# Possibilities of the European Social Fund Projects for Regional Development in the Information Society

**Irina Arhipova**, Dr.sc.ing., professor
Faculty of Information Technologies, Latvia University of Agriculture
**Signe Bāliņa**, Dr.oec., assistant professor
Faculty of Economics and Management, University of Latvia

### Abstract

In the economic situation, when the market economy is introduced, the labour force should be capable to adapt to the labour market demands quickly. The skill to use modern technologies is one of the most important preconditions for adaptation. "The professional disparity of labour force to the requirements of labour market" is indicated as one of the weak points in SWOT analysis of Zemgale planning region development strategy, as well as human resources development as one of the priorities for the development of Zemgale. It is envisaged to improve also ICT educational programmes.

The Faculty of Information Technologies of Latvia University of Agriculture actively participates in the implementation of the EU projects carried out in collaboration with Jelgava municipality and IT leading enterprises. The aim of projects is to improve the availability of lifelong learning for adults and the groups of individuals, exposed to the risk of social rejection and the youth, to improve the professional orientation within the educational system, to facilitate the development of inclusive education in order to promote the engagement of labour force in the national economy by co-operating with social partners, and these results will improve the policy development and implementation capacity, and co-operation of the institutions, responsible for education and lifelong education.

The balanced development of territory will be ensured by supporting the availability of lifelong learning to the population at the development centres of national, regional and district levels, as well as in rural territories of all the planning regions, by supporting the availability of the respective education and obtaining of qualification to the individuals with functional disabilities and other individuals, which are exposed to the risk of social rejection.

**Key words**: lifelong learning, continuing education, distance learning, e-studies, regional development

## Introduction

The Faculty of Information Technologies (FIT) of Latvia University of Agriculture (LLU) actively participates in the implementation of the EU projects carried out in collaboration with Jelgava municipality and IT leading enterprises. Jelgava Regional Education Centre for Adults (JRECA) is uptaking the financial support provided by the European Social Fund (ESF) for the project "*Professional education availability improvement for the disabled persons in Zemgale region*". The aim of the project is to improve education availability for the persons with disabilities in Zemgale region. The project target group is the inhabitants of Zemgale at the working age – people with disabilities, which cause the limitation of their physical capabilities. Within the framework of the project several activities are to be carried out in collaboration with LLU and Association of Jelgava Producers and Marketers. Firstly, the two professional educational study programmes: Computer Systems Technician (3rd qualification level) and Programming Technician (3rd qualification level) are developed, which are adapted for e-studies. Secondly, JRECA e-study system is developed, which can be used for the pilot testing of these programmes.

The particular feature of the project is that disabled people can study at home, using the system of e-studies. E-studies are one of the modern elements of knowledge acquisition and obtaining qualification, which can be efficiently integrated into the traditional study process. It provides single and systematic e-study system, using all the study process. In order to prepare the classes of the courses and to evaluate, a standard method is necessary. E-study system can be used within the full-time study system as a support system of the traditional study process. The experts of information technologies, employed at LLU will help

to ensure the quality of the programmes and their compatibility with the Faculty study programmes. Graduates of the programmes have an opportunity to continue their education at the higher educational institutions. Often, when talking about the employment of disabled people, their lack of motivation to improve their own situation is emphasized, as well as the employers' preconceived attitude towards the employment of disabled persons is indicated. Therefore there will be informative seminars organized for business people within the framework of the project that would help the employers to understand the desires and possibilities of people with disabilities.

The next project, which is carried out at the FIT of LLU, is the ESF project "The Modernization of the Information Technology Study Programmes at Latvia University of Agriculture" (VPD1/ESF/PIAA/04/APK/3.2.3.2./0004/0067). This project is implemented in co-operation with the partners - joint–stock company "Datorzinibu centrs" and Jelgava City Council (LLU, 2007). The project envisages the modernization of the master's study programme, implemented at the higher educational institution, in order to ensure the modern acquisition of knowledge for the economic growth within the important fields. The modernisation of the system of higher education and adults' continuing education is one of the ways to achieve the priority set by Single Programming Document – Facilitation of the Development and Employment of Human Resources. The aim of the project is to modernise and to supplement with new study trends the master study programme "Information Technologies" (implemented at the FIT) for the full-time studies, oriented towards the solution of interdisciplinary problems, as well as to create the preconditions for the start of part-time studies at the study programme, and an opportunity of e-studies.

The activities, planned within the framework of the project, will facilitate the preparation of IT specialists in such fields as computerized production control systems, systems analysis and information technologies in biosystems, taking into consideration that IT specialists are demanded not only in IT companies, but also in other sectors of economy, because no sector of economy can be developed without modern and qualitative IT solutions of problems. For the development, introduction and application of such IT solutions the experts of the respective qualification are needed, who possess the knowledge of both IT field and the particular sector of economy. Very significant aspect of the project is the introduction of distance learning teaching methods for the implementation of full-time and part-time study processes at the Faculty of Information Technologies. E-studies are one of the modern elements of knowledge acquisition and obtaining qualification, which can be efficiently integrated into the traditional study process.

The research hypothesis - e-studies function as the instrument of society integration, because it reduces the social difference, making the studies more available irrespective of the student's age, place of work and residence, working hours and other factors. The aim of the research is to develop the recommendations for the introduction of the form of e-studies for the full-time and part-time studies that would facilitate lifelong learning provide the programme graduates with an opportunity to acquire knowledge and practical skills regarding the use of the latest information technologies. In order to achieve the aim, the following objectives were set:

- to analyse the distribution of students according to the regions of Latvia;
- to analyse the role of lifelong learning, continuing education, distance learning and e-studies for the implementation of the full-time and part-time studies and their influence on the regional development;
- to analyse the results of ESF projects regarding the development of e-studies at the FIT of LLU.

The teaching staff from the leading higher educational institutions in IT field and the teaching staff from the commercial training centres of Latvia are involved in the improvement of the study programme, therefore it is expected that the teaching materials will be of high quality, and thus the teaching aids and teaching methodology will be interesting not only for the students studying at LLU, but also for those studying at other higher educational institutions of Latvia. Within the period of the implementation of this project, the improved study programmes will be used at other higher educational institutions of Latvia, because the teaching materials are envisaged to be prepared as the materials for e-studies and to place them on the server for e-studies. The server of e-studies of the FIT is connected to the internet network; therefore the materials of e-studies, prepared within the project, through Internet would be used by the students of other higher educational institutions.

The improved programmes will prepare IT specialists, who will facilitate the use of IT for the business activities carried out in Zemgale region and would increase the competitiveness of services and products supplied to the markets of Latvia and Europe.

### The dynamics of the number of students in the regions of Latvia

According to various studies, the differentiation between the developed and underdeveloped regions of Latvia increases more and more. Therefore it is very important to implement in practice the regional reform in Latvia, which has been discussed during the last years very actively. The determined direction of state strategy in the field of education might be one of the important instruments for the reduction of regional differences and a good impulse for the national development on the whole. The dynamics of the number of students, matriculated for the undergraduate studies at higher educational institutions, in the regions of Latvia from the study-year 2002/2003 to the study-year 2006/2007, is presented in Figure 1 (IZM, AIP, 2006, 2007).



⊟ Vidzeme ■ Kurzeme ◪ Latgale ☐ Zemgale ◪ Riga, District of Riga
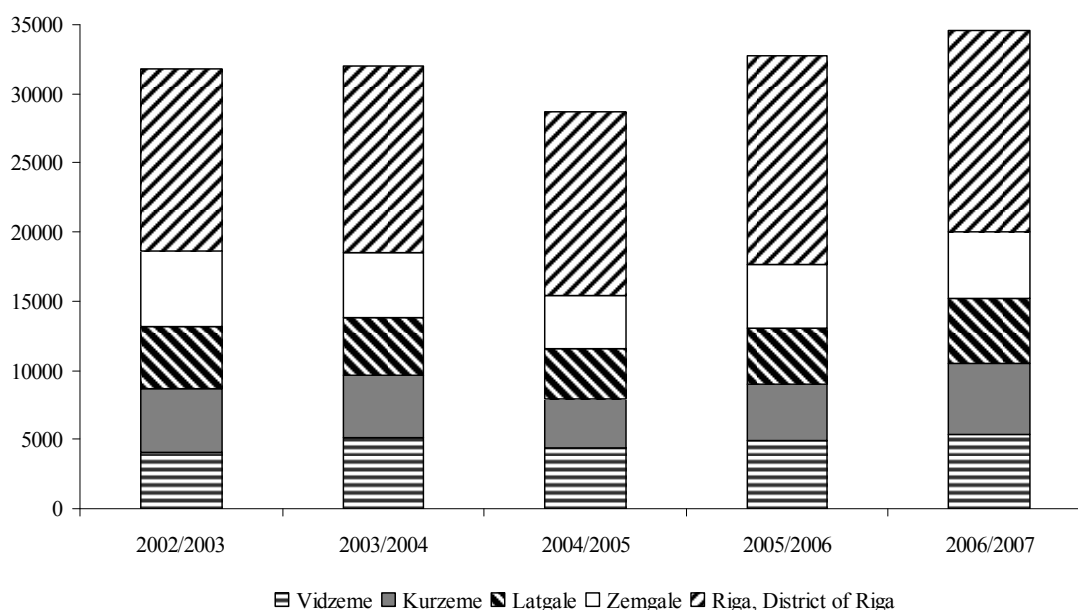
*Source: Figure is developed by the authors*

**Fig. 1. The proportion of students, matriculated for the studies at higher educational institutions in the regions of Latvia**

As it was established during the previous years, that the students from the respective region choose the higher educational institutions that are located near their place of residence, and 80-85% of students, studying at such higher educational institutions as Daugavpils University, Rēzekne Higher School, Liepāja Pedagogical Academy, are the residents of the respective region. Recently established higher educational institutions, such as Ventspils University College and Vidzeme University College, and the branches of some higher educational institutions, especially the branches of Riga Teacher Training and Educational Management Academy in Cēsis, Madona, Jēkabpils, Saldus, Kuldīga and Liepāja, as well as the branches of several higher educational institutions, founded by legal entities, offer study opportunities in fact for the inhabitants of all regions and districts. Gradually the supply of study programmes is diversified, and the quality of programmes improved, thus creating the preconditions for the growth of creative people in the region.

In order to study the relations between the number of students and particular regions, there was the proportion of students, matriculated at higher educational institutions, was analysed according to their place of residence in the study-years 2005/2006 and 2006/2007 (Fig. 2).

As we can see in Figure 2, the distribution of the number of enrolled students according to the regions in fact is proportional to the distribution of population, except Latgale, which is proved by Wilcoxon Signed Ranks Test (p-value > 0.7). We can draw a conclusion that on the whole there are no particular regional differences regarding the number of students. At the same time the proportion of students in Riga City and the District of Riga is more significant than the proportion of population. In comparison to the study-year 2005/2006, in the following study-year of 2006/2007, the proportion of students increased in Kurzeme and exceeded the proportion of population, thus indicating the development of the region, but in Riga City and the District of Riga the proportion of students decreased in comparison to the proportion of population. At the same time the number of students from Latgale at the state higher educational institutions and those of legal entities in total proportionally is less than the number of population. It proves the necessity of a special support, including support to higher education, for the less developed region of Latvia. The EU regional development funds could be an efficient instrument for the solution of this problem.

## Lifelong learning, Continuing education, Distance learning and E-study in full-time and part-time studies

The policy of lifelong learning in Latvia is based on the idea that the individual personal growth, self-development at each stage of life, in all spheres of life within one's lifetime should be facilitated, thus creating the preconditions for everybody's initiative, the development of adaptation abilities and achieving the social inclusion, employment, and active civic participation. Formal education, non-formal and everyday education within the policy of lifelong learning are equally important and supplement each other by enriching the learning culture, experience and by broadening the educational environment at the individual, community and society levels. Lifelong learning is an essential factor both for the reduction of the regional differences of Latvia and the improvement of life quality, and the promotion of society integration, particularly emphasizing that the continuing education provides the working age individual an opportunity to acquire and perfect knowledge and skills, to obtain or improve professional skills, mobilizing the human resources for the sectors of national economy. The basic skills form the ground for the obtaining of qualification, continuing education and employment, and thus it is a particularly significant component for the facilitation of the capacity for labour of the population, exposed to the risk of social rejection. Particular attention should be paid also to the availability of the appropriate education for the individuals with functional disabilities. Professional orientation and career education help to make the motivated choice at an individual level and corresponding to the needs of society for the continuation of education and the choice of profession.

In conformity with the draft law "On Higher Education":

- **lifelong learning** – educational process within one's lifetime, motivated by the society changing needs and adults' necessity to acquire knowledge, skills and competences, and the experience within the context of employment, social and personal growth. It includes formal, non-formal and everyday learning;
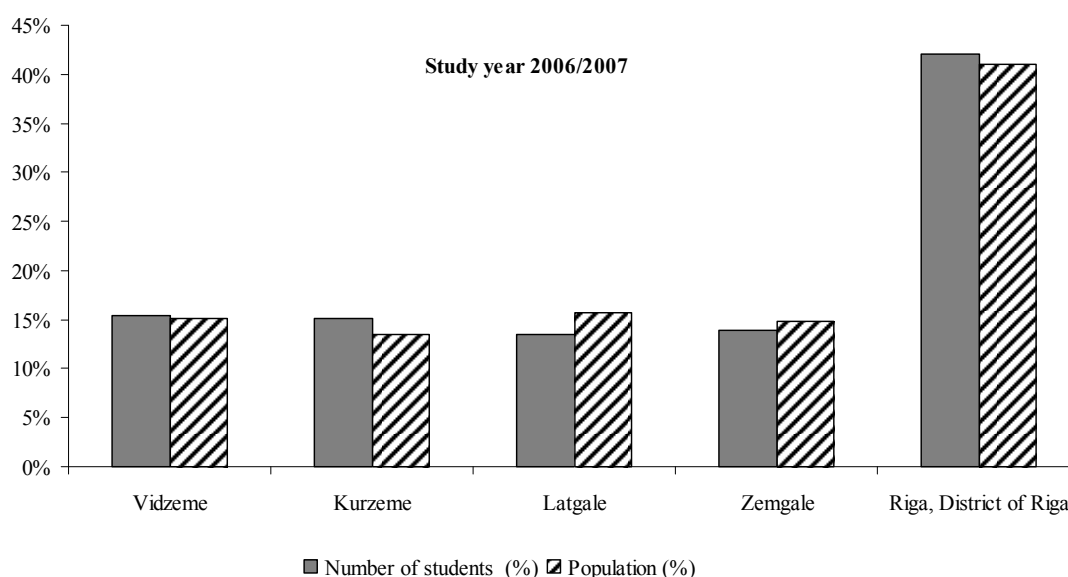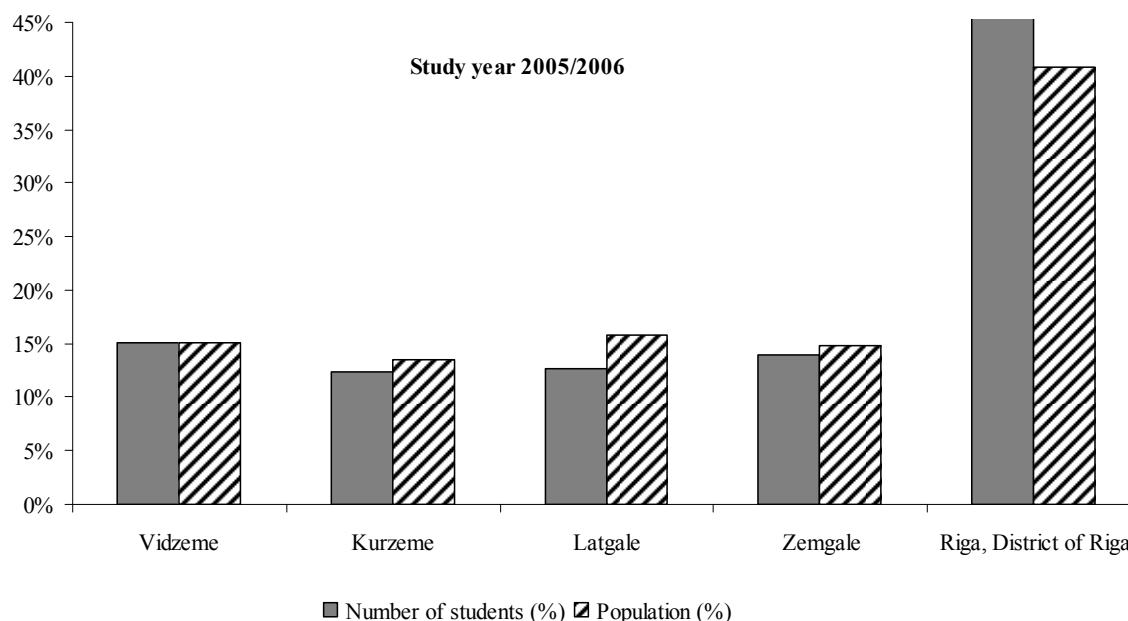
*Source: Figure is developed by the authors*

**Fig. 2. The proportion of students, matriculated for the undergraduate studies at higher educational institutions in the regions of Latvia**

- **continuing education** – the continuation and perfection of previously obtained education in conformity with the requirements of labour market and the interests of personality perfection;
- **distance learning** – form of education acquisition, characterized by the teaching materials specially structured for the self-educational purposes, individual learning pace, the assessment of progress specially organized for the self-educational purposes, as well as the application of various technical and electronic means of communication.

The methods of distance education can be used for both full-time and part-time studies. It should be noted that part-time and full-time studies are the types of studies with different amount of credits for a term or academic year, as well as with different amount of contact time within the study process. The summary of the types of studies and the forms of education acquisition is presented in Table 1.

Table 1

**Types of studies and forms of education acquisition**

| | **Full-time studies** | **Part-time studies** |
|---|---|---|
| **Type of studies** | - type of studies with the amount of 60 credits or 1600 student's working hours within the academic year of two terms (autumn and spring) and 72 credits or 1920 student's working hours within the academic year of three terms (autumn, spring and summer).* | - type of studies with the amount of less than 60 credits within the academic year of two terms (autumn and spring) and less than 72 credits within the academic year of three terms (autumn, spring and summer).* |
| **Form of education acquisition and amount** | **Contact time**<br>- the communication of academic staff and students, which is carried out for the achievement of the aims and objectives of higher education in conformity with the curricula of higher educational program.* | |
| | 40%-50% of the amount of academic lectures. | 10%-20% of the amount of academic lectures. |
| | **Distance learning**<br>- form of education acquisition, characterized by the teaching materials specially structured for the self-educational purposes, individual learning pace, the assessment of progress specially organized for the self-educational purposes, as well as the application of various technical and electronic means of communication.* | |
| | 50%-60% of the amount of academic lectures. | 80%-90% of the amount of academic lectures. |

* - the draft law "On Higher Education", September 11, 2006
*Source: Table is developed by the authors*

Distance learning very often is viewed as a type of studies without continuous and direct contact between the student and the lecturer, or distance learning is considered to be extra-mural or part-time studies. Namely, distance learning is considered to be a type of studies, instead of being a form of education acquisition. The methodology of distance learning comprises printed texts, audio or video recordings, tutorials, communication by mail, CD-ROM, e-studies and m-studies (a version of e-studies, when a cellular phone is used). E-studies and m-studies are one of the modern elements of knowledge acquisition and qualification obtaining, which can be efficiently integrated into the traditional study process in the form of distance learning. E-studies is a specially organized study course, where electronic technologies are used. As a result there is an opportunity to use efficient, on IT based ways of information preparation and presentation, ensuring closer interaction between students, lecturers and higher educational institution. Distance learning is based on three closely related principles: opportunity to study from distance, openness and wide availability, flexibility and adaptation (RTU, IZM, 2003).

Unfortunately, not all the above mentioned principles are implemented within the study process, therefore the introduction of e-studies is one of the most important preconditions for the introduction of qualitative distance learning form. Taking into consideration the rapid increase of tuition fee, the increase of the payment for the public services and the increase of price to be paid for food, many students have to stop their studies due to the lack of finances. It is difficult to combine studies and work, and it mostly negatively influences the quality of studies. Therefore one of the solutions could be the use of e-study system within both full-time and part-time study processes. The main difference is the process of the preparation and publishing of teaching materials. In order to ensure unified and systematic use of e-study system within all study process, it is necessary to have unified methodology for the development and evaluation of study courses. The objective of the methodology is to provide suggestions and proposals for the lecturers and management of the faculty, in order the content and the tools of information technologies, and the procedure

could ensure the availability of e-study materials always and everywhere, where there is Internet accessible. Within the system of full-time studies, e-study system can be used as a support system for the implementation everyday study process. In order to implement the master study programme of part-time studies, it is necessary to prepare the part-time study programme and to adjust the teaching/learning methodology of e-studies for the part-time studies. In this case at the first lecture or seminar the lecturer should provide students with information on the website of e-study system, how to work with e-study system and what activities are expected from the students within the framework of e-study system.

## Conclusion

The results of the collaborative project give the significant contribution to the sustainable economic and social development of Latvia. The activities of the project promote the improvement of the modernization of educational system, providing the basis for the modern ICT knowledge and skills acquisition in conformity with the increase of labour market demands, and thus contributing to the development of the important economic sectors of all regions. In order for e-studies to be successful; there are specially prepared and well-considered teaching materials and the plan for the support of studies, which had been planned in advance. When the e-study course had been planned and developed, it should be introduced and implemented within the unified study process. Before the implementation of courses, it should be considered that the teaching staff has had enough time for ensuring the support of e-studies. Only in the case of timely, constructive and active communication between a lecturer and a student (for example, publishing of teaching materials, answers to students' questions, asked in an electronic form, checking and comments of assignments), e-studies will achieve the expected results. The students should feel that they do not acquire the study course as a result of self-instruction, using previously published teaching materials, but in a form of e-studies, which means an opportunity of electronic dialogue between the lecturer and the student, as well as the students of the respective group.

The results of ESF project will improve the availability of lifelong learning for adults and the groups of individuals, exposed to the risk of social rejection, and the youth, improve the professional orientation within the educational system, facilitate the development of inclusive education in order to promote the engagement of labour force in the national economy by co-operating with social partners, and these results will improve the policy development and implementation capacity and co-operation of the institutions, responsible for education and lifelong education. The results of ESF projects will facilitate the implementation of polycentric development model in lifelong learning and special education. The balanced development of territory will be ensured by supporting the availability of lifelong learning to the population at the developmental centres of national, regional and district levels, as well as in rural territories of all the planning regions, by supporting the availability of the respective education and obtaining of qualification to the individuals with functional disabilities and other individuals, which are exposed to the risk of social rejection.

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