PalArch's Journal of Archaeology of Egypt / Egyptology

SPECIFIC ASPECTS OF MODELLING NETWORK PARTNERSHIPS BETWEEN SCHOOLS, HIGHER EDUCATION INSTITUTIONS AND BUSINESS ENTITIES FOR DEALING WITH ISSUES OF SENIOR PUPILS' VOCATIONAL GUIDANCE WITH ORIENTATION TO THE REGIONAL LABOUR MARKET

Shaymardanov R.Kh[1], Latypova L.V[2], Cand, Araslanova A.A[3], Cand, Araslanova V.A[4], Cand, Alekseeva O.V., Cand[5]

[1,2,3,4,5]Surgut State Pedagogical University, Surgut, Russian Federation

Shaymardanov R.Kh, Latypova L.V, Cand, Araslanova A.A, Cand, Araslanova V.A, Cand, Alekseeva O.V., Cand. Specific Aspects of Modelling Network Partnerships Between Schools, Higher Education Institutions And Business Entities For Dealing With Issues Of Senior Pupils' Vocational Guidance With Orientation To The Regional Labour Market-- Palarch's Journal of Archaeology of Egypt/Egyptology 17(10), 2408-2417. ISSN 1567-214x

Keywords: Partnerships, Modelling Network, Regional Labour Market

ABSTRACT

The issues addressed in the article are of particular relevance due to the need to find ways to build an effective social networking partnership between schools, higher education institutions and business structures in order to create conditions for the reproduction of highly qualified personnel for the regional market. The aim of the article is to identify specific aspects of modelling network partnerships for senior pupils' vocational guidance with orientation to the regional labour market The primary research method used to address the topic is the approach, allowing to integrate the efforts of all interested educational institutions and various joint-stock companies in training competent, mobile and competitive personnel, which allows to identify specific features of modelling the networking partnership taking into account the conditions and factors of a particular region and sectors of economy. A network partnership is considered in the article both as the creation of new opportunities for developing pupils' creative activities, contributing to the stimulation of their motivation for further work in the main industries of the region, and as an effective means of improving the quality of pupils' training, providing for their competitiveness in admission to the networking higher education institutions and in employment by the networking companies. Materials of this article may be useful for building systematic cooperation of schools and higher education institutions with representatives of business entities operating in the main sectors of the regional economy with the aim of exchanging experience and knowledge, organizing vocational guidance activities, motivating young specialists to work at the networking companies and developing the region as a whole.

RELEVANCE OF THE RESEARCH TOPIC.

A network partnership is a new phenomenon for our society, which is related to its transition to market economy. The essence of the phenomenon can be described as follows. In former times vocational guidance activities were totally controlled by the state, because secondary education was (and still is) funded and overseen by by the state. The results of the vocational guidance at secondary general schools were also evident at state-funded entities, since there was no private property and all the means of production and economy as a whole belonged only to the state. On the one hand, the state created conditions for a straightforward trajectory of professional development, first through obtaining secondary general and vocational education and later through participating in on-the-job training and retraining programs, with the maximum consideration of the production needs. On the other hand, the processes of professional growth were determined from outside and defined by external factors, without any consideration of personal development needs (4, pp. 7–8).

It should be noted that in the USSR the second half of the 20th century was marked by the search for effective forms of interaction between industrial entities and professional education institutions within territorial production complexes. That experimental approach was based on national traditions and had been tested for more than two decades (3, 6, 10, 24).

Today the private ownership of the means of production has made it possible for the private sector to occupy a significant share in the national economy; therefore, the current economic conditions require unified efforts of both stated-funded secondary and vocational schools and private business entities to solve the current problems of vocational guidance at school. During the Soviet period, each school had an assigned partner – factory or collective or state farm – to meet the challenges of pupils' vocational guidance. Such partner was called bazovoe predprijatie ("basic enterprise"), as it was a production base for vocational guidance activities, at the same time actually preparing future generations of personnel for the own needs. Such patron of a school was also colloquially called shefskoe predprijatie.

Each epoch generates its own ideas and innovations. Sooner or later they lose their novelty, become irrelevant and outdated. In order to spread innovations, it is necessary to solve some specific tasks: to develop special training programs and textbooks, provide advisory assistance and organise round tables and forums (14, p. 235).

Vocational guidance of the younger generations is the task of the school, family and public associations, though the results of their efforts are mostly enjoyed by the private joint-stock companies. Therefore, it is necessary to integrate the efforts of the interested educational institutions and various joint-stock companies in the training of competent, mobile and competitive personnel. The interested parties are the children themselves, family, kindergarten, school, vocational education institutions and business entities. That is why in this article we will consider some specific aspects of modelling the network partnership, taking into account the conditions and factors of our region and the regional branches of economy.

Today, the partnership, considered as "a technology of joint activity based on recognition of the importance of the interests of all participants, which is shared by all interested target groups of the society and leads to positive synergies" (5, p. 237), becomes one of the most popular types of social communication and interaction. The pedagogical theory and practice have accumulated a certain promising experience in

creating models of continuing education, an important precondition for the existence of which is the availability of network partnerships (7, 8, 9, 21, 15).

The concept of "networking (network partnership)" became relevant for our society in the late XX and early XXI century as one of the important directions of the education development. That was due to the following main reasons:

- growing dynamism of the external environment and the need for rapid adaptation to its changes;
- low efficiency of the generally accepted forms of cooperation in solving complicated issues of joint educational programs;
- development of networking technologies and global communication networks (17).

Today the complexity of understanding the concept of social networking is explained by the fact that there are too many different approaches to its definition in the foreign and Russian scholarly studies. Thus, according to R. Huggins (23) and J. Webster (25), a network is a structure consisting of two or more companies having common goals or working to solve common problems and interacting over a long period of time.

At the same time, the network structure is a free, flexible form of integration, which is managed from the single centre that takes on the responsibility of performing such important functions as the formation of alliances between networking partners and managing them, coordination of financial resources and technologies and the definition of the competency limits and strategies, and solves the related issues of managing the information resources that link the network together.

The scholars contend that the main advantages of network structures are the following:

- adaptability to the changing environment and rapid reaction to changes in the market economy;
- focusing of activities of networking partners on their key competencies and unique processes;
- a significant reduction in costs and rationalisation of costs structure;
- elimination of duplication of functions among different networking partners;
- involvement of competent partners with the necessary resource potential into joint activities for the implementation of projects within the network;
- an effective mechanism for exchanging information among the networking partners and for sharing best practices.

Social networking, as a type of social partnerships, is organised as a decentralized set of interconnected open-type nodes that can expand unlimitedly by including more and more new links (structures, associations or institutions), which makes this form flexible and dynamic (22).

Such social networking can be implemented, for example, in the field of education with the use of Web-2.0 services. It is important for training future teachers not only to teach them how to create blogs, but also to involve them them into existing blogs, where practising teachers discuss issues and problems they face in their work. As such blogs attract innovative teachers, methodologists, authors of textbooks, developers of state educational standards and other specialists, their use in teaching

students can improve the quality of higher education (19, p. 124). Such work is already underway, for example, at the Surgut State Pedagogical University both in teacher training and in continuing education of teachers (advanced training courses and retraining in those areas that are currently in demand in the Khanty-Mansi Autonomous Okrug – Yugra). The University web-site contains different information resources and is used as a platform for networking seminars, round tables, counselling sessions and conferences. The regional technology-enhanced learning environment can give a powerful impetus to the processes of students' self-realization. When properly used, such environment can promote examples of educational social behaviour, serving as "beacons" for the students looking for self-realization. The electronic communication environment provides opportunities for such important aspects of self-realisation as expansion of social contacts, multiple horizontal feedbacks through assessment of the activity results presented in the network environment, possibility of inclusion into new social communities and the status increase in them (1, p. 20) and for the creation of a true social network, including the school and the higher education institution, for solving the current problems of senior pupils' vocation guidance with the orientation to the regional labour market.

It is necessary to establish a network of the parties – both suppliers and customers – interested in the pupils' vocation guidance aimed to help them in a conscious choice of a job in the organizations, institutions and joint-stock companies operating in the regional economy. The most striking distinctive feature of the socio-cultural environment of the Yamal-Nenets Autonomous Okrug is poly-stratification of the local towns, characterised by multiple subcultures. Therefore, the formation of the ability of a conscious personal choice in an ever-changing environment – first of all, with respect to the future profession – among secondary school pupils will be of particular importance. Many townspeople, the majority of which are urban dwellers in the first or second generation, objectively do not have such ability.

Socialization in traditional rural societies is based on unchanging traditions, customs and rites, a system of mutual responsibility and the constraints of public opinion, but when people move to urban settlements, the factor of collective commitment disappears. If the internal locus of control is not yet formed, the person often turns into an irresponsible outcast. This is a cultural interpretation of the antisocial behaviour of certain categories of citizens and the problems faced by law enforcement agencies, social services and the citizens themselves.

This situation creates significant contradictions between the type of socialization formed in the urban environment and the type of socialization that was formed in other sociocultural conditions. So, there is an urgent need for the formation of socializing mechanisms that would take into account the specificity of the urban environment and provide for the creation of a unified cultural and educational infrastructure with the necessary conditions for self-realization of urban dwellers in the new cultural space.

While a traditional society is characterised by "interlacing" of the educational methods into the ritualized community-based social norms and in joint economic activities, more complicated and differently structured urban conditions require adequate educational mechanisms that would contribute to the emergence of pedagogical innovations, which are necessary for effective socialization in the urban culture.

In the context of the new educational paradigm, education is a powerful institution of our civilization that is aimed at personal development and shaping of personality and civic consciousness (11, p. 194).

The educational community should formulate an educational policy for the urban environment in compliance with the social order and the imperatives of our time. In our opinion, an "ideal" model, taking into account all specifics of the young Siberian city, should be based on certain principles. We would like to list the most important principles, without ranking them:

- continuity between different levels of education (each level should not be just a completed learning cycle but a basis for further studies at the next level);
- unity of requirements (existence of unified requirements to the form or level of education is important in case of moving to another educational institution);
- freedom to choose an educational trajectory (depending on intellectual abilities and financial possibilities);
- humanism in relations (in the systems of "student – teacher", "teacher – manager", "teacher – parent", "teacher – teacher");
- openness to the society (interaction with employers, public organizations, institutions of culture and sports, etc.) (16, p. 5).

DISCUSSION

There is an emerging need to design a new social and educational infrastructure that would create necessary conditions for the formation such personal qualities in the representatives of younger generations that would make them capable of "social navigation" in the urban culture; that would become a precondition for the creation of new urban cultural traditions, the observance and transfer of which could ensure social stability.

A distinctive characteristic of the towns of the Yamal-Nenets Autonomous Okrug has been their rapid growth with the development of oil and gas industry, which has resulted in the stratified poly-ethnic structure of the local population.

RESULTS

The city of Noyabrsk created a Resource Centre for local schools, where the schoolchildren, at their request, can receive an in-depth training or industry-specific education on the basis of several schools. And the accumulated experience of the Centre operation shows that there are conflicting interests of schools and teaching staff groups: schools compete with each other, and the teachers are afraid of losing their best pupils. Their worries are not unfounded: some schools actually try to lure away academically gifted children.

As for the networking in the "school – higher education institution" system, schools are trying to achieve the following goals:

1. To improve the quality of pupils' training, providing for their competitiveness in admission to higher education institutions, including the networking partners, and in employment by the networking companies.
2. Formation of ideas about the value of engineering jobs among senior pupils aged 16–18.
3. Creation of new favourable conditions for the development of pupils' creative activities and for meeting the following objectives:

1) to acquaint schoolchildren with the history, culture and development prospects of the Russian oil and gas industry and with specialisations and professions that are in demand on the regional labour market of the Yamal-Nenets Autonomous Okrug, involving instructors from the partner higher education institutions and the business structures of Gazprom Dobycha Noyabrsk (1, p. 204–206) and Gazpromneft-Noyabrskneftegaz (12, p. 207–211);
2) to stimulate pupils' motivation for future work as engineers in the oil and gas industry;
3) to organize schools' social partnership with higher education institutions and business entities (12, p. 147–156; 157–165);
4) to organize a network partnership between Noyabrsk schools in the sphere of industry-specific education, etc. (12, pp. 137–143).

In the system of schools' networking, organised as a Resource Centre (Noyabrsk Virtual School), schoolchildren can choose the educational programs that are most relevant to their interests and level of abilities. However, this possibility can be characterized as a system of municipal educational space aimed at optimizing the resources that schools have already had. This type of partnership cannot satisfy the interest of a school seeking to implement an innovative development strategy, which is defined by the national project "Education" as a priority, because the above-described partnership is of little use for identifying and creating new resources for the school development. We mean, first of all, that the school needs help to design new school sub-systems aimed at adapting the school's educational system to the rapidly changing realities of the surrounding world.

We are also talking here about the issues related to the vocational guidance of schoolchildren, which, of course, has regional specifics. In the Yamal-Nenets Autonomous Okrug, there are many high-tech enterprises and research institutes, which are in dire need of professionally motivated and creatively thinking personnel. Yamal's economy is based on oil and gas production, and the main producer is Gazprom, which accounts for approximately 90% of all gas and oil production in the Autonomous Okrug, therefore the company is in constant need of skilled workers and engineers. The lack of qualified professionals is also evidenced by statistics, according to which since 2013 there has been a need for 300 thousand jobs. We can only add that the number of industrial enterprises in the oil and gas sector is growing, and new production areas and oil and gas fields are developed. New projects have been launched and are now at the development stage:

- Bovanenkovskoye and Novoportovskoye fields;
- increase in the condensate processing capacity of the Purovsky Plant;
- expected commissioning of the Novy Urengoy Gas and Chemical Complex;
- construction of the Yamal LNG plant;
- construction of Sabetta Arctic port; etc. (12).

According to the forecast of the employment agencies of the Yamal-Nenets Autonomous Okrug, the implementation of these projects will increase the need for qualified specialists by several times.

The project "Network Partnership between Schools, Higher Education Institutions and Businesses in the Sphere of Senior Pupils' Vocational Guidance" has been specifically developed to deal with this problem. The project was developed in

compliance with the Concept of Additional Education for 2015–2020 (approved by the Government of the Russian Federation on 04 September, 2014).

The main idea of the project was to create a developing educational environment for learning such subjects as physics, mathematics and chemistry on the basis of a network partnership with higher education institutions (Moscow Institute of Physics and Technology and Saint Petersburg Mining University) and business entities (Gazprom Dobycha Noyabrsk and Gazpromneft-Noyabrskneftegaz), with access to the resources of university laboratories provided with the means of high-speed telecommunication and remote access, as well as joint professional educational programs based on the recommendations of networking partners.

The project was to provide for realization of the idea of close partnership between higher education institutions and business entities on the basis of a secondary school, establishment of the program for the development of teachers' professional competencies, implementation of the agreed educational programs and curricula, participation of universities in the methodological, financial, technical and staffing support of the educational process with the aim of involving those schoolchildren that are interested in working in the oil and gas industry into research and applied projects and into joint awareness-building and vocational-guidance programs.

In general, deepening of the network partnership between higher education institutions and schools would make it possible to achieve a synergistic effect in raising the educational potential of the schools and their graduates, providing access to high-quality education, and maintaining and developing continuity between secondary and higher vocational education and subsequent practical activities. The achieved effect could result from the self-consistent processes of improving the quality of the pedagogical staff activities, the effectiveness of the implemented educational programs and the general improvement of the secondary education system.

The project novelty is in the integration of pedagogical, educational and economic resources and structures aimed at increasing the motivation of senior pupils to choose engineering professions, in particular, in the oil and gas industry (18). The integration is based on using material and technical resources of the networking partners and a specially developed educational program. The program was designed in such a way that pupils, under the guidance of their school teacher, higher education instructors and representatives of a commercial organization, could deepen their knowledge about their future professional activities. A distinctive feature of the project was that it provided for training in the process of organizing the practical work.

Conclusion. It was expected that implementation of the project "Network Partnership between Schools, Higher Education Institutions and Businesses in the Sphere of Senior Pupils' Vocational Guidance" would result not only in the growing level of pupils' knowledge but also in organization of a network partnership and better staffing support for the educational process.

From the perspective of educational effectiveness, it was planned to increase the level of education among senior pupils aged 16–18, which would allow them to acquire systemic knowledge of the learned subjects, demonstrate self-determination, self-awareness, self-regulation and personal self-realization, develop such qualities

as responsibility, initiative, independence, mobility, competitiveness and self-esteem, and exhibit constructive behaviour and teamwork skills.

The network partnership was designed for a systematic cooperation of schools and higher education institutions with representatives of business entities of the oil and gas industry with the aim of exchanging experience and knowledge in the engineering education and creating necessary conditions for the reproduction of highly qualified personnel for the economy of the Yamal-Nenets Autonomous Okrug.

The project staffing was to provide for the formation of the theoretical and practical readiness of the networking partners for the implementation of the advanced systemic activity-based approach to education; growing competitive activity of the project participants; creation of a system of pedagogical expertise and counselling; and establishment of network mechanisms for the creation of teaching materials and methodological technologies of vocational guidance.

REFERENCES

[1] Alekseeva O.V., Araslanova A.A. Podgotovka bakalavrov pedagogiki k ispol'zovaniju vozmozhnosteĭ informacionno-obrazovatel'noj sredy regiona (Preparation of Bachelors of Education for Using Opportunities of the Regional Informational and Educational Environment). Doshkol'noe i nachal'noe obrazovanie: problemy, perspektivy, innovacii razvitija (Preschool and Primary Education: Development Problems, Perspectives and Innovations). Proceedings of the International Research and Application Conference, 22 May 2017, Department of Education and Youth Policy, Khanty-Mansi Autonomous Okrug – Yugra; Department of Psychology and Pedagogy, Surgut State Pedagogical University. Comp. and edited by N.V. Abramovskikh. Surgut: Surgut State Pedagogical University, 2017, pp. 16–22.

[2] Antapolskaya T.A. Setevoe vzaimodejstvie kak mehanizm realizacii social'nogo partnerstva v professional'noj orientacii molodezhi (Networking as a Mechanism for Social Partnerships in the Vocational Guidance of Young People). Scholarly Notes: Online Academic Journal of Kursk State University, 2016, no. 4 (40), pp. 1–8. Available at https://cyberleninka.ru/article/v/setevoe-vzaimodeystvie-kak-mehanizm-realizatsii-sotsialnogo-partnerstva-v-professionalnoy-orientatsii-molodezhi Accessed on 02.02.2018.

[3] Araslanova A.A. Istoriko-pedagogicheskij analiz razvitija vzaimodejstvija sovetskoj vysshej shkoly i proizvodstva v 60-80-ye gody XX stoletija (Historical and Pedagogical Analysis of the Development of Interaction between Soviet Higher Education and Production in the 1960-80s). Problemy i perspektivy razvitija obrazovanija v Rossii (Challenges and Prospects of the Development of Education in Russia). Proceedings of All-Russian research and application conference. Novosibirsk, 2017, pp. 6–11.

[4] Araslanova A.A. Professional'noe stanovlenie specialista: analiz sovetskogo perioda (60-80-ye gody XX stoletija) (Professional Formation of a Specialist: An Analysis of the Soviet Period of the 1960-80s). Fundamental'nye i prikladnye aspekty sovremennyh psihologo-pedagogicheskih i sociologicheskih issledovanij (Fundamental and Applied Aspects of the Contemporary Psychological, Pedagogical and Sociological Research). Vol. 2. Rishon LeZion: Medial, 2016, pp. 7–29.

[5] Araslanova A.A. Stanovlenie koncepcii social'nogo partnerstva: mirovoj zarubezhnyj opyt i tendencii razvitija (Formation of the Concept of Social Partnership: Global Foreign Experience and Development Trends). Nauka

Krasnojar'ja, 2012, no. 5, pp. 228–238.

[6] Araslanova A.A., Araslanova V.A. Process professional'nogo stanovlenija sovetskogo specialista (60-ye – 80-ye gg. XX stoletija) (The Process of Professional Formation of a Soviet Specialist: The 1960-80s). European Social Science Journal, 2016, no. 11, pp. 148–151.

[7] Araslanova V.A., Anuchin I.V. Stanovlenie sistemy nepreryvnogo obrazovanija v molodom sibirskom gorode (Establishment of the System of Continuing Education in a New Siberian City). Sistema nepreryvnogo obrazovanija: problemy i perspektivy (The System of Continuing Education: Problems and Perspectives). 2004, pp. 10–12.

[8] Araslanova V.A. Obrazovatel'nye kompleksy v sisteme nepreryvnogo obrazovanija (Educational complexes in the System of Continuing Education). Nacional'no-regional'nye aspekty reformirovanija rossijskoj obrazovatel'noj sistemy (National and Regional Aspects of Reforming the Russian Educational System). Ust-Ilimsk, 2008, pp. 9–10.

[9] Araslanova V.A. Sibir': vzgljad v proshloe tysjacheletie (Siberia: A Look into the Past Millennium). Sibir' na rubezhe tysjacheletij (Siberia at the Turn of the Millennium). Ust-Ilimsk, 2008, pp. 4–7.

[10] Araslanova V.A., Araslanova A.A. Upravlenie trudovymi resursami v uslovijah territorial'no-proizvodstvennyh kompleksov v SSSR (vtoraja polovina XX stoletija) (Management of Labour Resources in the Territorial Production Complexes of the USSR: The Second Half of the 20th Century). Istoricheskaja i social'no-obrazovatel'naja mysl', 2015, vol. 7, no. 5/1, pp. 18–23.

[11] Astratova G.V., Vasilyev N.L., Latypova L.V. Nekotorye aspekty menedzhmenta kachestva v vuze (Some Aspects of Quality Management in Higher Education Institutions). Kachestvo zhizni v XXI veke: tendencii, problemy, perspektivy (Quality of Life in the 21st Century: Trends, Problems and Prospects). Ed. by G.V. Astratova. Surgut: Surgut State Pedagogical University, 2014, pp. 194-199.

[12] Goncharova E.K., Shaymardanov R.Kh., Mukminova Yu.N., Kiskaev I.A. Setevoe partnjorstvo shkoly, VUZa i biznesa v professional'noj orientacii obuchajushhejsja molodezhi (Network Partnerships between Schools, Higher Education Institutions and Businesses in the Sphere of Students' Professional Orientation). Surgut: Defis Publ., 2017, 234 p.

[13] Chistyakova S.N., Panina S.V. Evropejskie modeli social'nogo partnerstva v professional'noj orientacii uchashhejsja molodezhi (European Models of Social Partnership in the Vocational Guidance of Young People). Scientific and Methodological E-journal "Koncept", 2015, vol. 26, pp. 331–335.Available at https://e-koncept.ru/2015/95351.htm Accessed on 03.02.2018.

[14] Latypova L.V. Blagoprijatnaja sreda dlja innovacionnoj dejatel'nosti malyh predprijatij g. Surguta (Favourable Environment for Innovative Activity of Small Enterprises in Surgut). Jekonomika i predprinimatel'stvo, 2012, no. 2, pp. 235–238.

[15] Latypova L.V. Biznes v uslovijah innovacij (Business in Innovative Environment). Teorija i praktika upravlenija v sisteme rynochnyh otnoshenij (Theory and Practice of Management in the System of Market Relations). Surgut, 2013, pp. 53–57.

[16] Lysak L.I., Araslanova V.A. Nepreryvnoe obrazovanie v g. Ust'-Ilimske – poisk ideal'noj modeli (Continuous Education in Ust-Ilimsk: Search for an Ideal Model). Sistema nepreryvnogo obrazovanija: problemy i perspektivy (The System of Continuing Education: Development Problems and

Perspectives). Proceedings of the 2nd Research and Application Conference. Ed. by A.A. Araslanona, (Soldatova). 2005, pp. 4–7.

[17] Makoveeva V.V. Setevoe vzaimodejstvie – kljuchevoj faktor razvitija integracii obrazovanija, nauki i biznesa (Networking as a Key Factor in the Development of Integration of Education, Science and Business). Bulletin of Tomsk State University, 2012, no. 354, pp. 163–166.

[18] Mukminova Yu.N., Shaymardanov R.Kh. Matematika v neftegazovoj sfere (aspekt professional'noj orientacii) (Mathematics in the Oil and Gas Industry: The Aspect of Vocational Guidance). Textbook for senior pupils entering oil&gas and engineering higher education institutions. Surgut: Defis Publ., 2017, 98 p.

[19] Salangina N.Ya., Alekseeva O.V. Ispol'zovanie blogov dlja raboty so studentami pedagogicheskih vuzov i uchiteljami (Use of Blogs to Work with Students of Pedagogical Schools of Higher Education and Teachers). Bulletin of Peoples' Friendship University of Russia, 2014, no. 1, pp. 121–126. [Series Informatization of Education].

[20] Suenkova A.V., Vayserova M.A., Petrova O.Yu. Setevoe vzaimodejstvie kak uslovie jeffektivnoj proforientacionnoj raboty so shkol'nikami (Networking as a Precondition for Effective Vocational Guidance of Schoolchildren). Saint Petersburg, 2016, 5 p.

[21] Tykheev V.A., Araslanova V.A. Universitetskij kompleks – teoreticheskij i prakticheskij aspekty (University Complex: Theoretical and Practical Aspects). Sistema nepreryvnogo obrazovanija: problemy i perspektivy (The System of Continuing Education: Problems and Perspectives). 2004, pp. 8–9.

[22] Tsirulnikov A.M. Shkol'naja set' vmeste s upravlencheskoj vertikal'ju (School Networking together with the Administrative Vertical). Rossijskoe obrazovanie. Setevoj podhod (The Russian Education: A Networking Approach). Collection of Articles. Moscow, 2003.

[23] Huggins R. The Success and Failure of Policy-Implanted Inter-Firm Network Initiatives: Motivations, Processes and Structure. Entrepreneurship & Regional Development, 2000, no. 12, issue 2.

[24] Kosogova A., Araslanova A. The Role of the "Human Factor" in the Context of Strengthening Interaction between Higher Education and Industry in the USSR (the Second Half of the XX Century). Worldwide trends in the development of education and academic research, Sofia, Bulgaria, 15-18 June 2015. Procedia – Social and Behavioral Sciences, 2015, 214, pp. 168–173.

[25] Webster J. Networks of Collaboration or Conflict? Electronic Data Interchange and Power in the Supply Chain. The Journal of Strategic Information Systems, 1995, vol. 4, no. 1, pp. 31–42.