Work competencies of white and blue collar workers in the context of information society development

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Abstract

Work competencies in the context of information society development. In this study we focus on work competencies specific for the work environment of information society (Himanen 2004, Webster 2002, Benner 2004, Lévy 2000). We examine significance of the specific work competencies based on the quantitative assessments of the sample of the employees of recruitment agencies. Using the empirical findings we verify a statistically significant difference in significance of those work competencies typical for the work culture of information society according to different kinds of work (Castells 2004). In this paper we apply the quantification of the significance of work competencies as the indicator of the information society development.[2]

Key words: w*ork competencies, key competencies, human capital, labor market, information society*

Abstrakt

Pracovné kompetencie bielych a modrých golierov v kontexte rozvoja informačnej spoločnosti. V tejto práci sa zameriavame na oblasť pracovných kompetencií špecifických pre pracovné prostredie informačnej spoločnosti (Himanen 2004, Webster 2002, Benner 2004,

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Lévy 2000). Prostredníctvom empirických odhadov dôležitosti vybraných kompetencií, uskutočnených pracovníkmi personálnych agentúr, sledujeme významnosť týchto pracovných kompetencií u rôznych druhov pracovných pozícií (Castells 2004). V práci aplikujeme kvantifikáciu hodnotenia dôležitosti pracovných kompetencií ako indikátor rozvoja informačnej spoločnosti.

Kľúčové slová: *pracovné kompetencie, kľúčové kompetencie, ľudský kapitál, trh práce, informačná spoločnosť*

Introduction

According to the part of the theoretical approaches, the key context of the human capital development is currently affected by the quantitative and qualitative changes in information (represented by the growths in quantitative information exchange, the raise of the meaning of the education and the raise of the ability of processing information) that are bringing into being new sort of social system, the information society (Webster, 2002, 9). Changes in social integration belong also to the most significant sings of the informational type of society, as horizontal networking processes bear significant influence on social life (Castells, 2003, p.25). Thus, beside the field of technological innovations (as the key indicators of new society development), the attention of social theories is heading towards the soft innovations, changes in the work environment, the growths of the flexibility on the labor market and the development, widening and accumulation of the human capital.

The methodological purpose of this paper is to verify the possibility to use specific attributes of the human capital as the indicators of the information society development. The aim of the paper is to analyze the work competencies that are specific for the information society and to examine the significance of the latter in the praxis.

From an international comparison in the area of human capital attributes, which examined the rate of exploitation of human capital on the labor market, the latter can be marked as the potential threat of human capital development in Slovakia (Lisbon Council Policy Brief, 2010, In Ivaničková - Vlčková, 2010). According to the empirical findings based on the rate of unemployment in Slovakia and on the rate of employment in the knowledge intensive businesses, exploitation of human capital was confirmed on an insufficient level when

compared to the average of the 28 EU countries. Also, the situation of persisting mismatch of supply and demand on the labor market in Slovakia[3] is heading the attention of plenty of researchers towards the information flow between subjects on the labor market, analyzing possibilities of increasing the employability on the labor market.

In this work we would like to add to this effort exploring the significance of specific non-formal work competencies on the labor market. The aim of this paper is to analyze the significance of work competencies in the situation of applying for a job. Empirical findings on significance of work competencies and findings of exploitation of work qualifications of job applicants are based on the assessment of employees of 96 recruitment organizations.

With regard to the raising dynamics of human capital on the labor market, the examinations of the optimal development and exploitation of human capital in this paper is focused to the analysis of significance of specific non-formal work competencies as the attributes of human capital. Reflecting the quantitative assessment of significance of work competencies we adopt the latter as the indicator of the information society development in terms of non-formal attributes of human capital, as a part of different appropriate indicators measuring huge amount of social and economic features of development of information society (Webster 2002).

Work competencies in the context of information society development.

The concept of work competency – in contrary to the concept of work qualification - refers to the sphere of personal properties that are not certified as formal qualification, obtained in institutional formal and post formal education system. The sense of competency is usually clarified by emphasizing its complexity, generality and applicability as compared with the term of skills (Belz and Siegrist 2001, Hrmo-Turek 2003). According Chisholm, "if particular skills mean knowledge and experience needed in particular work position, competency evokes exploiting of knowledge, skills and abilities in praxis" (in Fudaly-Lenčo, 2008, p. 11). As universal property, "competency fosters application of knowledge and skills in changeable situation" (Belz-Siegrist, 2001, p. 174), allowing the realization of acquired activities on an

Národný projekt Rozvoj stredného odborného vzdelávania, Available on the Internet: http://rsov.sk/node/6.

excellent level" (Hrmo-Turek, 2003). Competency is thus analyzed in the context of exploitation of human capital content.

The concept of work competencies as non-formal attributes of human capital has become a relevant part of examining of exploitation of human capital in the praxis. As it is defined in the works of significant part of authors, work competencies evoke the exploitation of knowledge, skills and abilities in the praxis (See Belz-Siegrist, 2001, Chisholm, in Fudaly-Lenčo, 2008). As the authors suppose, significance of work competencies in terms of the work culture that is specific for the socio-economic system of information society differs in relation to formal qualifications of the workers involved in white collar (information labor workforce) and blue collar work positions (manual workers).

The examinations of the work competencies, required and exploited on the labor market, represent a special field of studies on human capital accumulation. This approach reflects the contemporary sociological and economic view of human capital, extended to the complex form of knowledge, skills and personal properties relevant for economic activities (See e.g. Kameníček, 2007, Dudová, 2009, Buček-Řehák-Hudec, 2010. Human capital can be distinguished into attributes connected with formal work qualification and attributes of personal properties (Armstrong, 1999). According to Pichňa (1978), human capital is built on formal qualification, individual properties and practical experiences, reflecting the sphere of scholarly qualification obtained from formal institutional education system and the sphere of personal competencies completed by practical experiences. Assuming that "optimal exploitation of human capital requires development of personal, social and emotional skills" (Fudaly-Lenčo, 2008, p. 56), these attributes of human capital are relevant components of human capital content.

Changes on the labor market are reflected as one of the key signs of the coming of new kind of society (information society) or as one of the key sings of informatisation of the established social relations. (Webster, 2002, s. 5). The growths of the meaning of the information in the work activity can be recognized by the growth of flexibility and dynamics of the work activity whereby the information is inherent and being transmitted within the lifelong learning trainings. According to Lévy (2000), we are currently witnessing rising of dynamics and flexibility of human capital in contemporary conditions on the labor market along with the increasing meaning of work competencies in the changeable and dynamic human capital content. Thus, according to the author, it is possible to identify the alterative and changeable

content of knowledge, skills and properties set of attributes of human capital content as one of the key factors of the social position in the information society type (Lévy, 2000). In this sense, the complex of work qualifications in terms of professional skills and qualifications obtained also in post-formal education system completed by codified accreditation and legitimization of acquired skills, is enlarged into other attributes of human capital that participate in the identification of the social position in conditions of dynamic and flexible labor market.

As the work competencies "change permanently in relation to institutions and recipients involved into the education process, and changeable social conditions" (Fudaly-Lenčo, 2008, p. 25), it becomes relevant to consider the development of socio-economic system as the basis of analysis of the human capital exploitation. In this work we explore significance of the competencies specific to the current socio-economic conditions in the context of the information society development with the aim to verify the thesis of different types of work competencies specific for blue and white collar workers in the informational economy of Manuel Castells and Pekka Himanen (2004).

Writers on quantitative and qualitative changes in the information environment analyze the latter in the context of information society development (See Webster 2002, Castells 2004, Lévy 2000). According to the occupational approach to information society definition (Webster, 2002), changes in the field of human capital are regarded as one of the key indicators of information society as the entirely new type of social system or, in critical view, as the key indicator of the informatisation of established relationships. The growths of quantity of information, along with "decisive qualitative change with regard to the ways in which information is used" (Webster, 2002, p.26) towards priority of theoretical knowledge, are identified as the key signs of the development of information society in all specific theoretical approaches (economic, spatial, occupational, cultural, technological) of the theory of information society. Information in the field of occupation is embodied in the dynamic content of the work activity and is reflected and transmitted by leaning courses in the context of live-long leaning.

Even if most definitions of the information society use quantitative measurements as number of white-collar workers, the share of the people employed in knowledge-intensive business services or percentage of GNP devoted to information (Baláž, 2013) to analyze the development of in the information society, we suppose that quantification of the development

of the information society offers the possibility to use also the level of exploitation of the non-formal attributes of human capital as the special indicator of changes in the work environment.

With regard to the broad definition of human capital, changes of the most required knowledge, skills and persons properties are supposed to be perceived as one of key indicators of transition to the information society according the occupational definitions of the theory of the information society (Bell, 1979, Perkin, 1989 in Webster 2002, Lévy 2000). The authors stress the changes toward the new type of the work force (with the specific set of competencies) as privileged in the information society from the early beginning of the information society theory. In the current concept of work culture of the information society, defined in terms of specific work competencies according Himanen (2004), the latter have become usable as indicators of information society development. Based on qualitative analysis of interviews with the IT leaders, most specific work competencies of information society. According Himanen work competencies, identified as specific for the information society work culture include creativity, enthusiasm, explicitness, cooperation and flexible relation in time in the sphere of work organization. These competencies were identified in contrary to the emphasis on routine activities, fixed organization of work activity, low grade of ability to process information, and the idea of work as a duty specific for the work culture of industrial society according to Weber (in Castells, 2004). The quantitative findings of key changes in the work organization in the context of the information society theory are available by the findings of Chris Benner (2004) According to the empirical findings on the dynamics of development of forms of work and employment organization in the area of information-communication technologies of Benner (2004), we are witnessing the growths of the flexibility and the dynamics of work competencies, as the specific indicator of flexibility of the information society labor market. Appearing from "dynamic and flexible character of work, which is one of key dimensions of labor market flexibility in the information society, demands for professional adaptability and flexibility increase in the information society" (Benner, 2004, p. 179).

The special definition of the information society is represented by the network society theory by Manuel Castells (2004) as the idea of new conception of social stratification in the system of information capitalism (which represents the socio-economic system of information society) by Manuel Castells (2004, p.111). Applying the idea the work culture specific for

information society, Castells differentiates manual workers (in term of generic labor) and white collar workers (in term of informational labor) as two different types of work-force in conditions of the information society. The differences in competencies, specific for both groups, are those that define the different type of work culture of the workers in the system of the information capitalism. Workers in self- programmable type of work activity, "engaged in knowledge intensive business such as software engineering and biotechnology, research, design, marketing or management" (Castells, 2004, p.9) dispose of autonomous capacity to focus to the production aim, to search for relevant information and combine them into new kind knowledge in condition of complex information sources and databases. According Castells, specific competencies as "abilities to analyze, plot strategy, communicate effectively" (in: Webster, 2002, p. 113) are those that define the closeness of the work culture to that specific for advanced information society environment - "specific skills are less important to these people than the overriding skill of adaptability" (in: Webster, 2002, p.113). On the other hand, workers in generic type of labor, which represents the work activity of manual workers, is characterizes by acting up to given directions with lower grade of information processing skills, lack of flexibility and with emphasis on routine activity. Manuel Castells definition of self-programmable and generic labor in the information society can be interpreted as the distinction between information work force typical for high educated white collar workers and the manual type of work.

Table 1: Work competencies typical for the industrial and the information society
(Himanen, 2004, Webster, 2002, Lévy, 2000, Castells, 2004).

Work competencies of the industrial society	Work competencies of the information society
Work as a duty	Work as a self-fulfillment
Emphasis on routine activities	Emphasis on ideas and creative results
Fixed organization of work activity	Flexible organization of work activity
Low grade of ability to process information	Advanced level of ability to process information

Writers on the (personal, non-formal) work competencies, specific for the information society, define the latter as the attributes of the specific work culture, required on the labor

market of information society, that include the emphasis on creative capacity, degree of analytic capacities, ability to process information, creativity, enthusiasm, explicitness, cooperation and flexible relation in time in the sphere of work organization (Himanen, 2004, Webster, 2002, Lévy, 2000, Castells, 2004).

Methods and purposes of the research

Starting from the analysis of the work competencies specific for the information society, we focus to the empirical quantification of the significance of the work competencies of the information society. In this work significance of specific competencies is explored with the aim to compare the significance of the specific work competencies as the indicator the development of the information society work culture in particular types of work activity. As the definition of two different types of work in the information society can be interpreted as the distinction between information work force typical for high educated white collar workers and the manual type of work (Webster, 2002, p. 111), we examined the significance of competencies specific for white collar workers and blue collar workers, verifying the thesis of different types of the work culture specific for white and blue collar workers[4] (Castells, 2002). Significance of the work competencies was examined in three sets of work competencies: information-society (IS) competencies, key (K8) competencies and universal competencies (UC). The first group competencies is identified as those specific for the work culture of information society (Himanen, 2004) and include creativity, flexibility, digital competencies, analytic competencies and abilities to process information. The second group is one of key competencies relevant in the context of employability on the labor market[5] and include communication skills, communication in foreign languages, mathematic skills, digital competencies, ability to learn, social competencies, leadership and cultural sensitivity. The

[4] Blue-collar workers positions in the middle qualification degree included service trade workers, machine and robot attendants, trade workers, craft workers, qualified workers in agriculture industry, forestry and extractive industry.
Low qualified blue collar positions included low qualified and unskilled industry workers, low qualified and unskilled workers in agriculture, industry, forestry, extractive industry.
White collar jobs included positions of health care workers, high qualified technicians and engineer workers, management workers, science sector workers and technical experts and education sector workers

[5] Kompetencie podporujúce celoživotné vzdelávanie a iniciatívu „nové zručnosti pre nové pracovné miesta z apríla 2010, Rada EÚ, v Bruseli, 29.apríla 2010, ISBN 0-415-28200-4, Available on the Internet: <http.// *nuczv.sk/wp-content/uploads/ST08798.SK10.pdf*>**Chyba! Záložka nie je definovaná.**

third group covers universal competencies relevant in sector of economic activity (Belz-Siegrist, 2001), such as ability to learn, responsibility, independence and efficiency. The latter group was used as a benchmark of non-specific competencies. To compare significance of explored competencies, we created an index of work competencies in all sets of examined competencies based on the empirical assessments collected on a sample of employment agencies involved in the system of employment service. We also examined the amount of formal qualifications exploitation of blue and white collar workers in the system of employment service to stress importance of the development of competencies relevant for the specific groups of workers.

The empirical findings on the significance of work competencies of the job applicants were based on the assessments of employment agencies workers of the sample recruitment agencies that deal with unemployed applicants as well as employed but unsatisfied ones. Empirical data collecting was realized by questionnaire enquiry on the sample of 96 recruitment organizations Online questionnaire was sent to 865 email addresses of recruitment agencies collected in cooperation with ÚPSVAR (the managing board of system of employment services in Slovakia). Sample was created by 57 employment agencies from public sector, 14 agencies of contemporary employment, 24 employment agencies for recruitment for compensation and 1 agency for supported employment. Statistic methods of Wilcoxon nonparametric test was used to clarify the significance of differences in the esteems of work competencies exploitation realized by employment agencies workers of the sample. Empirical results based on assessment of recruitment agencies workers are relevant for persons involved in the system of employment services (persons applying for a job and employed persons interested in applying for a new job).

The main research questions were focused on the significance of specific non formal competencies on the labor market:

- What is the significance of the work competencies according the assessment of employers of the recruitment agencies in the situation of applying for a job (in the examined groups of competencies defined as specific for information society work culture)?
- Is there a significant difference between the assessments of importance of examined competencies in relation to type of the work qualification (blue and white collar workers)?

- Are the competencies defined as specific for the information society (group IS, K8) really assessed as the most important in the situation for applying for a job (to compare the set of universal competencies)?

The methodological purpose was to verify the possibility to use the quantitative assessment of the significance of the work competencies (as the indicator of the work culture) in relation to development of the information society. The aim of the work was to contribute to actual information on the labor market in the situation of applying for a job reflecting the significance of specific competencies in the praxis.

The significance of work competencies of white and blue collar workers in the system of employment service

According to the findings of the assessment of recruitment agency workers of our sample, significance of information society competencies was explored for the workers in blue and white collar positions in examined set of competencies (IS, K8, UC). *The results confirmed the existence of different types of the work culture in the context of information society development* as the significance of the competencies specific for the information society work culture (IS) and the significance of the key competencies (K8) were significantly higher for white collar workers.

Within the competencies specific for the information society (IS, K8), competencies of flexibility and ability to process information (8,34) and creative capacity (8,30) were marked as the most important informal competencies of white collar workers, followed by assessment of importance of analytic skills (7,08) and digital competencies (7,07). Similarly as for the white collar, but at the statistic significantly lower level, flexibility was assessed as the most important competency (6,7) of blue-collar workers, followed by ability to process information (5,40), creative capacity (4,04) and digital and analytic skills (3,19) (Table 2).

The index of the significance of competencies IS, defined by the mean of significance of competencies IS to express the aggregate value of the significance of work competencies, was confirmed on a level 7,82 for white-collar workers to compare 4,51 for blue-collar workers. The assed importance of competencies IS was significantly higher for white collar workers in all items. These findings support the thesis of the persistence of differences in the information

society work culture of white and blue and collar workers, confirming the thesis two different types of the work (generic-labor and self-programmable labor) of Manuel Castells (2002) in the information society.

The explored differences in the importance of the competencies defined as key competencies (K8) also support thesis of differences of work competencies specific for different types of work qualification. There was significantly higher degree of importance of all examined items for white collars except competency learning to learn, which was assessed as the only key competency not significantly different for white and blue collars (8,10 white collars and 7,04 blue collars) (Wilcoxon 0,053). The index of key competencies (K8) was created on the basis of calculation of the mean of significance of K8 competencies, and confirmed on a level 4,40 for blue collar workers and 7,35 for white collar workers. According the assessment of significant importance of explored key competencies, competencies of communication in mother and foreign languages and ability to learn were marked as the most important key competencies in the process of applying for a job in the system of employment service both for white and blue collars. The next, the significance of digital competencies was assessed on the level 7,07 for white collar workers, but for blue collar workers it was assessed on the level below the average (3,19).

Table 2: The assessment of the importance of work competencies IS and key competencies (K8) for blue and white collars and significance of differences.

Respondents were asked to mark the significance of specific competencies on the scale from 10 points answering the question *According your opinion, how important are following personal competencies for job applicants and employed persons searching new job?*

	Work Competencies specific for information society	White collar workers (mean)	Blue collar workers (mean)	Wilcoxon
Competencies IS	Creative capacity	8,30	4,07	0,00
	Flexibility	8,34	6,7	0,03
	Ability to process information	8,34	5,40	0,00
	Digital competencies	7,07	3,19	0,00
	Analytic skills	7,08	3,19	0,00
Competencies K8	Communication in mother language	8,96	5,58	0,00
	Communication in foreign languages	8,61	5,73	0,001
	Mathematic competence and basic competence in science and technology	6,19	3,58	0,00
	Digital competence	7, 08	3,19	0,00
	Social and civic competences	6,10	3,03	0,00
	Learning to learn	8,10	7, 04	0,053
	Sense of initiative and entrepreneurship	7,38	3,61	0,00
	Cultural awareness and expression	6,30	3,47	0,00

Asympt.sig. p=0,05

The significance of the competency learning to learn is reflected in a fact that the latter was included into the set of competencies specific for IS (based on the authors on the information society work culture) and also into the set of competencies defined as key on the labor market. As the empirical findings didn't confirm significant differences on the significance of competency ability to learn for white and blue collar workers, along with the highest assessment of significance of flexibility for blue and white collar workers, the development of information society working environment through the forming of requirements towards human capital development could be indicated.

According to Pol, Novotný, Chaloupková a Šimberová (2007), competency learning to learn along with the mathematic competence and basic competence in science and technology create basic attributes of complex solving skills in the context of development of adaptability and flexibility. Significance of mathematic competence and basic competence in science and technology was assessed at above the average for blue-collar workers (3,61), along with the competency sense of initiative and entrepreneurship. As the mathematic competence and competency learning to learn represent the key part of complex solving skills, these findings foster the significance of development of problem solving skills competencies in both examined types of work.

The highest assessment of flexibility for blue collar workers, along with an assessed level of significance of competency ability learning to learn, confirmed on above the average level and not significantly different for both blue and white collar workers, indicate that demands on the dynamics and flexibility of the human capital are raising up in both examined groups of workers.

Similarly in both groups of competencies, defined as specific for working environment of information society (competencies IS and K8), the assessments of significance of the latter competencies were significantly lower for blue collars than for of white collars (except competency learning to learn. These findings confirmed the differences in the significance of the IS and K8 competencies specific for the different types of work qualifications (white and blue collar job position) confirming the thesis of Manuel Castells (2002).

With regard to the question of exploitation of human development of job applicants in the system of employment service, we used set of universal competencies (UC) of Belz and Siegrist (2002) as a benchmark of non-specific competencies (Table 3). The importance of the set of universal competencies (UC), assessed for people applying for a job, was at the highest level for white collars (8, 69) and also blue collars (8,45) among all three examined sets of work competencies.

As the significant difference was not confirmed in any item of the set of UC competencies, (competencies of responsibility, accuracy, self-action, efficiency and learning to learn), the latter were confirmed as relevant in both examined groups of white and blue collar workers in the system of employment service.

The significance of the *universal competencies of responsibility, efficiency, self-action and ability learning to learn stresses the relevance of examined universal competencies UC with*

a view of exploitation of human capital on the labor market for both blue and white collar workers. Significance of UC competencies was confirmed at the highest level of the examined sets of competencies, on the level of index UC 8,69 for white collar workers and 8,45 for blue collar workers to compare the index IS competencies 4,51 for blue and 7,82 for white collar workers and index K8 4,40 for blue collar and 7,35 for white collar workers. According the assessment of the recruitment agency workers, there are key competencies that are universal both for blue and white collar jobs but these do not belong to the competencies that are specific for the information society.

Our findings indicate that there might be universal competencies, significant at similar level in all sectors of economic activity (white collar workers and blue collar workers), but they are not specific for working environment of information society. Similar importance of the universal competencies in both examined groups confirmed them as desirable competencies on the labor market. The findings foster the development of the examined universal competencies and also competency learning to learn and flexibility in relation to exploitation of human capital on the labor market in the position of applying for a job for both examined groups of workers.

Table 3: The assessment of the importance of universal competencies (UC) for blue and white collars and the significance of differences.

Universal competencies UC	White collar workers (mean)	Blue collars workers (mean)	Wilcoxon
Responsibility	8,96	9,15	0,831
Accuracy	8,73	8,73	0,468
Efficiency	8,65	9,08	0,282
Self-action	8,92	8,27	0, 107
Learning to learn	8,1	7,04	0,053

Asympt.sig.=0,05

As the empirical findings confirmed that the work culture of job applicants is specified in relation to formal qualification (as regard competencies specific for the information society), our findings stress the need to examine work competencies that are most relevant on the labor

market for different types of work positions. (With regard to the empirical explorations of significance of work competencies, studies in this field are mostly realized in relation to formal qualification based on the sample of employers, students or workers in specific field. Empirical studies examined work competencies specific for education workers (Fudaly-Lenčo, 2003, Koštialová, 2011, Sekerák, 2008), for technical workers (Krpálková Krkelová, 2008), for graduate students (Hrušovská –Srnánková -Zvalová, 2007).

Conclusion

The non-formal attributes of the human capital are being used as the useful indicators of the level of informational processes, as for example the level of digital competencies of the workers on the labor market. The methodological purpose of this work was to apply the quantitative assessment of the significance of the work competencies in the praxis as the indicator of the work culture specific for the information society. Thus, on the basis of the quantitative assessments realized on the group of the recruitment agencies workers, we followed the level of the development of the work culture specific for the information society and also we tested differences in the work culture of both examined groups of workers (white and blouse collar workers). Exploring the level of development of the work culture specific for the information society in time or between regions or economic sectors could bring interesting findings in relation to the development of the information society.

Our findings confirmed existence of the different types of the work culture in the context of the information society development. The work culture of the examined groups (white and blues collar workers in the situation of the applying for a job) was confirmed as significantly different in relation to formal qualification of the workers.

Similarly in both groups of competencies specific for the information society work culture, the assessments of significance of the latter competencies were significantly lower for blue collars than for of white collars, except competency learning to learn. These findings confirmed the differences in the significance of the IS and K8 competencies specific for the different types of work qualifications (white and blue collar job position) confirming the thesis of Manuel Castells (2002).

The significance of the *universal competencies of responsibility, efficiency, self-action and ability learning to learn stresses the relevance of examined universal competencies UC with a view of exploitation of human capital on the labor market for both blue and white collar workers.*

The highest assessment of flexibility for blue collar workers, along with an assessed level of significance of competency ability learning to learn, confirmed on above the average level and not significantly different for both blue and white collar workers, indicate that *demands on the dynamics and flexibility of the human capital are raising up in both examined groups of workers.*

Regarding the demands for the actual information from the labor market, we hope that the findings on the significance of non-formal competencies in relation with specific work qualifications bring the relevant information in the field of developing human capital and its exploration in the praxis. In the future, actual and relevant assessments of the labor market demands could foster the development of possibilities of live long learning process.

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