OFFER AND OPPORTUNITIES OF LOGISTICS EDUCATION IN LATVIA

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Abstract

The goal of the research was to evaluate the opportunities in preparation of logistics specialists offered by Latvian universities and to formulate problem solutions. To achieve the goal, study programmes and course syllabuses offered by Latvian universities and colleges were analysed from the logistics perspective. Opportunities to acquire logistics knowledge offered in Latvia by distance, in further education and life-long learning programmes were reviewed. In the end, it was concluded that the development of logistics education in Latvia does not correspond to the speed of the development of logistics industry. Currently Latvia offers 4 Logistics study programmes, but only one study programme offers education corresponding to the professional standard – Manager of Logistics Department – as approved by the MoES. Latvia University of Agriculture currently has no logistics study programmes but different logistics subjects are included in the study programmes of 4 Faculties, therefore there are vast opportunities and it is necessary to develop the offer of logistics education, first by giving students the opportunity to choose specialisation in logistics in the Faculties in the study areas of which logistics is especially important and necessary – Faculty of Economics, Technical Faculty, Faculty of Forestry, Faculty of Food Technology, and Faculty of Agriculture.

Key words: logistics education, offer, opportunities.

Introduction

The advantageous geographical location of Latvia, location on the trade road between West and East, the ice-free harbour and the European Union (henceforward – EU) external border with Russia determine the special place and role of logistics in Latvia. After joining the EU, Latvia is facing new opportunities that have to be used, as well as new problems which need to be solved. The increasing competition in several branches of national economy encourages Latvian enterprises to seek for new, economically effective working methods.

One of the main tools for increasing the competitiveness in such a situation is optimization of enterprise logistics systems. As a result, relevant changes are being observed in the market of logistics services:

1) the demand for high quality services at acceptable price is increasing faster and faster;
2) the part of market participants that form and manage their own competitive logistics systems is increasing;
3) the use of “mixed” logistics functions is decreasing (an enterprise produces a part of a definite function, for example, of international transportation, but a part is bought from logistics service provider).

I can agree with specialists (Virbule, 2006) who have already defined the most essential differences between technical supply and logistics. In its essence, philosophy of planning stocks, reserves, supply and other organization and management components has gradually and drastically changed in the world. Several years ago the main aim of supply departments was to ensure that production did not lack raw materials or goods for shops. Whereas now, the main aim of logistics systems is to deliver only as much as necessary. With the development of international cooperation, problems of just-in-time supply have become more urgent.

In transportation – the main function of logistics systems – a number of factors have become topical, among which the following factors can be regarded as the main ones:

- the constantly increasing costs demand more profound and wider knowledge of economists;
- overstock of service capacity is influenced by radical modernization of transportation management processes (speeding of transportation cycle, liquidation of customs frontier, and development of ferry transport, etc.);
- market globalization escalates discrepancies between big supplier interests and professional possibilities of market participants.
Those factors have also contributed to the demand for a wide range of professional and qualified logistics specialists. Unfortunately Latvia lacks high-qualified logistics specialists. The following could be considered the main reasons for this situation:

- Latvia’s inability to join the rapid development processes of the business logistics as a separate function of processes and systems management in the world;
- the alienation of Latvian academic education system from the real needs of logistics systems and business;
- the lack of qualified academic staff, experts and consultants in logistics and the negative attitude of some academic staff towards topicality of logistics science;
- necessity for higher qualification and wider knowledge of logistics specialists;
- the long period of accreditation process prolongs the introduction of new and progressive programs in the education system.

In 1996-2006, the percentage of employees working in logistics (transport, storage, and telecommunication) on average was 9% (the increase of 1.8 thousand people per year with a growth rate of 2% per year) (Employed in the ..., 2008). A number of employees that now work in logistics branch do not have special logistics education – they urgently need further special education.

However, the operative information turnover suggests that the branch experiences a crucial need for highly qualified employees. Skills and knowledge that labour market requires from logistics specialists depend on the specific character of each industry and enterprise (Daugherty, 2004).

Statistical data show that more than 2,000 companies operate in logistics services industry in Latvia, and they all need logistics specialists. Also supermarkets have their own logistics centres which need logistics specialists who would plan fast and qualitative cargo transportation at optimal costs. It means organization of transport network, drawing up of routes, and solving problems connected with warehouses, customs, etc.

Each cargo is specific and requires suitable transport, taking into account packaging of the transportable goods and the desirable kind of transportation. Therefore employees in logistics branch should have knowledge in transport technologies, in cargo specifics, documentation and handling, and in IT (Sarana et al., 2006; Perry, 2006).

Lack of special knowledge and competence can be the reason for the considerably low development level of Latvian logistics services market compared to the developed countries (Millere, 2005). In Latvia, there is a tendency to concentrate primarily on the optimization of transportation functions, but the significance of stocks and reserves management has not been properly estimated yet.

Regarding professional qualification of logistics specialists, N. Krumins (2004) has concluded that there is a difference between academic education in business logistics and practical business needs. To his mind, one of the most important factors not only in Latvia but also in other EU countries is lack of competent academic staff who could transform the interesting and engrossing, but at the same time, bare and mathematical theory into practical tools for daily use. In addition, A. Lietina (2007) points out that logistics specialists are paid higher than professors, which is the reason why the first are not interested in working at university.

A. Šlesers (2008) has looked at logistics problems from another aspect. Based on the data of January 2008, he has concluded that transportation processes in Latvia comply with the transportation policy of Europe: the volume of trucked cargo by Latvian railway company Latvian Railway subsidiary company LDz Cargo increased by 31.7% in January 2008 if compared with January 2007 and has reached 5.043 million tons. A total of 5.626 million tons cargo were reloaded in Latvian ports in January this year, which is for 26.5% more than in the first month of 2007.

The analysis of the situation allows stating the several groups of arguments that formed main motives for choosing the research topic.

The increasing topicality of logistics education and science forms one of the groups:

- the increasing necessity for qualified planning of processes and systems of primary, secondary and tertiary areas, the need and greater complexity of regulating and correcting the perfect control of processes and systems flows;
- professional management of the flows of information, knowledge and other intellectual resources;
- cost efficiency of material resources and production flows;
- modernization of the choice, planning and management of energy kinds, sources and volumes;
- the need for more qualified forecasting and planning of human resource flows;
- the increase of the capacity of the knowledge required for the effective management of all these flows and the visibility of its deficit.
All these arguments of the first group form the hypothesis or a part of it that the topicality of logistics knowledge and education is reflected in the study programmes offered in educational institutions. The second group of arguments is made by the development of the use or application of logistics science and its methods: its application is being updated in both production and materials international transcontinental mega flows and the common market of the European Union, in which Latvia participates. The third group of arguments is made by the geographical situation of Latvia, which allows it to perform the function and opportunities of materials flows through the West-East and North-South corridor. The fourth argument is related to the above – development of big logistics centres in Prieriga region, and they also need logistics specialists. The fifth argument is updating of management processes and technology by using global positioning options and systems, which requires special, adequate knowledge from the operators.

The next step – analysis of the topic approved the assumption that over the last years no purposeful studies about education opportunities and problems in logistics have been carried out as no study results have been published. Some considerations or recommendations can be found in periodicals.

Thus, it can be considered that a study of the opportunities of logistics education is not only topical, but also new and possibly original.

Research hypothesis: deep dissonance and divergence between the practical application of the cognitions of logistics science and the education opportunities or capacity of logistics specialists have developed.

To verify the above hypothesis, the following research goal was set: to evaluate the opportunities in preparing logistics specialists (study programmes) offered by universities and to offer solutions to the problem.

The following objectives were set to achieve the goal:

1) to analyse and evaluate the study programmes and course outlines offered by the Latvia University of Agriculture (LLU) from the perspective of logistics science;
2) to study logistics study programmes offered by other universities and colleges of Latvia;
3) to review the opportunities for acquiring logistics knowledge offered by distance education, further education and life-long learning programmes in Latvia.

Materials and Methods

The research covers the study programmes and course outlines available through the web sites of universities and colleges, accreditation information by the Ministry of Education and Science (henceforward – MoES), information published on consultation and training organizations, scientific and academic literature, special publications in periodicals, a.o.

The following methods were used in research:

- methods of analysis and synthesis, as well as the monographic method were used in studying the published materials, theories and standards;
- to find out the essence of logistics education, the inductive method with deduction elements was used;
- to make conclusions and forecasts, the logical construction and interpretation methods were used.

Results and Discussion

1. Logistics Study Programmes Offered by Latvian Universities and Colleges

To find out future opportunities, the author has collected data on logistics programmes in Latvian universities (Data of Higher…, 2008) and concluded that three universities in Latvia now offer 4 Logistics Study Programmes.

MoES of the Republic of Latvia approved the professional standard on November 9, 2004 – Manager of Logistics Department. The description of the profession provides that the manager of logistics department manages supply of raw materials, spare parts and materials, realization of the production output or purchased goods; in a trade company, ensures customer service quality at the certain place and time, determines the storage policy in the company, performs general control over the work quality of suppliers and develops cooperation policy with suppliers and clients. It is important for the logistics specialist to be communicable and a good diplomat, with logical and mathematical thinking because this industry involves serious processes where one cannot rely on feelings.

Education corresponding to this professional standard is currently offered by only one university – Riga Technical University: the Professional Bachelor’s Study Programme “Business Logistics” which enrolled its first 20 students in September 2006.

One of the main logistics functions is transport and, as the offered range of university study
programmes indicates, in total 7 programmes offer higher education in different study programmes in transportation area.

One of such programmes – International Carrier Management offered by Liepaja College of Maritime Activity – provides a qualification that corresponds to the professional standard “Logistics specialist”, which was approved on November 9, 2004.

Transport and Telecommunication institute (TTI) currently offers the widest range of logistics study programmes – 5 out of the total of 11. In addition, TTI is the only university founded by a legal entity for which the Latvia Council of Science has approved the Doctorate Council, on the basis of TTI, for awarding a Ph.D. in engineering, and it offers the only doctoral study programme in logistics “Telematics and Logistics” (Kabaškins, 2003).

Whereas Riga Air Navigation Institute offers the only Master’s study programme connected with logistics – International Carrier Management.

The fact that 9 out of 11 logistics and transportation organization programmes are professional study programmes is natural and only emphasises that this science is topical and applicable and necessary in real life.

When analysing the licensing dates of Logistics study programmes, it can be concluded that all these are new study programmes – they have been offered for not more than 5 years.

Only two universities – RTU and Ventspils University College – offer specialisation in logistics through 4 study programmes. This is the optimum choice of universities if the university is not able to offer a full logistics study programme in the specific study programme branch yet, because Latvia lacks not only logistics specialists but also academic staff that could teach these subjects qualitatively.

2. Opportunities to Receive Logistics Knowledge in the Faculties of LLU

Logistics is of utmost importance in industrial manufacturing and business, but it has not been studied systematically and introduced in the primary sector – agriculture and forestry. However, its development in agricultural and partner enterprises, their groups and regions would create new opportunities for the risk management due to the risks of competition and other social and economic factors, as well as for more effective management of specific risks.

Rather many logistics systems already operate in the enterprises of primary and secondary, as well as tertiary sectors of other industries. Part of them, probably even the largest part, are not registered as companies within the Enterprise Register of the Republic of Latvia or the Commercial Register but they operate as parts or departments of enterprises, as departments of several related enterprises (or enterprise groups) or as business units of enterprise group structures.

Thus, when evaluating the necessity of logistics subject at the Latvia University of Agriculture, it can be concluded that it is very topical and that this course would be the most necessary for several faculties.

One of them is the Faculty of Economics that teaches managers of companies and their departments, public officials, etc., because every manager within a company should be competent in logistics issues (storage management and handling, transport, warehouse management, etc.) even if the manager’s direct responsibilities are not related with it. The manager, planner or other administration specialists have to be even more competent if the company deals with offering logistics services, which is one of the most progressive industries in Latvia. One can surely forecast that it will only continue developing. It is acknowledged that when developing logistics systems skilfully, it is possible to reduce production and transportation costs, to increase the quality of output and to enhance its competitiveness in the market.

The second is the Faculty of Food Technology because transporting food and food stock management is especially sensitive and connected with high risk. In most cases these are fast moving goods with a rather short life period that require significantly stricter control, preciseness and adequately high level of knowledge.

The next is the Faculty of Forestry, the graduates of which deal with the growing need for effective management of the flows of round timber and forest exploitation remnants. It is also useful to introduce and use logistics methods and principles in forest growing and utilization. In fact, it can be said that every forestry employee has to know logistics.

The competence of the specialists prepared by the many-profile Technical Faculty is various – car park, containers, warehouse technological equipment, their specifications and utilization, choice and economy of fuel, etc.

Then the Faculty of Agriculture, the goal of the study programmes of which is to prepare specialists with career opportunities in top managerial positions in crop farming, horticultural, cattle-breeding and livestock product farms, firms and organizations. For such specialists logistics knowledge would be especially important, taking into consideration the fact that logistics systems as risk management methods and tools are especially crucial and
effective in quality risk management in dairy farming. These opportunities have already been rather widely and fruitfully used by business self-government organizations – co-op companies. In meat production industry, logistics systems formed on the principles or related company integration work effectively. In horticultural industry in risk management, peculiar logistics systems founded on contractual principles also work effectively.

In the Faculty of Information Technology, the need for such a course is determined by the fact that nowadays different achievements and programmes of information technology are applied to logistics systems management and Latvia feels the lack of such technology and programme management specialists especially sharp. Currently the market faces the situation that several merchants and service providers of such technology and programmes come to Latvia from abroad – Poland, Russia, Finland, a.o., thus these products and services are more expensive and are not fully adapted to Latvian market, the service is rather slow, language barriers are also possible both when consulting specialists and when using their offered products.

The Faculty of Agricultural Engineering prepares specialists in civil engineering, designing, building technology and management. In designing building constructions two factors are important. They create the necessity to offer acquiring logistics knowledge. First, logistics industry requires several functional buildings: warehouses, terminals, etc., and it would be necessary to teach the young specialists in basic planning principles of such buildings. Second, when managing construction works, it is necessary to choose the materials, supply them. In addition, material delivery on time and in the required volume is especially important in this industry because lack of some material causes idle time and losses. Besides, there are construction works that require certain weather conditions and if the supply is delayed or of insufficient volume, construction works can be performed with worse quality or can last longer.

The former activities of the Faculties lead to the following conclusions:

- Faculties of Latvia University of Agriculture have realized the importance of logistics science, therefore logistics courses have been introduced in 8 study programmes of LLU. Faculties as mandatory courses and students of all Faculties can choose “Basic Logistics” and “Logistics in Marketing” as electives;
- 2 Faculties offer logistics courses with specialisation in the Faculty area – Faculty of Food Technology offers “Logistics of Food Products” and “Logistics in Hospitality”, and Faculty of Forestry offers “Logistics in Forest Exploitation” which is also the widest study programme related to logistics at LLU. The other Faculties offer general and comprehensive logistics courses;
- unfortunately, logistics is not yet offered in the Faculty of Agriculture, the graduates of which are in real need of it. This course would be progressive and student competitiveness in the labour market would be increasing for the Faculty of Information Technology and the Faculty of Agricultural Engineering, in which it is not yet offered either.

3. Study Programmes of Riga and Regional Universities and Colleges that Offer Logistics Subjects

In several Latvian universities logistics subjects are included only as supplementary subjects. Having studied and analysed the information about the contents of study programmes, I concluded that in all biggest Latvian universities logistics subjects are offered in different study programmes, mostly in economics and management study programmes.

At the University of Latvia such subjects are offered in 3 Faculties: Faculty of Economics and Management, Faculty of Law, and Faculty of Physics and Mathematics. Logistics as an elective subject is offered in 13 study programmes. Offering logistics as a course in the Faculty of Economics and Management is self-evident. However, the conception chosen by the University of Latvia to offer the course “Logistics” to the students of the Faculty of Physics and Mathematics should be approved because, as it can be seen, this Faculty prepares programmers and mathematicians that can use their acquired knowledge in several directions – first, by performing independent professional activity and, when offering services to clients, by organising stock management themselves for their own needs; second, by creating new or managing and improving the existing programmes and information technology necessary for logistics systems. For optometrists this subject might be attractive from the following aspect – several optometrists perform their professional activity in private practices that are combined with shops for glasses. Thus they need to manage stocks and it is not cost-efficient to pay salary to people performing this function in small enterprises, therefore optometrists have to know this area themselves. Law students of the Faculty of Law might need logistics knowledge when designing different contracts of transportation, purchase and other agreements for both Latvian and international companies, consulting them in signing such deals.
At Riga Technical University, logistics subject is offered in 2 programmes of 2 Faculties: in the Faculty of Engineering-Economics, and in the Faculty of Transport and Engineering. Both study programmes are more of technical character and in both of them Logistics course is mandatory in difference from the University of Latvia.

At Riga Stradins University, International Transport Logistics is included as a mandatory course in the study programme “Management of Small and Medium-size Business”.

In several private non-university type colleges and the ones established by legal entities in Riga (BA School of Business and Finance, School of Business Administration “Turiba”, Riga Teacher Training and Education Management Academy, Baltic International Academy, Information Systems Management Institute, Culture and Economics University College), Logistics is offered as a mandatory course in economics and management study programmes. The exception is Riga Aviation Institute, where the course “Logistics” is included as a mandatory course in Master’s Study Programme “Engineering - Aviation Transport”. But in Rezekne and Vidzeme regional universities, Logistics course is mandatory in Business Management Study Programmes. Whereas in Juridical College and Riga Business School, Logistics course is an elective subject.

4. Opportunities to Study Logistics by Distance, in Further Education and Life-long Learning Systems

European Logistics Association (henceforward – ELA) has been working in Europe for several years already. Its main goal is to support the development of logistics industry in its Member States, to enhance solving of different issues related to industry specifics, to encourage observance of unified principles by developing logistics norms and quality standards.

For developing logistics education, ELA has defined European Logistics Education Standards. To ensure the implementation of these standards, European Certification Board of Logistics (ECBL) was established. Its main responsibility is to monitor and coordinate training, evaluation and certification processes in all Member States, in this way guaranteeing the legitimacy of the awarded certificate of the logistics specialist in every European country which is a member of ELA (ELA – Certification for…, 2006; Master Programme in …, 2005).

Currently in Latvia, Logistics Partners, Ltd. have worked out the only in Latvia complete training course for logistics specialists, based on the ECBL provided qualification requirements, as well as including specific aspects and conditions of Latvia. However, as the membership fee in ELA is very big and equal to all countries, Logistics Partners, Ltd. is not registered as an ELA member, but it operates as a subsidiary of Finland, which is an ELA member, and upon graduation, the new logistics specialists receive an ELA certified certificate of Finland.

The training programme worked out by Logistics Partners, Ltd. also anticipates very close involvement of the company represented by the logistics specialist’s candidate (more specifically the candidate’s direct supervisor) in the training process, so that the qualification received by the candidate would be most widely applicable to the specific company, as well as all practical tasks and projects are made on the basis of the specific company, using its real data and corresponding additional information.

Further education programme courses in logistics are also offered by RTU and TTI, as well as by several consultation and training firms of Latvia.

However, in total, the offer of Latvian further education in logistics is very narrow and most courses are specific, for receiving a specific certificate, not for preparing qualified logistics specialists. In addition, the training programme offered by Logistics Partners, Ltd. is the only one that offers internationally recognised certificate of a logistics specialist. All the other training organizations offer course graduates their own organization’s certificate.

International carriers managers’ certificate of professional competence (CPC) can be obtained by the graduates of International / Local cargo and passenger transportation and it is a sufficient proof of professional competence as provided by Directive 96/26/EC of April 28, 1996 “On Cargo and Passenger Carriers’ Admittance to Profession and on Mutual Acknowledgement of Diplomas, Certificates and Other Documents Certifying Professional Qualification” in order to give these carriers wider rights to get involved in inland and international carriage. A qualified administrator with a certificate of professional competence (CPC) in road transport management currently is one of the main requirements for a company to get a licence that allows performing inland and international carriage. However, it is not enough with such education for a graduate to become a logistics specialist in a company.
Conclusions

1. The development of logistics education in Latvia does not correspond to the speed of its industry development.

2. Currently Latvia has 4 Logistics study programmes, 3 of which are accredited: one of them is a doctoral programme, 2 – professional Bachelor’s study programmes.

3. Only RTU Professional Bachelor’s Study Programme “Business Logistics” offers education corresponding to the professional standard – Manager of Logistics Department – approved by the MoES. Graduates of other study programmes receive a degree in engineering and management.

4. Nine out of 11 logistics and transport organisation programmes are professional study programmes. It only emphasises the fact that this science is topical and applicable and necessary for use in real life.

5. Latvian universities now offer 7 higher education study programmes in transportation and 4 of them are accredited.

6. Raising logistics competence in Latvia is absolutely necessary in all business areas and at all levels, especially in the primary sector of agriculture.

7. Latvia University of Agriculture currently does not offer any logistics study programmes but different logistics subjects are included in the study programmes of 4 Faculties.

8. Latvia University of Agriculture has vast opportunities and it is necessary to develop the offer of logistics education, first, by giving students the opportunity to choose specialisation in logistics in the Faculties, in the study area of which logistics is especially topical and necessary – Faculty of Economics, Technical Faculty, Faculty of Forestry, Faculty of Food Technology, and Faculty of Agriculture.

References


