

THE CONTINUING EDUCATION IN THE FOREST INDUSTRY –A PREREQUISITE FOR INNOVATION

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ABSTRACT

In terms of the enhanced process of globalization and in the context of establishing a knowledge-based economy, the need for lifelong learning and continuing education is growing. Changes in management, organization of work processes, market and customer requirements, mean constant training and qualification. The Continuing education is insensibly becoming a prerequisite for the increased innovation activity of firms. In this regard, it is very important to determine the right approach for research and identifying training needs. This paper aims to provide the theoretical and practical aspects of the problem "Continuing education in Forest Industry".

Key words: knowledge-based economy, lifelong learning, continuing education, innovation, forest industry, training needs

INTRODUCTION

One of the signs of the management of the 21st century is a knowledge-based economy in which information and knowledge are both main product and resource. The phrase "Knowledge economy" became famous thanks to Peter Drucker, one of the most important names in the modern Theory of Management.

A key concept of the knowledge-based economy is that knowledge and education (often referred to as "human capital") can be treated as one of the following two:

- A business product, as educational and innovative intellectual products and services can be exported for a high value return.
- A productive asset.

The scientific thesis of the authors is that knowledge sets as a prerequisite for innovation, i.e. ability and willingness of the modern business organization to conduct innovation-oriented activities. A *major* factor in the innovation activity are precisely the

knowledge, skills, competencies of entrepreneurs and employees in the organization. They are not something constant. Just the contrary, they change according to the business environment, the requirements of the labor market, strategies and policies of the organization, motivation and strive for improvement and career development of staff.

Continuing education in this report is considered as an instrument for development. Contemporary organizations are "learning organizations". The continuing education of the personnel in the organization has influence on the way that company changes and develops. For the popularity of this concept in the Theory of Management most important role has *Peter Senge*. Precisely he draws the characteristics of the "learning organization": systems thinking; formation of personal skills and competencies of the modern manager, mental methods on organizational level purposed for the formation of organizational values and principles; shared knowledge based on team work and aimed to enhance innovativeness.

1. THE ECONOMY OF KNOWLEDGE

The rise and the development of the Economy of Knowledge are defined as the Third Economic Revolution in the human history. It is based on the production, distri-

bution and use of knowledge and its infrastructure in the global information network. This is the change of the paradigm of the economic development which significantly reduced material resources and production limits to “limits of growth”. (Zahariev, 2013)

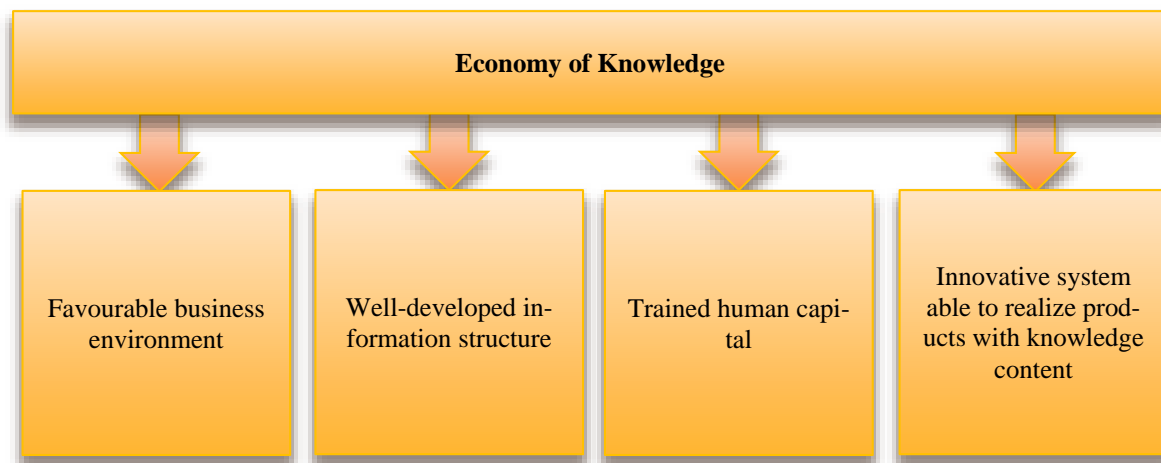


Figure 1: Structure of the Economy of Knowledge (Zahariev, 2013)

In order to be our future sustainable, we must look beyond the short term perspective because the world is moving at a rapid pace. In this connection it is the purpose of the European strategy “Europe 2020” – to help us come out stronger from the crisis and turn the European Union into a smart, sustainable and inclusive economy, delivering high levels of employment, productivity and social cohesion. “Europe 2020” sets out a vision of Europe’s social market economy for the 21st century. Europe 2020 puts forward three mutually reinforcing priorities (European Commission, 2010):

- Smart growth: developing an economy based on knowledge and innovation.
- Sustainable growth: promoting a more resource efficient, greener and more competitive economy.
- Inclusive growth: fostering a high – employment economy, delivering social and territorial cohesion.

The undertaken actions should focus on three areas: innovation, education and life-long learning, and digital society.

Actions under this priority are aimed to improve the quality of education by ensuring access for all and by strengthening research and business performance in order to stimulate innovation and knowledge transfer throughout the EU. They should encourage entrepreneurship and to help turning creative ideas into innovative products, services and processes that can create growth, quality work places, territorial, economic and social cohesion, and to respond more efficiently to European and global challenges related to society.

The realization of a smart growth will intensify Europe’s innovation capacity by improving the education and quality and by taking an advantage of the economic and social benefits of the digital society. These policies should be implemented at regional, national and European level.

1.1. THE RELATION INNOVATIVENESS – KNOWLEDGE

According to R. Chobanova the innovativeness of the national economy is directly connected to knowledge. The level of knowledge can be measured by (Chobanova, 2013):

- Estimating the human capacity to create, learn and use new knowledge.
- The number of applications for registration of intellectual property.
- The number of scientific publications.

Main factors affecting the application of knowledge are:

- Institutional, institutional transformation towards market principles.
- Economic – reduce the level of the salary of the employees in the research and development (R&D) and reduce R&D costs.
- Demographic - reducing the total population and the "brain drain" in other countries.

Trends in demand and supply of new knowledge in the Bulgarian economy identified by specialized studies are:

- The volume of R&D in absolute value increased, but its share in the gross domestic product (GDP) declined.
- The total costs for Research per capita in Bulgaria are at low level compared to the developed countries.
- The comparison of the indices of the demand of human resources for generating and using new knowledge (number of researchers per 1,000 people) indicates that Bulgaria has more than two times less potential than the EU countries.

1.2. CONTINUING EDUCATION – A TOOL OF THE ECONOMY OF KNOWLEDGE

“Continuing education is a process of training for people over 16 years of age for acquisition, expansion and improvement of professional qualifications in order to improve the employability, support the career and personal development.” (ZPOO, 1999)

Contemporary development poses challenges to learning more and more to come out of the general understanding that is related to formal education, but to be seen as a continuous process of lifelong learning.

Lifelong learning (LLL) is a process of constant learning and acquisition of knowledge and skills through formal and non-formal education and learning, and informal learning during the whole life. Lifelong learning is a way of thinking – each one of us should be open to new ideas, decisions, skills, aptitudes or attitudes. Viewed as a systematic process, it is directed to the learners and their needs for personal and professional development (Kovachev, Pavlova, Ivanova and other, 2012).

Therefore, continuing education is part of the lifelong learning. The Continuing education serves the real learning needs of adults, resulting from the necessity to supplement the knowledge and skills (training) and/or to acquire new profession (retraining).

In terms of the “Lifelong Learning” Strategy of the European Union and the aspiration for building a knowledge-based economy, to the institutions for continuing education stand the following challenges:

- coordinating the tasks, activities and resources according to the priorities for the development of human resources;
- improving the mechanisms for information openness and feedback;

- improving the quality of education and bring it closer to the contemporary requirements, which provide access to the European labor market;
- establishing mechanisms for motivating both consumers of training services and organizations that invest in continuing education;
- merging the performance between the social partners, local authorities and non-profit organizations that have opinion on improving the investments in human capital.

For the employees in the companies the further education is a tool to ensure their work performance and to improve their competitiveness in the labor market. These tools can be successfully applied only if there is an individual understanding that the continuing education is of interest to each of the company's staff and it is both companies and professional responsibility. Companies in the Forestry sector and their employees are mainly oriented to the training centers and specific institutions offering training in this area (Ivanova, Raicheva, Panayotov and other, 2008). Some organizations providing this type of education and training are: The Forest Institute – Bulgarian Academy of Science; Bulgarian Branch Chamber of Woodworking and Furniture Industry (BCWFI); Association of the forestry companies in Bulgaria; Bulgarian-German Vocational Training Center (BGCPO); The Ministry of agriculture and food and the Executive Forest Agency of Republic of Bulgaria; University of Forestry in Bulgaria and others.

In the woodworking and furniture industry the BCWFI conducts various educational forums for the enterprises in this industry in order to improve the knowledge and skills and qualification of the workers. Due to the increasing of the innovation potential of the

enterprises in the Forest Industry through investments in equipment and technologies appears the need to create new job positions requiring new knowledge of the personnel and necessity of the establishment of mechanisms for continuing vocational education. To meet the market demand, the staff in the company needs to update their knowledge, skills and experience in a particular occupation (woodworking employees, carpenters, furniture makers, managers, fitters) in order to ensure the implementation of the main activities in the sectors in the required level of qualification (Bulgarian Branch Chamber of Woodworking and Furniture Industry, 2012).

To characterize the *innovation activity* of the enterprises in the sector, in the specialized studies is used the term *innovation - the ability and willingness to conduct innovation-oriented activities in an enterprise*. One of the factors for innovation-oriented activities is the education and training of the entrepreneurs and employees. The *innovation-oriented activity* depends on the entrepreneurial culture and experience including an aptitude for innovativeness. This implies improving of the qualification, completion of knowledge and skills of both managers and technical staff in the enterprises (Popova, 2012).

2. STUDY OF THE NEEDS FOR CONTINUING EDUCATION IN THE FOREST INDUSTRY

As we defined, continuing education ostensibly becomes a prerequisite for innovation and in this connection we present a specific study. It is initiated and conducted with the assistance of the Center for continuing education in the University of Forestry. This research includes 94 out of 406 students "Bachelor" and "Master" degree, that are in extramural studies and from the subjects: Forestry (59) and Wood Technology (35).

This study is the first stage of a wider study of the problems and opportunities for continuing education in the forest sector. The study was held in February 2013 with a standardized questionnaire including 16 questions. The survey is structured in four parts:

1. Questions about the status of the respondents. Here are included: occupation of the respondents, their education, what they graduated in and what they are studying at the moment.
2. Questions about the practices of continuing education in business organizations. This section covered the following aspects: availability of a system, which identifies the need of the staff for education in the organization, where the respondent works; if the employer provides conditions for staff training; availability of a program for improving the qualification of the employees in the organization.
3. Questions about the personal motivation for continuing education. In this problematic issue group the respondents indicate their attitudes to visit courses for continuing education and their motivation to acquire new knowledge and skills. Information is searched on whether respondents have ever attended or currently attended a course for additional training.

4. Questions about the attitudes, evaluations and recommendations for continuing education and training. This group of questions is the most extensive of all the above. It comprises 6 questions. They are aimed to obtain information about the duration and what form and manner of financing the courses for continuing education respondents would choose. Next are the questions for the opinions of the respondents about the quality of education at the University of Forestry and the quality of the educational services in Bulgaria.

Since the focus of the report is placed on the continuing education in the Forest Industry, we present the results from the second and the third part of the survey, which directly relates to the attitude “to the continuing education of the respondents from the specialty “Wood Technology”.

It is important to draw attention to that the majority of the researched students have a job, as 51 % are employed in woodworking and furniture companies (Fig. 2). In this regard the opinion of the respondents on whether in the organizations they work is available a system, which identifies the need of the staff for training, is very real. Only 9 % of them indicated that in the company in which they work is available such a system (Fig. 3).

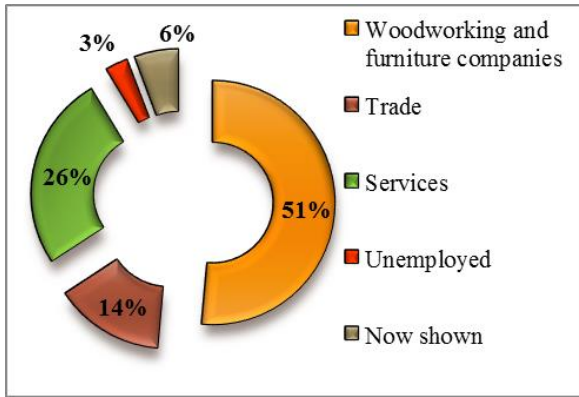


Figure 2: Place of employment of the respondents studying Wood Technology

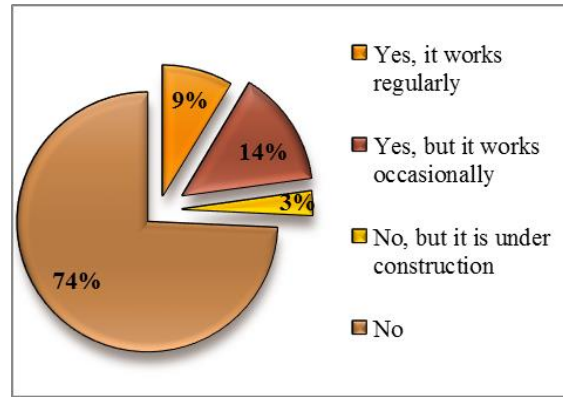


Figure 3: System for identifying the need for training of the staff in the organization

Next is the question concerning the conditions for training and development that the employers ensure for their staff. (Fig.4). The majority of the respondents (46%) indicated that such conditions are not provided to them. This indicates that the employers do not appreciate the fact that in the contemporary

economic conditions education and training are key factors for development and improvement of the individual, but also further enhance the creativity of the employees and the business success.

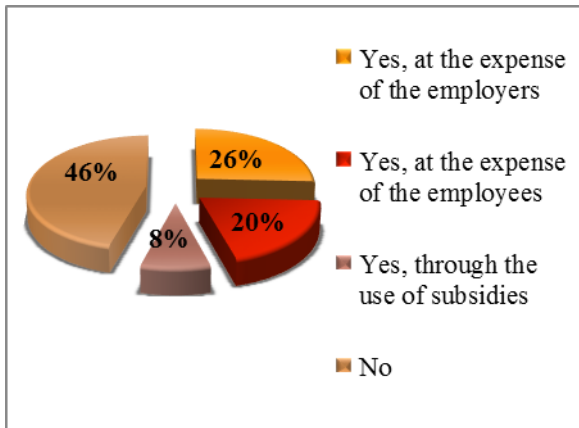


Figure 4: Provision of conditions for training of the staff.

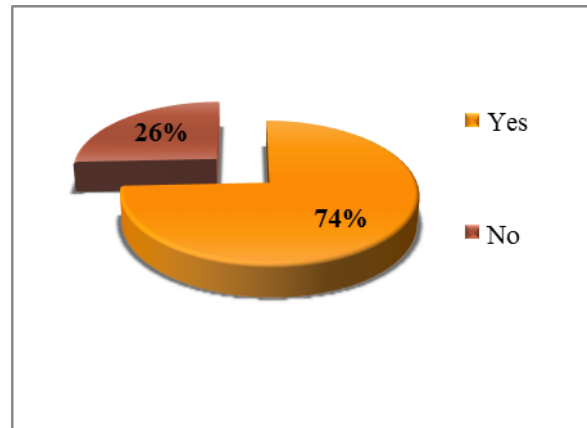


Figure 5: Fig.5. Plans for continuing education.

Despite the alarming results from the so far presented aspects, significant is the share (74 %) of those who would like to attend

courses to acquire additional knowledge and skills (Fig. 5) led by different motives, apparent from the following chart (Fig. 6):

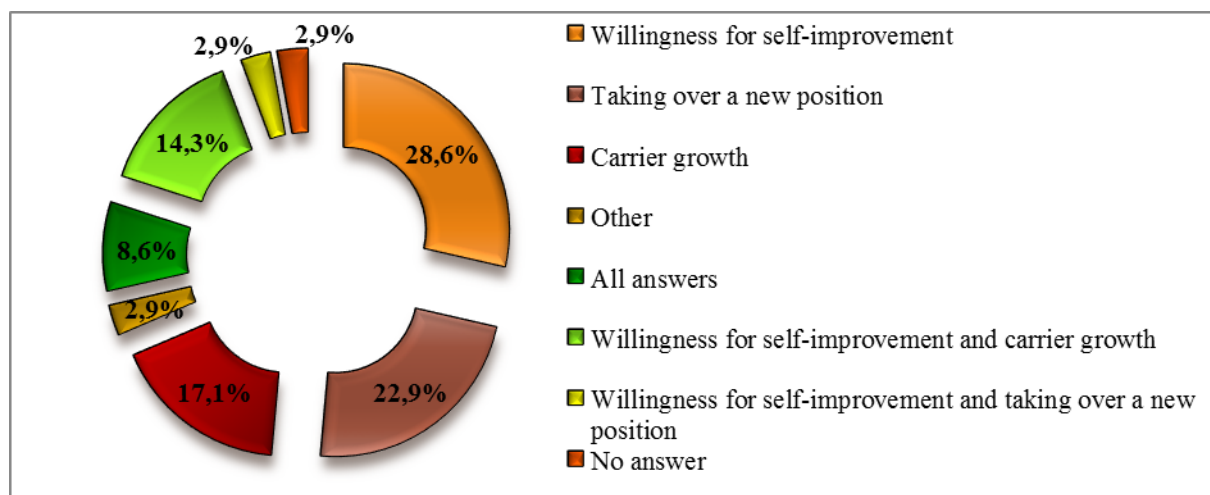


Figure 6: Motivation for continuing education

The largest share of the respondents is those who have desire for self-improvement (28,6 %). Next, with 22,9 % are those who believe that visiting a course for additional knowledge and skills will help them to take a new position at work. On a third place (17,1 %) are the respondents whose motive for continuing education is that it would provide them an opportunity for career growth.

In line with the will and the reasons for continuing education, the inquired students were able to indicate the subjects and areas, in which they would like to improve their knowledge and skills. The results, evident from Fig.7, show that the most wanted area for training is the foreign language – 38,5 % of the respondents would like to attend courses in English. Next, in connection with the specialty “Wood technology”, the students wish to enhance and fill out their knowledge in Autocad (23,1 %). With equal share (19,2 %) in the wish list of the respondents are the subjects Design and Pedagogy.

CONCLUSION

On the basis of the implemented pilot research are formulated main guidelines and suggestions for a representative study of the

Forest Sector in order to identify the necessity for continuing education.

1. Preserving the main groups of questions
 - About the practice in the area of continuing education in enterprises;
 - About the attitude toward continuing education.
2. Adding the possibility for evaluation of:
 - The current requirements for training aimed at the labor market;
 - The impact of knowledge on the innovativeness factor.
3. Scope and refinement of measurable indicators
 - Standardized questionnaire;
 - Sample – 250 woodworking and furniture enterprises;
 - Respondents – enterprise managers;
 - Availability of quantitative measurements;
 - Availability of ranking of responses.

REFERENCES

1. Chobanova R. (2012). Innovativeness of the national economy. "Prof. Marin Drinov". Academic Publishing House: 132–133.
2. Ivanova D., Raicheva R., Panayotov P., Grigorov N., Hristova G, Mladenova M., Kovacheva S., Ivanov I., Brezin V., Tasev G., Gochev Zh., Piralkov V. (2008). Manual of the Entrepreneur of the woodworking and furniture industry. Avangard Prime, Sofia: 246.
3. Kovachev L., Pavlova V., Ivanova D., Stoychev I., Markov M., Bozhkov A., Tividosheva V., Dimitrov E., Katsarova A., Ivanova V. (2012). Methodology for Regional Strategies of Learning Validation and Education. Sofia: 7–8.
4. Popova R. (2012). Research of the Innovation Activity of the SMEs in the Furniture Branch. Abstract of dissertation, Sofia: 9.
5. Zahariev E (2013). Challenges to the industrial management: priorities and decisions. University of Agribusiness and Rural Development, Plovdiv: 174–179
6. Bulgarian Branch Chamber of Woodworking and Furniture Industry (2012). National sector analysis of the woodworking and furniture industry.
7. European commission 2010. Europe 2020. A European Strategy for smart, sustainable and inclusive growth. 3.3.2010, Brussels: 3; 10.
8. Law for the Vocational Education and Training. (1999). Bulgarian State Newspaper, issue 68: 2.