KNOWLEDGE MANAGEMENT – FROM QUALIFICATIONS
TO COMPETENCES

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This paper deals with knowledge management. The works on the idea of the European Qualifications Framework proceeded rapidly in the second half of the nineties, when it became apparent that the globalisation process makes it necessary to develop tools of assessment and comparison of the qualifications acquired in different educational systems. The conviction that having a profession does not secure stable and lasting employment constituted the starting point. What is more, in an increasing number of cases the identification with only one profession becomes an obstacle in successful functioning on the labour market through limiting new opportunities of employment. That is why the European Qualifications Framework is the answer to the processes of globalisation and to the development of the economy based on knowledge as well as a tool valuable in comparing the competences acquired in the education systems of European states. The model of thinking about education that arises from this idea is to become – in the longer and shorter perspective – a fundament for the construction of a common European area of higher education, developing into a universal source of goals as well as a matrix serving to assess learning results (that is – competences).

Key words: Qualifications; competences; adult education; knowledge management.

A brief analysis of the economic phenomena of last few years clearly presents the failure of the idea of a stable and balanced economic development of the developed countries of Europe as well as other continents. This constitutes the background of the resurgence of the ideas of state interventionism and the counter-globalisation movement in relation to economic, political, and social problems. At the same time, a noticeable increase in the speed of changes in civilisation with the accompanying alterations in work organisation has resulted in new requirements facing the workers on the labour market. Learning a profession no longer guarantees a stable and lasting employment. Furthermore, the identification with a particular profession makes it increasingly difficult to function successfully on the labour market, because it reduces the number of new employment opportunities.

The idea of the European Qualifications Framework, with its rapid development in the second half of the nineties connected with the realisation that the globalisation process makes it necessary to design tools of assessment and comparison of the qualifications acquired in different educational systems constitutes a separate, complementary analytical perspective. It was as soon as in the years 1991–1996 that the *Secondary education for Europe* research programme was initiated and organised by the Council of Europe in order to investigate the similarities and common features in the curricula of countries constituting the contemporary Council of Europe and to the issues resulting in major differences. It was the first significant educational initiative of the Europe reluctantly unifying after 1989.

It was not until 2004 that the idea of the European Qualifications Framework (EQF) emerged. It was formulated by the European Commission in October 2006, and after the discussions it was ultimately accepted by the European Parliament in February 2008. The EQF

is the first international reference framework to include all qualifications. The framework is based on learning results entirely – the characteristics of the local education systems are of no importance. First and foremost, the EQF is aimed at improving the workforce mobility and promotion of lifelong learning.[1]

The idea of the European Qualifications Framework as an answer to the globalisation process and the development of economy based on knowledge on the one hand, and a tool aimed at comparing qualifications acquired in different educational systems of the European countries on the other emergences as increasingly significant. It also appears that the model of thinking about education that originates from this idea is going to constitute – in the longer and shorter perspective – the fundament of the construction of a common European area of education, comprising both its universal source of goals and a matrix to be employed in the assessment of learning results.

On the local scale – that is, that of the individual EU states – the National Qualifications Framework is employed; it is defined as "*a description of mutual relations between qualifications, which aims to integrate and coordinate national qualifications subsystems and improve the transparency, access, progression and quality of qualifications in relation to the labour market and civil society. In particular it describes the hierarchy of qualifications levels – each qualification is linked to one of these levels. Each level is subordinated to a corresponding level of the EQF*".[2]

In relation to the economic aspect of the present discussion it needs to be observed that the dynamic changes in how business activities are managed leads to the establishment of a relation between the investment in employee competence development in a company and its success on the market. This mechanism of the influence of human capital on economic growth is based on the statement that the knowledge and the skills of workers serve to increase development and growth of the entire economy.[3] For over a decade it has been possible to witness an increase in the importance of competences in the process of finding employment.

The term competences can be defined as "*all that a person knows, understands and performs in a way appropriate in a given situation*".[4] In the contemporary understanding of the term it is used in relation to soft skills (behavioural competences) and hard skills (functional competences). The first define "*how people should act*" to be successful at work. The hard competences, in turn, inform of "*what people should know*" to be successful at work. The conception of Richard Boyatzis has greatly contributed to the development of reflection on the problem of competences. When analysing the factors decisive in being successful at work, the author discerned personality traits, motivations, experience, and behavioural traits. The division between threshold competences – which constitute the fundamental competences required at a particular position – and the differentiating competences that distinguish those with better results from those with worse results has been proposed. Knowledge and skills constitute the first group, with the second one comprised of attitudes, motives, and values.[5]

The European attempts at defining competences were influenced, to a large extent, by the dominating models developed in the UK, Germany, and France. In these countries one can

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[1] JANOWSKI, A.: *Motywy utworzenia europejskich ram kwalifikacji i krajowych ram kwalifikacji* [online]. Available on: http://www.krk.org.pl/download/dokumenty/prof.Andrzej_Janowski_Motywy_utworzenia_KRK.pdf [cit. 2013-02-24].

[2] Available on: http://krk.org.pl/images/download/glossary.pdf [cit. 2013-02-24].

[3] MARSZAŁEK, A.: *Doskonalenie kluczowych kompetencji jako wymóg współczesnego rynku pracy*. E-mentor, 2011, Nr 3, p. 67.

[4] Available on: http://www.krk.org.pl/slownik-pojec [cit. 2013-02-24].

[5] ARMSTRONG, M.: *Zarządzanie zasobami ludzkimi*. Kraków 2005, p. 154.

observe a strong emphasis on the competences acquired at work. At the same time, in each of the countries they are characterised in a slightly different way. For instance, in the UK competences were originally defined as opportunities to employ knowledge and skills in the process of norms implementation at a particular professional position. It was only after the representatives of the employees made their suggestions in which they strongly emphasised the necessity to address social aspects that the more significant references to behavioural and functional competences were made. In Germany, in turn, it was as early as the nineties that specialist and technical, personal, and social competences were described. At the same time one's attention is drawn to the necessity to maintain a certain balance between them. It is only is such a state that further competences – i.e. the communicational, the methodical, and learning ones – are developed.[6]

The idea of Key Competences as well as their classification accepted in the EU has had a great influence on the shaping of the contemporary understanding of competences. In the *European Reference Framework* document issued on 18 December 2006 competences are defined as combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion, and employment. Eight key competences are defined as part of the reference framework:

1) Communication in the mother tongue;
2) Communication in foreign languages;
3) Mathematical competence and basic competences in science and technology;
4) Digital competence;
5) Learning to learn;
6) Social and civic competences;
7) Sense of initiative and entrepreneurship; and
8) Cultural awareness and expression.[7]

The ranges of these competences partially overlap and they are connected – the aspects necessary in one category reinforce competences in another. High level of fundamental language competences, reading, writing, counting, and the communicative and the digital competences are necessary in learning; the learning to learn competence, in turn, supports all other educational actions. What is crucial in all eight competences is critical thinking, creativity, initiative, problem solving, risk assessment, decision making, and constructive emotion management. It needs to be emphasised that all the key competences are considered to be equally important, because all of them can contribute to a successful life in the society of knowledge.

It is the problem of knowledge – or, to be more precise, of knowledge management – that constitutes the main part of the present article.

A brief introduction to the problem of knowledge ought to be provided hereby. That is particularly important due to the numerous new ideas – most of which are indirectly or directly related to the development of new technologies in collecting, storing, editing, and transferring/sharing knowledge – that have recently been formulated in connection with this

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[6] MARSZAŁEK, A.: *Doskonalenie kluczowych kompetencji jako wymóg współczesnego rynku pracy*. E-mentor, 2011, Nr 3, p. 68.

[7] *Key competences in lifelong learning – European Reference Framework* – annex to the recommendation of the European Parliament and of the Council of 18 December 2006 published in Official Journal of the European Union of 30.12.2006/L394. Available also on: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:EN:PDF [cit. 2013-02-24].

issue. It is not my intention to provide a comprehensive description of the above processes, as these are not directly connected with the topic of the article, I will hereby only attempt to draw attention to a number of selected characteristics of knowledge and their consequences.

According to Plato, knowledge is "*justified true belief*", and that is the definition that used to be employed. Contemporarily it is often assumed that knowledge is a collection of facts and intuitive rules that an individual gathers through years of experience.[8] This definition appears to be particularly useful in the present article. When considering the contemporary high position of knowledge it discerns its four fundamental features:

1) Dominance;
2) Inexhaustibility;
3) Nonlinearity;
4) Simultaneity.[9]

When discussing the dominance of knowledge what one has in mind is the leading position that it occupies among all the other values of the modern world, with its strategic importance in the planning and realisation of all enterprises. Inexhaustibility implies that the value of knowledge does not decrease with its transfer to other subjects. To the contrary, the process of sharing knowledge is the beginning of its transformation, generation of new information, that is, increasing knowledge resources.[10] Nonlinearity means that there is no unambiguous, clearly noticeable correlation between the size of knowledge resources and the obtained benefits. In other words, the possession of extensive knowledge resources is not immediately decisive in the effectiveness of the realised enterprises and, what follows, in the success in a competition. Therefore, the advantage in knowledge resources does not ultimately guarantee having an advantage over one's rivals. Simultaneity of knowledge is reflected in the fact that it can be used by many people at the same time. The contemporary databases located on computer network servers are particularly effective in benefiting from this feature of knowledge, allowing for a multi-access, regardless of place and time.

In their works Toffler and Drucker have predicted the rise of the knowledge society.[11] Just like the information society is simply a society in which all individuals have an unlimited access to information, in a knowledge society all individuals have enough knowledge to use the information appropriately and effectively.[12] It is assumed that the Bangemann Report issued in 1994 constitutes the foundation of the information society in Europe.[13] Arguments for the necessity of providing a systemic answer by the European Union to the challenges of the information society were presented there, with particular emphasis placed on the development of information technology and the vital changes of the labour market.

Other important EU documents addressing the problem of information society and knowledge society are: *Ku Społeczeństwu Informacyjnemu w Krajach Europy Środkowej i Wschodniej / Towards the information society in the countries of Central and Eastern Europe* (1996); *eEurope – An Information Society For All* (Brussels 1999); and *eEurope+ – A Co-operative Effort to Implement the Information Society in Europe* (Göteborg 2001). These included a list of recommendations for the implementation of the idea of the common access to

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[8] KARWOWSKI, W.: *Zarządzanie wiedzą*. Bezpieczeństwo Pracy – Nauka i Praktyka, 2004, Nr 11, p. 11.

[9] TOFFLER, A. – TOFFLER, H.: *Budowa nowej cywilizacji. Polityka trzeciej fali*. Poznań 1996.

[10] It appears that this can be said about all teaching and learning processes.

[11] TOFFLER, A.: *Trzecia fala*. Warszawa 1997.

[12] Comp. ZACHER, L. W.: *Od społeczeństwa informacji do społeczeństwa wiedzy, Społeczeństwo informacyjne. Wizja czy rzeczywistość?* Kraków 2004.

[13] BANGEMANN, M.: *Europe and the Global Information Society*. Brussels 1994.

information technology in the European society. This was intended to increase competitiveness, on the one hand, and to stimulate the level of communication on all its levels, on the other.

Currently, the connection between knowledge and intellectual capital is an expression of an even higher recognition. The intellectual capital comprises the hidden assets of a company that are not fully reflected in the financial balance,[14] and which are composed of both that which the members of an organisation have at their immediate disposal, and that which is left in the company after they leave. This includes knowledge and skills as well as talents and innovativeness of the individual employees. Furthermore, it contains the organisational culture of a company, manifest especially in the ways in which it supports productivity and innovativeness of the employees. It needs to be noted that not all knowledge constitutes intellectual capital. The essential distinguishing mark is its usefulness for a company. In other words − knowledge takes on the form and position of intellectual capital when there is a difference between the book value and the market value of a business. That is how the fact that the value of a company is decreasingly dependent on purely material factors is emphasised.[15]

Intellectual capital includes:

1) Human capital (encompassing knowledge, skills, talents, attitudes, and values of the employees);
2) Structural capital (encompassing databases, organisational structures, information systems, patents);
3) Relational capital (encompassing relations with customers, suppliers, partners, competitors, media, local communities).[16]

It is not difficult to observe that the previously discerned competence categories are reflected in the components of intellectual capital. The basic conclusion that can be drawn from the identification and the recognition of the importance of intellectual capital in an organisation can be expressed with a single statement – the intellectual capital of the employees – including their competences – is too valuable to remain beyond control. And that is why it ought to be made one of the priorities of in company management. It seems that a set of processes offered by the idea of knowledge management in an organisation is the answer to the previously mentioned requirement. When considering the numerous approaches to defining intellectual capital what tends to be emphasised is knowledge in the broad understanding of the term, which includes the individual and the organisational forms of knowledge. The knowledge resources in possession of organisations are seen as the basis of successful functioning on the contemporary complex and demanding market. This is perfectly illustrated by an opinion of Jashapara, who proposed that in looking for an answer to the question: Is it possible to construct a lasting advantage in market competition upon such a difficult resource as knowledge? It may be stated that it is, in fact, the only way of gaining a lasting advantage in market competition. In the age of knowledge it is only the constant work with knowledge and its management systems that secures the position of a company and allows it to be the leader.[17] This is a precise definition of the importance and the role of knowledge. However, on the other hand, the currently increased reflection on knowledge, its value and usefulness for organisations leads to some rather surprising propositions that present a completely different face of the condition of knowledge resources. It must often be honestly admitted that all we have gained are large amounts of

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[14] STEWARD, T.: *Intellectual Capital*. New York 1997. Comp. SOPIŃSKA, A.: *Jak mierzyć kapitał intelektualny w przedsiębiorstwie?* E-mentor, 2004, Nr 2, p. 42.
[15] EDVINSSON, L. – MALONE, M.: *Kapitał intelektualny*. Warszawa 2001, p. 39.
[16] KRÓL, H. – LUDWICZYŃSKI, A.: *Zarządzanie zasobami ludzkimi*. Warszawa 2006, p. 97.
[17] JASHAPARA, A.: *Zarządzanie wiedzą*. Warszawa 2006, p. 39.

unselected and unprocessed information. And what we are really trying to find is the knowledge necessary for a fast reaction to the requirements and expectations of the environment.[18]

It is necessary, at this point, to return to the reflection on knowledge itself, but not in order to further enumerate its features, but rather to make an attempt at defining its types. From the interpretation of the essence of intellectual capital the basic types of knowledge can be discerned – the tacit and the explicit one – according to the propositions of Nonaka and Takeuchi.[19] Explicit knowledge is systematised and externalised, and it can be easily formalised and presented in documents or reports. In other words, it is the knowledge that has already been codified or that is easy to codify and to share with others. Tacit knowledge, in turn, is difficult to access, because it reflects certain automatic processes of the unconscious. That is why it is specifically personal, context-dependent, and hardly formalised at all. It is, therefore, closely related to individuals, with the entirety of their experience and self-reflection. That is why tacit knowledge is difficult to share.

This situation constitutes perhaps the greatest challenge of knowledge management. There is a necessity to convert tacit knowledge to the explicit and accessible one. It is only in such a case that the knowledge hidden in the minds of the employees may become an actual company resource – a resource that may be stored, processed, and shared with all the interested parties.

A classic model of knowledge management has been developed by Nonaka and Takeuchi – it is named the Knowledge Spiral and it assumes that human knowledge is created and it is distributed through social interactions between the tacit and the explicit knowledge.[20] The mentioned interactions are externalisation, socialisation, internalisation, and combination.

The process of externalisation consists in transforming tacit knowledge into the explicit one through its codification allowing for its sharing with others through its skilful presentation in conceptual schemes comprehensible to the receivers. That is how the exchange of ideas makes it possible not only to share what we already know with others, but to actually create new knowledge.

The socialisation process consists in gaining new knowledge through the cooperation between individuals who spend time together and learn from each other by sharing their experience.

Internalisation of knowledge is – to put it simply – using formal knowledge in practice. "*Knowledge constitutes a valuable resource when it permeates individuals in its tacit form which is achieved through experience, mental models, and technical skills. People gather, interpret, and then use knowledge.*"[21]

Combination – the last interaction in the knowledge management process – consists in updating and ordering knowledge that the individuals already have – the formal knowledge that they can share with others. The selection and unification of the information that one has, the organisation of databases – it all leads to the creation of new knowledge. A constant repetition of the described processes of the interaction of knowledge is the Knowledge Spiral, which begins on the level of the individual and moves up by broadening the knowledge interactions.[22]

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[18] SERBAN, A. M. – LUAN, J.: *Overview of knowledge management*. New Directions for Institutional Research, 2002, Nr 113, p. 5–16. Comp. KARWOWSKI, W.: *Zarządzanie wiedzą*. Bezpieczeństwo Pracy – Nauka i Praktyka, 2004, Nr 11, p. 12.

[19] EVANS, C.: *Zarządzanie wiedzą*. Warszawa 2005, p. 189.

[20] KOWALCZYK, A. – NOGALSKI, B.: *Zarządzanie wiedząKoncepcja i narzędzia.* Warszawa 2007, p. 51.

[21] Ibidem, p. 52.

[22] Ibidem, p. 53

The externalisation of knowledge appears to be of particular importance to pedagogics, with the developing significance of the adult education process, especially in comparison with the increasingly popular "learning by teaching" method.

To complement the image of the knowledge management process it is necessary to mention the model developed by Probst, Raub, and Romhardt.[23] The model discerns six main interconnected processes constituting knowledge management. Identifying the knowledge that the individuals have is aimed at identifying the sources and the value of this knowledge in order to be able to use it more effectively. Knowledge retention ensures the security of knowledge resources and protects it from being used by e.g. market competitors. Apart from protection this process also involves selection, the means of storing knowledge and their updates. Knowledge acquisition and development consist in increasing the existing knowledge resources and filling in the blanks. This process involves all contacts with customers, competing organisations, and the companies that the organisation cooperates with. Knowledge utilisation is seemingly the simplest process – most of the information that individuals have (despite its value) is never used, or it is not used as effectively as it could. Knowledge sharing and its popularisation is another process constituting a part of the discussed management model; it is aimed at a maximally effective employment of knowledge resources at work, at creating databases that all the employees can use to get the information that they require.[24]

The numerous knowledge management models can be simplified and reduced to three main groups of processes:
1) Knowledge generation, i.e. all the processes and means of gathering it;
2) Knowledge conversion, i.e. uncovering the tacit knowledge;
3) Knowledge transfer, i.e. relocating it to be put to practical use.

The above set allows for the consideration and recognition of all the essential components of knowledge management.

That is how we reach the role of the pedagogue, or, to be more precise, the andragogue. Is not possible to include such actions as knowledge acquisition, uncovering-becoming aware of knowledge, updating, sharing, and assessing knowledge in the competences of an andragogue?

To sum up it can be stated that knowledge management can be treated as a tool in shaping employee competences, on the one hand, and, on the other, as a chance to verify, assess, and update the previously acquired competences.

Resumé

Znalostní management – od kvalifikací po kompetence

V druhé polovině roku 1990, kdy začalo být zřejmé, že proces globalizace si vyžádá vytvoření nástrojů pro posuzování a porovnávání kvalifikací získaných v různých vzdělávacích systémech, postupovaly práce na myšlence Evropského kvalifikačního rámce rychle. Za výchozí bod bylo vzato přesvědčení, že kvalifikace v určité profesi nezaručuje stabilní a trvalou zaměstnanost. Navíc ve stále větším počtu případů se ztotožnění se pouze s jednou profesí stává překážkou k úspěšnému fungování trhu práce kvůli tomu, že

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[23] PROBST, G. – RAUB, S. – ROMHARDT, K.: *Zarządzanie wiedzą w organizacji*. Kraków 2004, p. 42.
[24] Ibidem, p. 47.

omezuje možnosti získat nové zaměstnání. To je důvod, proč je Evropský kvalifikační rámec odpovědí na procesy globalizace a na rozvoj ekonomiky založené na znalostech, jakož i cenným nástrojem k porovnávání kompetencí poskytovaných vzdělávacími systémy jednotlivých evropských států. Model úvah o vzdělání, který vzniká z této myšlenky, se v dlouhodobém i krátkodobém horizontu stane základem pro budování společného evropského prostoru vyššího vzdělávání, který se rozvine do univerzálního zdroje cílů sloužících k hodnocení výsledků vzdělávání (kompetencí).