

Innovative Economy and Adult Education

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Abstract

This paper concerns important issues connected with adult continuing education in the context of innovative activity in a modern economy. The progress of civilisation in the world leads to the creation of new goals and objectives in the entire system of education, and in particular in adult education. Education and the professional training of workers are closely connected with the development of companies and enterprises. Innovative activities contribute to the development of new technological and organisational solutions and to their popularisation, creating and storing knowledge and abilities. The main elements in the sphere of the creation and popularisation of innovation are: academic and applied sciences, companies, business environments, government institutions, corporations and international organisations.

Introduction

Economic development contributes to employers' demand for knowledge and abilities in various fields such as: information technology, management, marketing, labour law, and others. The traditional understanding of a job is becoming more and more obsolete, because employers are interested mainly in professional qualifications or specialist skills (Kwiatkowski 1999, 17–20). Therefore, today's education requires new goals and objectives, adjusted to the perspectives of work and employment, as well as to the personal development of its participants (*Nauczanie i uczenie się...* 1997). Today everyone is responsible for shaping their own professional qualifications, which is directly connected with the economic development of the country.

1 Innovative economy

I. Lichniak claims that actions are of innovative character when they result in changes to work out new, or significantly improved, processes and products. They comprise scientific and research work, as well as technical, organizational, financial and trade work, leading to knowledge generation, application and popularization. GUS and OECD define the national innovation system as a complex of selected institutions, which together, and individually, contribute to the development and popularization of a new technology. Thus, they formulate and implement a policy whose aim is to influence innovative processes. So, it is a system of mutually connected institutions, which are to create and store knowledge and abilities, which are the basis of new technologies. The main entities in the area of innovation creation and diffusion are: academic and applied sciences, enterprises, business environments, government institutions of the central and regional level, corporations and international organizations, but above all the EU and OECD. These entities are also present on the regional level. It may be assumed that the regional innovation system comprises activities of regional entities, creating and diffusing innovations. They together, and individually, contribute to the development and popularization of new technological, product and organizational solutions, creating and storing knowledge and abilities, which are the basis for modern solutions, and formulate and implement the regional innovation policy and strategy. This innovation system on the regional level is a network of connections between various organisations, institutions and companies, acting for the development of entrepreneurship and innovation in the region. The objective of the

consolidation of actions of organisations, institutions and companies for the sake of innovation is the creation of innovation regions (Lichniak 2010).

Today it is said that the economy is based on knowledge as on a new model of economy. It functions on the basis of a more complete application of knowledge and innovation resources and the development of technology, and above all, one which is connected with fast and cheap access to information. For example, in the United States of America, only one third of production increase depends on traditional factors, and two thirds of the increase are the result of the application of modern factors such as: scale of production, knowledge and technical progress. This approach is also confirmed by contemporary American scholars. They estimate that in the economy of the 21st century, innovations are the main stimulus for economic growth (Babiak 2008, 15–20).

The factor which determines application of knowledge and modern technology to the development of particular countries is the phenomenon of globalisation. Whereas the global market, on which products and services are liable to competition, both with regard to price and quality, is the verifier of manufacturing processes. At the same time this fact causes an increase in technological progress on a world scale. On the scale of particular countries innovation activities are required. Therefore, the economy of the second half of the 20th century and the economy of the 21st century is defined as a Knowledge-based Economy. Economic growth based on the concept of the Knowledge-based Economy is in practice expressed as an increase in the significance of innovation activity. According to the current terminology used in the OECD and EU member states, innovation comprises four layers: technological product innovation, technological process innovation, organisational innovations and marketing innovations. To sum up, it may be said that innovations are now the basic factor of economic growth, and their role is systematically growing as economic development reaches a higher level (Babiak 2008).

It must be emphasised that the condition determining innovation possibilities for an entire economy and of particular entities within the economy are investments in knowledge development and scientific research. It relates both to the states which have reached a high level of development and to those which are classified as developing. This is the view of the authors of the report from 2007 entitled “Science, technology and industry in OECD countries,” who point out that investment in knowledge is the basis of innovation and technical progress. It must be stated that expenditure on research and development, computer programmes and education is increasing in most OECD countries. Another important issue included in the report is the fact that most research and development activities in OECD countries are conducted in the sector of enterprises, both with regard to the results and financing (63% and 68%, respectively, for all research enterprises) and in recent years this share has grown in all these countries with the exception of the United States of America (Babiak 2008).

The European Union, as part of the structural policy implemented on the Community level between the years 2007–2013, lay great emphasis on the support and co-financing of such investments which contribute, directly or indirectly, to reaching the priorities included in the Lisbon Strategy. It is the fundamental European document concerning the indication of the directions of social and economic growth, mainly through expenditure on science, research, and development of modern technologies (Babiak 2008).

2 Consequences of economic innovation for adult education

In connection with Poland’s accession to the European Union, creating a common reference system in the form of knowledge, skills and attitudes is becoming a more and more important objective for adult education. Particular attention should be paid to the development of knowledge connected with interpersonal communication so that the greatest number of people use a common language. Another important demand is the development of the ability to cope with the increase of information, which also means familiarity with computer technology and ability to use the Internet. In all European countries there is an effort to define key competences in order to recognize qualifications in adults and find the best solutions for their assessment. It is important to determine adequately defined skills in such fields as: information technology, foreign languages, finance or management.

It is also important to create a system for the assessment of skills in each field and to work out more flexible methods of formal recognition of qualifications. Moreover, learning foreign languages may allow people to benefit from job opportunities thanks to the creation of a new international labour market (Skwarek 2006).

Shaping adequate personal qualities of character in adult participants such as honesty, responsibility and readiness to undertake risks is also important. The new labour market requires adults not only to be well prepared for a job but also the ability and readiness to update their qualifications many times, as is common in many Western countries. Therefore, the significance of lifelong learning and professional work of participants will be increasing in the Polish economic reality (Skwarek 2006).

It must be noted that the needs connected with the continuing education of the society of the 21st century are conditioned socially and existentially. People have to undertake the effort of lifelong learning, because it is closely connected with the requirements of modern civilisation. Thus, adult education is extremely important in today's world. It makes adults better workers, influences their awareness, teaches them how to understand others, lets them gain necessary information on their own, and helps them to become better oriented in the contemporary world (Skwarek 2006).

C. Banach claims that in view of the challenges and tasks of Polish education in the years 2010–2020 the conditions and postulates enumerated below should be taken into account:

- The problem of IT training for teachers and preparing pupils and students for self-education and participation in the process of lifelong education is becoming more and more important.
- The relations between education and the changing economy and needs of the labour market must be acknowledged. Restructuring of many branches of production and services and the disappearance of traditional jobs and emergence of new ones, as well as the migration of professionally active people, require professional mobility and changing qualifications. Extending the period of general education and bringing general and professional education closer is therefore justified.
- The objectives of education in the process of the integration of Poland within the European Union are also very important. Popularising foreign language learning and spreading knowledge about the history, geography, economy and culture of nations and states is very important in order to be open to Europe and the world. To ensure foreign language learning at various levels of education, an appropriate number of teachers should be ensured and the quality of education should be improved. Thus, adequate funds and state, local government and society expenditures on education should be ensured to help it develop quantitatively and qualitatively. The long-term programme of education development should be the result of consultations, negotiations and decisions of various educational entities. However, it can be observed that education is not used enough in working out the concept for reforms and their implementation (Banach 2010).

Summary

Education needs inspiration and support from many branches of science so that its entities can acquire knowledge about the challenges, processes and directions changing our life and facilitate entrance within the informational and educational reality. However, the quality and directions of education leave much to be desired in relation to the evolution and needs of the labour markets and programme and methodology assumptions. The new labour market requires adults not only to well prepare for a job but also the ability and readiness to update qualifications many times, as is common in many countries in the world. Of course, the significance of lifelong learning education and professional work of participants in training will be increasing in the Polish economic reality.

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