

THE BASIS FOR DEVELOPMENT FOR E-LEARNING AT UNIVERSITIES IN ESTONIA

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Abstract

Information and communication technologies (ICTs) have become of key importance for many people throughout Europe. Active use of ICT often means better prospects for work, information or social relations for individuals. ICT helps to realize major advances in social services, healthcare or education, is a major contributor to productivity growth, and opens up many business opportunities in Estonia.

As a result of a series of market reforms and the relatively rapid achievement of macroeconomic stability, the Estonian economy has grown at an average of over 6% a year since 1995 with growth rates peaking at 10.5% in 2005 and 11.4 in 2006, making it a star performer in the EU. The Estonian GDP per capita, taking into account the purchasing power parity, has increased from 51% of the EU25 average in 2003 to 65% as of 2006.

Bertelsmann Transformation Index in 2006 ranks Estonia as the second most successful after Slovenia among 119 transformation countries in the world.

Since the 1990s Estonia has achieved remarkable successes in information society development. The major factors that have affected as well as contributed to the evolution of information society in Estonia include the economic factors, active role of the public sector, technological competency, and socio-cultural factors. Such rapid economic growth and its direct impact (e.g., increases in tax revenues to cover State ICT-investments) or indirect impact (e.g., increases in living standards and thus more widespread home ICT-infrastructure) have had definite and positive impact on the Estonian information society development.

Estonian successes in information society development is almost impossible to cover the developments of the more than 15 years within one short overview, but in order to understand success factors and barriers as well as future challenges for longer perspective have to be considered.

Estonian success in information society is widely recognized. For example the *Global Information Technology Report 2006-2007*, which uses a comprehensive tool for measuring the progress of and identifying the obstacles to information and communication technologies development worldwide, has ranked Estonia on the 20th position among the observed 122

countries. Economist Intelligence Unit has ranked Estonia 27th among the served 68 countries, while considering it the leader in Central and Eastern Europe.

Over the years Estonia has been ranked in high positions in international comparisons measuring e-readiness not only among Central and Eastern European countries, but also among the old EU member states and leading ICT countries. The UN Global E-government Readiness Report ranks Estonia as among the top 22 countries in its 2005 Web Measure Index.

Internet usage, which mostly characterizes information society development, has been growing rapidly over the years. Surveys by TNS Emor, the leading market information and consulting company in Estonia and the Baltic countries, indicate that 63% of people aged 15-74, or 65% of those aged 6-74, are Internet users as of 2007.

As of 2006 46% of individuals could use Internet at home and the share has been constantly growing in Estonia, the EU15 respective indicator was 45% and for EU25 43% in 2006 correspondly. The second popular usage place in Estonia is working place, followed by place of education. Public Internet Access points by individuals have been reduced from 6% in 2004 to 2% in 2006. Estonian Internet usage differs from “EU average” by the following indicators such as financial services (mainly Internet banking) and reading/downloading online newspapers/news magazines. E-Government services are also widely used. At the same time, Internet is still relatively less used for educational courses (and for e-learning in general) and for e-business.

Attempts to build up an information society as well as knowledge-based economy in Estonia can be traced way back in Estonian politics and policy. In practice all the above mentioned tools of usage of high technology have been introduced in Estonia at the beginning of 90-es. Officially these changes were recognized in 1998, by adopting the main policy document on Estonian information society policy – *Principles of Estonian Information Policy* – which was approved by the Parliament. An updated version of the strategy – *Principles of the Estonian Information Policy 2004-2006* – was approved by the Government in 2004. It reiterated the priority given to the development of e-Government services, stressing the main objectives including: the introduction of e-Services in all state agencies together with respective training and awareness-raising activities for the whole society; keeping the level of ICT use in Estonia at no less than the average level of the EU, and hence ensuring the efficiency of the Estonian economy and society in general; and increasing the export capacity of the IT sector.

The new *Estonian Information Society Development Plan 2013* sets out objectives covering social, economic and institutional dimensions. It acknowledges that no additional disparities or divides are to be created in developing an information society, and that an information society should enable the reduction of current gaps.

There is another very important policy field that has relevance on the information society development; namely, research, development and innovation (R&D&I) policies have potentially very direct influence on the societal development.

Estonia is well known for its ICT initiative on the general education level, namely the Tiger Leap Foundation established in 1997 to offer support in procuring ICT equipment for general educational schools. While the Foundation enjoyed strong political support and resulted with increasing the penetration of ICT in schools, there are profound problems unresolved.

The target groups of this development plan are students who are given education at the level of general and vocational secondary education, teachers and school leaders, teacher training establishments, curriculum developers, creators of educational materials, school headmasters and educational institutions. The objective of the development plan is to increase learning quality and effectiveness via ICT utilization, making e-learning part of the everyday curriculum and establishing preconditions in the following five priority fields of development:

- production of e-learning content and the offering of services;
- achievement of competencies and skills required for e-learning;
- e-learning management;
- provision of a sustainable development of ICT infrastructure;
- implementation of surveys and analyses to explore learner needs and utilization of results.

There are successful initiatives in management of administrative information in education. For example information system called SAIS (SissAstumise InfoSüsteem) aims participating universities to consolidate the whole enrolment information, process and decision-making in one site is the first in the EU central enrolment system. This system uses national ID-card as authentication tool aside from bank authentication.

In 2009, Estonia will be integrated with European and the global education system. Our educational system will guarantee the most flexible opportunities for development according to the skills and needs of all learners. In addition to traditional learning methods, modern motivating learning methods will be highly valued, project-based learning in the context of

virtual learning communities and communication and learning skills development with the help of ICT will be among them. E-learning will have become part of the school study organization due to the number and quality of available and useful ICT tools. Skills and knowledge acquired at school will molded the skills of learner self-expression. Collaboration in a creative study process, becomes an active part in the social world and is open to continuous studies in order to adjust to the changes. The development, observation and quality of the educational process are guaranteed by the education system.

Currently Estonian Information Technology Foundation that is administering the National Support Program for ICT in Higher Education Tiger University, Estonian e-University and Estonian e-Vocational School is key player in this respect.

Estonian e-University is a consortium of universities and applied universities. Estonian e-University was founded in February 2003. Consortium consists of Estonian Ministry of Education and Research, Estonian Information Technology Foundation and eight Estonian leading universities.

Author is using the SWOT analysis to show development and changes of the new techno-economic paradigm result with both winners and losers.