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**PROFESSIONAL TRAINING PROGRAM IN THE U.S.****Sichko S.M., candidate of economic sciences****Shapochka K.A.***Mykolaiv National University after V.O. Sukhomlynsky*

В статті проаналізовано становлення системи професійних навчальних закладів по підготовці і перепідготовці кадрів в США. Досліджені основні джерела фінансування витрат на освіту. Проаналізовано кадрове забезпечення науки і освіти та виділені основні негативні тенденції, що мають місце в цій сфері. Досліджені методи державного регулювання системи підготовки і перепідготовки кадрів, які реалізуються у рамках державних програм підготовки і зайнятості молоді та через розробку державними органами США і підприємствами спільних програм перепідготовки працівників. На основі проведеного дослідження визначені основні напрями внутрішньополітичної діяльності держави.

**Ключові слова:** система підготовки і перепідготовки кадрів, освіта, державні програми.

The article is devoted to the problem of vocational schools for training and retraining in the U.S. development. Main sources of educational expenses funding are investigated. Human resources management science and education is main negative trends in the sphere are analyzed. Methods of state regulation of the system of training and retraining, system marketed under the state programs of training and employment of young people and through the development of U.S. government agencies and enterprises of joint programs for retraining workers are investigated. The priority directions of internal state's activity are identified on the bases of research.

**Keywords:** system of training and retraining, education, state programs.

**Relevance of the problem.** The theory of human capital was developed in the U.S. in the 50-60th years of the twentieth century. Its main aim was to develop deeper problems of formation, the reproduction of labor and the role and value of creative abilities of a person, as well as its contribution to economic growth. Last years the special attention is spared to the transition to the “knowledge society”, priority of education and quality of human potential, from providing of personnel potential of economic. Fundamentally new requirements to quality of human capitals are pulled out forming of economy, based on knowledge. Condition of the economy growing became the increase

of their competitiveness. As a result, the problems of educational and professional training become more actual not only in the U.S. but approaches which are used by the government of the U.S. can be useful to the decision of these problems by others countries.

**Literature research.** The theory of human capital was developed by many prominent American economists, including T. Schultz, G. Becker, D. Mintser, L. Thurow, D. Kendrick and others. Authors of this concept distinguish human capital as a set of people's knowledge, skills, qualifications, their physical readiness to work, i.e. their health, as well as a set of various motivations. Due to the theory of human capital in the U.S., since the mid-twentieth century, spending on education, professional training and health protection are distinguished as the most important investment in the future development.

**The main purpose.** Under current conditions is define the priority directions of internal state's activity.

**Research results presentment.** In the early twentieth century the U.S. government introduced free secondary education. Since the nineteenth century a network of multidisciplinary universities and colleges, both private and public is formed. In addition to formal education in the twentieth century the professional training in the private sector is rapidly developed, a system of public vocational schools for training and retraining, including young people and the unemployed is also created. The powerful incentives in the development of higher vocational education in the USA were the development of scientific and technological revolution, economic and military-technical competition with the Soviet Union, and also the struggle of black population for their rights, that in cooperation with other measures to desegregation, led to creation of municipal colleges for African-American youth [3].

Public and private spending on education (excluding the cost on professional training), increased significantly (by 70%) in the 80-90th of the twentieth century. By 2007 it counted \$972 billion, or about 7.5% of GDP, which is significantly, exceeded the annual cost of the U.S. military targets (\$ 660 billion i.e.5.0% of GDP in the same year). In addition, according to different estimates \$ 150 billion were the costs on retraining. 94 million people, which is 44% of the adult population (it was only 13.3% in the mid 80's) took part in different training programs in 2005.

Taking into account all other public and private programs on training and

retraining of the labor force (the retraining of the unemployed people, training at the workplace, etc.) the gross expenditure on education in the United States reach \$ 1 trillion a year. In 2011 this amount was \$1.01 trillion.

Absolute majority (4/5) of all educational institutions (from pre-school education institutions to HEE (Higher Educational Establishments) is financed from public sources (federal, state and local budgets). In 2007 these expenses amounted to \$ 792 billion or more than 81% of the total amount, in 2011 they were \$ 787 billion. Only 20% of all educational institutions are supported by private capital (corporations, private foundations, individual persons); in 2011 their expenditure amounted to almost \$ 200 million, or about 25% of total spending. This ratio reflects the most important feature of the American system of formal education i.e. the dominant role of the state in its financing.

In addition to the financial supply education services dispose numerous and well-trained human resources. In 2009, in the U.S.A there were 3.7% million of school teachers, and about 1.3 million teachers were occupied at the HEE, including 840 thousands at the state HEE, 450 thousands in the private ones. According to the forecasts, more than 4.2 million school teachers will work in the United States in 2017. The analyses shows that more than 1 million people has work related to teaching: the experts working in industrial companies, military field, consultants and teachers in museums, libraries, etc.

One of the central and the most important parts of the American system of education is higher educational institutions. In 2010 in the USA there were 18 million students: 13.4 million enrolled in public HEE (74%); 4.6 million were in private ones (26%). In 2010 the United States had 4.3 thousand institutions of higher education 1.85 thousand were state and 2.45 thousand were private. Among them special role play research universities, which are about 235 ones.

These universities enrolled about 2.8 million students (19% of the total number), which receive state support for basic research and they awarded the largest number of doctoral degrees in various sciences.

These are highly prestige HEE, which take the leading places in university's rating not only in the USA, but in the whole world. They are Princeton University, Harvard University, Yale University, Stanford University, Columbia University, University of Pennsylvania, Cornell University, Massachusetts and California polytechnics and other worldwide known HEE. In general, in 2010

almost 1,5 million of bachelors (5% of student's age nation population), 594 thousand of masters (2%) and over 56 thousand of doctors (approximately 0,2%) in various fields of knowledge got their degree in them [4].

However, in spite of all existing achievements, there is a number of negative tendencies, which become apparent in Science and Education staffing.

In the first place is ageing of scientific and engineering personnel. More than 50% of all scientists and engineers are over 40.

Secondly, after the terrorist attack of 2001, the attractiveness of the USA for the foreign scientists and engineers has reduced; the conditions to entry the United States have been complicated for students, as well as for professionals. It is the foreign scientific and technical personnel in many specialties that form 50% or more in joint demand for such experts.

Thirdly, the countries, which had previously been an important source of scientific and technical personnel for the US, such as China, India, Taiwan, South Korea, prepare scientific and technical personnel themselves and increase the appropriation on RADW (research and development work) and education. So, for example, in South Korea the number of doctorates since 1999 till 2010 increased in 400%, in Taiwan – in 500%, and in China – in 540%. Accordingly, the number of graduate students from these countries, who defended doctoral dissertations in the USA, declined.

The fourth is that fewer American students devote themselves to the study of natural and engineering sciences and mathematics. Among all graduates, the proportion of graduates in such specialties is, for example, 60% in China, 41% in Taiwan and 33% in South Korea.

In the USA in 2009, this proportion was under 30%. The proportion of 24-year old and older engineering profession alumnus consists of 5,8% in Japan, 4,3% in Taiwan, 2,7 % in the European Union, and only 1,8% in the USA.

Moreover, there is a number of factors, affecting the higher education development, scientific and technical potential of the nation negatively. This is the accessibility of a high school for Americans of different stratum, according to which, by 2009, student's average costs, connected with studying for 4 years in a University college had reached 34,3 thousand dollars. Since 1985 till 2009, education costs, for example, in a 2 year-studying college, were increased by 115 %, and in a 4 year-studying one the costs were increased by 200%; at the same time the maximum amount of scholarships for students from poor families were

reduced by 25%. Regardless of it, the amount of young men among the white people and the representatives of ethnic minorities, getting a higher education, have grown. Thus, in the period of 1976-1980, in 4 and 2 year-studying colleges there were 31% of 18-24 years old white people, 28% of black ones and 29% of Spanish-speaking people, by 2009, 48% - the white people, 34% - the black and 32% - the Spanish-speaking youth.

The topical issue for the USA HEE remains a shortage of lecturers within a scientific and technical discipline, leading to an active involvement of foreign highly qualified personnel to their universities. Thus, in the middle of the first decade of the 21 century, a number of the foreign engineering science lecturers was 26%, 33% - the applied and theoretical mathematics lecturers, 22% - physics lectures, a number of scientists-doctors, from abroad, which constantly reside in the USA is 37%. Basically, these scientists are from Asia and Europe with the predominance of such countries as India, China, Great Britain, Taiwan, Canada, South Korea [2].

In the USA, the main part of the personnel training and retraining system appears a high and secondary school, educational courses and private corporation centers. The national professional training system is developed poorer.

Therefore, in the 2008-2009 crises the U.S. government had to take additional emergency measures to support people who have lost their jobs and help them with their future employment. In April 2009, the unemployment rate in the U.S. increased to 8.9%, and up to 21% - among people of 16-19 age groups. However, in February 2009, the new administration plan was adopted. It includes not only traditional anti-crisis measures to increase support for the unemployed and to create workplaces, but also a long-term component of the XXI century labor force training. In 2011 the Department of Labor approved the Strategic Plan for 2011-2016, whereas the mainstream of public employment strategy competitiveness of labor considering the challenges of international competition of the XXI century is defined. The emphasis is made on providing decent work for everyone, active involvement in the process of providing adequate education and training, improvement of labor training system not only in government agencies but also in businesses, nonprofit organizations and citizens themselves [8, p.5].

The U.S. strategy of labor competitiveness strengthening and providing of the U.S. economy human resources is realized in a number of initiatives of labor training system modernization, which are realized due to current and

future demand.

In the United States, together with the expanding accessibility of secondary, vocational and high education, labor training, special industrial and educational centers of private companies engaged in training and retraining of workers became widespread. But the functions of human resource departments aren't realized, if they are limited by mediation only, and do not apply to the preparation of labor force based on production needs. Accordingly, the funding of promoting employment and vocational training got about 60% of the Departments of employment and vocational training budget of the U.S. Department of Labor (the social protection of the unemployed got 38%, and administrative goals is less than 2%) by 2011.

Finance restructuring in managing employment and training are accompanied by increased demands to bring investment system to workforce according to new economic realities, efficiency programs, including the improvement of their administration.

There were 14 economic sectors in this program. They are: aerospace sector, automotive, industrial production based on high technology, construction, energy, healthcare, financial sector, biotechnology, geospatial technology, national security, information technology, retail trade, transport, and hotel business. Their transformation is largely associated with the development and spread of new technologies and innovations that require employees in the appropriate knowledge and skills to provide adequate personnel. The approach is to "focus on the demand." The investment into labor should be used for staff skills, knowledge and information needed in certain areas that are important for the development of the economy as a whole.

Key features to implement the Initiatives are assigned to the Office of Employment and Vocational Training of the Ministry of Labor. Particular attention is paid to inform the subjects of labor market about the perspectives.

Among the tasks that are designed to solve this program are:

- creating favorable conditions for employees in career sectors with high qualifications;
- implementation of targeted investments in workforce development and support of public-private partnership for the formation of workers labor skills demanded by modern industry;
- ensure harmonious interaction of colleges at all levels of business and

public employment services in order to meet the needs of professionally-prepared workforce;

- widening of employers' opportunities to the use of the education system by combining training of staff in the workplace and in academic educational institutions [8, p.11-20].
- The peculiarity of the American system of training and re-qualification is the creation of wide continual system of study and advanced training for companies' employees. The most popular methods are the active methods of learning that are used with the purpose of the increase of personal activity and initiative of students, intensifying their creative thinking and emotional-volitional. During the advanced training the employee usually strives to deepen the knowledge y of one profession. But experts point out, that over the years the training in the U.S. is becoming more theoretical and informational. The American system of education tends to give professional knowledge, while most the U.S. students would like to get specific information and learn effective ways of business interaction. American experts believe that training can be effective if the actual problem is solved in one education group by various specialists.

Considering the initial training of young people, it should be mentioned, that the state primarily stimulates the activity of enterprises through direct funding of inner firm systems of education. In the United States the State strives radically transform the nature of education in the firms and come out as the organizer of inner firm training centers. The obligatory condition is correspondence of education to conditions that are stated modern professions. The state investment into inner industrial training programs directly related to the problem of employment and unemployment, so far as the basic contingent of those, who get their education is potentially or actually unemployed young people at the age of 16 to 25 years old. In case of recruitment and training at the appropriate level of young people (age group 16-18 years old) with no secondary education, state agencies cover up to 60% company's costs. The goal of the studying is to get basic knowledge which provide certain employment guarantees and allow increasing further qualification.

Generally, the state's direct financing of the inner-firm training is extended on working professions, but sometimes it involves the training of specialists at the level of specialized secondary and higher education (specialized on

engineers and technicians categories).

Since 1990, methods of direct financing have become supplemented with indirect stimulation of the inner-firm preparation by means of the differentiated tax policy i.e. in the USA, the sums intended for teaching of young employees are completely tax free [5].

Together with the economic methods there exist the other forms of the enterprises' activity stimulation, for example, the creation of an infrastructure suitable for the youth inner-firm training. The state research centers, employment services, branch consulting commissions provide enterprises with the information about the labor market situation.

These specified activation actions of the inner - firm training of the personnel are realized within the state educational programs and youth employment that provide a certain legal basis of interaction between the state and enterprises. In the nation-wide programs the considerable part of the finance is delegated at regional and local levels.

The mechanism of youth employment by means of its vocational training and retraining allows the bilateral interaction between the government bodies and the enterprises and the state stimulation of the direct cooperation between the enterprises and the educational institutions. Thus the state uses the same instruments of action: financing, tax policy and creation of the informational legal structure.

The main goal of the theoretical training and labor activity combine process system is to approach the preparation of skilled workers to the production conditions. The problems of youth employment and creation of additional workplaces are thus solved, as well as public financing and in this case it executes main social function.

These principles took the most perfective form in the US state contract system, which itself is an absolutely different level of interaction between the government bodies, educational institutions and the enterprises in preparation of the top skilled scientific personnel. The essence of system consists in stimulation by the state-customer of the large research projects which are aimed on realization of scientific researches, training of specialists and increase of their qualification. The educational institutions and firms act in this case as collaborators of the project. The multi-standardization of the projects allows obligation of the personnel shift from educational to the production sphere.



As a whole, the contract system has an indirect relation to a problem of youth employment, but it is necessary to consider certain terms of the state financing of the research projects. The number of these conditions often include the level of involving the students into the project and the corresponding programs of preparation that substantially guarantee the students the employment at the particular enterprise according to their qualification. The projects created by the associations of independent small and medium-sized enterprises are in priority subsidizing. In case if a certain norm of the students' involvement achieved, the US National scientific fund compensates nearly a half of the corresponding expenses of the enterprise.

The retraining of the employees dismissed in the course of production isn't included into the enterprise's sphere of interests. But in modern conditions the insufficiency of the states affords and necessity of involving the enterprises into providing of employment becomes obvious. Without such an interaction the efficiency of the retraining measures for the dismissed personnel turns out to be very low, as it doesn't count the specifics of requirements of those corporations for which the personnel is prepared [1].

The traditional participation of enterprises in federal programs is that the retraining of dismissed workers in public courses partially funded by contributions from employers to unemployment insurance fund. Nowadays to realize the potential of research centers the benefits and reimbursement of costs are actively used, they are associated with the certain unemployed categories training. In case of organization of courses for workers retraining, the US firms receive a discount on income tax.

Another form of cooperation between the U.S. government and enterprises are joint development programs for retraining fired workers, and the management of these programs. In case of such cooperation the corporations independently assess their staffing needs and on the basis of these assessments identify the opportunities for training and employment compulsory retired persons. Then according to the contract of the company get state subsidies for those who were prepared.

For example, in Massachusetts tax rebates and subsidies are only for those companies that organize the retraining of employees to be laid off, not less than three months before the intended period. The retraining of workers who potentially will be off work provides not only cooperation between

government agencies and companies, but also stimulates the appropriate state cooperation of institutions and companies. Thus, direct public funding is used for the organization of joint programs for retraining associated with radical restructuring of production.

For example, in 2005 the Oregon state government compensated 31% of all spending on the cost of the joint program retraining because of computerization of production, done by corporation “Northern Pacific Bell”, local university and a number of colleges. The condition of funding was to include all interested employees in the program.

Inner-firm training and retraining of staff became a powerful industry. The development of inner firm training gets active support from the state and is coordinated by government policy in education sphere and labor market regulation.

In the first half of the XXI century in the field of education large corporations became the leaders that operate in the field of high technology. For example, the corporation “Motorola” has a network of training centers and a technical university for training and reeducating technical specialists and managers. Its annual allocations for training personnel increased in 2010, from 7 to 120 million U.S. dollars [3].

The intensive growth of inner corporate personnel’s training is associated with new conditions of competition on the world market. The role of non-price competition in which technological innovation and quality of products have resolute value increases. High professionalism of personnel, its ability and willingness to develop creatively new technologies become the most important factors for commercial success.

The organization of training and retraining of personnel within enterprises are built in the system of inner corporate planning i.e. training and retraining programs have purposive character and closely related to plans of creating new enterprises and reconstruction of the old ones, i.e. with investment plans, as well as with programs of research, development and implementation of new technologies. Developing the next technological program, company management not just plans technical and financial provision, but begins to prepare the necessary staff in advance.

Lately, the motivation for professional growth and personal enhancement is the basis of training organization. Methods of psychological stimulation,

such as self-esteem and goal's development are commonly used. Periodically, each employee fills in the questionnaire, in which they assess their contribution in production and scores, and also expresses certain wishes. The supervisor also expresses his opinion on these questions in the questionnaire. On the ground of questionnaires department leaders decide whether to promote an employee or send him to study off-job (to the training center of the firm, technical college or university) to achieve retraining course. In order to increase qualifications profile of employees and to find out their abilities staff turnover is widely used.

**Conclusions.** The priority directions of internal state's activity are now the following: increasing of employment level among all segments of American population, increasing of unemployment benefits, creating new and saving existed work places, improving of training and retraining system of workers in enterprises. Today, one of the top priorities is the problem of providing work places to graduates of secondary schools, women, disabled and other vulnerable people.

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