INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR INCLUSION

Latvia

1. Policy Frameworks

This information was provided by Guntis Vasilevskis (Head of the National Centre for Education).

1.1 Policies that impact on ICT for inclusion in the compulsory school sector

The informatisation programme for the education system, 'Information and Communication Technologies for Quality Education for 2007–2013', was adopted by the Regulations of the Cabinet of Ministers No. 812 of 20 October 2006. The programme states that the use of different technological means (e.g. computers, Internet, mobile phones, etc.) has an enormous impact on improving quality and increasing the appeal of the education process. The provision of ICT in all educational programmes/courses/subjects offers the opportunity to use all the advantages offered by technology: to connect text in multimedia, to create three-dimensional graphics, to make still and moving images, to create audio and video files, to create tests that meet learners' skills, to differentiate languages, etc. The role of the Internet is significant in providing technological and informative accessibility of learning and methodological materials and an interactive learning environment – learning materials, pedagogical tutorials and test materials. The Internet is an excellent environment for organising interest group networks and discussion forums for the formal and informal exchange of experiences, regardless of the participants' physical location. The abovementioned programme envisages the following course of action: development of electronic study materials; development of the education information system; the increase of ICT competences amongst educational staff; and updating and maintenance of the education ICT system. In the field of education, the main drivers of the programme are the Ministry of Education and Science, which organises procurement procedures for hardware and software, and the founders of educational institutions, mainly local municipalities.

1.2 Current policy on ICT for inclusion in relation to the main project themes

1.2 (i) ICT as a tool for promoting equity in educational opportunities.

Access to high-speed Internet, the availability of modern computers and access to electronic resources ensure equal opportunities for learners in urban and rural areas and for learners with different levels of ability and knowledge. Many interactive learning materials provide the opportunity for individualisation of the education process.

1.2 (ii) Access to appropriate ICTs as an entitlement

ICT is mainly provided within the framework of national programmes (at the level of European Regional Development Fund – ERDF – projects), ensuring equity. Local municipalities implement their projects and take part in all the national level projects and enjoy the right to choose the most necessary ICT for their educational institutions.

1.2 (iii) Training of educational staff in the use of general and specialist ICTs

At national level, the teacher in-service training programmes that have been implemented are based on modules where the teachers themselves can choose the appropriate module for professional development. The in-service training is offered to develop ICT usage competences (computer proficiency, interactive whiteboards, etc.) in education in this system of modules.

1.2 (iv) The promotion of ICT research and development requiring a multi-stakeholder approach

Various interactive learning materials are developed in the framework of different European Social Fund (ESF) projects. Publishing houses prepare textbooks in different subjects in electronic formats. In co-operation with partners, professional development is also offered as e-education.

1.2 (v) Data collection and monitoring in the use of ICT in inclusion

The Ministry of Education and Science develops, updates and maintains the National Education Information System. This encompasses all educational institutions, all teaching staff, all learners, school curricula, teacher tariffing (data about all work done by teachers and calculation of payment for their work), information about ICT and other learning and teaching materials available to educational institutions, as well as other data that is relevant to school organisation for the Central Statistical Bureau, social services and other stakeholders.

1.3 Strategic plans for implementing policy on ICT for inclusion

The main tasks for implementation of the ICT policy are to increase access to and use of electronic learning materials and to offer the possibility of individualising learning, thus increasing inclusion opportunities. At present, special focus is being placed on the implementation of electronic textbooks and learning materials. In the summer of 2012, the Ministry of Education and Science announced applications for grants to develop interactive, electronic learning materials for pre-school, primary, secondary and vocational education. Twenty applicants received grants, 13 of which were schools, while others were NGOs with experience in developing educational materials for different levels of education.

1.4 Monitoring and evaluation of policies or strategic plans relating to ICT for inclusion

Content was developed for the ESF project 'Mathematics and Natural Sciences for Grades 7–12' (national programme). Electronic materials and an e-environment were developed for acquiring this content and all schools have access to these materials and environment (www.dzm.lu.lv). During the project, which ran from 2005 to 2010, all the developed materials were approved. In the framework of the ERDF project, all secondary schools were provided with state-of-the-art laboratories and studies for natural sciences (physics, chemistry, biology, mathematics) and relevant ICT resources (interactive whiteboards, computers, multimedia projectors, digital gauges and other equipment). From 2010, in the framework of an ESF project, the Ministry of Education and Science implemented professional development courses for teachers, where ICT is the theme of separate courses and included within every school subject course. Some 15,500 teachers, or 65% of all general education teachers, attended such courses in 2012.

1.5 Main policy developments in ICT for Inclusion that have taken place since 2000

Please see above.

1.6 Current issues in relation to ICT for Inclusion

The central issues our country is facing in relation to ICT for inclusion are the development of various teaching and learning materials to help individualise the education process and the development of specific software to help learners with different special educational needs (SEN) to fully participate in learning. It is also important to improve the ICT competence of those teachers who work with learners with SEN. The very rapid

development of ICT gives wider and more diverse options in the use of technology. That is why it is important that teachers acquire skills on how to use the latest technology, such as tablet PCs, smartphones, etc.

1.7 Important short and long-term developments in ICT for Inclusion

An ideal situation cannot be achieved in the rapidly changing field of ICT, but it is very important to reach high levels of competence amongst teachers and to have state-of-the-art equipment for facilitating learning by all learners.

2. Country Practice

This information was provided by Guntis Vasilevskis (Head of the National Centre for Education) and Mudite Reigase (ESF Project Manager).

2.1 Main developments in practice in ICT for Inclusion since 2000 in relation to the main project themes

2.1 (i) ICT as a tool for promoting equity in educational opportunities

From the late 1990s and the early 2000s, starting from grade 6 (12–13 year old pupils), IT became a compulsory subject. New software was introduced in the learning process of visually and hearing impaired learners. By 2005, the majority of schools had Internet access so new forms of learning materials were introduced. At that time, materials in foreign languages were mainly used for different school subjects. The first teachers' shared materials appeared on the webpage of the Ministry of Education and Science. The Ministry developed a special website for teachers and schools that is currently updated. By introducing ICT in the education process, schools have facilitated learners with different needs.

2.1 (ii) Access to appropriate ICTs as an entitlement

From 1998 to 2004, the Ministry of Education and Science successfully implemented the Education System Informatisation project in Latvia. During this project, schools were provided with computers, the unified education information system was developed, the development of teaching materials in electronic form was initiated and teachers were given the opportunity to improve their computer skills. In 2007, with the support of ESF funding, the abovementioned system was transformed into separate activities, through which the Unified System of Education Information, the Information System for State Tests and the Interactive Portal for Teachers, Learners and Parents, SKOLAS.lv (www.skolas.lv), were developed. The ESF project 'Mathematics and Natural Sciences' was implemented in order to improve the content of studies, providing updated content based on the principle of learning outcomes, support materials for learners and teachers (including e-materials), teacher professional development and state-of-the-art equipment for school laboratories, which was approved in pilot schools. Since 2011, an ERDF project has been providing financing for creating state-of-the-art classrooms in all mainstream schools for mathematics, physics, chemistry and biology.

2.1 (iii) Training of educational staff in the use of general and specialist ICT

During the ESF project 'Mathematics and Natural Sciences', all mathematics, physics, chemistry and biology teachers were educated on the use of ICT in the education process. In the ESF project 'The Professional Development of Teachers of General Education' (from 2010), teachers can choose and undertake those further education modules that are most needed for their work. From 64 modules, 7 are about ICT, but almost all the other modules include the important issues about the use and possibilities of ICT. Several

interactive (electronic) learning materials have been developed for learners with severe and multiple disabilities, language impairments and learning disabilities in another ESF project, 'The Development of a Support System for Learners with Disabilities'. Teachers are trained to work with these materials on different media – interactive whiteboards, smartphones, tablets and computers. A contract has been signed with Symbols Worldwide Ltd. T/A Widgit Software for the translation and development in Latvian of the software Communicate: SymWriter, which will provide support to learners with learning, reading and writing difficulties. Teachers and support staff will be trained to use this software to help learners. The software will be provided to all schools and pre-schools.

2.1 (iv) The promotion of ICT research and development requiring a multi-stakeholder approach

In the ESF project 'The Development of a Support System for Learners with Disabilities', all the e-materials that have been developed involved different stakeholders: teacher trainers and researchers from higher education institutions, teachers from mainstream and special education settings, specialists, parents of children with special needs, as well as children with special needs who tried out the materials at all stages of their development. However, this approach is not very widespread at present.

2.1 (v) Data collection and monitoring in the use of ICT for inclusion

Practitioners mostly get information about ICT use and the latest developments in using ICT in learning through working seminars and on professional websites. Many interesting ideas about the use of different media and software were obtained during study visits to various European countries.

2.2 ICT to promote learning in inclusive settings

2.2 (i) Country-based networks to support teachers in using ICT to promote inclusive learning

There are different practitioners' associations and experiences are exchanged during practical seminars, open lessons and workshops. A new e-magazine is published which includes articles about the use of ICT in lessons of different subjects and new methods of assessment. There are also networks of NGOs that are working closely with educational institutions.

2.2 (ii) Initial teacher education in using ICT to promote inclusive learning

The average age of teachers in Latvia is 49.8 and it is a challenge for some of these teachers to feel comfortable using ICT, because in their initial teacher education they did not have anything remotely like ICT. In the last 15 years, all student teachers have acquired ICT skills in their initial teacher education, but it is quite evident that it is not enough. As higher education institutions do not develop ICT materials, it is obvious that teachers are not ready to use them in their teaching. However, the situation is improving very rapidly. Many teachers are learning to use e-materials on tablets and smartphones.

2.2 (iii) Practical support in classrooms to help teachers' use of ICT to promote inclusive learning

It is up to educational institutions to support their teachers in their use of ICT in the classrooms. There should be a staff member with appropriate training in computer sciences or the municipality must provide such a specialist on a regular basis.

2.2 (iv) Important information sources about new developments, hardware and software products and ideas for using ICT to promote learning in inclusive settings

The Ministry of Education and Science, in cooperation with a publishers' association, organised a seminar entitled 'Bridge of Opportunities', where information on different new learning materials, including e-materials, is presented to school representatives and other stakeholders. The exhibition 'School 20..' is also organised every March, where many different companies, publishers, schools, higher education institutions and NGOs present materials and study opportunities to a wide range of the population.

2.3 Current obstacles to using ICT to promote learning in inclusive settings

- the readiness of teachers to use ICT in their teaching;

- provision of state-of-the-art ICT hardware for schools;

- lack of understanding of the need for ICT in schools from those who are responsible for funding at local level.

2.4 Factors that support using ICT to promote learning in inclusive settings

- keen interest from learners and parents;

- rapid development of ICT and its widespread use in everyday life;

- possibility to individualise teaching and learning.

2.5 Perceived short and long-term developments that will have an impact on ICT for Inclusion practice

The main task for our country is to prepare all teachers to use ICT effectively in their teaching, so that they can support every learner in the education process. The other goal is to provide every school with modern hardware and software, so that learners can get acquainted with the latest developments in ICT in order to be also able to use it outside the learning environment.