

Knowledge Society: Challenges for Higher Education in the Baltic States

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Abstract This paper describes situation in Latvia and the Baltic States and evaluates impact of external factors on the upcoming changes of education market. The authors describe higher education development and interaction between technological and economical changes and higher education.

The knowledge society promotes the development of education and science and facilitates the general development.

Keywords - knowledge society, higher education, economical changes.

I. KNOWLEDGE SOCIETY – STRUCTURE AND DEVELOPMENT

Society of the future is the society of knowledge, in which the capability of knowledge concentration and transformation into innovative and applicative solutions is an important and respective value. Knowledge has become a central resource of the new society with knowledge workers as key elements of its workforce. The basic strategy of achieving the knowledge society was set according to the goals of so-called Lisbon strategy.

Any society, including knowledge society, cannot exist without people, organizations, workers, communities, customers etc. A knowledge-based organization is viewed as a society of knowledge workers who are interconnected by a computerized infrastructure. Their work with several distinct kinds of knowledge is supported by the computerized infrastructure in a coordinated, cooperative manner. The dominant features of such organization are:

1. Local workstations,
2. Support centers,
3. Communication paths,
4. Distributed knowledge storehouses.

The management of a knowledge-based organization starts with careful planning of organization's design and construction. A plan for using, increasing, and preserving a company's knowledge-based resources should include long-term strategic aspects that provide a framework for developing operational plans. Each of the traditional functional areas of management can contribute significantly to the realization of viable knowledge-based organizations. [10]

Increasingly, organizations will be regarded as joint human-computer knowledge processing systems. This perspective has important implications for the design, management, and success of an organization [10].

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It is widely accepted that intangible (knowledge or intellectual) assets are the major drivers of corporate value and growth in most economic sectors, but the measurement of these assets has so far been neglected by managers, accountants, and financial analysts in valuing investment projects [4]. Yet, according to the authors' point of view one of the most important resources in the knowledge society should be the intellectual capital.

In general, taxonomies of intellectual capital acknowledge three primary types of capital: human capital, structural capital and customer capital.

Thought leaders describe intellectual capital and its components. According to Saudah Mark E. Van Buren [8] elective Intellectual Capital Indicators are [4]:

- Human Capital (Management experience, Organizational learning measure, Management credibility etc.),
- Process Capital (Strategy execution, Quality of decisions, Percent of company effectively engaged with customer etc.),
- Innovation Capital (Number of copyrights/trademarks, Number of patents used effectively, R&D productivity etc.);
- Customer Capital (Market growth, Customer needs met, Marketing effectiveness, Market share etc.).

Intellectual capital can be defined as consisting of human and structural capital. Structural capital can be decomposed into organizational and customer capital or internal and external relations. In this context, intellectual capital is the value generated from resources not conventionally found on the balance sheet [7].

As we know, knowledge is not separable from human capital. Therefore the following definition will characterize core of knowledge: "Knowledge is the result of learning. Knowledge is the internalization of information, data and experience. Tacit Knowledge is the personal knowledge resident within the mind, behaviour and perceptions of individual members of the organization. Explicit Knowledge is the formal, recorded, or systematic knowledge in the form of scientific formulae, procedures, rules, organizational archives, principles, etc., and can easily be accessed, transmitted, or stored in computer files or hard copy" [10]. According to the authors' point of view knowledge can be considered as the transformation of information and value added of human capital. Knowledge can be used to create new information and new knowledge.

The authors assess the above-mentioned definitions and make the following conclusions:

- Knowledge and information are prime commodities in today's 'knowledge-economy' where economic

enterprises are increasingly knowledge-based and technology-driven;

- Knowledge can be used to create new knowledge by using information, creativity of human capital, and experience.
- Computer technologies are driving force for information gathering, processing and storing.

Trends in development of knowledge society create changes in education system and force institutions of higher education develop new approaches for teaching, learning and study processes. It is a challenge for system as a whole, and especially for universities with long traditions and history.

Education institutions are directly involved in development of society of knowledge because university is the highest level educational institution where one studies for a degree.

Universities are influenced by the turbulent change of environment – impact of globalization and technologies requires a lot of strategic and structural change. Many of the public universities in the Baltic States are not flexible enough for effective change, but authors believe that ever-growing presence of the information technologies in higher education institutions will support information exchange.

The number of higher education institutions changes every year, especially in the Baltic States and Latvia. According to the statistics, there were 34 higher education institutions (20 of which are public) and 26 colleges accredited in Latvia in 2008. [3] According to this data there are 14.8 institutions of higher education per 1 million inhabitants. In 2006 Latvia took 1st place in Europe by the number of students per capita. At the same time there are 22 universities (143 200 students) and 28 colleges (56 300 students) in Lithuania, and it ranks 5th in Europe by the number of students, estimated per 1000 of the population (approx. 67 % of the population in the age group 18-24).

While institutions of higher education become main driver for development of knowledge society, there are a lot of problems and challenges to face along this path. Among the many difficulties for education system in the Baltic States the authors would like to emphasize the main two:

- Interaction between education, higher education and labour market in the Baltic States;
- Knowledge vs. skills in the offer of institutions of higher education.

II. LABOUR MARKET, EDUCATION AND EMPLOYMENT OF GRADUATES

National development plan of Latvia and long term economic strategy states that Latvia needs more qualified workers and the qualification level of employed should be increased dramatically, particularly in the fields of natural sciences and engineering. The same scheme concerns also professionals with higher education. Employers' research shows that labour market needs more highly qualified labour force in many professions and qualifications, for example, accountancy, engineering, ICT, etc. Those specialists who are in labour market for several decades need re-training and continuous education. [6]

In authors' opinion the most topical employment problems in Latvia are:

- relatively high unemployment rate (considerable long-term unemployment, which is particularly high among people with lower education, high unemployment among youth, considerable regional disparities in respect of the rate of unemployment in different regions);
- relatively low rate of employment lagging behind the average EU level;
- low rate of entrepreneurship development, as well as reduction of the number of jobs in some sectors;
- the necessity to create new jobs in certain sectors;
- employee-friendly system of remuneration (including taxes and social benefits);
- raising of quality of workforce in line with labour market requirements.

Recently employers have started to take more active part in realization of professional or vocational education, yet this co-operation is still insufficient. Also, the rights of social partners to take an active part in vocational education and training are secured in legislation, namely in the Law on Vocational Education and "Procedure how the State delegates public organisations separate support and management functions of vocational education".

Up to now, there is no appropriate mechanism for obtaining data about the skills required in the labour market, which is crucial in order to meet medium – and long – term needs of occupations. To do that, furtherance of research on the labour market issues is necessary. One of the solutions would be setting up a research centre for labour market research and monitoring, focusing specifically on the education needs.

The main problems are involving social partners in development and actualisation of the occupational standards and subsidized practice placements. In order to make increase the interest of enterprises it is necessary to develop stimulating factors for closer co-operation with professional education and educational establishments (schools, universities etc.).

Authors believe most of the schools, universities and training centres in Latvia are very poorly equipped, equipment is old – only few have quite good equipment, but this depends on the enthusiasm of the management of educational establishment to a great extent. Practice and apprenticeships could to some extent substitute the practical workshops in schools. For that, even closer collaboration with employers is needed.

It is slightly easier to equip vocational school or training centre, but equipping technical universities or professional programmes is a big problem. The quality of professional higher education programmes is not as good as labour market demands.

The employment prospects for most of the higher education graduates worldwide are bleak for a number of reasons, including the negative effects of the "massification" (mass-production) of higher education, rapid technological change, crisis in the conception of work in highly developed societies, and the neo-liberal political and economic agenda. A number of survival strategies are proposed to students as well as to improve the link between employers and higher education institutions so as to improve the study/future employment match. Students are advised to be flexible, able and willing to

innovate, entrepreneurial, proactive, and to not only be willing to take risks but also consider risk and uncertainty as forms of opportunity.

The problems faced by many graduates of higher education institutions when seeking employment far outweigh the bright side of the graduates' labour market.

Substantial graduate unemployment is reported in many relatively wealthy countries as well as in the developing ones, for example, in Latvia. In most of the countries, the unemployment quota among graduates is quite clearly smaller than that of the total labour force. Nevertheless, there is considerable public and, possibly, private investment in higher education, as well as the belief – at least in the past – that his sector provides sound returns. Hence, the unemployment of its products – i.e., graduates – is bound to be viewed more critically than overall unemployment. Furthermore, investment in higher education (as compared to investment in vocational or upper secondary schooling) does not necessarily provide a better return from the standpoint of investing in human capital. The increased interest in higher education cannot, thus be attributed to the certainty of its return. Rather, the interest illustrates that most young people are optimistic of that, in general, they themselves will do better than the average graduate.

One should not be surprised if the concerns regarding graduate employment are only translated into vague proposals for improvement so far as the competencies of graduates were concerned.

It might be argued that political fads to improve higher education will always come and go. First they flourish, but then are discarded – they are perceived as being only one amongst a number of measures suitable in a complex overall setting that becomes better understood after each period of exaggerated hopes.

The changing qualification requirements obviously have far-reaching implications for the content of learning and the processes of teaching and learning.

Important is role of research on higher education or its links to employment. Many players in higher education tend to preach that progress in their area of expertise can only be achieved if systematic knowledge is acquired through research. Yet, when it comes to general issues of higher education, the same experts believe that intelligent amateurism will suffice. One has to admit that higher education research has not always been sufficiently relevant and sound in theory and methodology to challenge these claims.

The authors have to admit that the communication and networking skills required later in life to express varied needs and interests as well as seek mutually acceptable solutions are not easily acquired through higher education in its present form. Conversely, the needs of society in general are not clearly represented in existing mode of communication in higher education in Latvia. The declining role of government might further aggravate this issue. Employers and higher education institutions have the responsibility of fostering new modes of communication that do not marginalize the voice of society at large.

III. KNOWLEDGE AS A BASIC OFFER OF EDUCATION INSTITUTIONS

In spite of different external impacts education system offers just two basic assets – knowledge and skills (see Fig.1).

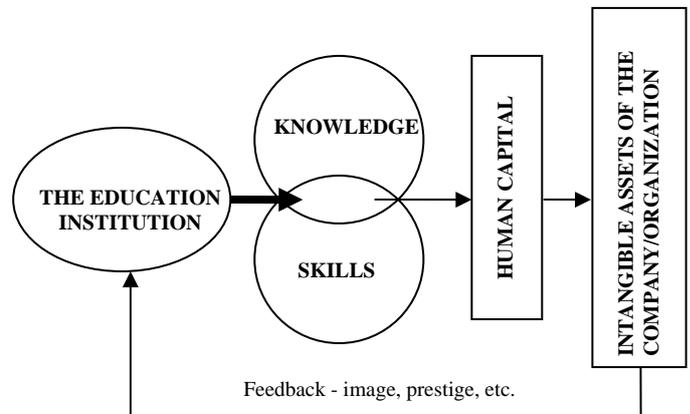


Fig. 1. Value chain of the education institution

Knowledge culture refers to human (human capital) activities (understanding of information and transformation of it into knowledge, developing criteria for valuing of knowledge, human activity, classified experiences, encoding of knowledge and information, way of communication etc.). The culture of knowledge creation directly affects intensity of knowledge which transforms in human capital and intangible assets of organization.

Therefore it is important to understand the role of knowledge and information in the intellectual capital of organization or company

There is a number of definitions describing the *knowledge*. In the Longman Dictionary of Contemporary English *knowledge* is explained as the facts, skills, and understanding that one has gained through learning or experience [5].

In the *Wikipedia* dictionary *knowledge* is defined as the awareness and understanding of facts, truths or information gained in the form of experience or learning (a posteriori), or through introspection (a priori). Knowledge is an appreciation of the possession of interconnected details which, in isolation, are of a lesser value.

Another definition of knowledge says it is organized or contextualized information which can be used to produce new meanings and generate new data [1].

Knowledge is not an entity by itself; it has to be connected to things, phenomena or relations. It is knowledge *about* something rather than knowledge *per se*. Therefore, knowledge must be explained by showing how its flow contributes to making an issue useful to somebody or something. The experience of Danish companies demonstrates that the process combines four elements: narratives, challenges, efforts and numbers. This model suggests that knowledge is a flow and that numbers are important in the account of how knowledge works in a company. The flows between narrative, challenges, efforts and numbers constitute

a connected network of heterogeneous elements that together explain how knowledge works in the firm [7].

At the same time labour market requires many different skills. These skills can be developed within a university, but this requires changes in study programmes, study processes, methodology etc. It is not an easy task for the universities with long history and traditions, especially if they are not flexible.

Today we can observe that there are differences in study quality between universities and business schools, between private and state institutions. One of the most important questions for education institutions is to find equilibrium for the whole society.

Accordingly, the authors' conclude that in a knowledge society every educational organization has to find balance between knowledge and skills in their programmes, taking into account the pressure of many external circumstances, such as:

- technology development;
- political and legal regulations,
- market demand, especially labour market demand,
- the voice of the customer,
- demography, economical situation etc.

Small countries like Latvia and other Baltic States with specific local market conditions, national language and local (national) peculiarities have to be very creative in development of their education system. The authors believe that creativity would positively stimulate overall development of knowledge society in Latvia.

IV. CONCLUSION

The research helps understand the particularities of education system development problems in Latvia. There are common problems in the higher education in Latvia and many other countries. The authors have summarized different opinions [9] on problems in higher education establishments (universities, colleges etc.), most of which, stem from four fundamental issues:

1 - What kinds of services should they provide? Society expects higher education institutions to perform multiple roles, but these roles of universities and colleges are inextricably intertwined.

2 - How much and how diverse service should be provided? In other words this problem is the financial crisis of higher education. Legislative appropriations to public institutions have not kept pace with growing enrolments and rising costs, thus limiting funds available for development.

3 - What is the appropriate institutional structure? Does the existing structure facilitate providing the appropriate kinds and quantities of higher educational services relative to other goods and services desired by the society?

4 - Who should pay for it? Should the government (all the taxpayers) cover the costs of producing the services of higher education or should the costs be covered by students and their families?

The research contributes to better understanding of education system challenges caused by development of knowledge society. However, the field of research is very vast and this study presents just an insight into the scope of the

different questions that ought to be discussed in the higher education institutions.

In the knowledge society education should be based on the knowledge triangle – research, education and innovation, the core factors in economy development. The goal of higher education in the context of sustainable economy development must be oriented towards flexibility, evolution and continuous progress. The responsibilities of higher education stretch far beyond university and so in a knowledge society it is highly important to focus on strengthening the links between public and industry.

“The creation, development and application of knowledge in our societies today – is one of the major factors in economic development and is increasingly at the core of a country's competitive advantage in the global economy.” (World Development Report 1998/99)

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