



Working together
www.rcis.ro

Revista de cercetare și intervenție socială

Review of research and social intervention

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

Selected by coverage in Social Sciences Citation Index, ISI databases

Lifelong Learning in the Knowledge Economy: Considerations on the Lifelong Learning System in Romania from a European Perspective

Alina Irina POPESCU

Revista de cercetare și intervenție socială, 2012, vol. 37, pp. 49-76

The online version of this article can be found at:

www.rcis.ro

and

www.scopus.com

Published by:

Lumen Publishing House

On behalf of:

„Alexandru Ioan Cuza” University,

Department of Sociology and Social Work

and

Holt Romania Foundation

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA

is indexed by ISI Thomson Reuters - Social Sciences Citation Index

(Sociology and Social Work Domains)



Lifelong Learning in the Knowledge Economy: Considerations on the Lifelong Learning System in Romania from a European Perspective

Alina Irina POPESCU¹

Abstract:

Lifelong learning is currently one of the mostly used concepts in European Union's attempt to achieve the objective to become the most competitive and dynamic knowledge-based economy in the world. Since learning is embedded in human nature, various forms of the concept emerged simultaneously in different countries where they developed individually, thus creating a multi-faceted concept that was recently brought in the spotlight of the scientific arena. The purpose of this paper is to bring to the attention the 'facets' of the lifelong learning concept, its evolution over the years and the ways it is recognized to help the achievement of the knowledge economy. The exploration of the features of the knowledge economy with far-ranging implications for education and training, the challenges raised by the knowledge economy for education and training systems, and the emergence of the lifelong learning concept aiming to equip learners with the skills and competencies they need to succeed in a knowledge economy is done thorough a theoretical research based on an extensive literature review to allow for a clear understanding of the concepts of knowledge economy and lifelong learning, and of their interlinks. In Romania, the concept of lifelong learning as such is quite new. Some aspects, like adult continuous education and professional training as well as the apprenticeship at workplace were offered extensive attention, but an integrative vision on lifelong learning was not transposed into legislation and practice, until recently. The paper offers a review of the measures taken for the development of the lifelong learning system in Romania. The most recent, the Law of Education 1/2011 set the premises for the desired lifelong learning system and aligned the Romanian educational system with the European vision on lifelong learning to facilitate the emergence of the knowledge economy.

¹ PhD Lecturer at the Department of International Business and Economics from the Faculty of International Business and Economics (REI), at the Bucharest Academy of Economic Studies (ASE). ROMANIA. Phone: 021.319.19.01/267; Email: alina.popescu@rei.ase.ro

Keywords: lifelong learning; adult education; continuous education; knowledge economy; competence.

Introduction

The emergence of the knowledge economy emphasized the importance of learning throughout the world. Ideas and know-how are sources of economic growth with important implications on how people learn, create and apply knowledge throughout their lives. In this context, lifelong learning - the continuous building of skills and knowledge throughout the life of an individual - is education for the knowledge economy.

At European level, the European Commission has stressed with many occasions the importance of lifelong learning, while growing preoccupation of governments and stakeholders with the lifelong learning perspective has led to concrete developments in most Bologna countries. In Romania and elsewhere people have always studied, for a variety of purposes, in a variety of forms, and at a variety of institutions. But recently, Romania has included the principles of lifelong learning in policy documents as priorities in the area of education, continuous training and employment. National policy discussions focus nowadays on the development of an effective and sustainable lifelong learning system. Based on the critical review of the lifelong learning system in Romania, this article argues that a complete analysis of the discourse on lifelong learning, coupled with an analysis of the learning from others will give a more appropriate picture of what contributed to the current conceptualisation of lifelong learning. Critical research method is involved in the second part of the paper. The findings underline the progress that has been made in identifying strategic priorities and directions for action in the area of lifelong learning such as recognition and validation of non-formal and informal learning, educational and vocational guidance and counselling throughout life and in-service learning systems.

The concept of ‘lifelong learning’ for all

‘Learning is a treasure that will follow its owner everywhere’ says a Chinese proverb. The importance of learning was widely recognized since ancient times as the activity that brings progress and development to the individual and to the society. The world is changing around us, nowadays faster than ever before under the influence of the information and communication technologies (ICT). To keep pace with these developments, individuals need to continuously update and upgrade their knowledge and skills through education and experience. As we passed the turn of the century, policy-makers from countries, agencies and institutions

across the international arena have been devoted increasing attention to the concept of ‘lifelong learning’ in which they believe to find the answers to many of society’s problems and challenges. The knowledge economy, together with the wider economic and societal trends such as globalisation, changes in family structures, demographic change, and the impact of information society technologies, raise both benefits and challenges for citizens. Among benefits we find multiple opportunities in terms of communication, travel and employment, but taking advantage of these new opportunities implies an ongoing acquisition of knowledge and competences. On the other side, considerable risks and uncertainties are associated with the knowledge economy, as it threatens to bring about greater inequalities and social exclusion. This is the main reason for which it is emphasized that continuous learning must be done by all citizens, irrespective of age, social status or educational level.

Research on ‘lifelong learning’ reveals a very rich concept: in terms of evolution, meanings, forms, benefits and coverage. Although lifelong learning has been the subject of intense policy discussion and development quite recently, the concept is not new. The emergence of this concept can be traced back to the 1960s in the discussions that occurred during international gatherings led by intergovernmental bodies such as the United Nations Educational, Social and Cultural Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD). At that time, UNESCO was the major force in promoting global discussions of lifelong learning, strongly promoting the idea that education should occur universally and across the life span, and should not merely be formal education for a “privileged few” (Field, 2001). OECD advocated lifelong learning due to its potential for developing the human capital of workers. Initially, in the late 1960s and in the French context the term used was ‘*éducation permanente*’ and it was in 1965 when UNESCO International Committee for the Advancement of Adult Education started using the term ‘lifelong education’ to describe its initial concept of learning throughout life. The concept of ‘lifelong education’ was developed by Paul Lengrand, the head of the Division of Adult Education at UNESCO as well as Director of the UNESCO Institute for Education (UIE) in his work *An Introduction to Lifelong Education* (1970). During this period, René Maheu, the general director of UNESCO also underlined lifelong education as a fundamental concept in his report, titled *Report of the Director-General on the Activities of the Organization in 1968* (UNESCO 1969): ‘*With regard to lifelong education, it is now a matter of common knowledge that this is the concept which explains the real meaning of modern education and which should inspire and sum up all efforts directed towards reform. Education is no longer confined to a particular age, that is, only a part of life; co-existent throughout its length, it represents an attitude and a dimension of life. It is an attitude enabling us to keep in touch with realities and not simply a preparation for work and responsibilities.*’ (UNESCO, 1969 cited in UNESCO 1997).

UNESCO's lifelong learning policy documents recognized almost half a century ago the need for continuous education as a concept that incorporates '*the real meaning of modern education*'. Scholars like Dave, Cropley, Gelpi, Lengrand, and Suchodolski deeply engaged in UNESCO's literature on this topic and influenced the arena of the international lifelong learning policy through their publications in the mid 1970s. These writers have been referred to as 'maximalists' since they disseminated their humanistic ideals of lifelong learning and they regarded lifelong learning as involving a fundamental transformation of society so that the whole society becomes a learning resource for each individual (Wain 1987; Bagnall 1990; Aspin and Chapman 2000).

Dave's (1976) perspective of lifelong education came to be articulated almost a quarter of a century later in the EU policy document, *Making a European Area of Lifelong Learning a Reality* (EC, 2001): '*lifelong learning covers formal, non-formal and informal patterns of learning throughout the life cycle of an individual...*' (cited in Medel-Añonuevo et al. 2001). A lifelong learning framework encompasses learning throughout the lifecycle, from early childhood to retirement, and in different learning environments, and it encompasses: formal learning (in schools, training institutions, universities), non-formal learning (like structured on-the-job training), and informal learning (skills learned from family members or people in the community). Eurostat (2007) brought additional clarification on the terms: '*informal learning corresponds to self-learning which is not part of either formal nor non-formal education and training, by using one of the following ways: making use of printed material (e.g. professional books, magazines and the like); computer-based learning/training; online Internet-based web education; making use of educational broadcasting or offline computer-based (audio or videotapes); visiting facilities aimed at transmitting educational content (library, learning centres, etc.)*' (Eurostat Yearbook, 2007). Eurostat also stated that according to the definition of the European Commission, the intention / aim to learn is the critical point for distinguishing learning activities from non-learning activities (like cultural activities, sports activities etc) especially when discussing informal learning.

From the early to mid-1970s, lifelong learning becomes an important topic in international debates, led by UNESCO, the Organization for Economic Cooperation and Development (OECD) and the Council of Europe (Dehmel, 2006). The idea of lifelong education / learning was inextricably linked to the widespread concern for the crisis of schooling and higher education in the 1960s (Boshier, 1998), based on the critiques against the authoritarian, uniform, monolithic, and unequal education systems of the 1960s: '*there is no real freedom of choice unless the individual is able to follow any path leading to his goals without being hindered by formalised criteria*' (UNESCO, 1972). The concept of lifelong learning education advocated by the Council of Europe in 1970 was considerably influenced by the French version of lifelong education, referred to as '*éducation*

permanente', and it was highlighted in the Plan Europe 2000 developed by the European Cultural Foundation from 1968 to 1978. According to Hall (1977), Plan Europe was an enormous research project intended to delineate the desirable future of Europe, which encompassed four major themes: education, industry, urbanisation, and agriculture. Thus, the premises of the desirable future of Europe comprised education, where lifelong learning was particularly stressed in the context of permanent education (Schwartz, 1974).

Although the concept of lifelong learning was strongly promoted by the inter-governmental agencies, their lack of power and ability to influence national educational policies left the concept into the shadow until the 1990s, when the international interest in lifelong learning was renewed as the concept was promoted as a means for retaining economic competitiveness in a global market by increasing investments in human resources across the life span (Field, 2001). The European Commission articulated proposed 'lifelong education and training' as one major priority for addressing the Europe-wide employment issue in the Third Delors Commission's (1993–1994) 1993 White Paper, entitled *Growth, Competitiveness, Employment* (EC, 1993), which represented one of the first official usage of the term. The terminology used by the European Commission in 1991 Memorandum on Higher Education was not 'lifelong learning', but 'continuing education', 'recurrent education' or 'education throughout working life or beyond' (Davies, 2003). The White Paper (1993) proposed lifelong learning as a key reform measure of education and vocational training systems, established the European Year of Education to develop the European dimension of education and training, which was later implemented under the name of the European Year of Lifelong Learning (1996), under the authorisation of the EU Parliament and the Council. The European Year of Lifelong Learning (1996) aimed to make the European public aware of the importance of lifelong learning, to foster better cooperation between education and training structures and the business community, particularly small and medium-sized enterprises, to help to establish a European area of education and training through the academic and vocational recognition of qualifications within the European Union, and to stress the contribution made by education and training to the equality of opportunities.

In the 1995 White Paper *Teaching and Learning: Towards the Learning Society* (EC, 1995) the European Commission underlined the importance of lifelong learning in terms of its potential contribution to employability and a competitive European economy. The Commission acknowledges '*the need for a more open and flexible approach to enhance everyone's potential by catering more closely for the needs of the individual, business and industry, that encourages lifelong learning by allowing for a continuing process of skill acquisition.*'

The European Council meeting in Vienna in 1998 emphasized the commitment to making a reality the concept of lifelong learning and clarified the aims of the existing notions of lifelong learning. The summit articulated the *four pillars* of

lifelong learning for the EU: *employability, entrepreneurship, adaptability and equal opportunities* (EC, 1999). In accordance with the EU summit's articulation, the Commission tried to fine-tune its policy discourse in a more balanced way between different ideologies, evident in the aims of EU lifelong learning policy expanded by encompassing '*personal fulfilment, active citizenship, social inclusion and employability, and adaptability*' as stated in *Making a European Area of Lifelong Learning a Reality* (EC, 2001). The hybrid character in terms of different ideologies stems from these aims: personal fulfilment is linked to classical liberalism, neo-liberalism, and social democratic liberalism; active citizenship is consistent with social democratic liberalism; social inclusion is consistent with both neo-liberalism and social democratic liberalism; the employment related aspects are consistent with neo-liberalism, and the centrality of the learner is consistent with both classical liberalism and neo-liberalism; and equal opportunities and the quality and relevance of learning opportunities go hand in hand with social democratic liberalism. The combination of different ideologies – two of which would seem quite incompatible (i.e. neo-liberalism and socio-democratic liberalism) – in one policy text show why the EU lifelong learning discourse looks like an all-embracing concept. Thus the EU policy discourse on lifelong learning constitute one reason for '*the pluralistic concept of EU lifelong learning during the second peak*' (Dehmel, 2006) supporting the argument that the EU's view of lifelong learning policy has been '*an elastic concept tailorable to any needs*' (Dehmel, 2006).

The 1997 shift in the discourse of the European Commission can be understood in the context of the EU's adoption of an all-embracing approach that merges UNESCO's and the OECD's perspectives. In the 1996 European Year of Lifelong Learning, two other policy documents that shaped the evolution of the lifelong learning concept were released. OECD's policy report *Lifelong Learning for All* (OECD, 1996) was published, emphasizing the importance of lifelong learning for employability, competitiveness and the centrality of learners. Also, the Delors Report, *Learning: The Treasure Within* (UNESCO, 1996) which promoted active citizenship, social inclusion and personal fulfilment through lifelong learning was published by UNESCO. In this regard, Lee (2006) points out that this '*cross-fertilised lifelong learning policy of the EU can be identified from the intertextuality of its key policy documents with UNESCO and the OECD's principal policy documents*'.

The 'pluralistic concept' of lifelong learning determined many scholars to make efforts to define it. Learning is part of people's life and can take place anytime and anywhere; it is therefore a continuous process going on from birth to the end of our lives, and it takes place in a variety of contexts: within the family, communities, school, workplaces etc. Learning of the 3 – 24 age group usually takes place in educational institutions, having as main objective the holistic development of learners' intellectual and physical abilities, social capacity,

emotional and mental development. Adult learning (25 - 60 age group) takes place during their working life mainly informally mostly from their occupations, work-places, colleagues, touring, mass media, information technologies, environment and nature. Adults need continuous development of their intellect, capabilities and competences, which is done through experience and problem solving, critical thinking and reasoning. Learning of elderly people (over 60) is done through activities suitable to their age e.g. tourism, art, sports, music, social work etc. having as main objectives keeping the mental and physical health and sharing their experience gained throughout their lives with the younger people.

In *A Memorandum on Lifelong Learning* (EC, 2000) defines lifelong learning as the process *'encompassing all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence'*. In a document published one year later, *Making a European Area of Lifelong Learning a Reality* (EC, 2001) lifelong learning is defined as *'all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competencies within a personal, civic, social and/or employment-related perspective'*. The emphasis is placed on knowledge, skills and competences as major factors in the EU's innovation, productivity and competitiveness. The rapid pace of change, the globalization of world's markets, and the continuous roll-out of new technologies mean that people must not only keep their specific job-related skills up-to-date, but also possess the generic competences that will enable them to adapt to change.

Wain made an earlier philosophical survey of numerous interpretations of lifelong learning and underlined in this work the progressive research programme of lifelong education, as various writers have presented it (see Dave, Cropley, Gelpi, Lengrand, Suchodolski in Wain, 1987): *'lifelong education' stands for a programme to reconceptualise education totally according to the principle that education is a lifelong process ... for a complete overhaul of our way of thinking about education, for a new philosophy of education and ... for a programme of action (Faure, 1972; Lengrand, 1975; Dave, 1976; Cropley, 1975) ... as the 'master concept' for all educational planning, policy-making, and practice ... Their ambition was that the word education would eventually become synonymous with lifelong education in people's minds ... (today's) world ... requires a lifelong education which is a 'constant reorganizing or reconstructing of experience (Dewey, 1966)'*.

Aitchison (2003) makes it clear that lifelong learning is a complex concept, broader than the concept of education, meant to help people attain the fullest possible development. *'Lifelong education is a comprehensive and visionary concept which includes formal, non-formal and informal learning extended throughout the lifespan of an individual to attain the fullest possible development in personal, social and vocational and professional life. ... A key purpose of lifelong*

learning is democratic citizenship, connecting individuals and groups to the structures of social, political and economic activity' (Aitcheson, 2003)

Lifelong learning has undergone a great number of interpretations during the years, but several key characteristics were stressed out. *The lifelong dimension of the learning process* is a characteristic that defines learning in the knowledge economy. The traditional approach of studying for a finite period of time to complete education before moving to the labour market is increasingly replaced by the continuous learning throughout the entire lifecycle of the individual. This represents a requirement of the knowledge economy, since knowledge is developing at a faster pace, becoming easily obsolete and requiring individuals to continuously update and upgrade their knowledge, skills and competences.

Lifelong learning is also 'life-wide', covering diverse aspects of life from 'cradle to grave'. The notion of *life-wide learning* (EC, 2001) proposes that learning, in general terms and in vocationally-relevant ways, may result from all forms of learning (formal, non-formal, informal) – including learning embedded in social, personal, and vocational experience. The promotion of life-wide learning forms an essential drive within the practical development of lifelong learning. The recognition (which may include certification) of non-formal and informal learning is a critical process towards the implementation of life-wide learning policies, especially that more than 50% of learning is done outside the institutional framework, percentage that depends on the age group of the learner.

The value of all forms of learning is emphasized in a desire to create the 'learning culture' for the knowledge economy, EC Communication, *Making a European Area of Lifelong Learning* (2001): 'Creating a culture of learning requires that the question of how to value learning in formal, non-formal and informal settings must be addressed in a coherent way. Enabling citizens to combine and build on learning from school, university, training bodies, work, leisure time and family activities presupposes that all forms of learning can be identified, assessed and recognised.' (EC, 2001).

Lifelong learning contexts are centred on learners, in their voluntary and self-motivated pursuit of knowledge for either personal or professional reasons. Learners are expected to actively seek to acquire and develop knowledge and competences. A lifelong learning system must *reach larger segments of population*, including people with diverse learning needs. The concept of 'lifelong learning for all' was adopted in 1996 by the OECD ministers of education, acknowledging the need for flexibility in the learning offer. Tertiary education institutions have to re-organize to accommodate the learning and training needs of a more diverse clientele: adult students, working students, stay-at-home students, part-time students, travelling students, evening students, weekend students and so on.

The *roles and responsibilities of teachers, trainers and other learning facilitators* are also challenged by the transformation of learning. In the traditional

model of learning, teachers tell learners what they need to know. In the new learning model, teachers work as learning facilitators, enable learners to access knowledge and develop their conceptual understanding. Thus it appears the strong need for teachers to develop new pedagogical approaches, new skills and competences – among which ICT, foreign languages, multi-cultural competences, and new values like tolerance and democracy are of outmost importance. In the lifelong learning context, the learning facilitator is a lifelong learner. Teachers need to learn by doing, they must practice and use techniques they are expected to use in the classroom (Navarro and Verdisco, 2000).

Learning needs to be *community connected* as the circumstances in which learning takes place have an important effect on the way people learn. The objectives of learning include active citizenship, personal fulfilment and social inclusion, equal opportunity, as well as employment-related aspects. Implicit learning is linked to successful participation in social interaction (OECD, 2001a). Moreover, working on real-life problems or issues that are relevant to learners increases interest and motivation and promoted knowledge transfer (Cibulka et al, 2000).

Key characteristics of the lifelong learning process as opposed to the traditional model of learning are summarized in Table 1, adapted from World Bank (2003).

Table 1. Characteristics of Traditional and Lifelong Learning Models

Traditional learning	Lifelong learning
Study for a finite period of time	Learning throughout lifetime
Targets students of defined age-groups	Targets every age group
The teacher is the source of knowledge	Educators are guides to sources of knowledge
Learners receive knowledge from the teacher	People learn by doing
Learners work by themselves	People learn in groups and from each other
Tests are given to prevent progress until students have completely mastered a set of skills and to ration access to further learning	Assessment is used to guide learning strategies and identify pathways for future learning
All learners do the same thing	Educators develop individualized learning plans
Teachers receive initial training plus ad hoc in-service training	Educators are lifelong learners. Initial training and ongoing professional development are linked
“Good” learners are identified and permitted to continue their education	People have access to learning opportunities over a lifetime

Source: Adapted from World Bank (2003).

Knapper and Cropley (2000) have described the characteristics of a lifelong learner as someone who is strongly aware of the relationship between learning and real life, recognises the need for lifelong learning and is highly motivated to engage in the process, and has the necessary confidence and learning skills. These skills include the following dimensions: (1) Lifelong learning: people plan and monitor their own learning; learners engage in self-evaluation and reflection; assessment focuses on feedback for change and improvement; (2) Life-wide

learning: learning is active, not passive; learning occurs in both formal and informal settings; people learn with and from peers; learners can locate and evaluate information from a wide range of sources; learners integrate ideas from different fields; people use different learning strategies as needed and appropriate; learning tackles real-world problems; learning stresses process as well as content.

Candy, Crebert and O'Leary (1994) summed up the characteristics of lifelong learner in a slightly different way. According to them, such people have: (1) an inquiring mind characterised by a love of learning, curiosity, a critical spirit, and self-monitoring of their own learning; (2) "helicopter" vision involving mastery of a particular field paired with broad vision and a sense of the interconnectedness of different fields; (3) information literacy, including skill in locating, retrieving, decoding (from different sources, such as words, charts or diagrams), evaluating, managing and using information; (4) learning skills focused on "deep" learning (deduction of general principles underlying specific knowledge that can be applied in novel situations, not just ones identical to the situation in which the learning occurred); (5) a sense of "personal urgency" deriving from a favourable self-concept, self-organising skills, and a positive attitude to learning.

In UNESCO's "International Commission on Education for the Twenty-first Century" Delors et al (1996) presented the "four pillars" of learning: learning to know, learning to do, learning to live together and learning to be. These pillars recognize the broad scope of lifelong learning: (1) *Learning to know*, by combining a sufficiently broad general knowledge with the opportunity to work in depth on a small number of subjects; (2) *Learning to do*, by equipping people for the types of work needed now and in the future including innovation and adaptation of learning to future work environments; (3) *Learning to be*, by allowing people to develop their personality and be able to act with greater autonomy, judgement and personal responsibility; (4) *Learning to live together*, by developing an understanding of other people and an appreciation of interdependence - carrying out joint projects and learning to manage conflicts - in a spirit of respect for the values of pluralism, mutual understanding and peace.

Lifelong Learning as Education for the Knowledge Economy

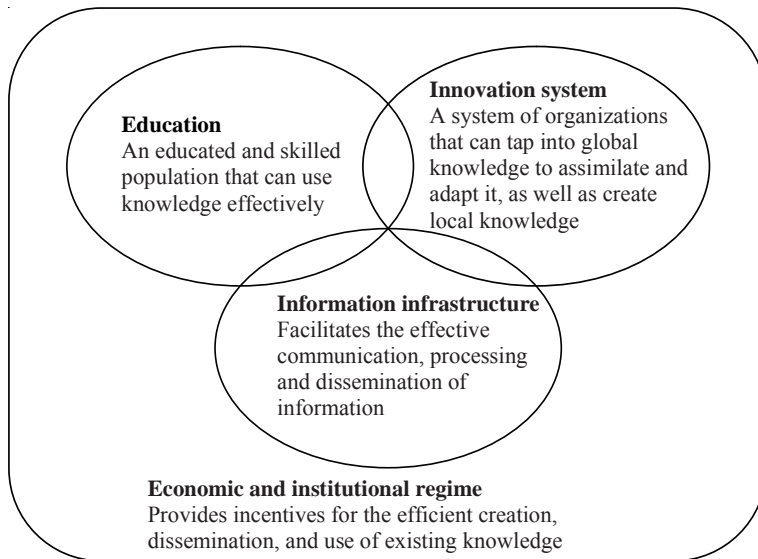
Lifelong learning is seen as the form of learning for and in the knowledge economy. Major economies of the 21st century are knowledge based economies characterised by high levels of skills and education, lifelong learning, and innovation. The investment in human capital is the major driver for growth and competitiveness. Opportunities for learning throughout people's lifetime are becoming increasingly critical for countries to be competitive in the global knowledge economy.

A knowledge economy (KE) relies on knowledge as the key engine of economic growth. The *Four-Pillar Framework* developed by the World Bank (2007) sets the conditions for a knowledge-based development process and, at the same time, it is employed to measure and benchmark countries' progress over time and in comparison to one another. The four pillars are:

1. *An educated and skilled population to create, share, and use knowledge and to continuously upgrade their skills.* Education and training systems encompass primary and secondary education, vocational training, higher education, and lifelong learning. Several studies have focused on the role of human capital in economic development. Using international test scores as a proxy for the quality of educational systems, Hanushek and Kimko (2000) found that educational quality had a positive effect on economic growth. Cohen and Soto (2001), using cross-country time-series data on educational attainment (or average years of school completed), found that education had statistically significant positive effects on economic growth. Similarly, Barro (1991), using data for 98 countries for 1960–1985 and school enrolment rates at the primary and secondary levels in 1960 as proxies for initial human capital, found that enrolment rates had statistically significant positive effects on growth of per capita real GDP.
2. *A modern information infrastructure to facilitate the effective communication, dissemination, and processing of information and knowledge.* Information and communication technologies (ICTs)—including telephone, television, and radio networks—are the essential infrastructure of the global, information-based economies of our time, and put their fingerprint on the learning processes. A recent report on ICTs and economic growth in transition economies indicates that ICTs are a major contributor to productivity, profitability, and growth at the level of the firm (InfoDev, 2006). Also, a study conducted by the London Business School found that, in a typical developing country, an increase of 10 mobile phones per 100 people boosts GDP growth by 0.6 percentage points (cited in World Bank, 2007).
3. *An effective innovation system composed of firms, research centers, universities, consultants, and other organizations that keep up with new knowledge and technology, tap into the growing stock of global knowledge, and assimilate and adapt it to local needs.* Universities and research centers are more than the summit of the traditional education pyramid; they are a critical pillar of human development worldwide. To prove this, Lederman and Maloney (2003), using regressions on data panels of five-year averages between 1975 and 2000 for 53 countries, found that a 1 percentage point increase in the ratio of total R&D expenditure to GDP increased the growth rate of GDP by 0.78 percentage points.

4. The country's *institutional regime*, and the set of economic incentives it creates, should allow for the efficient mobilization and allocation of resources, stimulate entrepreneurship, and induce the creation, dissemination, and efficient use of knowledge. The notion covers a vast array of issues and policy areas, ranging from aspects of the macroeconomic framework, to trade regulations, finance and banking, labour markets, and governance. The institutional regime influences all three pillars mentioned above, as shown in Figure 1.

Figure 1. The Four-Pillar Framework of the Knowledge Economy



Source: World Bank (2007)

As stated elsewhere (Popescu, 2011a), in the knowledge economy learning needs to become *competence-driven*. The fast pace of the scientific and technological progress makes irrelevant the remembering of countless facts and basic data. Today, factual knowledge taught in the first year of study might become obsolete by the graduation date of the student. Instead, the learning process has to emphasize the development of methodological knowledge and analytical skills – the skills needed for learning to think and to analyze information independently. According to cognitive research on learning how people learn is more important than what people learn in the achievement of successful learning (OECD, 2001b). Primacy is given to learning to learn, learning to transform information into knowledge and to translate new knowledge into application, with the use of competences that employers value in the knowledge economy like: analytical skills, oral and written communications, teamwork, peer teaching, creativity, envisioning skills, self-improvement, ability to adjust to change and others.

The knowledge economy is transforming the demands of the *labour market* in economies throughout the world. Technological change has brought about the demand for high-skilled workers, particularly highly-skilled in ICT, and a decrease in the demand for low-skilled workers (OECD, 2001c). In the current economic and social environments the emphasis is placed on *competences* and *qualifications*. Competence acquisition and improvement is not only a requirement for those with high qualifications working in hi-technology industries, but a necessity for everybody, especially for under-qualified workers that are the most vulnerable category to the changes in the labour markets.

Education and training systems need to generate new competences in order to satisfy the characteristics of the new jobs to be created, as well as to improve the adaptation capability and professional integration of active adults. Basic competences, meaning competences to be acquired by everybody in the knowledge economy, required by employers in today's labour markets (Table 1) give an indication of the challenges faced by education systems.

Lifelong learning's emergence and appearance were triggered by the ever faster technological and social changes that make existing knowledge, skills, values, habits and attitudes becoming increasingly obsolete. The worker in the knowledge economy need to master three categories of key competences (Rychen and Salganik 2001): (1) *Acting autonomously*: Planning and carrying out personal development projects, building and exercising a sense of self, making choices and acting in the context of a larger picture, being oriented toward the future, being aware of the environment, and understanding how one fits in; (2) *Using tools interactively*: Using tools as instruments for an active dialogue; being aware of and responding to the potential of new tools; and being able to use language, text, symbols, information and knowledge, and technology interactively to accomplish goals; (3) *Functioning in socially heterogeneous groups*: Being able to interact effectively with other people, including those from different backgrounds; recognizing the social embeddedness of individuals; creating social capital; and being able to relate well to others, cooperate, and manage and resolve conflict.

Well-educated and skilled population is essential to the efficient creation, acquisition, dissemination and utilization of relevant knowledge, which tends to increase total factor productivity and assure the economic growth (Chen and Dahlam, 2004). Basic education is necessary to increase peoples' capacity to learn and to use information.

New skills and competences required in the knowledge economy were nominated by the Lisbon European Council (2000) as *new basic skills*; they are IT skills, foreign languages, technological culture, entrepreneurship and social skills. The traditional basic skills of literacy and numeracy are not included in this list, being considered acquired; it is impossible to imagine a person being able to function in the information society without being able to read, write and count. The European

Commission's *A Memorandum on Lifelong Learning* defines new basic skills in a broader sense: 'New basic skills as those required for active participation in the knowledge society and economy – in the labour market and at work, in real-time and in virtual communities and in a democracy, and as a person with a coherent sense of identity and direction in life... A solid command of these basic skills is crucial for everyone, but it is only the beginning of a continuum of learning throughout life.' (EC, 2000).

Table 2. *New Competences for the Knowledge Economy*

Competency area	Content
Cognitive	Language, communication, logistical and mathematical thought
Problem solving	Observing, analyzing, identifying the parts of a problem, suggesting creative solutions, critical thinking, planning and project management skills Adapting knowledge to new contexts
Self-learning and self-knowledge	Being informed and motivated to learn, concern with one's own development, knowledge of one's capacities, ability to transfer knowledge from one context to another
Social	Working in a team, negotiating and creating constructive arguments, interacting, getting others to understand one's point of view, self-confidence, seeking and maintaining networks of social contacts
Motivation for work	Initiative, responsibility, commitment, and interest

Source: *Adapted from Vargas Zuñiga (2005).*

On the other hand, technical secondary-level education, and higher education in engineering and scientific areas is necessary for technological innovation. Currently, the process of learning is under an ongoing transformation due to the employment of technology in learning activities. ICT has the potential to improve the quality of learning, expand access to learning opportunities, and increase the efficiency of administrative processes (World Bank, 2003). These technologies can support changes in pedagogy and teacher training, deepening and extending planned changes. Also, ICT changes the role of teacher. The availability of online curricular material suggests that teacher's role is no longer to provide content, but rather to work with learners to develop new territory. Interactive multimedia technologies encompass text, audio, video and computer-based materials and usually some face-to-face learner support. This approach offers mediated guidance through the learning process or provides the opportunity for knowledge seeking individuals to create their own meaning and understanding. The Internet offers immense potential as enabler for interactive electronic learning infrastructure in the creation and distribution of knowledge and intelligence networks. In the Internet-based systems, multimedia (text, audio, video and computer-based) materials in electronic format are delivered to individuals through computers connected to the Internet, along with access to the databases and electronic libraries that enable teacher-student and student-student as well as one-to-one, one-to-many, many-to-many interactions, simultaneously or not, through email, computer

conferences or video conferences, virtual networks, bulletin boards, platforms and other means (Popescu, 2011a).

The Development of a Lifelong Learning System in Romania

A Review of the Legislative Framework

Although various interpretations of the concept of lifelong learning exist at international level, a desired common direction is set in the Member States of the European Union by the lifelong learning policy formulated by the European Commission. Nevertheless, the implementation of the concept into practice differs even from a European country to another due to historical, geographical, economic, political and technological reasons. There are differences in the extent to which various concepts appear in national policies; by and large, concepts associated with lifelong learning are viewed as associated mainly with adult or post-compulsory learning. Differences are prominent when we compare Western European Member States and post-communist states that joined the European Union later. Post-communist countries tend to see lifelong learning as a way to enhance their economic development, whilst countries with established market economies place greater emphasis on maintaining economic performance and meeting necessary skills shortages (Institute for International and Social Studies et al, 2007).

In transposing the lifelong learning concept into their national policies, post-communist countries followed closely the direction traced by the European Commission, since the concept was inexistent locally before the fall of communism. This is also the case of Romania, where lifelong learning as a concept is very little known and understood. By contrast, the concept of '*continuous education*' was generally used, being taken from French literature into the vocabulary and into the legislation.

Romania is considered a country with tradition in continuous education. References trace back to 1920s and 1930s, period when the concept of 'social pedagogy' was developed and implemented in rural areas of Romania. Bădina et al (1970) analysed the results of the social pedagogy in Romania between the World Wars and noted that '*social pedagogy appeared as a reaction to the limits of the school education and as an emphasis on the necessity to prepare the young generation with the aim of their integration, active and creative, in the whole social life*'. At that time, social pedagogy targeted various categories of learners, including inhabitants of rural areas, disadvantaged people, women and youngsters. Thus, one can say that there has always been a need for educational activities outside the formal education system in Romania, being recognized its roles as a basic fundamental and an important ingredient required for development of the Romanian society.

Romania's transition from planned to market economy together with country's integration into the European Union imposed new demands on population, like the mastery of new skills that will qualify them for successfully coping with the rapidly changing environment and pressures of globalisation. The acquisition of knowledge, skills and competences by the population is seen as the duty of the Romanian educational system, which is in a continuous structural reform, since the fall of the communism in 1989. Structural changes to the Romanian educational system aim to improve its efficiency for the purpose of a faster development of Romania through the development of its human capital for the knowledge economy to be achieved in the future. However, the upgrade of the educational system need the design of a strategy for its development that will contain a vision of its long-term objectives and plan for long-term and medium-term actions necessary for their achievement.

The reform of the educational system in Romania aimed to incorporate the concept of lifelong learning into the educational policy, especially after country's joining the European Union. Before 2005, disparate legislative measures were meant to shape a lifelong learning system in Romania, aiming at the development and regulation of the 'continuous professional education' of adults. Among these measures, the most relevant are: (1) Government Ordinance no. 102/1998 regarding the organisation and functioning of the permanent education in educational institutions; (2) Law no. 132/1999 regarding the establishment, organisation and functioning of National Adult Training Board; (3) Government Ordinance no. 129/2000 regarding the professional training of adults, amended by G.O. no. 76/2004; (4) Law no. 279/2005 regarding the apprenticeship at workplace; (5) Methodology for the authorisation of the suppliers of adult professional education; (6) Methodology for the certification of adult professional education; (7) Catalogue of the qualifications for which programs finalized with certificates can be organized; (8) Procedure for the evaluation and certification of professional competences, obtained through informal and non-formal education.

In 2005, the Romanian Government acknowledged the importance of continuous education by issuing *The Strategy for Continuous Professional Education on Short and Medium Term 2005-2010*, one of the policy documents that set the basis for the lifelong learning system in Romania. Actually, the document was prepared jointly by Romanian and Danish researchers under a PHARE institutional twinning program between the Ministry of Labour from Romania and the Ministry of Education from Denmark. The Strategy proposed a revision of the legislative framework to address the main obstacles identified in pursuing continuous education: the lack of flexibility of the learning system corroborated with the long duration of the studies; the lack of correlation between the qualifications acquired in the formal educational system and those obtained in informal and non-formal systems; employers' perceptions according to which the expenses with continuous education are a cost, not an investment; the lack of awareness of

continuous education benefits; the lack of promotion, information and counselling activities.

Under another PHARE project the *National Adult Training Board* (Consiliul Național de Formare Profesională a Adulților) was established in 2004 to consolidate the administrative capacity of the continuous professional education. Through projects, the Board aimed at developing the lifelong learning capacity in Romania. For instance, the project “*Implementation and validation of the National Qualifications Framework (NQF): starting with qualifications going to continuous professional training*” was implemented in collaboration with the National Authority for Qualifications (Autoritatea Națională pentru Calificări). The project is financed through the EU Programme Sectoral Operational Programme - Development of Human Resources and it aims to strengthen the institutional capacity of the National Authority for Qualifications and the four sectoral committees for the implementation and validation of the National Qualifications Framework, to develop and pilot specific instruments for ensuring quality of the professional training providers, to develop, implement and validate training programs for 12 qualifications selected from those developed within PHARE projects 2004–2005, as well as to develop specific instruments for the validation of anterior education and evaluation of the selected qualifications.

Another initiative of the National Adult Training Board, “*Ensuring the quality of the continuous professional training in Romania*” (CALISIS), is also financed through the EU Programme Sectoral Operational Programme - Development of Human Resources. The general objective of the project is to develop and implement a national system of quality assurance and management in continuous professional training, based on relevant scientific studies and using a compatible approach with the European Qualifications Framework. Therefore, the project aims to develop recommendations for institutional arrangements regarding quality assurance in continuous professional training, on basis of relevant scientific studies and trans-national know-how exchange, to improve the national authorization system for adult training providers and setting-up a quality assurance system for continuous professional training according to European provisions of the reference framework of quality assurance in education and training, to implement instruments and mechanisms of quality assurance at all system levels and to develop a training and certification system of evaluators that correspond to requests in the field of quality assurance in continuous professional training.

A critical analysis of the legislation that regulates the education and professional training indicates their approach as a purpose per se, and not as an instrument for personal, professional and civic development of the individual. In other words, the emphasis is place on the system and on the institutional structure, instead of focusing on the individual as a member of the society and on the society as beneficiary of the personal, professional and civic abilities of the individuals.

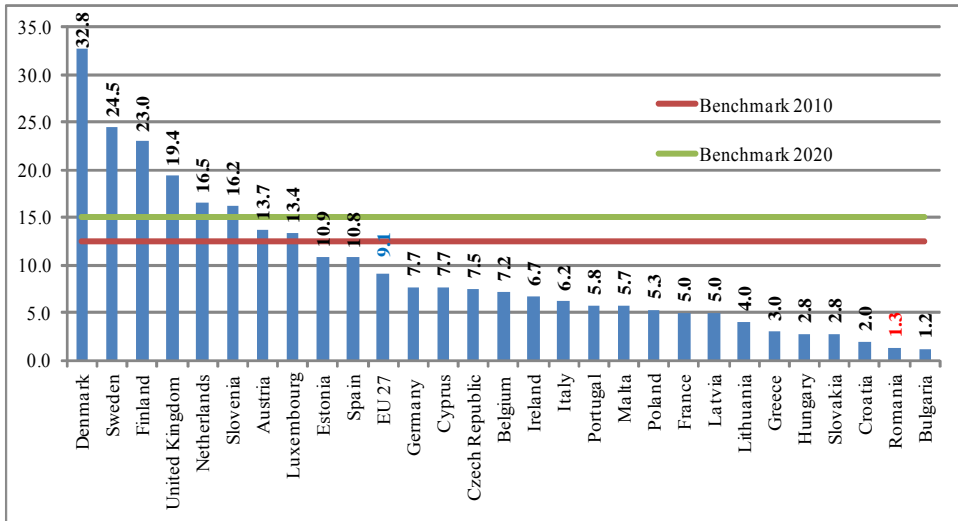
The *National Reform Program 2007-2010* (Romanian Government, 2007) addressed the issues of *continuous professional education*, the quality of education and the acquisition of new competences by employees, as factors to enhance competitiveness in the knowledge economy. It is acknowledged that in terms of continuous professional education, Romania registers one of the lowest participation rates for the age group 25-64 (1.1% in 2001; 1.1% in 2002; 1.3% in 2003; and 1.6% in 2005%). This low participation rate is determined by the fragmentation of the offer for continuous professional education, limited geographic coverage of the Romanian territory with suppliers of continuous professional education, reduced interest of the entrepreneurs and companies to finance the development of the human resources (Romanian Government, 2007). Taking into account the significant differences between Romanian and EU values for basic indicators of performance (including the rate of participation in lifelong learning for the 25-64 age group), the document sets the following priorities: promoting job creation, promoting the adaptability of businesses and employees to social and economic changes, fighting illegal/undeclared employment; improving the access to the labour market for vulnerable groups; promoting competitiveness in the labour market, through a better correlation between the education and training system and the labour market demands.

In 2008, the *Report on the Implementation of the National Reform Program 2007-2010* was released and offered a comprehensive view on the progress of the implementation of the renewed Lisbon strategy's provisions. Formulating as an objective the promotion of lifelong learning, the report presents significant differences in the participation in continuous education among Romania and the other Member States. According to the EC Progress Report on the Lisbon Objectives for Education and Training (2009), there are huge gaps regarding adults participation in lifelong education and training in EU Member States: Scandinavian countries and UK having the highest participation rates (over 20%) while Bulgaria, Greece and Romania register less than 2% (Romania - 1.6%). As, in the case of these three countries, the progress made compared with the year 2000 has been very modest, the reports which monitor the progress on Lisbon objectives focuses on the importance of promoting new policies in this field, as part of an integrated approach involving the Ministry of Education and the Ministry of Labour and Social Solidarity. The report also stressed the need to create lifelong learning partnerships, involving various stakeholders at regional and local level, the potential of ICT in broadening access to lifelong learning, as well as the continuous training of teachers.

Despite all the efforts, adults' participation rate in education and training in Romania decreased since 2008. One may argue that the economic and financial crisis has put its mark on adults' interest in continuing education and training. This could be assessed as a very surprising fact as job loss possibility or eventuality should have constrained adults to continue their education and training in

Romania. Figure 2 shows that Romania and Bulgaria are still the worst performers on this indicator (with 1.3 % in the case of Romania, and 1.2 % in the case of Bulgaria), while Greece and Croatia have improved their positions by 1, and respectively 2 percentage points. The best performers from EU 27 in terms of adults' participation rates in education and training are still Denmark (32.8%), Sweden (24.5%), Finland (23%), and UK (19.4%).

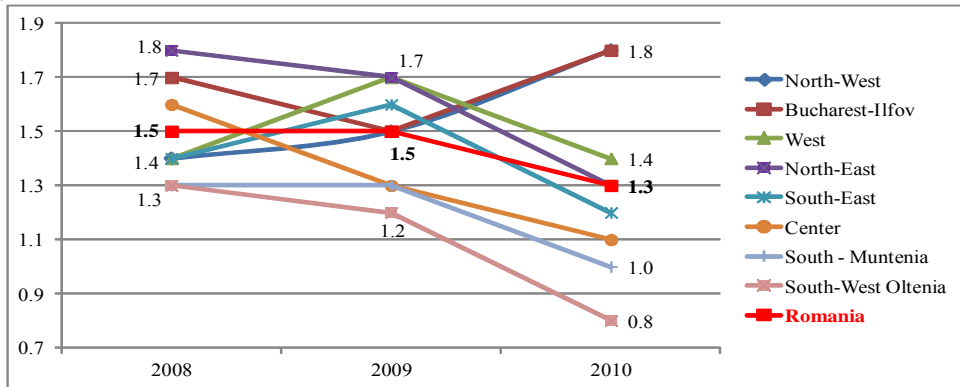
Figure 2. Participation of adults aged 25-64 in education and training in EU countries (data for 2010)



Source: Eurostat Database (2012)

European Union's benchmark on lifelong learning concerning the adults aged 25-64 and set the objective of 12.5% participation rate by 2010. Following modest progress, a new benchmark has been adopted by the Council (Education) in May 2009: setting the objective of 15% participation of adults in lifelong learning, by 2020. In this context, Romania should make miracles in encouraging adults to enrol in education and training programs. The breakdown of adults' participation in lifelong learning could provide us with more input on the regions towards which the efforts should be intensified. As shown in Figure 3, two development regions (South-West Oltenia and South-Muntenia) are not only the worst performers in terms of adults' participation in education and training, but also register decreasing rates of this indicator. Actually, decreasing participation rates of adults in education and training are recorded in almost all developing regions of Romania, exception making Bucharest-Ilfov and North West regions. Actually, these two development regions were found to have the lowest degree of specialization by Moga and Constantin (2011).

Figure 3. Participation of adults aged 25-64 in education and training in Romania, at NUTS level 2



Source: Eurostat Database (2012)

Further steps in the development of the lifelong learning system in Romania were taken with the project of the *Integrated Strategy for Human Resource Development (ISHRD) from the Perspective of Lifelong Learning 2009-2020*. The document was developed as part of a PHARE project started in 2006 by the Ministry of Labour, Family and Social Protection. Although it had the nature of a project and not a legislative provision per se, the document provides useful conceptual clarifications, an extensive list of challenges of the education system from the perspective of various experts and consultants, as well as recommendations and initiatives for policy developments.

The Law of Education no. 1/2011 (Legea Educației Naționale) is the first law to bring in line the Romanian education with the European vision regarding lifelong learning. The Law dedicates the last title (Title V) to Lifelong learning, after General Provision (Title I), Secondary education (Title II), Tertiary Education (Title III) and Teaching Staff Status (Title IV). It is worth to mention that this legislative measure uses for the first time the term of 'lifelong learning'. Nevertheless, across the articles the term 'lifelong learning' is used interchangeably with 'permanent education', 'continuous education', and 'continuous formation' which may demonstrate a sort of confusion. Thus, article 328 (1) notes '*the title regulates the general and integrated framework of lifelong learning in Romania*', and continues with (2) '*Permanent education represents all learning activities performed by each person during lifetime in formal, non-formal and informal contexts, aiming at acquiring and developing competences from multiple perspectives: personal, civic, social and professional*'. The definition of lifelong learning and its approach consistently follow the European direction set by the European Commission in *A Memorandum of Lifelong Learning* (2000) and *Making the European Lifelong Learning Area A Reality* (2001). Lifelong learning is extended

to a dimension that comprises also the early education, secondary education, tertiary education and adult's professional training and education. With this approach, the Ministry of Education brings under the lifelong learning umbrella all forms of education treated previously separately, as demonstrated by the legislative provisions for adult's continuous education and training presented before. This integrative approach is consistent with the vertical dimension of learning (lifelong learning) and the horizontal dimension of learning (life-wide learning). Several state actors are named as having attributions in the field of lifelong learning: The Ministry of Education, Research, Youth and Sports (MCTS), The Parliament, The Government, The Ministry of Labour, Family and Social Security (MMFPS), The Ministry of Culture, The Ministry of Health, and The Ministry of Interior. To those adds several governmental agencies, such as the National Authority for Qualifications established through the reorganization of The National Council for Qualifications and Adults Professional Training (CNCFPA). This can be justified by the complexity of the lifelong learning field, but may lead to problems of co-ordination among various aspects that are found in the responsibility areas of different actors. A clear specification of the attribution of each ministry is needed for the development of a lifelong learning system.

The creation of an incentivizing framework needs also financial support. It is well-known the lower standard of living of the Romanian population in comparison to those from other European countries that makes personal financial resources dedicated by adults to their learning or their children's learning to be limited. From the lifelong learning perspective, financial resources are needed to help the individual benefit from the opportunities of the initial education, of opportunities for the continuous learning and professional training at workplace, and of the opportunities for learning for self-development outside the context of work. The financing of lifelong learning is to be done with financial resources from the state budget, private sources, public-private partnerships, NGOs, European funds, through employers' co-financing, beneficiary's contribution or continuous education accounts. Therefore, Law of Education introduces the notion of '*account for continuous education*' as a measure to promote lifelong learning: '*the state will give each baby at birth the amount of EUR 500 in equivalent to support the right of lifelong learning*' (Article 356). Parents can also contribute to this account, by redirecting 2% of the tax paid each year on salary income. The account for continuous education shall be opened at State Treasury, will bear interest rate and can be accessed by the child after the graduation of the compulsory education.

The establishment of the National Museum of Science within one year from the publication of the Law of Education 1/2011 is another measure meant to stimulate lifelong learning in Romania. The National Museum of Science enhances the non-formal and informal learning processes, by presenting a collection of the latest achievements in science and technology.

Considerations on Adults' Education and Professional Training

International statistics regarding adults' participation in continuous education in Romania show that so far the right measures for adults' stimulation to engage in lifelong learning activities have not yet been implemented. This is not of great surprise considering the multitude institutions with responsibilities in this field as previously shown, and the fragmentation and lack of coordination of the measures taken so far. When referring to adults' participation in education, one needs to consider all educational and learning needs of an adult, for his / her personal as well as professional development. Lifelong learning includes education for active and democratic citizenship, adults' general education, learning during and through leisure activities such as hobbies and relaxation that have an impact on the functional capacity of the individuals at their workplaces. So far, non-formal and informal learning activities have not been supported in Romania, since the measures taken by the Ministry of Culture and affiliate institutions and bodies did not have the desired outcome.

Although the continuous professional education was subject of many regulations, the allocated resources and the institutional structures aimed fragmented aspects of this type of education and not the entire development of individuals' professional career. Poor preoccupations for professional improvement, for knowledge, competence and skills upgrade, for learning to accede to a better position at workplace or to change the career explain a reduced occupational mobility of adults in Romania. Upgrading skills and knowledge is becoming increasingly important for adults in the context of the emerging knowledge economy. In economic terms, adults' employability and adaptability assured by continuous update and upgrade of competences are vital for Romania's transition towards the knowledge economy. It is foreseen that the number of low-skilled jobs will diminish over the next years due to improved production techniques and increased salaries, and the number of high-skilled jobs will increase, posing a pressure on individuals to engage in lifelong learning activities.

At present, exhaustive, systematic and periodical studies to reflect the realities in the field of adult learning are inexistent in Romania, and if they exist their credibility is questionable. Databases or an organized framework containing the offers for adult education have not been developed yet. Relevant research on the reasons for adult non-participation in continuous education and professional training are difficult to be found, if not inexistent. All these lead to the conclusion that the offer for adult education is not adapted to the demand and partially explain the lowest percentage of adults' participation in lifelong learning at European level.

In Romania, the market for educational programs for adults and the institutions authorised to provide such programs developed quite chaotically, with educational

programs not entirely tailored to adults' learning needs, nor to labours' market's requirements. It is widely recognized that adults' have different needs in terms of learning, and different expectations from educational providers. Learning needs require the education system to become more flexible and diverse to allow alternative delivery mechanisms, such as distance education and e-learning, open entry and exit, flexible enrolment, modular courses, and training that is available as and when needed. In addition, a new and diverse set of competencies and skills, described before can be acquired in various non-formal out-of-school learning activities, as well through formal educational channels. Adults' learning needs to offer also alternative pathways for learners within and between different levels of institutions; it should provide linkages between different types of qualifications, vocational and academic; it should articulate training standards and qualifications that help link formal and informal education and training and integrate learning, licensing and qualifications, and labour market needs; it should also enable learners to have their achievements recognized across countries (World Bank, 2003).

The ability to develop educational and training programs to answer to the rapidly changing needs of the labour market represents a major challenge for policy makers which need to create an integrated framework to incorporate the multiple contexts of lifelong learning: formal, non-formal and informal. In order for a learning process to be efficient it is needed that its curricula to be relevant not only for the individual, but also for the labour market and society as a whole. Often worries are expressed that the curricula of the educational and training programs are not consistent with the requirements of the labour market from Romania.

Essential for the success of the adult education programs is the provision of a teaching staff that has all needed competences and experience. Teachers need in-depth knowledge of their subject area, including knowledge of relevant facts, an understanding of the major concepts, and the connections between them; they to be lifelong learners themselves. Traditionally, during classes teachers told learners what they need to do; in lifelong learning environment, the role of teacher changes, from knowledge communicator to learning facilitator, enabling learners to access knowledge and develop their conceptual understanding. The creation of the new environment required by lifelong learning needs a change of culture, especially where teachers' status in the classroom and society arises from being perceived as an authority figure.

Adults' initial education and work experience create the premises for learner-centered environments, in which is it widely recognized that learners acquire new knowledge and skills best if the knowledge and skills are connected to what they already know. Learner-centered learning allows new knowledge to become available for use in new situations—that is, it allows knowledge transfer to take place.

Last but not least, the continuous education system in Romania needs to keep up with accelerating technological developments. ICT offers innovative learning methods that best suit the needs of adult learners. These often includes the use of educational software to teach curriculum, course materials being available to students online, the use of computers in the classroom, the use of Internet for research and documentation especially through the access to scientific databases, research networks and platforms (Popescu, 2011b). Technologies' employment in educational and training activities is still reduced. Distance learning is almost the only form of learning employing ICT technology and the use of Internet. Mobile learning, the use of mobile devices to access learning content, is in the inception phase. Judging from the perspective of the wide territory of Romania and the dimension of rural areas, mobile learning has the potential to play a more important role in learning in adult continuous education and professional training.

Conclusions and Recommendations

Romania is finding and following its way towards the knowledge economy. Increasing the competitiveness of the Romanian labour force for the knowledge economy can be sustained by providing lifelong learning education for specific workplace qualifications, qualifications update, and new qualifications for career change, improving the quality and relevance of the curriculum and the teaching and employing technologies in the educational activities targeting all age groups. An alarm signal is triggered by the almost insignificant number of adults participating in lifelong learning education, raising questions on the ability of the Romanian workforce to adapt to the requirements of the labour market in the knowledge economy.

After disparate legislative provisions released over the years and the continuous re-organisation of governmental agencies and bodies with responsibilities in the field of lifelong learning, a major step forward was taken with the coming into force of the Law of Education 1/2011. Although with great delay, the Law introduced the concept of 'lifelong learning' as promoted at European level in the last decade as an acknowledged way to acquire the objective of the Lisbon strategy continued by Europe 2020, that of EU becoming the most competitive knowledge economy in the world by 2020.

The departure point for the development of the human capital through lifelong learning is represented by the intensity of the preoccupations regarding the need for the continuous improvement of the knowledge, skills and competences, as well as from the acknowledgement of the benefits for the individual, organisation and society. In the context of the economic and financial crisis, a sustainable way to lessen its effects is the investment in continuous learning to increase the adaptability of the labour force and of the companies.

The development of the lifelong learning system in Romania needs to be continued through an adequate strategy. To create an effective lifelong learning system, Romania needs to make significant changes to both the governance and financing of education and training. Further actions are required to address the obstacles identified in the policy documents, such as: arrangements for ensuring coordination across ministries and other institutions involved in education and training activities to set clear the responsibilities of the many actors with attributions in the complex field of lifelong learning; monitoring institutional and system performance through the establishment of a monitoring system collecting data on the indicators used at European level as the outcomes of learning must be monitored effectively; the promotion of a lifelong learning culture and the promotion of learning pathways through the development of an integrated and comprehensive system for the information, counselling and professional guidance of learners of all ages and from all environments. In addition, close cooperation between the state, the private sector and the civil society has the ability to foster the faster development of the lifelong learning system in Romania. The quality assurance system needs to recognize the range of settings, both formal and informal, in which learning takes place, and needs to provide opportunities for learners to demonstrate their newly acquired skills and knowledge. The quality assurance system also needs to provide prospective learners with information about the offerings and performance of providers and the mechanisms used for certifying the achievements of learners that shall also consider the certification of the non-formal and informal learning outcomes.

The demands raised by the development of a lifelong learning system are enormous, and it is very difficult for a country to implement all elements of the system at once. Thus Romania must therefore develop a comprehensive strategy with an action plan on how to move forwards in a sequenced and systematic way, in its evolution towards the knowledge economy.

Acknowledgement

This work was co-financed from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/1.5/S/59184 „Performance and excellence in postdoctoral research in Romanian economics science domain”

References

- Aitchison, J. (2003). Adult Literacy and Basic Education: A SADC Regional Perspective. *Adult Education and Development*, 60, 161-170.
- Aspin, D.N., & Chapman, J.D. (2000). Lifelong Learning: Concepts and Conceptions. *International Journal of Lifelong Education* 19, no. 1, 2-19.
- Bagnall, R.G. (1990). Lifelong Education: the Institutionalisation of an Illiberal and Repressive Ideology? *Educational Philosophy and Theory* 22, no. 1, 1-7.
- Barro, R.J. (1991). *Economic Growth in a Cross Section of Countries*. NBER Working Paper 3120, National Bureau of Economic Research, Cambridge.
- Bădina O., Curticăpeanu, V., Muster, D., Neamtu O. (1970). *Pedagogie socială - concepții, preocupări și experiențe în România dintre cele două războaie mondiale*. Editura Didactică și Pedagogică Bucharest.
- Boshier, R. (1998). Edgar Faure after 25 years: Down but not out. *International perspectives on lifelong learning*, ed. J. Holford, P. Jarvis and C. Griffin, 3-20. Kogan Page. London.
- Candy, P.C., Crebert, R. G., & O'Leary, J.O. (1994). *Developing Lifelong Learners through Undergraduate Education*. National Board of Employment, Education and Training. Canberra.
- Chen, D.H.C., & Dahlman, C.J. (2004). *Knowledge and Development: A Cross-Section Approach*. World Bank Policy Research Working Paper 3366. Washington, DC.
- Cibulka, J., & Coursey, S., Nakayama, M., Price, J., Stewart, S. (2000). *Schools as Learning Organizations: A Review of the Literature*, Maryland
- Cohen, D., & Soto, M. (2001). *Growth and Human Capital: Good Data, Good Results*. CEPR Discussion Papers 3025, Centre for Economic Policy Research, London.
- Dave, R.H. (1976). *Foundations of Lifelong Education*. Oxford: UIE.
- Davies, P. (2003). Widening participation and the European Union: direct action – Indirect policy? *European Journal of Education* 38(1), 99-116.
- Dehmel, A. (2006). Making a European Area of Lifelong Learning a Reality? Some critical reflections on the European Union's lifelong learning policies. *Comparative Education* 42(1), 49-62.
- European Commission (1993). *Growth, Competitiveness, Employment: the challenges and ways forward into the 21st century*. Brussels.
- European Commission (1995). *Teaching and Learning: towards the Learning Society*. Brussels.
- European Commission (1999). *The European Employment Strategy. Investing in People*. Brussels.
- European Commission (2000). *A Memorandum on Lifelong Learning*. Brussels.
- European Commission (2001). *Making a European Area of Lifelong Learning a Reality*, Brussels.
- European Commission (2009). *Progress towards the Lisbon Objectives in Education and Training*. Brussels.
- Eurostat (2007). *Europe in Figures. Eurostat Yearbook 2006-2007*, Luxembourg.
- Eurostat Database (2012). <http://epp.eurostat.ec.europa.eu/> Data retrieved 29.01.2012.
- Field, J. (2001). Lifelong education. *International Journal of Lifelong Education*, 20(1-2), 3-15.

- Hall, P., ed. (1977). *Europe 2000*. Columbia University Press. New York.
- Hanushek, E.A., & Kimko, D.D. (2000). Schooling, Labor-Force Quality, and the Growth of Nations. *American Economic Review*, 90(5), 1184–1208.
- infoDev. (2006). *ICT, Innovation, and Economic Growth in Transition Economies: A Multi-Country Study of Poland, Russia, and the Baltic Countries*. World Bank, Washington, DC.
- Institute for International and Social Studies (coordinator) (2007). *Lifelong Learning: Patterns of Policy in Thirteen European Countries*, Report developed within a research project EU 6th Framework programme.
- Knapper, C.K., & Cropley, A.J. (2000). *Lifelong Learning in Higher Education*. Kogan Page. London.
- Lederman, D., & Maloney, W. (2003). *R&D and Development*. World Bank Policy Research Working Paper 3024. Washington, DC.
- Lee, M. (2006). The periodization of lifelong learning discourses in international bodies. The annual meeting of the American Educational Research Association, April 7–11, in San Francisco, US.
- Lengrand, P. (1970). *An Introduction to Lifelong Education*. UNESCO Paris.
- Medel-Añonuevo, C., Ohsako, T., & Mauch, W. (2001). *Revisiting lifelong learning for the 21st century*. UIE. UNESCO Hamburg.
- Moga, L.M., & Constantin, D.L. (2011). Specialization and Geographic Concentration of the Economic Activities in the Romanian Regions, *Journal of Applied Quantitative Methods*, Vol. 6, Nr. 2, ISSN: 18424562, <http://jaqm.ro/>.
- Navarro, J.C., & Verdisco, A. (2000). *Teaching Training in Latin America: Innovations and Trends*. Inter-American Development Bank. Washington, D.C.
- OECD (1996). *Lifelong learning for all*. OECD Paris.
- OECD (2001a). *Preliminary Synthesis of the Third High Level Forum on Learning and Sciences and Brain Research: Potential Implications for Education Policies and Practices. Brain Mechanisms and Youth Learning*, OECD –CERI Paris
- OECD (2001b). *Thematic Review on Adult Learning: Finland Background Report*. OECD Paris.
- OECD (2001c). *Science, Technology, and Industry Scoreboard: Towards a Knowledge-Based Economy*, OECD Paris.
- Popescu A.I. (2011a). *Transforming Learning for Lifelong Learning in a Knowledge Economy*. DAAAM Conference, Vienna.
- Popescu A.I. (2011b). *Bridging Education and Technology for the Knowledge Economy: Evidence from Romania*. DAAAM Conference, Vienna.
- Romanian Government (2007). *National Reform Program 2007-2010*. Bucharest.
- Romanian Government (2008). *Report on the Implementation of the National Reform Program 2007-2010*. Bucharest.
- Romanian Government (2009). *Integrated Strategy for Human Resource Development (ISHRD) from the Perspective of Lifelong Learning 2009-2020*. Bucharest.
- Romanian Government (2010). *The Law of Education no. 1/2011*. Bucharest.
- Rychen, D.S., & Hersh Salganik, L., eds. (2001). *Defining and Selecting Key Competencies*. Hogrefe and Huber Kirkland USA.
- Schwartz, B. (1974). *Permanent education*. Martinus Nijhoff The Hague.

- UNESCO (1969). *Report of the director-general on the activities of the organization in 1968*. Paris.
- UNESCO (1972). *Learning to be: the world of education today and tomorrow*. Paris.
- UNESCO (1996). Delors' Report *Learning: The Treasure Within*. Paris.
- UNESCO (1997). *50 Years for Education*. Paris.
- Vargas Zuñiga, F. (2005). Key Competencies and Lifelong Learning. in Fernando Vargas Zuñiga, ed., *Key Competencies and Lifelong Learning* (81–118). Montevideo.
- Wain, K. (1987). *Philosophy of Lifelong Education*. Croom Helm London.
- World Bank (2003). *Lifelong Learning in the Global Economy: Challenges for Developing Countries*, A World Bank Report, Washington, DC.
- World Bank (2007). *Building Knowledge Economies: Advanced Strategies for Development*, Washington, DC.