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## Development of Human Capital in Bialystok Functional Area

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**Development of Human Capital in Białystok Functional Area**

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## **Development of Human Capital in Białystok Functional Area**

**JEL Classification:** *J24; O15*

**Keywords:** *Human capital; human development; economic development*

### **Abstract**

**Research background:** Today, the value of skilled, complex and creative work is growing fast. In the global knowledge economy, people's knowledge, skills learning, talents and abilities - their human capital - have become a main factor of economic growth. In many regions, the potential of human capital is restricted, eg. in podlaskie voivodship. Particular problems exist in the field of vocational education as a result of long-term under-funding of vocational schools, reversal of proportion in choice between vocational and regular high schools, etc. Especially in the field of vocational education exists low quality of training. Education systems can do much to help people realise their potential and external funding (eg. EU) can support innovative projects for the development of human resources..

**Purpose of the article:** The main goal of this article is to show an exemple of innovative project in the field of vocational education. In frame of EU instrument called Integrated Territorial Investments in Białystok Functional Area (BFA) is implementing project "Competence Center of BFA". The project is to support the development of knowledge, professional skills, talents and abilities.

**Methodology/methods:** In the article was described a case study of "Competence Center of BFA", which aims to adapt the competence to the needs of the regional economy. Case study will be preceded by an analysis of the situation of vocational education in the area of BFA and analysis of theoretical issues.

**Findings & Value added:** The analysis led to the following conclusions: vocational education requires a broad integrated support; cooperation with different stakeholders (especially with employers, organizations of business environment, etc.) is essential to achieve high-quality education; a vocational education should be more attractive for pupils.

### **Introduction**

Human resources development is one of the sources of companies'

competitive advantage. The quality of human resources depends on whether and how an enterprise uses its resources and whether functions effectively in the modern world. It not only influences the economic growth, but increases national competitiveness. Moreover, human capital affects the growth of other kinds of the capital (Vaitkevičius et al. 2015, p. 1641).

One of the elements of building high quality human capital is the educational system. Employees expect the high qualifications necessary to perform specific job functions. Therefore vocational education system is of great importance in this process.

The main goal of this article is to show an example of innovative project in the field of vocational education, that supports human capital development. In frame of EU instrument called Integrated Territorial Investments (ITI)<sup>1</sup>, Białystok Functional Area (BFA) is implementing project *BFA Competency Center*.

### **Research Methodology**

The article was based on case study analysis. Firstly, a research, related to importance of human capital and the state of vocational education was made on the basis of literature, strategic papers, research reports and other official statistics, as well as vocational education report prepared by Białystok Foundation of Professional Training (BFKK). This research was an introduction to the case study of the *BFA Competency Center* project, which is implemented within the framework of *Regional Operational Program for Podlaskie Voivodship 2014-2020* and *Integrated Territorial Investment Strategy of Białystok Functional Area for the years 2014-2020* (ITI Strategy of BFA).

### **Human capital – main issues**

In literature, human capital is broadly defined. It is described as intangible resources like: knowledge, skills, intelligence, enterprise's labor force's capabilities. (Baron et al. 2012, p. 20; Bontis et al., 1999, pp. 391-402; ). Some authors have defined human capital as the combination of only four personal factors: genetic inheritance, education, experience, and attitudes toward life and business. Human capital is also understood as capabilities, knowledge, skills, and experience of employees, including the values, culture, and philosophy of the firm. It is also seen as a tacit and explicit knowledge that belongs to the people. Simply, it can be defined that the

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<sup>1</sup> This instrument is dedicated to solving specific problems of territorial urban centers (functional areas). ITI provides a flexible mechanism for formulating integrated responses to diverse needs formulated within the framework of development strategy. (Ministry of Development, 2015, p.217).

sum of knowledge of the members within an organization. (Vargas et al., 2016, pp. 961–978) Bontis (1999) also believes that human capital is the collective capability of an organization to develop the best solutions based on individuals' knowledge. In other definitions, it is pointed out that human capital corresponds to employees' capabilities and satisfaction or it is a combination of employees' capabilities, competencies and the way they are managed. (Vargas et al., 2016, pp. 961–978).

Other definitions of human capital also link to learning and innovation. Bontis (1998, pp. 63-76) underlines that communication and learning process of individuals through their involvement in the production process of the organization is a source of innovation and value for the company. Human capital is defined as factors which create assumptions or possibilities to create innovations or strive for higher productivity.

Some authors also underline that human capital is a critical determinant of economic development. (Čadil et al., 2014, pp. 85-92; Lee J.W. et al., 2016, pp. 147–169; Schultz, 2014, pp. 96-101; Shuaibu et al., 2016, pp. 523-549). In particular, studies on the education system were conducted by the Lee (2016, pp. 147–169). The studies revealed great achievements in educational expansion throughout the world, as well as significant progress in economic development. This increased growth was accompanied by rapid capital accumulation and technological progress. It played an important role in many countries' transitions from low-income, uneducated societies to high-income, well-educated societies and their structural change from rural and agricultural to urban and industrial.

In our study, we focused on human capital. For the purpose of this article, it was assumed that human capital is a combination of elements such as: knowledge, skills, abilities, creativity and experience, which are the set of rare, valuable, inimitable, and non-substitutable intangible resources.

The issues of human capital development are increasingly becoming the most important field of scientific research. There are a number of scientific researches representing peculiarities of development of human capital in different countries. However, there is still a gap in research. (Vaitkevičius, 2015. pp.1641 – 1648)

## **The development problems of human capital in Białystok Functional Area**

Białystok Functional Area (BFA) consists of 10 municipalities: Białystok, Choroszcz, Czarna Białostocka, Dobrzyniewo Duże, Juchnowiec Kościelny, Łapy, Supraśl, Turośń Kościelna, Wasilków and Zabłudów.

Analyzing the *Integrated Territorial Investment Strategy of Białystok Functional Area for the years 2014-2020* (2016, pp.166-242), it may be

noted that the emphasis in shaping the development of the BFA is put on human capital and professional competence, in particular, the development of vocational education. This is due to diagnosis of problems existing in this field as described below.

In Białystok Functional Area in 2014, there were 18 teams of vocational schools, most of them in the city of Białystok educated ca. 8 538 students in 70 professions. Unfortunately most of these professions are surplus to the regional labor market, because there is a lack of jobs for all graduates of such education. (ITI Strategy of BFA, 2016, p. 122) The essence of the problem lies in the professional competence structure of the unemployed and is caused mainly by the competence inadequacy to the regional employers' expectations. Within the BFA, the largest deficit was recorded among workers in such occupations as scaffolding fitter, call center worker, telecommunications fitter, carpenter and technician of physical protection of people and property, and the highest surplus professions on the list were: clothing technology technician, economist, small catering chef, electrical technician, or physical education teacher. (BFKK, 2014 p. 24-25).

At the same time it should be emphasized that the directors of vocational schools do not ignore the problem. The results of Białystok Foundation of Professional Training survey (2014, p. 25-27) confirm that 100% of schools are in contact with employers in order to adapt the training offer to their needs. Almost all schools (94%) analyze data from the Provincial and District Labor Office and uses feedback from graduates. A large percentage of schools (65%) is based on an intuitive market research and information obtained from research reports..

The study, conducted by Białystok Foundation of Professional Training (2014, p. 88), shows also a small range of cooperation from the side of employers. More than half of the respondents did not see the need and the benefits of cooperation with schools. Over 80% of employers who employ graduates of vocational schools do not work with these schools in any form. As the main reason for this state, entrepreneurs didn't indicated such a need. At the same time, 32% of respondents considered that this is due to legal regulations related to the employment of young workers. The problem is also the lack of cooperation standards and employer's support for keeping record related to the practical training organization in accordance with the requirements of the educational system. Almost half (43%) of entrepreneurs believe that the most significant barrier to cooperation with vocational schools is that there is no time for such activities. Another factor which handicaps obtaining high qualifications and practical skills of vocational school students is also the difficulty in accessing high-quality professional internships. Almost 70% of vocational school students' practices take place

in school workshops or in school labs, which do not fully reflect the specifics and working environment in a given profession..

Analyzing further research of Białystok Foundation of Professional Training (2014, p.60-63) in Białystok Functional Area for compliance of positions at which employed graduates work with their learned profession and acquired competencies, it can be seen that only 55% of them work in their profession. The main reason for the graduates from the BFA not to perform work in their profession was that they did not find work in this profession (more than 84% of respondents). At the same time, schools see demand for certain deficit professions, but they do not have educational opportunities due to lack of teaching facilities and properly qualified teaching staff. Analysis of the data for vocational schools' teachers indicates that only a third of all teachers (30%) had previously worked in their profession. Only 12% of teachers had the opportunity to take advantage of internships in companies.

Entrepreneurs' evaluation of the main reasons for difficulties in recruiting new staff with appropriate qualifications pointed to: lack of staff with relevant experience (41.7%), lack of local people willing to work (16.7%) and that the vocational school graduates do not have the qualifications and skills sought by employers (BFKK, 2014, p. 25-29).

In addition, the unfavorable situation of vocational schools enhances the overall relatively low level of economic development of the Podlasie region, including the BFA, which affects a limited number of jobs. In 2015, the number of newly created jobs in Podlasie region was 12 thousand. This was approx. 2% of the total number of new jobs in the country (Local Data Bank, the Central Statistical Office).

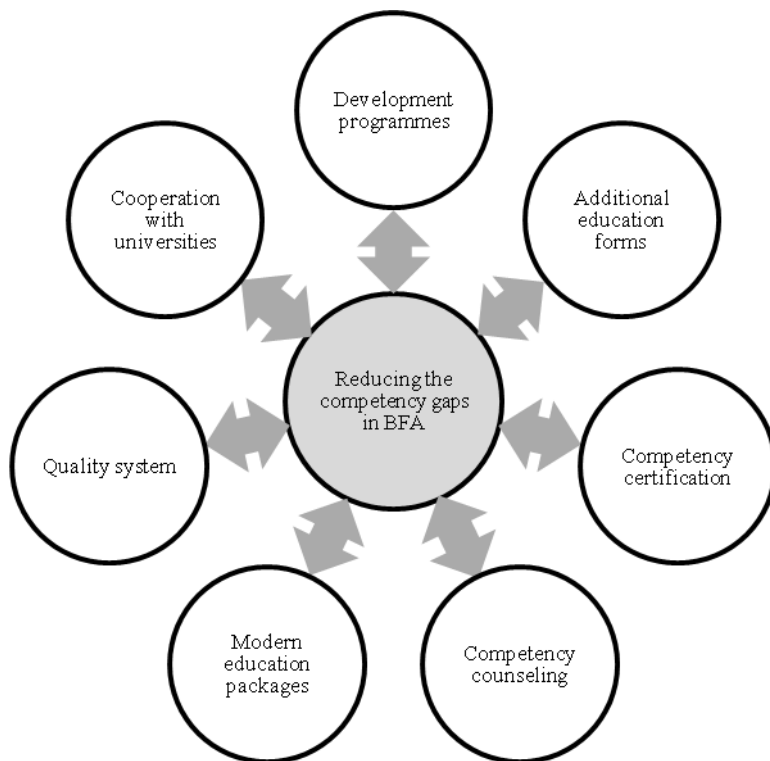
EU policy puts great emphasis on financing the development of human capital. Significant funds for this purpose (13 939 699 EUR) were provided in the ITI Strategy of BFA. Part of this sum was dedicated to *BFA Competency Center*, which activities and results are described in the next paragraph of the article.

### **BFA Competency Centre as an example of support for the development of human capital in Białystok Functional Area**

Due to the fact that the dual education system is not able to solve the aforementioned problems – the trial to reduce the competency gap in BFA was undertaken by the project *BFA Competency Centre – the comprehensive model of support and modernization of vocational education system in Białystok Functional Area*. It is an inter-sector cooperation between the governing bodies of schools and vocational education facilities operating in BFA – the City of Białystok and a non-governmental organization - the Białystok Foundation of Professional Training. The value of the undertak-

ing amounts to over 16.0 mln PLN, including the EU funding – 15.2 mln PLN. The aim of the project is to improve the BFA’s inhabitants competencies so that they constantly suit the current needs of the existing and emerging work places, which would result in the increase in employment and remuneration of the functional area’s inhabitants. The *BFA Competency Centre* model predicts eight complementary activities dedicated to the particular aspects of the competency gap that will support the activities of schools and vocational education facilities (Figure 1). This various tasks have been characterized below.

**Figure 1.** Support model within the *BFA Competency Centre*



Source: own elaboration.

The *Competency Centre* model manages the process of reducing the competency gap by taking into account five levels of its identification: occupations, qualifications, skills, activities and professionalism. The competency needs of companies will be examined every year – in 5 editions – on the trial group of 120 enterprises and 360 employees in BFA. Furthermore,



the examination of educational needs and ambitions of BFA inhabitants pertaining to objective professional predispositions and educational possibilities shall be conducted with the same frequency and number and cover the trial group of 500 people and 50 educational facilities.

The objective of action *Development programmes* is to support 15 vocational schools from BFA in preparing development programmes and in the process of elaborating new educational programmes. The complementary development programmes of schools are to include three levels of modernization: student, school as well as the surrounding. Within the activity, there will be seminars, workshops and trainings for modernizers – 39 teachers engaged in preparation and implementation of the development programme.

Next task of the project aims to improve employability of students from schools and vocational as well as general education facilities by elaborating and implementing in practice new solutions in the field of the competency gap supplementation. After consultations with employers and teachers of the profession, the catalogue of supplementary courses will be developed as well as the rules for their organization. Moreover, additional specialist classes will be realized for students.

The next detailed objective of the project is the creation of professional skills validation and certification system, with the participation of employers, which would complement the present system of confirming professional qualifications carried out by the Regional Examination Boards. The developed system will enable 600 students.

Competency counseling implemented within next action aims to prepare in BFA innovative, in the scale of Poland, system of BFA demand counseling integrated with the process of diagnosing and describing the BFA's competency gap as well as with the process of competency validation and certification. It will be based on developing job predispositions in tasks and conditions similar to the selected professional environment by the *Assessment Center* method. The evaluation shall be made by practical trial method in the field of professional competencies with the use of diagnostic boxes, under the supervision of a Competency Counselor, in the form of exercises assessing activities characteristic to particular professions and industries. Within the planned educational counseling, 3000 students will be granted support in the form of the *Individual Action Plan for Competencies*.

Within sixth project action, modern educational resources shall be elaborated. The prepared modern, interactive and multimedia educational packages for learning a profession will constitute the key instrument for popularizing vocational education and providing positive support for professional and educational choices of the youth. In order to ensure durability and

accessibility of elaborated materials, they will be shared on the *Podlaskie Educational Platform*.

The aim of next action is to improve vocational education quality in co-operation with employers. Within the project, the accreditation system will be created that will help grant certificates of high level of education in particular professions. The system of accreditation will employ external experts, especially employers.

The implementation of previous undertakings will be complemented by the cooperation between schools and vocational education facilities with universities. This cooperation aims to provide students with the accessibility to current state of knowledge, motivate them to learn and simultaneously increase professional competencies of teachers of particular professions.

The model system of support for vocational schools in the field of preparing and implementing development programmes, including the preparation of new educational programmes, is implemented by the BFA Competency Centre and is the key instrument of modernizing vocational education system from the point of view of development human capital..

## Conclusions

Human capital quality decides on economic development and competitive advantage of regions. It is important to adapt it to the needs of entrepreneurs. Proper vocational education, adjusted to current and future labor market needs, is a crucial element of every education system (CEDEFOP, 2011). Vocational education not only provides the labor market with properly prepared human resources, but also builds entrepreneurial potential among students, who after finishing education set up their own economic activity and, what is also important, awakens the need of lifelong learning. In knowledge-based economy, the support of its development should be one of the most important elements of regional policy.

In this context, the especially valuable examples are the activities undertaken in Białystok Functional Area – implementation of the *BFA Competency Centre* project as well as complementary activities described in the article, as they include the comprehensive approach to vocational education and the fact that essential changes in this field demand strict collaboration between administration, education and employers.

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