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PERSONAL COMPETENCES FOR FUTURE LABOUR MARKET IN VIDZEME REGION, LATVIA

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Abstract. This article analyses personal competencies that will be necessary for employers in Vidzeme region in Latvia within the next 5-7 years in the context of rapid changes in the labour market and technologies. This article confirms the importance of quality of education in sustainable development and highlights the most important preconditions. The data were analysed after they were collected through electronic questionnaire of employers and Delphi method - interactive forecasting method which relies on a panel of experts, and both confirm the growing role of personal competencies for future labour market. The article reflects the most important reasons for insufficient vocational training mentioned by employers, such as lack of motivation and inadequate choice of profession as well as the role of schools and their challenges in order to improve this situation. Delphi experts answered questionnaires in two rounds and rated the most important personal competences of the future workforce, and the most important were the ability to learn, the ability to change and the ability to make decisions. As a result, 11 personal competencies groups were created, and 5 of them were analyzed in more detail. The study confirmed the high importance of foreign language skills, engineering needs for future labour market as well as the high quality requirements of the labour force in large enterprises.

Key words: future, forecast, labour market, business, competencies.

JEL code: R23, J2

Introduction

The most important goal of this article is to explore the competencies that will be important for the future workforce in Vidzeme region, Latvia. The significance of the research is reinforced by the expected change in the labour market in future that will affect not only changes in professions (the emergence of new and disappearance of some professions) but also the ongoing changes in the demand of competencies in the labour market. There is a long-lasting point of view that the education offer is forming the future workforce according to the demand of the labour market by performing structural changes in the state supported study programmes, by education institutions updating the existing study programmes, and by creating new study programmes. However, employers and society as a whole publicly express their dissatisfaction with the existing education offer and quality. Consequently, it is important to find out the future preferences of employers regarding competencies of workforce, emphasizing the role of the personal competencies, as each employer and employee naturally expects the education programme to provide professional competencies at the highest quality level. A survey of employers was used for the study on labour market demand; review of other research and literature, and Delphi expert method was used for identifying changes in labour market and priority competences.

As a result of the research the authors conclude that the acquired results both from survey of employers and Delphi method experts confirm the growing role of personal competencies in future labour market. This is consistent with the previous research and the problems highlighted in the national and international policy documents and reports. Future labour market needs a person with improved personal competencies, certain traits of character and at the same time with technical skills and knowledge of languages.

Theoretical background

Incheon Declaration "Education 2030: Towards inclusive and equitable quality education and lifelong learning for all" sets out a new vision for education. One hundred and twenty ministers committed that "quality education fosters creativity and knowledge, and ensures the acquisition of the foundational skills of literacy and numeracy as well as analytical, problem-solving and other high-level cognitive, interpersonal and social skills. It also develops the skills, values and attitudes that enable citizens to lead healthy and fulfilled lives, make informed decisions, and respond to local and global challenges" (UNESCO, 2015). This declaration confirms that quality education is significant for sustainable development on global and local scale, including reference to personal and social skills in decision making. In this study, these skills were also assessed as significant in the future labour market.

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The Student Union of Latvia in its conference report (Zarina, 2015) indicates four important aspects about learning and quality of learning: development of teacher pedagogic skills, appropriate teaching and assessment methods, use of technology and student-centred learning approach.

In particular, this report emphasized the competencies to be acquired in a practical way and its assessment in study courses. It was argued that the competencies to be acquired during higher education studies are well described and listed in a written forma but the practical acquisition and assessment during studies was put forward as a problem. In the authors' opinion, this is one of the reasons that creates a gap between education offer, competencies to be acquired and their inadequate application in the labour market. The report of The Student Union of Latvia also highlighted four directions of employability of graduates, requiring an action to be taken in the future: a rapidly changing work environment, balance between theory and practical tasks, entrepreneurial development and study and internship mobility (Zarina, 2015).

The experts expect that in 2025 automation and robots will take over almost 30% of our work, and even officials are not protected (Kapitals, 2016). These issues are discussed also by American professor and the director of Digital Business Centre (MIT) Erik Brynjolfsson in the book "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies". His study helps see the world of tomorrow through an exponential rather than arithmetic lens. Brynjolfsson believes that massive technological innovation will radically affect our world, and we need to develop new business models, new technology and new policies to deepen our human capabilities, so that each person could remain economically viable in an era when automation is increasing (Brynjolfsson&McAfee, 2014).

Methods

Delphi method was applied among experts of various sectors, including both qualitative and quantitative analysis in order to explore the most required personal competencies in the labour market in Latvia and abroad in the next five years. The Delphi expert panel involved employers of Vidzeme region and the Latvian experts, including entrepreneurs from various sectors, leaders and staff of local municipalities, members of Parliament, heads of education institutions and teachers, researchers representing engineering and social sciences – 37 experts in total.

Employers' quantitative survey was used from quantitative research methods. The survey was carried out using the on-line platform JotForm. General set according to the CSB (Central Statistical Bureau) 2014 data was formed by 16393 economically active enterprises of Vidzeme region, including 15200 market sector companies (CSB, 2015). The most represented industries in the general set market sector were agriculture, forestry and fishing (38%), services (19%) and trade (11%). The number of active enterprises in the municipalities of Vidzeme region varies. According to NACE2 classifier 18 industries are represented in total in Vidzeme region. The numerical relationships of companies of various sizes may vary in municipalities and towns. Therefore, the study designed a typological two-stage selection that corresponds to the characteristics of the general set - all economically active enterprises of Vidzeme region. These factors encourage the choice of stratified sampling method. The first stage sample set building technique is defined as a three-stage stratified sampling. On the first stage, companies are divided as a separate stratum by their activity. On the second stage, companies in Vidzeme region are divided by size: micro, small, medium, large and others. On the third stage, economically active companies are divided as a separate stratum by territorial principle – the city of Valmiera and the municipalities of Vidzeme region. The selection of sample set according to the listed criteria was performed by the Central Statistical Bureau on request of the researchers. The total sample size was 579 employers. The sample size of each activity was calculated by total size of the sample according to the total number of companies by the following formulae:

Formulae 1

$$n_i = n \cdot \frac{N_i}{N} \text{ , where} \qquad (1)$$

n_i - sample size by activity; n - total size of the sample;

N_i - size of the general set by activity; N - total size of the general set.

The size of the general set of activity corresponds to the number of economically active companies in a particular sector. Sample size was 579 and size of the general set – 16393. Confidence probability of sampling

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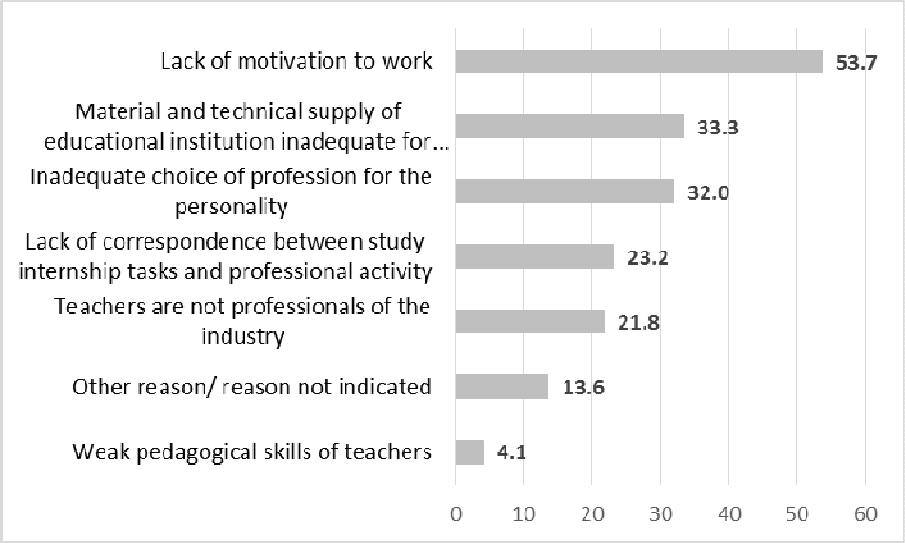
results p = 0.95. The response rate from the size of the sample was 25.4% and the general set – 10%.

Research results and discussion

In the survey, the employers provided their opinion on most important reasons why employees are not sufficiently prepared professionally. Out of six factors most respondents 53.7% have indicated "the lack of motivation to work" (Figure 1). The respondents could indicate several reasons. In 32% of answers the employers indicated the reason "the chosen profession inadequate for personality". The two above-mentioned reasons indicate the importance of improving the personality skills, character traits including motivation, persistence.



Source: authors' construction based on the survey results

Fig. 1. **Reasons why employees are insufficiently prepared professionally, according to employers, %**

During the expert interviews it was expressed that the crucial factors affecting the labour market included the teachers' attitudes in school and learning conditions in the institution, opinions expressed by politicians and community leaders.

Figure 1 shows that 23.1 % of employers have indicated that the objective of study internship does not correspond to professional activity. In reply to the question on the main forms of cooperation with education institutions, 57% of respondents indicated the internships, which validated the answers in respect to study internship content creation.

Figure 2 shows the performance of the company and its attitude towards accepting students from vocational schools and universities for internship according to the size of companies. More than a half (53.7 %) of respondents have answered that they take on or want to take on students for internship in their company, while 15% of respondents indicate that they do not accept and do not want to accept students for internship, out of which 77 % are micro-enterprises, which can be explained by the amount of work and working conditions such as work from home

According to the assessment of Delphi experts, the most important personality competencies for future workforce were determined in two stages. Eleven groups of personality competencies were created from the answers acquired during the first stage by combining similar ones. In the second stage, Delphi experts were asked to priority order all 11 groups of competencies as well as five groups of competencies in more detail. Results are shown in Table 1.

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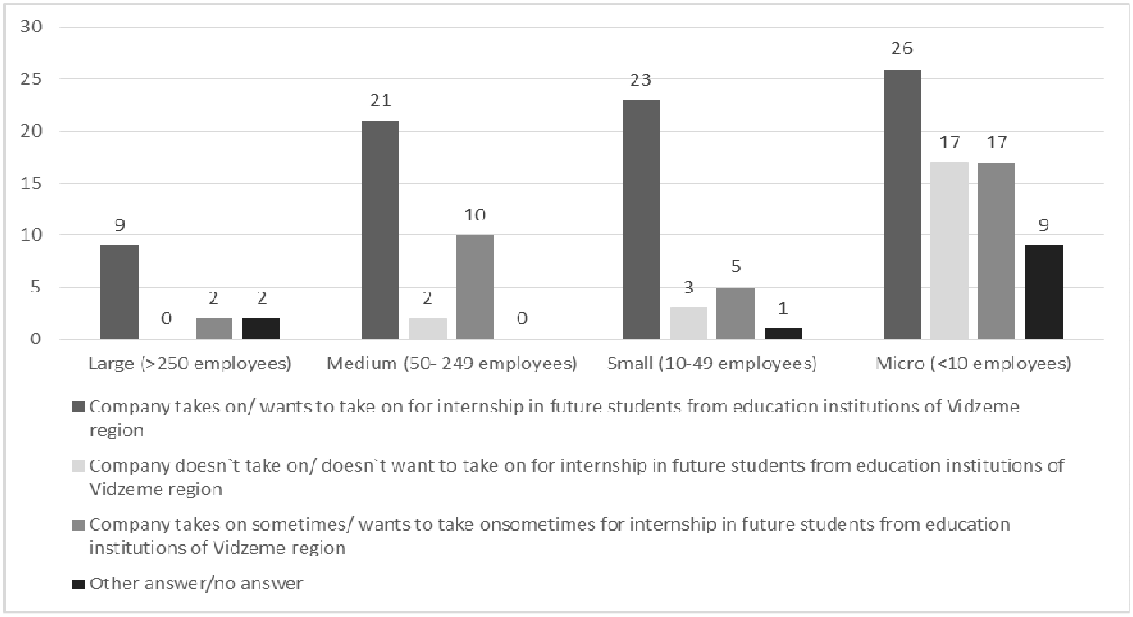

Source: authors' construction based on the survey results

Fig.2. **Receiving of students of Vidzeme region in companies**

Table 1

Experts' rating of personality competencies groups

Groups of personality competencies	Mode	Minimum	Maximum	Weight according to mode
Ability to learn	11	1	11	0.22
Knowledge of languages	10	3	11	0.07
Technological knowledge	10	3	11	0.07
Communication skills	10	6	11	0.08
Ability to change	11	3	11	0.10
Cooperation. Work in team	10	3	11	0.09
Ability to work in international environment	10	1	11	0.07
Ability to make decisions	10	4	11	0.10
Emotional intelligence, leadership	10	2	11	0.07
Many-branched competencies	9	1	10	0.08
Creativity, innovations	10	2	11	0.07

Source: authors' construction based on Delphi results

In the expert assessment, some competencies stand out, since the expressed opinions of many experts on priorities match; ability to learn, ability to change and ability to make decisions are most highly valued. At the same time, there are some drastically different ratings among experts, for example, the ability to learn is indicated as the least important by one of experts. The ability to change quickly was commented on by one of the experts "real progress is determined by the skills and profoundness of work, not some quick reorientation"; at the same time, the importance of skills to achieve results is explicitly pointed out.

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Table 2

Detailed view of the competencies group "ability to learn"

Competencies	Mode	Minimum	Maximum	Weight according to mode inside the competency group
Self-learning ability	7	3	8	0.13
Willingness and ability to improve knowledge	8	1	8	0.16
Ability to acquire new knowledge in a short time	6.5	1	8	0.13
Intellect	7	2	8	0.09
Continuous improvement, lifelong learning	8	2	8	0.13
Thirst for knowledge and openness	6	1	8	0.11
Ability to continuously learn in your profession, as well as retrain	8	2	8	0.14
Acquiring new work methods and technologies	8	1	8	0.11

Source: authors' construction based on Delphi results

According to the experts, the competencies group "ability to learn" was the most important among other 10 groups of competencies. These results confirm the findings of the research on furniture companies in Romania, Brasov region, that transversal competencies such as learning capacity, availability for self-development, orientation to quality, team work will be the most crucial in the future (Constantin et.al., 2015). In this group experts were assessing eight competencies, out of which the most important is willingness and ability to improve knowledge; minimum value for this competence is 3. The second most important competence in this group is related to the ability to continuously learn in the profession as well as retrain. The high evaluation of this competence shows that the future labour market will appreciate not only the ability to self-educate in areas of interest but specifically in the profession.

There are no doubts among experts on the English language competence, it is a must in order to be able to work; Russian is indicated as the second most important language which has not received the lowest priority by any expert. German is marked as less important for the labour market, overtaken by knowledge of Spanish and Chinese.

The improvements and innovations in the ICT sector generate necessity for new skills in different professions at the right time (The e-Skills Manifesto, 2014).

Table 3

Priorities of technological knowledge competencies group

Competencies	Mode	Minimum	Maximum	Weight according to mode inside the competency group
Programming skills	7	1	8	0.10
Math skills	6	3	8	0.10
Physics skills	5	2	8	0.12
Chemistry skills	6.5	1	7	0.10
IT skills	7	1	8	0.13
Skills to work in electronic information systems	7	1	8	0.10
Ability to discern and integrate possibilities of modern technologies in everyday work	8	3	8	0.19
Technical engineering skills	7	3	8	0.16

Source: authors' construction based on Delhi results

The experts have assessed that the ability to use possibilities of technical solutions in daily work will be the most important in the future, the minimum value 3. Just knowledge is not enough but one should acquire the skills to apply it in everyday work. The research in furniture industry in Romania shows the same principle

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of applying the competences in daily work, for example, to design furniture products using IT systems (Constantin et.al., 2015).

From the competencies group "ability to communicate", the experts have given the highest priority in the future labour market to social competencies that are necessary for professional cooperation with people of various generations and cultures. This competence has received the maximum values as well as the highest weight calculated according to mode 0.25 within its competencies group. Expert interviews took place in autumn 2015 when the question on refugees was very topical in the European public space, which is related to the competence "cooperation with various cultures" that in future can be even more urgent.

In the competencies group "ability to change" four skills were rated as important: ability to adapt to a changing environment, ability to react quickly, ability to see new possibilities and openness to changes. The ability to adapt to changing environment received the highest weight 0.26.

Table 4

Overview of competencies group "ability to make decisions"

Competencies	Mode	Minimum	Maximum	Weight according to mode inside the competency group
Problem-solving skills	7	2	7	0.18
Predicting skills	6	1	7	0.15
Sense of responsibility	7	1	7	0.21
Ability to estimate benefits and losses	6	2	7	0.11
Ability to discern and analyse the cause and effect relationship	6	1	7	0.13
Independence	6	1	7	0.10
Logical thinking and argumentation skills	6	2	7	0.11

Source: authors' construction based on Delhi results

Within the competencies group "ability to make decisions", the sense of responsibility is considered to be the most important future competence by frequency with the weight 0.21. The sense of responsibility can be related to the opinion expressed by the employers in the questionnaire on insufficient professional qualification of employees, which is explained by 57% by lack of motivation to work (Figure 1).

According to the hierarchy analysis, the first three competences in the future labour market in general are: ability to see new possibilities, knowledge of the English language and openness to the change.

Nearly a quarter of employers (24%) will need managers over the next 5-7 years, 46% senior experts, only 4% will need servants, 17% service group professions and 12% skilled agricultural, forestry and fishery staff group professions. Employers have pointed out the following important competencies in these profession groups in the future: in manager group – the ability to make decisions and the use of modern technologies in daily work; in senior expert group - the use of modern technologies in daily work and teamwork; in servant group – teamwork, punctuality, precision and interest in the work of the industry; in service and sales staff profession group – joy and the ability to work with people, and the understanding of consumer behaviour; in agriculture, forestry industry - self-discipline and interest in the work of the industry; in qualified workers and craftsmen group – skills to apply ICT in daily work, the ability to collaborate with others; in common profession group – the willingness to work and responsibility about the work to be done. Other research on entrepreneurial education concludes that there is a need to strengthen entrepreneurial skills at higher education institutions (Kucel et.al., 2016).

In comparison, study results in Latvia in Kurzeme region on knowledge and skills required by employers showed that there were significant differences among industry groups (Sloka et. al., 2014). Unlike the results of Sloka's research in Kurzeme where foreign language knowledge was not indicated as highly necessary, this study in Vidzeme region revealed that employers considered foreign language knowledge in English, Russian, Spanish, Chinese and German important in the future.

The competencies for the future workforce mentioned here by both experts and employers are included in current study programme descriptions, as

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these include a lot of competencies, but it is important, as indicated by both the Student Union of Latvia and the employers, that the competencies are acquired during the studies, including internships in companies. Other studies confirm this significance of the qualitative education (Dezelan et al., 2016).

The survey on adult skills focused on skills for wage inequality. One of the conclusions of this survey is that investments in skills which have high demand in the labour market are significant for various reasons: to reduce inequality of wages, to raise productivity, to develop economy (OECD, 2015).

One of the experts has mentioned that "work is an essential part of our lives, so a person wants to gain recognition, self-fulfilment, public or work collective appreciation and meaningful work that is consistent with the values of individual".

Conclusions

1) The personal competencies alongside high professional competencies will play a growing role in the future labour market.

2) Education policy in Latvia emphasizes the significance of technical and natural science professions in economic development but the Incheon Declaration on education for sustainable development indicates that education quality and personality competencies acquired in different education stages have a growing importance.

3) There are no significant differences between expert opinions and employer views on future competencies, both groups point to the significance of personality and characteristic traits in the future labour market.

4) For the future labour market, a special emphasis is laid on skills to practically apply acquired knowledge, use technologies in daily work; the ability to independently acquire new skills and knowledge to be used in the profession.

5) When analysing the data by company size, it can be concluded that large companies will have high-quality requirements for the workforce also in the future as well as requirements for specific skills in technologies and processes.

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