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## **THE CONCEPT OF LIFELONG LEARNING AND THE ROLE OF HIGHER EDUCATION ORGANIZATIONS**

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### ***Abstract***

*In the past few years, it has been widely accepted that change is the only constant of modern world. In that sense, the process of globalization has had a significant impact on the contemporary society, as well as on the modern business world. A significant shift of core concepts in technological, social, political and economic subsystems has been the determinant of the 21<sup>st</sup> century accompanied with organizations transforming through the means of the lifelong learning (hereafter LLL) model. It is also a known fact that human capital is crucial for success in the global market competition, and thus it represents the main competitive advantage of propelling societies. The concept of learning organizations and LLL model are the key components of the new paradigm of the management development. The transformation of organizations, society and economy in the era of knowledge is closely tied to educational organizations as one of the pillars. Education is essential for every society and individual since it creates new and improves current value system in order to improve life of every member of society. All higher educational organizations are established to enable an individual to realize his/hers highest goals. The aforementioned changes are also mirrored in the field of education, and are especially true for higher education organizations, which due to their scope, activities, but also their missions, require a business oriented way of thinking and operating. In other words, concepts of strategy and business have to become a part of their modus operandi. Nowadays, the learning process never ends because it is progressive and dynamic as one's skills and potentials are constantly being improved through formal and informal education. The LLL model is bigger than formal education system; it is a concept of strategic thinking, tactic acting and operational surviving. Paradoxically this paper shows both the*

*complexity and simplicity of the LLL model and its application on higher education organizations. The emphasis of the paper is on the fact that today's higher education organizations have to create and implement a quality management system that follows, supports and improves the philosophy of knowledge management.*

***Key words: knowledge transfer, knowledge society, lifelong learning model, higher education organizations***

## 1. INTRODUCTION

Today's way of living is irrefutably determined with change where leaders of all forms are forcing imperative to build organizational capabilities that support sustainability, flexibility, innovation, continues improvement and well-focused usage of all available resources. In that sense lot of light is being shed on the paradigm change where well-executed human capital development initiatives yield a virtually limitless resources essential in a knowledge-based economy. In March 2000, the Lisbon European Council set the strategic goal for Europe to become the most competitive and dynamic knowledge-based economy in the world by the 2010, capable of sustainable economic growth with more and better jobs and greater social cohesion and furthermore, the Heads of State in their conclusions in Lisbon emphasized the central role of education and training in responding to the challenges of such an objective and invited the Ministers of Education to agree upon concrete objectives for education and training systems. As stated at the begging of this article organizations operate in an environment that is not only changing rapidly but is subject to many discontinuities that are mainly caused by financial crises and political unrest (Hamel, 2007, 6).

At the same time, and in certain discrepancy to the aforementioned ideas, knowledge management (hereafter KM) and the concept of lifelong learning (hereafter LLL) are still more of a phenomenon rather than an implemented and highly used tool of management practice. When talking about aspects of change, one has to emphasize that the process of transformation and redefinition involves every aspect of society, introducing whole new approach in working, living and doing. These new models are, naturally, very different from those of 20 or 100 years ago. The Information age, associated also with the Digital Revolution, has new settings, values and principles. In the centre of its interest lies knowledge in all of its aspects and forms. Within business and KM, two types of knowledge are usually defined, namely explicit and tacit knowledge. The former refers to codified knowledge, such as that found in documents, while the latter refers to non-codified and often personal/experience-based knowledge.

Knowledge is often associated with the concept of education, and nowadays, in particular, that concept constantly grows, seeking new, additional values, forms and finally ways of application. However, the role of educational

institutions, accompanied and underpinned with modern communication technologies is setting new relationships within the market in relation to workforce and current technological progress. At the same time, high demands for excellence are constantly pushing individuals and organizations further and stronger in many various ways regarding their professional and personal development.

## **2. ABOUT KNOWLEDGE AND KNOWLEDGE MANAGEMENT**

Many of these changes and challenges have portrayed the role of KM increasingly important for organizations' sustainability and competitiveness (Quintas, Lefrere, and Jones, 1997, 385; Valkokari and Helander, 2007, 597; Salo, 2009, 95; Pasha and Pasha, 2012, 10). Knowledge is the most sought-after commodity at present, the foundation of competitive advantage and the source of predominance over competition. There are numerous definitions of knowledge and an entire jungle of KM theories. Jelkić (2011, 261) analyses different philosophical and scientific concepts of knowledge and concludes that the demand for "orientational knowledge" corresponds with the new epoch and bioethical perspective.

Knowledge builds on information and embodies a person's prior understanding experience and learning (Boddy, 2011, 633). Defined by Klaus (2008, 39), knowledge is the totality of knowledge and skills that people apply to solve problems. Knowledge comes from the intellect during work. It is the totality of everything that has been learned, or concluded. Knowledge is formed by a mixture of experience, values, related information and expert opinions providing a framework for the evaluation and including new experiences and information (Đula, 2010, 226). Also, knowledge is a complex and multidimensional term, while KM is rather a new phenomenon. Thus, understanding the different forms that knowledge can exist in, and thereby being able to distinguish between various types of knowledge, is an essential step for KM.

KM and organizational learning theory nearly always take root in the interaction and relationship between these two types of knowledge. This concept has been introduced and developed by Nonaka in the 90's (e.g. Nonaka et al, 1998, 673-684) and remains a theoretical cornerstone of the discipline. Botha et al (2008) point out that tacit and explicit knowledge should be viewed as a spectrum rather than as definitive points. Therefore in practice, all knowledge is a mixture of tacit and explicit elements (Frost, 2013).

We have already stated that two types of knowledge, explicit and tacit, are usually recognized and defined. However, some researchers make a further distinction and talk about embedded knowledge. Embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artefacts or

structures (Gamble and Blackwell, 2001). Knowledge is embedded either formally, such as through a management initiative to formalize a certain beneficent routine, or informally as the organization uses and enforces the other two types of knowledge.

According to Frost (2013), the challenges in managing embedded knowledge vary considerably and will often differ from tacit knowledge. Culture and routines can both be difficult to understand and hard to change. Formalized routines on the other hand may be easier to implement and management can actively try to embed the fruits of lessons learned directly into procedures, routines, and products. ITs role in this context is somewhat limited but it does have some useful applications. Broadly speaking, IT can be used to help map organizational knowledge areas; as a tool in reverse engineering of products (thus trying to uncover hidden embedded knowledge); or as a supporting mechanism for processes and cultures. However, it has also been argued that IT can have a disruptive influence on culture and processes, particularly if implemented improperly (Frost, 2013). Due to the difficulty in effectively managing embedded knowledge, firms that succeed may enjoy a significant competitive advantage.

Philosophy of knowledge is involved in organizations and nations, while economy and individuals are significantly determined by the knowledge society (Marić et. al., 2012). Bahtijarević - Šiber et al. (2008, 596) consider knowledge the most important resource of the organization and they define it a corporate asset, without which it would be difficult to survive in the market, let alone gain competitive advantage. Furthermore, in the means of strategy and competitiveness, it is clear that knowledge represents a valuable, rare, inimitable and non-substitutable resource, which is increased and improved through, transfer and dissemination within the organization

Organizational knowledge has to be successfully guided by the management, and Growth and survival for the modern organization means balancing between creating organizational knowledge and implementing good KM practices. Bratić (2009: p. 46) defined KM as a type of management that identifies, collects, creates, adapts, represents and distributes all the knowledge and skills that the company has, either from external sources or business experience.

Many questions arise in the domain of KM: some of the most important being what type of knowledge is used and how, which type of organizational knowledge is the company going to use in the future, and finally how to use and manage organizational knowledge with success. Dimensions that need to be considered in the context of KM and their characteristics are: (1) acquiring knowledge, (2) knowledge development, (3) knowledge transfer, and (4) learning. The domain of knowledge is largely described and analysed by Klaus (2008).

Table 1

## Knowledge management goals and tasks

The goal	The task
Acquiring knowledge	To secure the required knowledge for business development and processes
Knowledge development	To secure knowledge management at the most appropriate place inside and outside the company
Knowledge transfer	To secure optimal utilization of knowledge
Learning	To secure ability to learn for the company and employees
Further knowledge development	To secure knowledge actualization compatible with the application, the further development and updating and obliterating of outdated

Source: Klaus, N. (2008). *Upravljanje znanjem: vođenje poduzeća usmjereno prema znanju, Jastrebarsko, : Naklada Slap, p. 4*

### 3. CONCEPT OF LIFELONG LEARNING AND EDUCATION ORGANIZATIONS

Truly great universities are one of society's greatest assets (Adler, Harzing, 2009, 72). Humans are, in their nature, social beings who interact with other individuals, and who grow continuously developing their knowledge regarding the world in accordance with one's mind set. Due to the complexity of our surrounding and the fact that vital resources are scarce, people must change, adapt, and constantly learn more than ever before. The imperative of today is to learn more and more outside the formal education institutions, but the fact is that the basic education system is *condition sine qua on* for the development of the individual and the society as a whole.

Drucker (2005) claims that continuing education for highly educated adults will become a large and important field of development in the new society. Indeed, the knowledge workers need to enable the development of their potential through programs tailored to the individual needs and various organizational requirements differing between sectors and industries. Kuka (2012, 47) defined the modern organization as a learning organization, based on all different types of available information and innovation. Rupčić (2002, 909) highlights that "a learning organization is a type of organizational culture in which the encouragement of employees for individual development and learning is aimed at engaging and maximizing the contribution of each employee in achieve organizational goals. The idea of shared learning and application of knowledge in

adapting to change has resulted in the term "enterprise as a family" which represents a synonym for organizational learning".

Pastuović (2006, 422) points out that the concept of LLL is closely linked to the concept of a learning society and the concept of "knowledge society" further, claims that learning must be a lifetime process. Given the fact that enrolling into different school programs is not always possible through a whole lifetime gaining knowledge and learning has to become available outside the school system *per se*, and it has to be available to all people regardless of their previous education and business rank. In other words, the concept of LLL has to enable meaningful education harmonized with one's professional and personal life. Thus, LLL is defined by EU Commission (2002) as all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment, and related perspectives. Dave (1976, 10-35) defined LLL as term that covers all formal and informal forms of education that integrate and articulate all the structures and stages of education along the vertical and horizontal dimensions of society. It is also characterized by its flexibility in terms of time, space, content, methods of learning and therefore requires self-directed learning, sharing one's enlightenment with others and accepting different styles and learning strategies. Savićević (2006) considers the merits and standards, particularly UNESCO's, which are aimed at accepting and fostering the concept of LLL, and points that a significant number of countries have reformed their systems of education according to this concept, passed legislation aimed at overcoming the traditional rigidity of the formal education system and gave access to education to all people regardless their age and social class.

When looking at the situation in Croatia, the general attitude towards LLL and the development and improvement of skills in the workforce is especially worrying. The percentage of employees aged 18-24 in Croatia involved in education and training is 5.9% (2011), which is about only 17% of the EU-27 average, which amounts to 35.8%. According to the Croatian bureau of statistics, of all people employed in the country, only 2.3% are involved in lifelong learning programs, which is well below the EU-27 average of 8.9% ([www.dzs.hr/Hrv\\_Eng/CroInFig/croinfig\\_2012.pdf](http://www.dzs.hr/Hrv_Eng/CroInFig/croinfig_2012.pdf)). The given information raises questions and doubts regarding the competencies of the existing educational institutions, as well as their ability to adapt and develop new skills/competencies, e.g. e-skills needed in the new digital society. If such skills and competencies are not being developed, can there be word of knowledge workers? Furthermore, we have to seriously consider how globalization and KM, as inevitable drivers of change, will shape and affect the current system of high education in Croatia. The figures in this section further reinforce doubts.

The figures from 2011 show in that year 49,586 pupils graduated from elementary schools, and 42,669 pupils graduated from secondary schools. In terms of high education, (ISCED 5), 11,153 students finished professional study programs and 25,335 students graduated from university studies

([www.dzs.hr/Hrv\\_Eng/CroInFig/croinfig\\_2012.pdf](http://www.dzs.hr/Hrv_Eng/CroInFig/croinfig_2012.pdf)). If we take into account the fact that Croatia found itself in an unenviable position to adapt to the EU and to cope with the increased competition, particularly in terms of labor market, we can agree with Pološki Vokić and Grizelj (2008, 853) who point out that education and development is an essential requirement for modern organizations and people creating them.

#### 4. CROATIA AND THE CONCEPT OF KNOWLEDGE MANAGEMENT

According to the mid-2012 estimates, the Republic of Croatia has 4,267,558 inhabitants, and an alarmingly high rate of unemployment of 18,5% ([http://www.dzs.hr/Hrv/system/first\\_results.htm](http://www.dzs.hr/Hrv/system/first_results.htm)). The latest report on global competitiveness puts Croatia on the 81<sup>st</sup> place of 144 countries included in the survey. The national position is somewhat better regarding the dimensions of innovation, where Croatia stands as the 74<sup>th</sup> country ([www.minpo.hr/UserDocsImages/STRATEGIJA%20RAZVOJA%20PODUZETNI%20C5%A0TVA\\_PRVI%20NACRT\\_06%2003%202013\\_javna%20rasprava.pdf](http://www.minpo.hr/UserDocsImages/STRATEGIJA%20RAZVOJA%20PODUZETNI%20C5%A0TVA_PRVI%20NACRT_06%2003%202013_javna%20rasprava.pdf)).

Innovations play significant role in the process of creating knowledge, so advanced, technologically oriented and relatively rich (in terms of GDP and GDP *per capita*) organizations and nations are dominant in the field. Croatia is considered to be a "moderate innovator" which is proved and supported with the information that Croatia takes the 25<sup>th</sup> place from all 34<sup>th</sup> European countries in terms of innovation performance: 44% of all companies in Croatia are classified as innovation active, while the same figure for the EU-27 is 52%.

According to the data on innovation performance of small businesses in Croatia, 79% of large companies innovate, while only one-third of small businesses were engaged in innovation during the survey period. Barić and Raguž (2010) have made research regarding interactive and complex connections between the society, economy and knowledge in the context of the knowledge society and knowledge based economy. Authors found that, as a nation, we have to deal with different challenges in the domain of education, information and communication infrastructure. They point out that changes are needed to increase the share of the population in some pillars of education, and that we are considerably lagging behind developed countries in the means of the information system, and thus they recommend increased investments in research and development, and improvement of the legal and economic framework.

Jakovac (2012, 9) considers that in today's environment of global market economy, success is possible only when an economy values knowledge and innovation and invests adequate resources in innovation, research and development. Therefore, one of the key assumptions of developing the Croatian economy is creating an entrepreneurial climate and opportunities in the educational system that will encourage and support innovations and social progress.

## 5. CONCLUSION

In times when knowledge is the only sustainable and constantly evolving resource, it is very important for organizations to be able to learn, develop, adapt, transform and finally create new services and products in order to survive and possibly, consequently, gain competitive advantage. The question of how to promote, measure and reward knowledge creation and scholarly impact is one of the plagues of every higher education organization (Doh, 2009, 70). Modern organizations should continuously improve both their business and educational processes but also encourage employees, customers, associates and other organizations, as well as the whole society, towards positive changes regarding both professional and private aspects of life. Lifelong learning is becoming an unquestionable paradigm and information and knowledge are constantly being transformed into new knowledge expanded and upgraded into new technologies, resulting in innovative application and creating grounds for more new innovations and ideas. Another two important issues regarding knowledge and success is the possibility of successfully managing knowledge in an organizational context and creating and nurturing KM culture determined by: knowledge workers, learning organization and KM. Figure 1 shows the basic dimensions of the knowledge era.

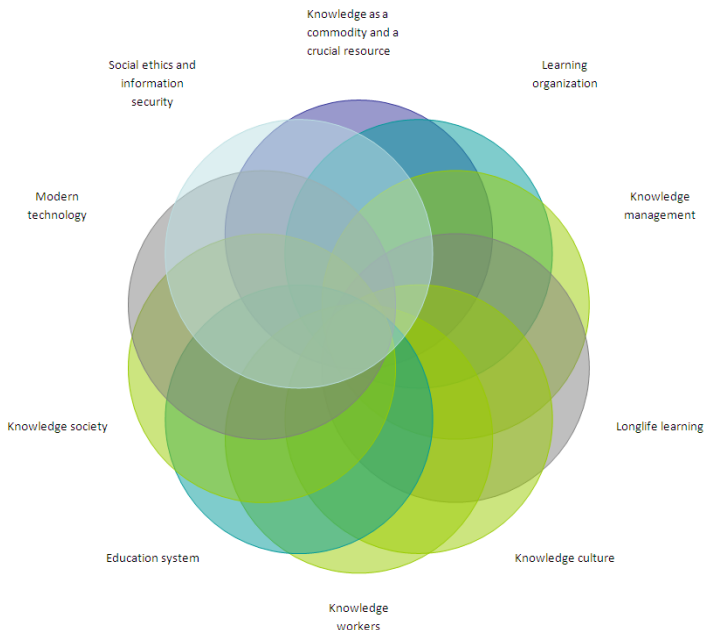


Figure 1 The concept of knowledge era

Source: Author



The first assumption regarding KM and knowledge society is that knowledge is a commodity and a key resource for organizational success, which, in other words means that each organization, in order to succeed, should be a learning organization and therefore use the principles of KM and lifelong learning. Knowledge workers, are by definition, a product of the era of knowledge, so the education system and modern technology have the most significant role in their existence and development. When considering the aforementioned concepts, one must take into account the and at last; there is the questions of social ethics and safety of available information.

One of the important issues in the domain of knowledge that management scholars certainly agree upon is the need to liberate and develop knowledge in the function of organizational goals (Đuričić and Taši, 2009, 1-5). The efficiency of employees within a certain organization should be channelled towards increasing its value and the fulfilment of the organization's mission/objectives. The third dilemma is the relationship between the process of learning and educational institutions, the ways in which the modern technology is replacing the methods of formal education, and how easy and fast access to information may hinder the intellectual development of individuals. The contemporary organizational learning concept can and should be linked to the traditional system of education with respect to the tendencies on the future of higher education. The trend of continuing education in developed countries is well recognized and rising and the organizations are investing significant resources (with regard to the current economic situation and the impact of the global economic crisis) in education, and various training programs.

The last question is related to the social dimension of knowledge, more specific the benefits for individuals, organizations and society in general. How does one improve general knowledge? There are various development options through wider use of information and knowledge and the wise implementation of new technologies. There is also the question whether the acquired knowledge reduces overall social problems such as unemployment, hunger, diseases and war. Today, the well-known syntagma *l'art pour l'art* could be interpreted as *knowledge for knowledge's sake, technology for technology's sake*, presenting the idea that technology and knowledge create progress, but taking into account that the latter are often in service of large corporate profits and interests, without paying attention to corporate social responsibility and the society. Thus, the made conclusions should be viewed through a bioethical paradigm - the possibility to improve the world of knowledge and technology having in mind clear social goals, aiming at better quality of life by enabling education, work opportunities and better health care. Knowledge workers through a learning organization and KM give quality and meaning to new technologies and specific programs and actions, in other words, to every day projects around the world.

In addition, when we talk about the efforts to create a knowledge society we can agree with Barić and Raguž (2010, 57-75) who state that for raising innovation and competitiveness of the Croatian economy, the convergence of

higher education institutions to their immediate environment is needed in order to improve the transfer of knowledge and technology, and it is necessary to strengthen the cooperation between educational institutions, science, government and the economy.

Finally, to meet all of these recommendations it is necessary to build firm and responsible leadership, assure continuous involvement and activities of leading experts, promote of knowledge, redefine the educational system, as well as, to reconsider the current and, quite possibly, build a new system of social values.

## REFERENCES

- Adler, J. N., Harzing, A.-W. (2009). When Knowledge Wins: Transcending the Sense and Nonsense of Academic Ranking, *Academy of Management Learning & Education*, Vol. 8, No. 1, pp. 72-95
- Bahtijarević-Šiber, F., Sikavica, P. and Pološki Vokić, N. (2008), *Suvremeni menadžment - vještine, sustavi i izazovi*. Zagreb: Školska knjiga
- Barić, V. and Raguž, M. J. (2010). Hrvatska na putu prema društvu znanja, *Poslovna izvrsnost*, Vol. 4, No. 2, pp. 57-76
- Boddy, D. (2011). *Management: An introduction*, New Jersey: Pearson
- Botha, A., Kourie, D. and Snyman, R. (2008). *Coping with continuous change in the business environment: knowledge management and knowledge management technology*. Oxford: Chandice Publishing
- Bratić, D. (2009). Knowledge and knowledge management as a competitive advantage, *Acta Graphica*, Vol. 20, No. 1-4, pp. 43-49
- Dave, R. H. (1976). *Foundations of Lifelong Education*. New York: Pergamon Press
- Doh, J. P. (2009). Introduction: Knowledge, Learning and Impact, *Academy of Management Learning & Education*, Vol. 8, No. 1, pp. 70-71
- Drucker, P. (2000). *Putting More Now Into Knowledge*, *Forbes Online*, May 15. Available at: <http://www.forbes.com/forbes/2000/0515/6511084a.html>
- Državni zavod za statistiku – Croatian Bureau of Statistics (2012). *Hrvatska u brojkama, 2012*. Available at: [http://www.dzs.hr/Hrv\\_Eng/CroInFig/croinfig\\_2012.pdf](http://www.dzs.hr/Hrv_Eng/CroInFig/croinfig_2012.pdf)
- Državni zavod za statistiku – Croatian Bureau of Statistics (2013). *Hrvatska u brojkama, prvi rezultati*. Available at: [http://www.dzs.hr/Hrv/system/first\\_results.htm](http://www.dzs.hr/Hrv/system/first_results.htm)
- Đula, Lj. (2010). Upravljanje znanjem: trendovi i izazovi, *Ekonomski vjesnik*, Vol. 23, No. 1, pp. 224-239
- Đuričić, N. and Taši, A. (2009). Menadžment znanjem - nova poslovna kultura, *Zbornik radova*. Available at: <http://www.famns.edu.rs/skup2/radovied>), pp. 1-5.
- EU Commission (2002). *European report on quality indicators of lifelong learning*. Available at: [http://ec.europa.eu/education/lifelong-learning-policy/doc/policy/qualityreport\\_en.pdf](http://ec.europa.eu/education/lifelong-learning-policy/doc/policy/qualityreport_en.pdf)
- Frost, A. (2013). The Different Types of Knowledge, *KMT – An Educational KM Site*. Available at: <http://www.knowledge-management-tools.net/different-types-of-knowledge.html>

- Gamble, P. R. and Blackwell, J. (2001). *Knowledge Management: A State of the Art Guide*, London: Kogan Page
- Hamel, G. (2007). *The future of management*, Boston: Harvard Business School Press
- Jakovac, P. (2012). Znanje kao ekonomski resurs: osvrt na ulogu i značaj znanja te intelektualnog kapitala u novoj ekonomiji znanja, *Tranzicija*, Vol. 14, No. 29, pp. 88-106
- Jelkić, V. (2011). Kakvo znanje trebamo, *Filozofska istraživanja*, Vol. 31, No. 2, pp. 255-261
- Klaus, N. (2008). *Upravljanje znanjem: vođenje poduzeća usmjereno prema znanju*, Jastrebarsko: Naklada Slap
- Kuka, E. (2012). Obrazovanje i strateški menadžment kao konkurentske prednosti, *Praktični menadžment*, Vol. 3, No. 4, pp. 46-50
- Marić, I., Barišić, P. and Jurjević, I. (2012). Knowledge and skills needed in knowledge economy, *CECIIS- Central European Conference of Information and Intelligent Systems – 23rd International Conference Varaždin*, University of Zagreb, Faculty of Organization and Informatics, pp. 181-185
- Ministarstvo poduzetništva i obrta (2013). Strategija razvoja poduzetništva 2013.–2020. - prvi nacrt. Available at: [www.minpo.hr/UserDocsImages/STRATEGIJA%20RAZVOJA%20PODUZETNI%C5%A0TVA\\_PRVI%20NACRT\\_06%2003%202013\\_javna%20rasprava.pdf](http://www.minpo.hr/UserDocsImages/STRATEGIJA%20RAZVOJA%20PODUZETNI%C5%A0TVA_PRVI%20NACRT_06%2003%202013_javna%20rasprava.pdf)
- Nonaka, I. et al (1998). Management Focus the 'ART' of Knowledge: Systems to Capitalize on Market Knowledge. *European Management Journal*, Vol. 16, No. 6, pp. 673–684. Online: Elsevier Science database.
- Pasha, M. A. R. and Pasha, S. (2012). A Pragmatic Approach for Implementing Knowledge Management in Pakistani Organizations using Open Source Technologies, *International Journal of Computer Applications*, Vol. 49, No. 7, pp. 10-18
- Pastuović, N. (2006). Kako do društva koje uči, *Odgojne znanosti*, Vol. 8, No. 2, pp. 421-441
- Pološki Vokić, N., Grizelj, H. (2008). Obrazovanje i razvoj zaposlenika u hrvatskim organizacijama, *Ekonomski pregled*, Vol. 58, No. 12, pp. 851-880
- Quintas, P., Lefrere, P. and Jones, G. (1997). Knowledge management: A strategic agenda, *Journal of Long Range Planning*, Vol. 30, No. 3, pp. 385-391
- Rupčić, N. (2002). Poduzeće koje uči – formula za 21. stoljeće, *Ekonomski pregled*, Vol. 53, No. 9-10, pp. 903-920
- Salo, N. (2009). The Implications of Knowledge Management Sustainability for Leadership in an Organization: An Exploration and Analysis of Leadership Theories and Knowledge Management Practices in Bangwita Flores, Indonesia, *Journal of NTT Studies*, Vol. 1, No. 2, pp. 95-135
- Savičević, D. M. (2006). *Korijeni i razvoj andragoških ideja*. Beograd: Institut za pedagogiju i andragogiju Filozofskog fakulteta
- Valkokari, K. and Helander, N. (2007). Knowledge management in different types of strategic SME networks, *Management Research News*, Vol. 30, No. 8, pp. 597-608