

WELLSO 2016 - III International Scientific Symposium on Lifelong Wellbeing in the World

Continuous Well-Being: The Role of Staff Training for Innovative Companies

German Mariy^a, Nekhoda Evgeniya^{a*}, Rakovskaya Vera^a

* Corresponding author: Nekhoda Evgeniya, sheyna@sibmail.com

^aTomsk State University, Lenin Ave., 36, Tomsk, 634050, Russia

Abstract

<http://dx.doi.org/10.15405/epsbs.2017.01.68>

Qualified employees are a key resource in innovative development. At the same time workers and specialists with technical college of education play an important role in economy. The article explains the role of training for innovative companies in connection with the changing social system associated with the assessment of socio-economic progress and well-being. There are training model for innovative companies, and criteria and indicators for evaluating interaction of professional educational institutions and innovative companies in this article. Training of personnel is revealed through the relationship and the characteristics of the main components of the training model: market research of staff needs, interaction mechanisms of professional educational institutions with innovative companies, evaluation of the results of interaction of professional educational institutions with innovative companies. It is concluded about professional education system which provides sustainability and continuous well-being of society and the individual at the expense of quality of advanced human resource development.

© 2017 Published by Future Academy www.FutureAcademy.org.uk

Keywords: Well-being, continuing education, innovative economy, a model of staff training, professional educational organizations.

1. Introduction

At the beginning of the XXI century the new contours of the measurement of social progress were designated, finding the optimal combination of objective (statistical) and subjective, quantitative and qualitative indicators that would more fully reflect the modern globalized world. The human dimension becomes the basis for assessing the progress of society, the development of socio-economic systems (Baimurzina et al., 2012), (Greenberg, 2012), (Lapin, 2014), (Lapin, 2012), (Gardening, & Sautkina, 2012), (Fox, 2012).

In the scientific community, in particular the socio-economic sciences, this has resulted in the development of both traditional concepts (quality of working life and quality of life, lifelong learning, sustainable development), and the emergence of new concepts (for example, the concept of continuous well-being and society, the concept of decent labor). Reasons for the social and economic sciences appeal to the continuous well-being of human society are connected with the increase in social risks uncertainty and instability of the surrounding environment; in the labor market - the need to learn new competencies, knowledge and skills throughout their working life, although the foundations laid for that long before a person enters into an active career.

We share the author's view of the monograph "The new factor of global and regional development: escalation of ethnical and socio-cultural contradictions" about new role of professional employment and higher education which helps to overcome the problems associated with the "personal socialization" promotes the stabilization of social life in general; professional employment could also "become an alternative and a new opportunity to confront social conflicts", the basis of quality of life concept and continuous well-being can provide professional employment and education (Gontmaher et al., 2013).

The most valuable employee competencies today are the following: first, the ability and willingness to lifelong learning, continuous improvement, retraining and self-learning, professional mobility, the desire for self-development; Second, critical thinking; Third, the ability and willingness to take reasonable risks, creativity and entrepreneurial spirit, ability to work independently and willingness to work in a team, willingness to work in highly competitive environment.

Competences development is a long and complex process, which includes the need to develop a training model for the present stage of social development. If training models for scientific and engineering staff more or less developed, training models in professional educational institutions of scientific workers, providing the necessary conditions for scientific and technical activities, are practically absent. Moreover, the urgent task in Russia today is to educate employees for innovative companies.

The research on this topic is limited. The most significant papers are written by (Janssen, 2000), (Kanter, 1982), (Miron et al., 2004), (Scott, & Bruce, 1994), (Tjosvold, 2008), (Yuan, 2010).

2. Problem statement

The need to change the mechanisms of interaction between innovative companies and subjects of educational activity was determined by Russian innovation development strategy for the period up to 2020, Education development program for 2013 - 2020, the Program of development of science and technology for 2013 - 2020, and other policy documents, implemented in the context of the concept of the Russian Federation social and economic development until 2020. Research shows that this interaction involves the dynamic development of all participants of the national innovation system, ensuring compliance with the employee competence development processes and knowledge economy requirements, promotes innovation activities, the competitiveness of the participants.

However, despite the institutional changes taking place in the Russian economy, the integration of education, science and production is very slow. It should be noted, the subjects of educational activity

is only universities (higher education), excluding an important role of professional educational institutions in the development of innovative companies that provide training for skilled workers and mid-level professionals.

Qualified employees are a key resource in innovative development of the Russian economy. At the same time workers and specialists with technical college of education play an important role in economy. Underestimating the role of workers and mid-level professionals in the era of "mass" higher education has led to the loss of worker's skills and qualifications. It is an important issue to provide training of workers who have desired competencies in the conditions of formation of innovative economy and improving the sustainability of socio-economic system of Russia.

Importance of staff training was proved by organizing WorldSkills (WS) national championships around the world. International non-profit organization WorldSkills International (WSI) is responsible for enhancing the status, prestige, promotion and working skills training standards throughout the world.

3. Main results of the research

Innovative activities carry risks more than other business activities since there is no guarantee of successful outcome. In large organizations this risk is much smaller because of the overlap with ordinary business activities which are more established and diversified. Unlike large organizations, small organizations are more at risk. It happens due to high dependence of small organizations from the external environment changes. Therefore training for innovative companies is also associated with the risk and the presence of the so-called uncertainty for professional educational institutions (hereinafter - PEI). There is a need to develop methods of decision-making and justification for training for innovation companies, which will ensure the limitation of losses due to non-compliance of planned and actual results of realization of educational services.

However, any activity for achieving this goal is rarely done on a strict program, without taking into account (or more precisely - with only a priori view of) what is happening in the intermediate stages. Companies have to assess the current result of previous actions and to choose the next step from the possible. It means that it is necessary to compare the effects of all possible steps without executing them actually, and "play" them on the model (Fig. 1).



Fig. 1. Training model for innovative companies

There are following components of a training model for innovative companies.

Marketing research of staffing needs (segmentation, positioning, sales promotion of educational services)

Marketing research of staffing requirements and training of qualified personnel for innovative manufacturing companies have a certain structure which has a specific sequence:

- the first level helps to determine what requirements are met, i.e. estimation of purpose, object and subject of research;
- the second level helps to select a sample of innovative companies for the research;
- the third level helps to develop research tools;
- the fourth level helps to conduct a survey of isolated research respondents, which is based on the staffing needs and their level of training for innovative manufacturing companies, as well as on the data processing;
- the fifth level helps to interpret results and to make a conclusion about staffing needs for innovative manufacturing companies.

Market segmentation of training for innovative companies consists of its division into relatively distinct groups of customers (market segments) that can be tailored to the different competences and required different efforts of PEI.

The first step in conducting market segmentation is to choose criteria. It is required to use the following criteria:

- geographical criterion is market division into different geographical units: countries, regions, areas, cities, districts, etc. Using this criterion is often the starting point of the segmentation. Geographical segments are usually easily identified and measured, the necessary information is available from secondary sources. In pure form geographic segmentation has limited use. It is mostly useful in educational services where territorial identity plays an important role;
- economic criterion involves dividing the potential innovative enterprises on number of employees (small, medium, large), the nature of the production, industry sector;
- cluster criterion involves assessing the prospects of the region's education for the expansion of the network of PEI and innovative partnerships in emerging territorial and sectoral clusters.

The next step after identifying the market segments is to determine the degree of their attractiveness and selection of target markets and marketing strategies. Ongoing assessment of the attractiveness of each market segment, and selecting one or more segments to master. In assessing the degree of attractiveness of the various market segments, that meet the requirements for their successful segmentation, it should be considered the following three main factors: segment size and rate of change (increase, decrease); structural attractiveness of the segment; PEI goals and resources, master segment. Structural attractiveness of the market segment is determined by the level of competition, the positioning power of innovative companies of potential employers towards PEI, competitiveness of considered educational products in these segments.

Even if the market segment has desired size, growth rate, and structural attractiveness, it is necessary to take into account the objectives and resources of PEI. There is a risk of mismatching of long-term development goals of the educational organization with the current objectives of its activities on a particular market segment. There is a possible lack of resources to provide competitive advantage.

PEI must decide which of the analyzed market segments must be selected and viewed as a target market.

The next step for PEI is to determine the position of the educational product on the individual market segments. Of course, we must also take into account the fact that educational product position affects the reputation and image of PEI as a whole. Positioning educational product is based on the innovative companies estimates that help to implement selection of such parameters that will provide a competitive advantage to PEI graduate. As a result of positioning market segments and areas of differentiation of educational products will be chosen.

Stability and success of any organization in a market economy depend on its relationship with the market and the possibilities of selling goods and services on the market. Therefore, regardless of the structure of the training system, each educational organization should solve the problems of promoting their educational services.

Promotion of educative services (sales promotion) is a complex of the various activities to bring the information about educational service advantages to potential employers (innovative firms) and to stimulate their desires to employ PEI graduates. by promoting educational services. Promotion of educational services has its functional channels which are illustrated in Fig. 2.

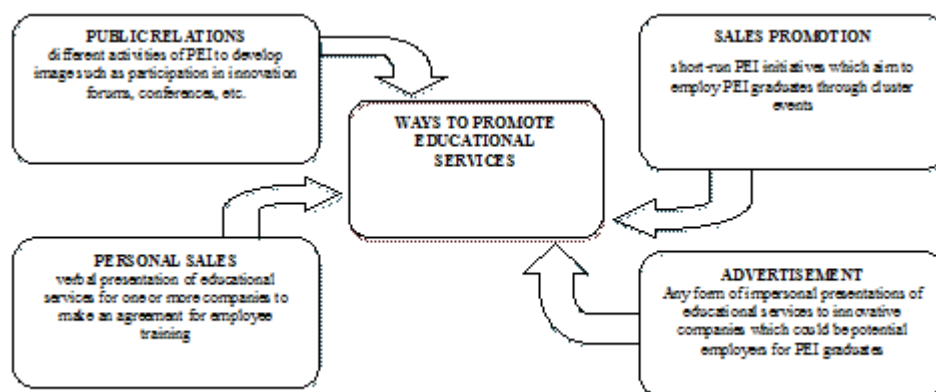


Fig. 2. Ways to promote PEI educational services to innovative companies

Determining the mechanisms of interaction of PEI and innovative companies

The mechanisms of interaction of professional educational organizations with innovative companies are combined into three groups: institutional, informative and marketing.

Institutional mechanisms of interaction of professional educational institutions with innovative companies.

This group has systematic nature and has the property of networking as being on the main character of organizational impact. They both feature economic and motivational mechanisms, and thereby enhance the relationship of professional educational institutions with innovative companies.

The network model of PEI cooperation with innovative companies shows distributed approach and defines in the diversity of competence and policy functions. Obviously, the success of the network needs a common goal, based on mutually beneficial cooperation. Interaction of PEI with innovative companies in the network reduces the costs of each participant. The network allows using shared resources, and reducing transaction costs. The specificity of innovative processes is reflected in the fact that an intensive exchange of knowledge organized in addition to the network, but it requires a high level of trust between the members of the network. To create a sustainable network, you must achieve a balance between the key assets of each of the participants.

Organizational mechanisms of interaction of professional educational institutions with innovative companies through networking include:

- integrated management, which involves the inclusion of the leaders of innovative companies in the PEI coordination (management) Council, in order to form a coherent educational policy and PEI personnel policy innovation companies;
- rational use of material and intellectual resources, which implies: firstly, the use of resources (equipment) PEI companies for innovative activities; secondly, the use of resources (equipment) through the creation of innovative companies on the basis of their departments in order to create application specific competences of PEI students; thirdly, initiating and joint implementation of technological, social and image projects.

Meaningful interaction mechanisms of professional educational organizations with innovative companies.

This group of mechanisms determines the content of the educational process in PEI, contribute to the formation of intellectual strategic platform, which provides a strategic sustainable development as PEI and innovative companies, as well as the formation of professional strategic competencies for graduates of PEI, facilitating the formation of a special innovative thinking and mobility and adaptability to high-risk labor market.

Important interaction mechanisms of professional educational organizations with innovative companies must include:

1. Preparation of workers and mid-level professionals, focused on elite education, and it is based on the continuous introduction of scientific discoveries and developments in the educational process, thus avoiding obsolescence of knowledge, due to the rapid scientific and technological progress, as well as to give not only a deep knowledge of the fundamental but also the ability to get new results. At the same time the most important aspect is the transition

from the control of knowledge and skills to assess key competencies associated with the willingness to innovate, commercialize.

2. R & D phase is accompanied by the development of the experimental samples and the transition to a test product marketing. At the same time the main driving force of innovation are the workers and mid-level professionals, capable to implement the scientific development by participating in the creation of an experienced R & D sample. In this regard, one of the main features of vocational education in modern conditions becomes connection of fundamental theoretical and practical knowledge, which changes the requirements for a rapid response capacity on the economic, technological and other changes in society. Consequently, during the learning process great attention should be paid to creating conditions for the development of creativity, initiative and versatility of the individual through:
 - formation of the new content of educational programs in general and the workers of disciplines (modules) programs in particular;
 - orientation theme of final qualifying works to solve applied problems of innovative companies;
 - orientation of the educational process on the design professionally-oriented education technologies that take into account inter-subject relations, the close relationship of theory and practice, focus on results, the creation of high motivation to study the subject, as well as the identity of the learner, the development of creative and personal competencies;
 - optimizing the combination of pedagogical process in PEI secondary, special and / or technological, socio-economic and general cultural components, which will provide assistance to the development of a mature personality, capable of solving professional problems, to take responsibility for the outcome;
 - widespread use of gaming and simulation learning modes, as well as team work, motivation to increase knowledge, awareness activities hierarchy of goals and their own role in the process and the result of the work, communicative competence;
 - research work of students;
 - formation of PEI students (along with the company's employees) additional competences at the company order - a partner in the form of additional education on a paid basis and budget using the PEI educational license and logistical resources of the company.
 - cooperation towards meeting PEI students with the corporate culture of the Employer, social and cultural-mass component of the enterprise.

To educate and develop the required student quality teachers and trainers have to know the production requirements for young workers and professionals themselves. They must comply with the requirements of a professional teacher standards.

Interaction of PEI with innovative company in this direction will be more effective if each factor of the educational process viewed through the prism of individualization.

Table 1 shows the types and mechanisms of applying the principle of individualization of the educational process elements, which will increase the satisfaction of innovative companies - employers of graduates.

Table 1. Types and mechanisms of individualization of the educational process principle implementation

Factors of educational process	Elements of individualization of educational process factors	Implementation mechanisms
Education technologies	Targeted training based on individual curriculum on the contract bases Group project learning	Selection of students to the target group, signing agreement about targeted training
Content of professional modules and interdisciplinary courses	Related professions Additional general and professional competences in accordance with professional standards and corporate requirements	Formation of individual curricular and educational trajectories Professional and public accreditation of educational programs
Material and technical equipment, methodical support	Integration of PEI resource potential with innovation companies Using material and technical equipment, special software during learning process for targeted group	Singing public-private agreements, networking agreements Organization of practical training and practice in the form of student internship
Methods of assessment of learning outcomes	Assigning a higher rank or skill level as a result of an internship at the company Independent qualification evaluation	Making protocols matching desired learning outcomes (educational standards + corporate requirements) and methods of qualification assessment
Worldviews of PEI managerial staff and teachers	Independent evaluation of PEI teaching staff qualifications Individual development plans of PEI staff on the bases of qualification evaluations	Internship at a company, training weak competences. Coaching, training, workshops on management competencies
Adaptation of graduates to the environmental changes and innovative risks	Skills of successful socialization, self-presentation, the ability to continuing education for professional work	Participation in professional competitions, WS championships, ad other competitive events. Start-ups implementation Individual social learning, ability to display talents in other areas

Market mechanisms of interaction of professional educational institutions with innovative companies.

In order to be able to satisfy the demand and be competitive, PEI should focus on the objectives of education subjects market and be able to respond flexibly to changes in the innovation economy. Therefore, based on market mechanisms of interaction of PEI and innovative companies it is advisable to put a target marketing approach, which includes a comprehensive toolkit that provides training workers and mid-level professionals to the individual requirements under consideration of economic entities:

- systematization of the organization of educational organization by which satisfied expands, projected demand for educational services, through the implementation of comprehensive marketing studies to identify future needs of innovative companies in the workers and specialists of middle link and embed them in the development strategy of professional educational institutions;

- promotion of PEI education services through the implementation of the service, price, communication policy educational institution in regional institutional environment of innovative companies;
- systematization demand, ensuring the formation of a package of orders of innovative enterprises in the region or municipality through: innovative motivation of partner companies on the formation of an address for the training of skilled workers and mid-level professionals; motivation of professional associations of potential employers in the formation of an industry targeted for the training of skilled workers and mid-level professionals, as well as the possible expansion of the range of professional competencies focused on the innovative development of the industry.

It should be noted that currently the majority of innovative companies are the representatives of small and medium-sized businesses, and bringing them in the educational process may arise certain risks:

- a small number of jobs for employment;
- a high probability of a change in the profile of the company during the period of study, and as a result, failure in employment specialist (not relevant for its preparation);
- mobility of innovation market, rapid technological change to which the institution does not have time to adapt.

At the same time attracting innovative companies gives a positive effect both on the quality of training and the quality of the processes of the most innovative companies. Thus, cooperation is beneficial to both parties.

Cropped described possible risks by engaging in educational institutions more innovative companies that lack specialists of similar qualification. It is also necessary to exclude the cooperation with companies that are on the market for less than three years, since during this period the young company changes most quickly and are not predictable. Ready for the professional risks to industrial innovation on the part of PEI graduates - these qualities are likely not unique to all students, they need to identify and develop the learning process, using individual educational trajectory, individual learning plans, specialized technology training.

Evaluation

Evaluation is integrative and productive unit which respectively determine:

- firstly, the PEI stability of the market in an innovative segment;
- secondly, the level of readiness of students (students and trainees) to innovation.

Integrative-effective unit reflects the idea of the intermediate and final results of the expected interaction between PEI and innovative companies.

Interim and final expected result presented by the respective criteria and indicators in Fig. 3.

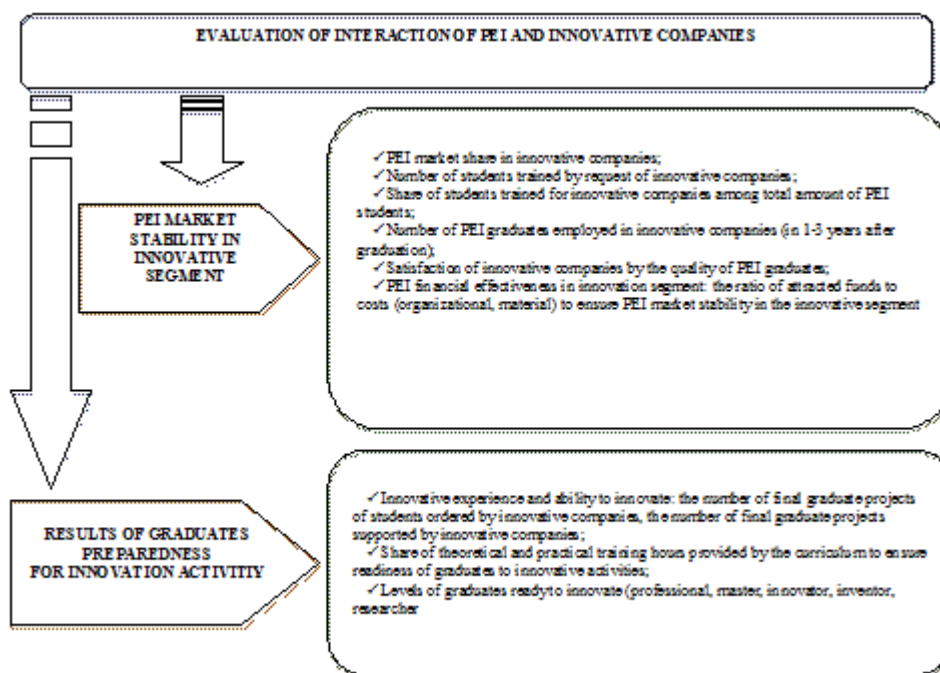


Fig. 3. Criteria and indicators for evaluating interaction of PEI and innovative companies

4. Conclusion

Professional education system provides sustainability and continuous well-being of society and the individual at the expense of quality of advanced human resource development.

However, the global trend of the end of XX - beginning of XXI century in professional education has been the growth of mass higher education, and this process is accelerating. Higher education is becoming a social norm. In world practice, the growth of mass higher education is linked, first of all, with the trend of transition from an industrial economy to a "knowledge economy". In Russia, the beginning of the XXI century, the number of students per 10,000 population was 390 people. Moreover, admission to universities exceeded the number of issues of general educational institutions in more than 250 thousand people. This in turn has led to an imbalance in the labor market. Rapid growth of the overall supply of specialists with higher education on the demand in the labor market led to decline in the probability of employment in the specialty and, accordingly, receive wages commensurate with their level of education.

In Russia, this must be added the factor of low innovation and technological development and, as a consequence, the lack of a young generation of broad institutional capacities of professional fulfillment. As a result, practical implementation of the continuous well-being and sustainable development concept has no systematic and institutional framework is fragmented.

However, theoretical and applied research clearly shows the decisive role of personnel in the innovative development of modern society. Therefore, to ensure the business with highly qualified personnel and, accordingly, effective formation of personnel potential of the company, training of

personnel should be based on the integration of professional educational organizations with innovative companies.

References

- Baimurzina, G.R., Valiakhmetov, R.M., Kolosova, R.P. (2012). *Implementation Of The Principles Of Decent Work In Russia: Regional Aspect (On The Example Of The Republic Of Bashkortostan)*. Ufa: The Academy of Sciences of Belarus, Guillem.
- Fox, J. (2012). The Economics of Well-Being. *Harvard Business Review*, 1, 78-83.
- Gardening, E.S., Sautkina, V.A. (2012). *The Quality Of Life Of The Population Of The World: Measurement, Trends And Institutions*. Moscow, M.: IMEMO. (in Russian)
- Gontmaher, E.Sh., Zagladin, N.V., Semenenko, I.S. (2013). *New Factors Of Global And Regional Development: The Aggravation Of Ethnical And Social Contradictions*. Moscow, M.: IMEMO. (in Russian)
- Greenberg, R.S. (2012). *Freedom and Justice. Russian Temptations Of False Choice*. Moscow, M.: Master INFRA-M. (in Russian)
- Janssen, O. (2000). Job Demands, Perceptions Of Effort-Reward Fairness And Innovative Work Behavior. *Journal of Occupational and Organizational Psychology*, 3, 287-302
- Kanter, R.M. (1982). The Middle Manager as Innovator. *Harvard Business Review*, 4, 95-105.
- Lapin, N.I. (2012). Human Russian Modernization of Measurement in the International Context. *Innovations*, 5, 19-26.
- Lapin, N.I. (2014). Problems of Concept Formation and Human Measurement Of Russia Phased Modernization Strategy And Its Regions. *Sociological studies*, 7, 8-19.
- Miron, E., Erez, M., Naveh, E. (2004). Do Personal Characteristics and Cultural Values That Promote Innovation, Quality, and Efficiency Compete or Complement Each Other? *Journal of Organizational Behavior*, 2, 175-199.
- Scott, S.G., Bruce, R.A. (1994). Determinants of Innovative Behavior: a Path Model of Individual Innovation in the Workplace. *The Academy of Management Journal*, 3, 580-607.
- Tjosvold, D. (2008). The Conflict-Positive Organization: It Depends Upon Us. *Journal of Organizational Behavior*, 1, 19-28.
- Yuan, F., Woodman, R.W. (2010). Innovative Behavior in the Workplace: The Role of Performance and Image Out-come Expectations. *Academy of Management Journal*, 2, 323-342.