.

The role and position of a human being gradually changed in the course of industrial revolution: personal independence took the place of personal dependence. Materialization of relations among commodity producers becomes the nucleus of labor alienation that characterizes different aspects of the past labor prevalence over direct labor, of the product over activity, of the thing over the human being.

Human alienation in society results in social and individual ailment of this society. The alienated society was labelled by E. Fromm (1955; 1963) as a sick society.

Correlation of private property and alienation was given the following description by K. Marx (1867): the alienation of immediate producers’ labor is the real cause of their exploitation and private property. K. Marx (1867) assigned universal character to social alienation. He considered alienation as a kind of limitation that concerns not only the exploited class but the dominant class as well: “everything that appears as activity alienation for the worker acts as a state of alienation for the non-worker” (K. Marx, 1867).

A lot of research concerning overcoming the alienation process in socialist society was done in the Soviet epoch. The Soviet official ideology declared private property the cause of alienation. A comprehensive program of building

communism of the industrial epoch was adopted. Destruction of private property (already non-existent in the USSR) was looked upon as elimination as such of the alienated state of labor and society. According to the Soviet period ideology community labor was dominant in the Soviet Union, meaning that workers and peasants in union with the working intelligentsia were all involved in labor activities.

The point in question was nationwide property, free creative labor for the benefit of the motherland, all society, the worker being the production owner. But one can hardly talk of successful overcoming alienation because of the plan-based economy, international isolation, minimized leveling pay, etc. Nevertheless, the idea of a communist society was enthusiastically welcomed by everyone as would be any utopia. At the same time, the history of the Chinese Republic demonstrated to the whole world an example of harmonious co-existence and development of the market economy and socialist political order.

Prerequisites for overcoming alienation begin to take shape in the course of transition from industrial to post-industrial society. As for the current situation, both – the labor division law and the law of labor change are still functioning in society, because we can hardly expect in the near future that labor change will disappear and universal workers will become unnecessary.

It's worth mentioning though that certain achievements were made already in the second half of the XXth century, namely, automation and computerization of production processes, that allowed to reduce manual labor and replace dozens and hundreds of manual workers by a couple of automatic machines. Automation and computerization have become part and parcel of our contemporary life both at work and at home. We can hardly imagine a workplace not equipped with a computer, scanner, printer, etc. Likewise, domestic "clever" machines – from a vacuum-cleaner to a dish-washer and washing machine – are indispensable in our everyday life. As far as the operation of the labor change law it is still on the agenda in modern world, but its effect is acquiring new features. The same is true about the law of labor division. A need for a universal employee rather than a worker comes to the fore and these are not identical phenomena.

So what is happening in this area today? In our view a third economic law is emerging although it has not been formulated or economically substantiated as yet but the objective needs of life and economics prognosticate its appearance. What we mean is the economic law of labor universality. This phenomenon of contemporary life deserves close attention on the part of the scholars so as to give it scientific comprehension and provide substantiation of its functioning at the present stage of economic development and society on the whole.

We suggest in treating this issue to proceed initially from a certain philosophical and pedagogical view of this problem. What caused this law to life? As long as any law is objective in essence it is obvious that life itself and new demands to specialists and professionals and consequently to education in general and vocational education in particular have given rise to it.

In substantiating professional pedagogy we repeatedly mentioned the fact that its primary object is not the educational process (process approach), not the system of education (systems approach), but human being within this system and this process. To be more exact, the object of professional pedagogics is a highly competent personality in the system of vocational educational relations. A

highly competent personality implies a personality endowed with a complex of knowledge, skills and competences in accordance with the requirements of the state educational and professional standard, prepared to be involved in professional activity and further self-study and self-development.

We immediately face the problem of how to form such personality in modern educational institutions. Hereby a new method of professional pedagogics is suggested – the method of competence-based project work that is actually included in the operating Federal state educational standards. This method dictates special technologies that involve stage by stage formation of the future specialist's knowledge, skills, professional mastery and competences.

This in its turn necessitates working out specific competences and requirements of the employee. In this light a requirement of fundamental and universal kind of labor comes to the foreground. K. Marx (1844) spoke of a universal kind of worker; today we claim that any employee must possess universal qualities necessary for any type of activity and any sphere of social life. These qualities include computer literacy, creativity, communicative ability, mobility (readiness for change), capacity for self-growth and self-education. This covers only partially the list of requirements to a modern employee, but these are universal features of contemporary labor and an employee must be well prepared for these changes. In our view, time has come to think about forming a specific professional mentality of the learners, their ability to adapt to future changes, creating motivation that would facilitate their change and development in compliance with new requirements.

We can frequently hear today that professional education ought to bring up such specialists who would help our country to switch over from the economy of the “lagging behind” type to the efficient, innovative contemporary model so as not to be doomed to stay on the back-end edge of civilization.

These seem to be only nice though sensible words but in reality meeting new requirements to professional education will take us up to a completely new level. And the essence of this process will be our readiness for these changes. It is this process that will challenge us with the problem of new mentality formation that would correspond to this new level. Nowadays an employer, frequently ignoring the graduate's diploma, puts a potential employee to his own test in terms of these requirements

(his practical skills and abilities, capacity for education and communication, readiness for specific types of activity, etc.) and, in our opinion it is the first manifestation of the new economic law of universal labor.

In the present century the sphere of education acquires a special status because humanity at large can only survive as a learning civilization. Therefore in conditions of information-based post-industrial society and the ever growing role of education, this sector of social life should be regarded as a *unified multifunctional complex* that fulfils a whole number of most significant functions. Among them:

- provision of various economic branches with highly qualified personnel;
- creation of new information and production technologies;
- carrying out research and so on (Pyastolov, Balashov & Tolmachev, 2009).

And the central place in this process of transformation belongs to forming a highly competent personality.

So on each stage of social development the dominating economic law puts forth its specific demands to the employee preparation in the system of vocational training and self-education. There was a time that called for a tradesman and employee preparation; now there is a need of a universal employee education. Unlike the proverbial saying “Jack of all trades and master none” the modern task of employee preparation implies building up their internal personal traits (industry, persistence, working capacity, well developed memory, professional mentality, concentration, etc.) required to make any vital decision and become proficient in a wide scope of diverse activities (Matveyeva, 2008).

Discussions

Study of scientific works devoted to issues of economic and educational interaction and the effect of the economic laws on education shows the absence of special research in the area of the objective factors of the vocational education development.

Likewise no research was found on the impact of the laws in question on vocational education, either in a historical perspective or at the current stage of its development.

However, we tried to analyze and use numerous works in the sphere of economic and educational interaction on the whole, as well as works devoted to the investigation of the division and change of the labor laws, all of which enabled us to move the analysis of the problem from the general to the particular and draw certain conclusions in the framework of the present research.

Problems of economic and educational interaction have been elaborated by foreign and Russian scholars since the XX century. Specifically, A. Etzioni (1998) singled out education as a basic branch of economy and attached great importance to it as a priority factor in economic development. Research carried out in the 20-30th years of the XX century by S.G. Strumillin (1924) contained a complex analysis of the Russian educational system of that period and made a particularly important contribution in this area. He wrote, that educational costs “will be requited with a return above after the first year and a half, while during the following years they will enhance labor productivity and the total production efficiency. Within the period of 35,5 years the state will gain the net profit on this capital at the rate of 73% annually” (Strumillin, 1924). Further treatment this problem received only in 1960-1970s in the works of V.A. Zhamin & S.L. Kostanyan (1970). They were among the first Russian scholars who turned to the specific character of such new field of science as economics of education and described it as a science studying the nature of manifestation and operation of economic laws in such branch of national economy as education.

They assumed that the new science is intended to study material and cash flows assigned by society to set up extended reproduction of qualified workforce through the system of education (Zhamin & Kostanyan, 1970).

Contemporary authors also make a considerable contribution into solving the problems of integration of education and production as well as pedagogics

and economics by developing conceptions of education and market interaction, openness, social partnership, higher vocational education (Romantsev, 1997). One of the leading conceptions expresses the idea of the necessity of radical changes in the relations that appeared between economic development and vocational education of workers (Romantsev, 1997). Production needs dictate their own game directives to education, insisting on the requirement of not just teaching them modern technologies but their

independent acquisition. This is stipulated by the invocation of the labor change law, specifically expressed by the increasing role of such trait of a worker's personality as professional mobility (Chapayev, 2008).

All scientists acknowledge that education takes a special place in the social system of labor division. Education is a unique, delicate and powerful tool that can and must be used to enhance an efficient economic system in regions and to ensure competitiveness of the national economic system in conditions of finding a way out of the global crisis (Pyastolov, Balashov & Tolmachev, 2009). This is the only branch of economy that satisfies the needs of the population in educational facilities and specializes in the reproduction of the major social productive force – qualified personnel for all areas of material and non-material production. This predetermines the foreground role of education. Accumulation of knowledge and proficiency rather than material benefits becomes the critical factor of reproduction.

Maintenance and development of the educational knowledge base can be achieved only by a high level education of the workforce and its appropriate vocational training which is inevitably tied up with investment growth in this sphere of economy (Botneva & Filatkin, 2010).

So summing up the main objectives of this work, that was done on the basis of previous research in the area we should stress the following: revelation of the labor division and labor change laws' function that serves as an objective factor of vocational education development; identification of the laws' specific operation in the current situation; definition of requirements to an employee in accordance with the state educational and professional standards adopted by the Russian Federation at present.

Conclusion

In the course of our investigation the significance and role of the economic laws of division and change of the labor in a historical and current perspective was established for the vocational education development, the status of the given laws was determined as an objective factor of the vocational education development. In compliance with the economic laws of division and change of the labor requirements to a contemporary employee as a specialist, professional and highly competent personality were presented.

The materials of the article may benefit teachers in the vocational education system in solving problems of a learning personality's strategic development, drawing up the line of its development, designing the development and formation of all-cultural and professional competences, etc.

The outcomes of research present interest for the lawmaking specialists in the sphere of professional education while designing and upgrading educational and professional standards to bring them into conformity with objective development factors of vocational education and such subjective factors as the requirements to the learning personality and the formation of its professional mentality.

During the research new questions and problems appeared that are in need of solution. There is also a necessity of further investigation of subjective factors of a learning personality's development, namely those connected with the formation of a future specialist's professional mentality.

Acknowledgments

The article is written in the framework of the government commission of the Russian Federation Ministry of education and science #1240.

Disclosure statement

No potential conflict of interest was reported by the authors.

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