

ROLE OF UNIVERSITY LIFELONG LEARNING PROCESS IMPLEMENTATION

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Abstract

Nowadays the need for a qualitative, accessible and varied lifelong learning is becoming more and more necessary. In Latvia, different institutions take part in the implementation of lifelong learning; however, in spite of the negative factors of demography and migration, changes of work force supply and demand, investment and information shortage, the role of universities has not been properly investigated. The role of higher education in lifelong learning was studied in 9 state universities of Latvia in the period of 2013 – 2015. Monographic analysis and method of synthesis, data statistical research methods – grouping, comparison, relative and average indicators, as well as dynamics line analysis was used in the article. The study proved that the number of occupied work places has increased in 2015. However, it has not reached the average of ten and seven years since 2006 and 2009. Comparing with the free vacancies, the number of them has increased by 2164, especially in the profession group Specialists and Senior specialists, which as well as Executives, is the target audience of universities, which in its turn is a lifelong learning event insufficiently used potential. The universities have suffered because of demographic and migration factors: the rate of student number increases (-9.4%). In order to reach the goals of education politics, universities try to direct education function from studies to lifelong learning, they try to improve existing lifelong learning courses and programs, as well as to propose new ones in order to offer something for workforce corrections.

Key words: lifelong, higher education, labour market.

Introduction

The middle of the 20th century was the time when the investigation and evaluation of the role of lifelong learning in the world began; in Latvia the work on it has begun relatively recently, especially in connection with universities. Within the work of frame debates with such issues take place: what is lifelong learning, what its goals and implementation options are and what role a university has in this process.

The term lifelong education has transformed from lifelong learning process through whole lifetime (Беляков & Вахштайн, 2006) to recurrent education, permanent education, adult education, but nowadays the term lifelong learning has become consolidated (Schuetze, 2004).

A Memorandum on Lifelong Learning developed by the European Council stresses lifelong learning as the leading power in all fields of education stating employment improvement as one of the main tasks (Commission of European Communities, 2000).

Appropriate workforce preparation for market needs meets several problems in universities of Latvia, and higher education has a crucial role in solving them, and they, from the point of authors, have not been investigated properly: 1) negative factors of demographics and migration; 2) workforce and employers need changes; 3) number of people involved into lifelong learning; 4) extent of staff training.

The demographic structure changes when the number of seniors increases. If in 2013 it was about 28%, then it is expected that it will exceed 36% in

2030. Moreover, since the transformation time of economics in 90ies, the proportion of women with higher education has increased dramatically. They choose to develop careers rather than plan a baby (Mejihovs, 2015). This aspect is very important for those who want to get or who have higher or professional education, because a baby can destroy the chance of career development and possibilities to get higher incomes (Mills *et al.*, 2011).

During the period from 2009 to 2014 Latvia lost 174,911 state inhabitants due to migration. Alarming is the fact that exactly those people, who were at the age of workforce, that is 83.4% of emigrated amount (CSB, 2015) went abroad. That means that the first background of the research problem is the decrease in workforce amount today and in future.

The second background comes into being in the offer and demand of labour market. In Latvia, labour market offer is described by the number of occupied work places, which in 2014 was 932,000. Labour market offer and demand is influenced by the economic crisis, which made remarks in the trade amount changes, as well as in the structure of trade categories. Since 2011 the number of free vacancies has been stable in the interval from 3,006-3,718, despite the fact that in 2014 its increase was observed (CSB, 2015).

The third lifelong learning process influence background, which is highly connected with demography and migration, is the number of people involved in lifelong learning. According to EUROSTAT data, in Latvia the population involved

in lifelong education in 2015 was 5.7%, which in comparison with the European Union – 10.7%, as well as with neighbouring countries Lithuania – 5.8% and Estonia 12.4% – is not a very large number. Furthermore, the numbers of Latvia, which give information about the number of people involved in lifelong learning in 2015 in comparison with 2012, when they were 7.2%, have become even smaller. The states, which have higher indicators of population involvement in lifelong learning and to which we should be similar are Switzerland 32.1%, Denmark – 31.3% and Sweden 29.4% (Eurostat, 2016).

The topicality of lifelong learning in Latvia, the same as in Europe, was promoted by the improvement of education role in economics. That caused changes in the quality of human resources and investment field in human capital (The Republic of Latvia Ministry of Education and Science, 2009).

That is why the fourth lifelong learning problem is investments, which improve the quality of workforce and suitability to the demands of labour market. According to The World Education Forum Global Competitiveness Report data Latvia (in 2012 – 2013) in extent of staff training takes the 47th place out of 148 world countries and the 14th place out of 27 European Union countries (World Economic Forum, 2013).

Despite the lifelong learning and its gained knowledge topicality and previously stated influence factors, the authors concluded that lifelong learning in Latvia has not been studied properly. Researchers take upon interest about higher lifelong learning quality assurance themes (Eglitis, 2003; Jarvis, 2014), their costs and investment stimulation possibilities (Kokosalakis & Kogan, 2001), observance of labour market demands in education and its research (Pavlovskā, 2008; Jaunzems, 2013), securement of lifelong learning and employment (Sannikova, Baltēre 2008), the research of existing situation in lifelong learning field (Jurgelane, 2013; Kapenieks *et al.*, 2014)

and others. *The aim of the study*: investigation of higher education role in lifelong learning in Latvia. In order to reach the aim, tasks as follow were developed: 1) to investigate tendencies of state education institution student number; 2) to clarify labour market demand and offer; 3) to investigate labour market forecasts and actual offer; 4) to develop analysis of lifelong learning processes in order to clarify their role.

Materials and Methods

In the article quantitative and qualitative methods were used – monographic or descriptive method, analysis and synthesis method; data statistical research methods – grouping, comparison, relative and average indicator analysis, development and analysis of time-series. In order to analyse labour market ten and seven year occupied work places and vacancy average indices were compared with the year 2015. Calculations and data processing was made using computer programme Microsoft Excel. Restriction of the research: in order to evaluate the role of universities in lifelong learning, available data of 9 universities (overall there are 17 universities in Latvia), which was given by The Latvian Association of Higher Education Institutions for Lifelong Learning (LAKMA) and from the universities themselves. Data included information about the number of people involved in lifelong learning in 2013 – 2015. The largest universities and universities from all regions of Latvia were represented. The research was made during the period 2013 – 2015. As the sources of information were previously developed researches, world, Europe and Latvian institution documents, statistical data and publications about the specific theme.

Results and Discussion

Demographic structure as well as migration described in introduction leaves a trace to student number (Table 1) in educational institutions in Latvia.

Table 1

The number of students in educational institutions in Latvia 2012 – 2015 (CSB, 2016a)

Educational institutions	Years			Underlying growth in 2014 – 2015 to 2012 – 2013
	2012 – 2013	2013 – 2014	2014 – 2015	
	The number of students			Growth rate %
Preschools	93,293	93,533	92,219	-0.01
Comprehensive schools	212,433	209,130	209,686	-0.01
Vocational schools	32,086	31,055	29,855	-0.07
Higher education institutions and colleges	94,474	89,671	85,881	-0.09
Total	432,286	423,389	417,761	-0.03

Table 2

**Number of occupied work places according to trade categories in Latvia from 2006 to 2015 (thousands)
(CSB, 2016b)**

Occupational group	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	Occupied work places									
Executives	109.2	122.0	106.6	89.1	76.6	76.1	79.8	84.1	88.9	90.1
Senior specialists	150.3	157.0	157.0	136.3	118.4	124.4	129.6	141.3	150.8	158.3
Specialists	143.9	169.4	175.7	147.1	151	159.7	163.9	162	154.2	155.2
Clerks	67.5	67.4	62.5	48.7	44.2	42.2	42.0	44.8	43.3	43.8
Service and sales workers	151.5	159.9	160.6	131.5	123.3	127.4	130.9	135.5	143.3	149.0
Skilled agricultural and fishery workers	6.1	8.1	6.4	5.0	5.9	6.5	6.8	6.8	6.5	6.5
Skilled workers and craftsmen	129.3	136.9	132	93.8	86.5	93.3	103.5	100.6	93.6	92.7
Equipment and machine operators and assemblers	89.6	90.3	85.6	69.5	66.9	69.1	69.1	75.3	76.8	74.0
Simple professions	112.0	121.9	124.7	100.0	99.4	102.3	108.7	110.2	115.8	109.4
Total	964.7	1,038.3	1,016.6	826.1	776.7	805.5	839.1	865.1	877.9	883.8

Base growth speed in 2013 – 2014 against base period in 2012 – 2013 in all positions is negative, which confirms the student number decrease. Higher education institutions and colleges are the places where student number decreases fastest. That shows a negative tendency – work force with higher education decreases. A contradiction with labour market demands occurs, because employers want competent employees, who have the latest knowledge in specific work field.

In order to investigate labour market tendencies in Latvia from the year 2006 to 2015, authors summarized statistical data about occupied and free job places according to occupational groups (Table 2, Table 3), that is – labour market offer and demand. Comparing ten (2006 – 2015) year period average with the year 2015, that is -5.5 thousand occupied places, but seven (2009 – 2015) years – is an increase 44.4 thousand. After comparing occupied job places in occupational groups in analogical time cut, the authors ascertained the largest increase within ten years in profession Senior specialists 15.96 thousand. Comparing 10 years – Clerks (6.84 thous) and what is more – Skilled agricultural and fishery workers in 2015 could not catch up – occupied job places were 13.82 thousand less. Comparing seven year period average with the year 2015, dramatically increased Senior specialists up to 21.3 and Service and sales workers 14.6 thousand occupied places.

At the same time the authors concluded free vacancies (Table 3) in all trade categories; comparing ten year period average with the year 2015, there is a shortage of 1753 more vacancies, but seven year

period average – has increased and are 2164 more. In a ten year cut the largest number of free vacancies in comparison with the average of the year 2015, is in profession Skilled agricultural and fishery workers – 615 and Senior specialists – 466, but the average of seven years with 2015 showed a free vacancy place growth Specialists 721, Service and sales workers 362 and Senior Specialists 236.

Authors state that workforce occupational groups Executives, Senior specialists, Specialists, Service and sales workers are the target audience of universities, which is a lifelong learning event insufficiently used potential. As well as if a Bachelors' or Masters' degree is obtained, not always it is necessary to enter or continue education in a universities professional or academic study programme just in order to improve professional competence, which corresponds to labour market needs and a person could react to latest tendencies in the World. It would be natural and logical to divide roles of university and professional educational institutions not only within the context of formal education, but also lifelong learning, as well as to cooperate within the processes of lifelong learning in universities and professional educational institutions. The authors consider that university role in the implementation of lifelong learning must be connected exactly with the education of executive and senior level employee lifelong learning, or with those employees, who have a desire to learn only specific (necessary for his job) courses, seminars, lectures.

The European Council pointed out that the education system must be more open and flexible; at the same time it must be suitable for individual needs

Table 3

The number of vacancies in Latvia from 2006 to 2015 (CSB, 2016c)

Occupational group	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	The number of vacancies									
Executives	912	1,016	580	176	179	194	242	211	216	257
Senior specialists	3,436	3,578	2,046	525	585	809	819	588	524	917
Specialists	2,445	3,251	2,160	558	516	769	829	1,345	1,290	1,726
Clerks	1,229	1,034	839	199	49	77	190	197	208	323
Service and sales workers	2,805	2,491	1,231	316	255	569	607	847	729	976
Skilled agricultural, fishery workers	68	154	44	9	8	4	6	32	3	16
Skilled workers, craftsmen	3,613	3,807	1,402	202	164	244	247	211	197	437
Equipment and machine operators	2,580	2,540	1,048	187	146	164	166	192	156	351
Simple professions	1,991	2,097	1,046	204	96	176	244	309	395	585
Total	19,157	20,231	10561	2,377	2,001	3,008	3,351	3,934	3,719	5,589

and interests, leaning on gradual formal education environment integration and a desire to make available a qualitative education for all (Commission of the European Communities, 2000).

The authors concluded that not always individual desires correspond to labour market demand forecasts. In 2015, Ministry of Economics (MoE) of Latvia developed a forecast of the labour market up to 2030 and it showed a labour surplus in the group of higher education for people with education in fields of humanitarian and services, that according to the MoE data in 2020 could exceed 20%. A similar situation can also be in social, commercial and law sciences and for the citizens, who have obtained a higher education in pedagogy. According to the given information, it is possible to predict a dangerous trend – in 2020 about 6 – 8% of young specialists with relevant qualifications will work in a workplace that is inadequate to their education. However, the labour market and educational staff agree that young people with tertiary education are more flexible in labour market, and they have more opportunities to work in professions that do not correspond to their qualification. The opposite trend can be observed in the natural sciences, in the group of mathematics and information technology, which, without a change in the educational structure, until 2020 can form the lack of specialists with higher education in engineering, manufacturing and construction, agriculture. The same situation is also in health care and social welfare (MoE, 2015). Authors observed this tendency already in the research in 2015 when analysing the statistics of free vacancies (Table 3).

Considering the fact that major challenges for the future labour market will be associated with an aging of employees, migration and demographic impact, the assurance of the balance of skills demand and supply will be important (Sannikova & Baltere, 2008). Emphasis is put exactly on such skill acquisition that improves even more complicated skill acquirement. As a result, manufacturing efficiency, competence and productivity are improved (Kumar, 2004).

According to data collected in 2015, the expected appropriate education level necessary for profession in 2020 unfortunately shows higher levels of education than is required by the relevant profession to low and medium-skilled workers. However, high-skilled workers have a lower level education than it would be necessary in accordance with the position (MoE, 2015).

The authors consider that particularly higher education institutions are those who could change the situation, by offering employers lifelong learning courses for their employees. As long there is such a trend, labour productivity may decline, and in result those employees who carry out highly qualified work with an inadequate level of education can be pushed out of the labour market. There are opportunities for close development of the cooperation between the employer and universities, especially in the development of specific skills in a lifelong learning context.

The objective is to increase the proportion of the adult education of 25 – 64 year-olds to 15% by 2020 (The Republic of Latvia Ministry of Education and Science). However, in 2015 the lifelong

Table 4

**Number of individuals involved in lifelong learning in 9 Universities of Latvia from 2013 to 2015
(LAKMA)**

University	2013	2015	Growth rate %
	The number of students		
Daugavpils University (DU)	906	896	-1.1
Latvia University of Agriculture (LUA)	1,200	1,192	-0.7
Latvian Academy of Sport Education (LASPE)	578	1374	+137.5
University of Latvia (LU)	887	244	-72.5
Liepaja University (LiepU)	598	805	+34.6
Riga Stradins University (RSU)	4,033	3,012	-25.3
Riga Technical University (RTU)	1,274	1,898	+50.0
Ventspils University College (VeA)	414	212	- 48.8
Vidzeme University of Applied Sciences (ViA)	644	95	- 85.3

learning activities involved only 6% (MoE, 2016). The dynamics of lifelong learning shows that it is necessary to implement adult education activities more purposefully. Such a rapid development of lifelong learning offer can only be made by higher or vocational education institutions, where professional teaching staff, laboratories, equipment, infrastructure are available. The average professional educational institution transformation into competence centres also requires the support of universities.

Citizens with higher education more actively choose to participate in lifelong learning. In 2014, 9.4% of inhabitants with higher education were involved, but with elementary education only 1.9% (European Commission Report, 2013).

Participation in lifelong learning depends also from the employee. Unfortunately, in Latvia more than 35% of employers do not provide further education of employees on the grounds of the existing staff sufficient work qualifications (European Commission's report, 2013). Universities must justify the need for employees to take part as the cooperation partners of lifelong learning.

The wide lifelong learning institutionalization (background, infrastructure) unfortunately cannot overstep life obstacles of an individual – incomes. It could be possible to comprehend young people form age 15-19, who state that shortage of money (59%) is the barrier of entering lifelong learning; however, shortage of money to people able to work in the age of 41 – 50 (38%) causes concern (Jurgelane, 2014).

In Sweden, Lithuania and Estonia lifelong learning activities are funded by the state, local government, as well as additional funding is obtained from the European Union funds. A relatively small number of trainees pay for training activities themselves (Jurgelane, 2014).

The authors state that there exists a heightened risk for further lifelong learning events, because EU Structural fond financing shift structures or suspensions can occur. In most cases inhabitants themselves pay for lifelong learning events. Exception is European Union Structural fond financed and State Employments Agency organized events for unemployed learning and qualification improvement for employed ones.

In order to investigate the role of higher education in lifelong learning, the authors developed a survey in nine state universities of Latvia and they concluded that lifelong learning events organized by LASPE, LiepU in 2015 were those universities who were visited most frequently. There budget ways of means are attached in order to pay totally or partially for student programmes or courses.

Riga Technical University (RTU) uses a new offer – Open approach university, new professional completion and further education course. Decrease is observed in University of Latvia (LU) – state funded teacher courses ended in 2014. Growth rate in amount of -85.3% is observed in Vidzeme University of Applied Sciences (ViA), because the university changed the lifelong learning structure strategy and basic activities. They chose to concentrate on science integration in order to develop business, not on further education and training. The largest student number decline since 2013 has experienced Daugavpils University (DU) with an increase rate (-17.0%) and LU (-17.9%) and Liepaja University (LiepU) – (14.0%). Overall, all universities included in the research have suffered from demographic and migration factors: increase rate (-9.1%).

The authors' opinion is that due to the decrease of the student number the infrastructure and associate professor workload is decreasing, research libraries and modern technologies are not used

properly. Summing up the situation in the previously described labour market and the need for professional development and student population trends, the authors recommend universities to start actively engaging in the implementation of life-long learning processes. After analysing the existent situation in universities, it has been concluded that in each of them (however, differently) there is a department responsible for the realization of lifelong learning process. The best positions have those universities which offer specific courses through lifelong learning – programs that are not offered in other universities (eg. Latvia University of Agriculture – agricultural programs, Riga Stradins University – medical programmes, etc.).

In order to achieve the indicators on lifelong learning, universities need to shift the gravity centre of educational function from studies to lifelong learning. In order to ensure this shift and realize functions of lifelong learning, the number of employees has to be increased, as well as opportunities for lifelong learning from distance using an organized electronic studying environment have to be created. The need for gravity centre shift is shown by the facts of change in the number of students in Latvia (Tab. 4).

In order to support university lifelong learning process, universities of Latvia have to join a lifelong learning association (The Latvian Association of Higher Education Institutions for Lifelong Learning) (LAKMA). The aim of it is to promote lifelong learning in universities and cooperate in order to solve important lifelong learning questions with The Republic of Latvia Ministry of Education and Science, Rector Council, Higher education council, Employers' Confederation of Latvia and other institutions. That is why the authors consider – it has been proved that the role of higher education is crucial for lifelong learning process realization.

Conclusions

1. The student number in state educational institutions from 2013 – 2015 has decreased, because of demographic and migration factors. The fastest student declining number is in higher educational institutions and colleges – growth rate -0.07%.
2. Latvia's labour market offer in 2006 – 2015: in 2015 comparing with seven (2009 – 2015) year period

average occupied position amount has increased to 44.4 thousand. Particularly in profession group Senior specialist – 15.96 and Service and sales workers – 14.6 thousands; the demand, that is – free vacancies, in ten years has increased up to 1753, but in seven years – 2164. Vacancies are free in all workforce profession groups starting from Executives, Senior specialists up to Service and sales workers, which is a university lifelong learning event insufficiently used target audience potential.

3. In 2015, a conclusion was made that 2020 forecast has an inappropriate necessary educational level for a profession. It stated that high qualification profession representatives have a lower education level, inappropriate for the position; furthermore, work force structural disparity was observed.
4. In the period of 2013 – 2015 LSPA, LiepU experienced the highest number of people involved in lifelong learning due to state investment assets. RTU was successful because of Open approach university, new professional completion and further education course.
5. In order to stop student number decline in universities and to reach lifelong learning indicators stated by education politics, the university role is the education process reorientation in formal and informal education offer. It should be done in order to develop specific skills. Role of universities is also to create possibilities to study lifelong learning from distance, promote financial support in order to provide lifelong learning activities.
6. The Latvian Association of Higher Education Institutions for Lifelong Learning (LAKMA) as the voice of higher education role in the realization of lifelong learning promotes universities to cooperate with The Republic of Latvia Ministry of Education and Science, Rector Council, Higher education council, Employers' Confederation of Latvia and other institutions in order to solve important lifelong learning questions. That is why the authors consider – it has been proved that the role of higher education is crucial for lifelong learning process realization.

References

1. European Commission. (2009). A European Information Society for growth and employment. Europe's Digital Competitiveness Report. Main Achievements of the i2010 strategy 2005 – 2009. Luxembourg: Publications Office of the European Union, ISBN 978-92-79-12823-3. DOI: 10.2759/1902.
2. Central Statistical Bureau (CSB) of Latvia. (2016a). Number of students in higher education institutions of Latvia has reduced by 2%, Retrieved May 21, 2016, from <http://www.csb.gov.lv/en/notikumi/number-students-higher-education-institutions-latvia-has-reduced-2-44000.html>.
3. Central Statistical Bureau (CSB) of Latvia. (2016b). *Aizņemtās darbvietas, aizņemtās darbvietas pa profesiju grupām vidēji gadā (Occupied posts, occupied posts by occupation groups on average per year)*.

- Retrieved February 16, 2016, from <http://data.csb.gov.lv/pxweb/lv/Sociala/?rxid=cdbc978c-22b0-416a-aacc-aa650d3e2ce0>. (in Latvian).
4. Central Statistical Bureau (CSB) of Latvia. (2016c). *Brīvās darba vietas, brīvās darba vietas pa profesiju grupām vidēji gadā (Vacancies, vacancies by occupational groups on average per year)*. Retrieved February 16, 2016, from <http://data.csb.gov.lv/pxweb/lv/Sociala/?rxid=cdbc978c-22b0-416a-aacc-aa650d3e2ce0>. (in Latvian).
 5. Commission of the European Communities (2000). A Memorandum of Lifelong Learning. Brussels. 30.10.2000.SEC (2000) 1832. Retrieved February 16, 2016, from http://arhiv.acs.si/dokumenti/Memorandum_on_Lifelong_Learning.pdf.
 6. Commission of the European Communities (2000). A Memorandum on Lifelong Learning. Brussels. 30.10.2000.SEC. (2000) 1832. Retrieved February 16, 2016, from <http://www.bologna-berlin2003.de/pdf/memorandumEng.pdf>.
 7. Eglītis, J. (2003). *Izglītības kvalitātes nodrošināšanas reģionālie un ekonomiskie aspekti. Promocijas darbs ekonomiskā doktorā grāda (Dr.oec.) iegūšanai ekonomisko zinātņu nozarē (Education quality regional and economic aspects. Thesis for a doctorate in economics (Dr.oec.) To obtain economic sciences industry)*. Jelgava: LLU, 136. lpp. (in Latvian).
 8. Ekonomikas ministrija. (Ministry of Economics) (MoE) (2015). Informatīvais ziņojums par darba tirgus vidēja un ilgtermiņa prognozēm, 2015.gada jūnijs (Informative Report on Medium and Long-term Labour Market Forecasts, 2015 June). Retrieved February 20, 2016, from https://em.gov.lv/lv/nozares_politika/tautsaimniecibas_attistiba/informativais_zinojums_par_darba_tirgus_vidēja_un_ilgtermiņa_prognozēm/. (in Latvian).
 9. Ekonomikas ministrija. (Ministry of Economics) (MoE) (2016). Informatīvais ziņojums par darba tirgus vidēja un ilgtermiņa prognozēm, 2016. gada jūnijs (Informative Report on Medium and Long-term Labour Market Forecasts, 2015 June). Retrieved June 20, 2016, from https://www.em.gov.lv/lv/nozares_politika/tautsaimniecibas_attistiba/informativais_zinojums_par_darba_tirgus_vidēja_un_ilgtermiņa_prognozēm/. (in Latvian).
 10. European Commission's report. (2013). Education and training monitor 2013, Retrieved February 13, 2016, from http://ec.europa.eu/education/library/publications/monitor13_en.pdf.
 11. EUROSTAT. (2016). European Commission. Database. Retrieved February 13, 2016, from http://ec.europa.eu/eurostat/data/database?node_code=tsdsc440.
 12. Jarvis, D.S.L. (2014). Regulating higher education – A critical introduction. In: Policy and Society, Vol 33, September 2014, pp. 155-166. Retrieved May 21, 2016, from http://www.darryljarvis.com/uploads/2/2/6/9/22690064/publication_2_revised.pdf.
 13. Jaunzems, A. (2013). Štalberga-Neša alternatīvas Latvijas izglītības tirgū. (Stalbergs-Nash alternatives in the Latvian education market). *Latvian Academy of Science. A.*, Volume 67. (1./2). 23-42. Retrieved January 4, 2016, from http://www.lza.lv/LZA_VestisA/67_1-2/2_Andrejs%20jaunzems.pdf. (in Latvian).
 14. Jurgelane, I. (2014). Lifelong learning trends in Latvia and in the world. In Revelling in Reference: International Scientific Conference “Social Sciences for Regional Development 2014, 17-18 October, 2014, PART I. ISSUES OF SOCIOLOGY, pp. 5-20. Included in the databases: Electronic Journals Library of University of Regensburg, ISSN 2255-8853, ISBN 978-9984-14-734-5.
 15. Kapenieks, A., Žuga, B., Kapenieks, J., Majore, G., & Jirgensons M., etc. (2013). ‘eBig3’: a new triple screen approach for the next generation of lifelong learning. Riga Technical University, Retrieved December 21, 2015, from <https://ortus.rtu.lv/science/lv/experts/1965>.
 16. Kokosalakis, N. (2000). Lifelong Learning in European Universities: a preliminary assessment. *European Journal of Education*, Volume 35, No.3, 253-375. Retrieved January 20, 2016, from <http://www.pjb.co.uk/npl/bp20.htm>.
 17. Kokosalakis, N., & Kogan, M. (2001). *Lifelong Learning: the Implications for Universities in the EU. Final Report*. Retrieved January 12, 2016, from <http://www.omproving-ser.sti.jrc.it>.
 18. Kumar, P. (2004). Lifelong Learning in Singapore: Where are we now? *International Journal of Lifelong Education*, Volume 20, pp. 559-568.
 19. LR Izglītības un zinātnes ministrija (Ministry of Education and Science). (2013). *Izglītības attīstības pamatnostādnes 2014.-2020. gadam. Informatīvā daļa (Education Development Guidelines for 2014-2020. Informative part)*. Riga, pp. 148. Retrieved December 13, 2015, from <http://m.likumi.lv/doc.php?id=266406>. (in Latvian).
 20. LR Izglītības un zinātnes ministrija (Ministry of Education and Science). (2009). Mūžizglītība Latvijā. Informatīvais ziņojums. Mūžizglītības politikas pamatnostādņu 2007 – 2013. gada īstenošanas gaita 2008.

- gadā (Lifelong learning in Latvia. Informative report. Lifelong Learning Policy Guidelines 2007- 2013 and Implementation in 2008. Retrieved December 12, 2015, from nvo.lv/site/uploads/vecie_faili/2_Muziglitibas.pol.nost.isten.2008.doc. (in Latvian).
21. Mežs, I. (2011). Dzimstības etniskie un reģionālie aspekti Latvijā 1985 – 2010. gadā. Latvijas Zinātņu akadēmijas Vēstis. (Ethnical and Regional Aspects of Birth in Latvia 1985 – 2010). *Latvian Academy of Science*. Retrieved January 11, 2016, from http://www.lza.lv/LZA_VestisA/65_3-4/1_Ilmars%20Mezs_Reg%20aspekti.pdf. (in Latvian).
 22. Pavlovska, V. (2008). Darba tirgus prasību ievērošana kā profesionālās un augstākās izglītības kvalitātes kritērijs (Labour market requirements compliance with the professional and higher education quality criterion). Latvian University of Agriculture, Economic Science for Rural Development, Conference Proceedings. 2008. Issue 15, 166-174. lpp. (in Latvian).
 23. Sannikova, A., & Baltere, R. (2008). Mūžizglītība un nodarbinātība Latvijā (Lifelong learning and employment in Latvia). *Latvijas Ekonomists*, magazine, 8, 26-32. lpp. (in Latvian).
 24. Schuetze, H.G. (2006). Financing lifelong learning: Potential of and problems with Individual Learning Accounts in three countries. In: preparing for Post-Secondary Education: New Roles for Governments and Families. R. Sweet, P. Anisef (Eds.). Montreal: McGill-Queen's University Press. University of British Columbia, vancouver, BC, Canada. From Retrieved February 20, 2016, from <http://ncspe.tc.columbia.edu/working-papers/OP107.pdf>.
 25. The Central Intelligence Agency. (2016). *The World Factbook*. Retrieved February 20, 2016, from <https://www.cia.gov/library/publications/the-world-factbook/fields/2177.html>.
 26. The Central Intelligence Agency. (2016). *The World Factbook*. Retrieved February 20, 2016, from <https://www.cia.gov/library/publications/the-world-factbook/fields/2177.html>.
 27. The European Commission's report. (2013). *Education and training monitor 2013*. Retrieved February 13, 2016, from http://ec.europa.eu/education/library/publications/monitor13_en.pdf.
 28. World Economic Forum. (2013). *The Global Competitiveness Report 2012-2013*. Geneva, Retrieved January 11, 2016, from <http://www.weforum.org/pdf/GCR08/GCR08.pdf>.
 29. Беляков, С.А., & Вахштайн, В.С. (2006). Мониторинг непрерывного образования: инструмент управления и социологические аспекты. (Monitoring of continuing education: tool of management and sociological aspects). М.: МАКС Пресс, 2006. 340 с. (in Russian).