Hungary

Country Report on ICT in Education

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1 THE EDUCATION CONTEXT

1.1 EDUCATION REFORM

National Core Curriculum

Developing key competences is a priority of educational policy. The National Core Curriculum 2007 document established the system of key competences recommended by the EU, and the approach has become general both in educational theoretical considerations and in pedagogical practice as well.

With the adoption of the National Core Curriculum 2007, competence-based teaching is emphasised in public education; acquiring the key competences needed for lifelong learning receives greater support in the school syllabus, curriculum framework and textbooks. Learning processes supporting skills and capabilities needed for everyday life get greater emphasis generally in the public educational system and indirectly in the whole educational sector.

The nine fields of key competences which appear in the National Core Curriculum as needed skills are the following:

1. Communication in the Mother Tongue
2. Communication in Foreign Languages
3. Mathematical Competence
4. Competences in Natural Science
5. Digital Competence
6. Learning to learn
7. Social and Civic Competences
8. Sense of Initiative and Entrepreneurship
9. Aesthetic and Artistic Awareness and Expression

Intelligent School Programme

Creating the school of the 21st century is a wide-ranging programme for the renewal of the entire public education system to prepare young people for lifelong learning through competence-based education. The Intelligent School Programme, a sub-programme of this initiative, provides a framework for the development of an up-to-date public education infrastructure, necessary for gaining and developing the competences required for lifelong learning and the labour market.

“The Development of the IT infrastructure supporting pedagogical and methodological reforms” (2007)

The Social Infrastructure Operative Programme supports the development of the educational infrastructure. The direct goal of TIOP 1.1.1 is to establish ICT infrastructure in Hungary that provides equal access to knowledge and key-competences for lifelong learning. A goal emphasised as a “priority” in the programme is the IT development of the formal education, namely to establish the “Intelligent school”, which primarily focuses on the development of IT infrastructure. The development thus ensures a standardised basic IT infrastructure for all public education institutions (except kindergartens), which is an essential condition for distributing competence-based education and also contributes to the equalisation of local differences.

“The Development of the IT infrastructure supporting pedagogical and methodological reforms” (2009)

This programme aims to directly contribute to the implementation and distribution of a strong ICT supported, 1:1 (one student, one computer) educational environment in public education. The 1:1 educational environment is the next generation of the educational tool system supported by ICT, which focuses on individual and individually-organised team-learning processes besides frontal teaching, and which supports even more efficiently the capacity for individual learning and the development of cooperative techniques. The programme also contributes to the integration of digital content during teaching aiming at competence development.

Infrastructure development likewise contributes to the distribution of electronic measurement/evaluation and electronic educational administration.

Parliamentary elections will be held in spring 2010; future educational reforms will be determined by the new government.

Reform of the upper secondary graduation exam (giving access to Higher Education)

The goals of the reform of the upper secondary education exam in 2005 were the following:
• Formal education should move step by step from factual knowledge – regarded as the “only” knowledge – towards competence development.
• The requirements for the exam are based on skills and knowledge that can be acquired realistically in public education.
• To cease “double examination”: The exam is an entrance exam for higher education; higher education institutions establish ranking lists based on the results in this exam, and on students' other performances in public education.
• Exam requirements are standardised for each subject level; requirements are public and the same in all schools.

1.2 KEY CHALLENGES /PRIORITIES FOR EDUCATION

New Hungary development Plan, Social Renewal Operative Program (Second National Development Plan) eLearning sub-projects:

• Development of eLearning system
• Further development of ICT learning tool system according to the requirements of DTMB accreditation
• Professional and technical support of SROP 3.1.2 project
• e-paper pilot project
• Help-desk service
• eLearning Professional Board
• Elaborating and providing an eLearning mentor and workflow adviser system
• Developing and providing an ICT-based in-service teacher training module-system
• Providing and coordinating ICT-based dissemination activity
• Contribution to the elaboration of the accreditation system for digital learning tools

2. ICT POLICY

2.1. RESPONSIBILITIES

The general aims of educational policy

Educational policy remains a priority field within the Government's programme. The Government regards educational policy as an essential tool for economic development, social cohesion and well-being.

ICT-based constructive pedagogy

The Ministry of Education drafted a long-term educational-IT strategy in 2003 aiming at the implementation and dissemination of ICT-based constructive pedagogy. In order to realise the development of ICT infrastructure in educational institutions, the IT-development norm – the use of which is well determined – was integrated in the budget Act. Developments based on the educational IT strategy and the IT norm are realised from the governmental budget which assumes the overall responsibility of its implementation and results. Moreover, the New Hungary Development Plan is partially financed by the government, and partially by European Union funds (also allocated by the government). Nevertheless, in case of the actual implementation the responsibility is shared:

• The government provides the budget for the overall developments
• Schools and other beneficiaries choose what they will implement

The strategy has four main pillars:

• Internet access
• ICT infrastructure
• Digital content provision
• Teacher training

The development of the ICT infrastructure is provided centrally (except for the Social Infrastructure Operative Program)

2.2. ICT POLICIES FOR SCHOOLS

Teacher professional training – development of digital skills

In the framework of the New Hungary Development Plan, training of 40,000 teachers will be supported with HUF 40bn. The aim is to help to integrate ICT-skills in teaching – so these are teacher in-service trainings with ICT-skills practice. They use individually assigned digital content (framework, tests, quizzes), electronic
lesson administration, online help, tutoring via chatting, tracking development.

**Development of the already procured digital equipment**

In the framework of the New Hungary Development Plan, electronic assessment and monitoring in public education will be realised.

**Digital content**

The aim is to promote the use of digital content (SDT, Sunflower, Realika, Apertus, Mythware) in lessons – meanwhile increasing the proportion of contents developed on the market (compared to the proportion of centrally developed contents) among all used digital contents – and to ensure high quality. Digital IWB content, being the “soul” of the IWB, is also available in almost every subject on the Sulinet Digital Knowledgebase (Sulinet Digitális Tudásbázis).

**Student laptop programme**

Small laptops and the teaching methodology related to them are being implemented in Hungary, first among the Central-Eastern Countries. Most of the winner institutions of the call for proposal in Human Resource Development Operative Programme (HRDOP; Hungarian abbreviation: HEFOP) 3.1.3/B launched the school year 2009/2010 with Classmate PCs developed by Intel (more than 3000 Classmate PC-s were to be deployed in the school year 2009/2010).

The goal of the programme is to distribute tools needed for competence-based educational programs, educational program packages including the use of digital learning contents, to public schools, supported by calls.

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**2.3. ICT PRIORITIES**

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**2.3. ICT PRIORITIES**

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**3. THE CURRICULUM AND ICT**

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**3.1. THE CURRICULUM FRAMEWORK**

**National core curriculum**

The main function of the National Core Curriculum (NCC) is to create the basis for public education. It determines the general national goals, the main fields of education and objectives in the given thematic divisions, taking into consideration the autonomy of the schools.

The NCC defines values, samples of knowledge, interpretation of information and learning for compulsory education. Local curricula have to be in
acCORDANCE WITH THE PRINCIPLES OF THE NCC (TO MEET THESE REQUIREMENTS LOCAL CURRICULUM ARE APPROVED). TEACHERS IN SCHOOLS CAN PREPARE THE LOCAL CURRICULUM IN THREE WAYS: (1) THE SCHOOL TAKES A PREPARED CURRICULUM FRAMEWORK; (2) THE SCHOOL COMPILES ITS OWN LOCAL CURRICULUM BASED ON THE EXISTING CURRICULA AND EDUCATIONAL PROGRAMMES (PEDAGOGICAL SYSTEMS); (3) THE SCHOOL Prepares ITS OWN LOCAL CURRICULUM, BUT IN RELATION TO THE NATIONAL Core CURRICULUM, WHERE THE NUMBER OF LESSONS IS FIXED. WHEN THE SCHOOL Prepares ITS OWN LOCAL SYLLABUS BASED ON THE NATIONAL Core CURRICULUM, IT ALSO HAS TO SUBMIT IT TO THE GOVERNING BODY OF THE SCHOOL FOR APPROVAL.

The requirements of state exams must be taken into consideration in all cases. The NCC fosters developments in public education by orientating teacher training and the continuous professional development of teachers with programmes serving innovation in public education and through the launch of educational calls.

3.2. ICT IN THE CURRICULUM

Informatics is a compulsory subject in public education. ICT knowledge and digital literacy are included in the syllabus of the subject Informatics or Computer Sciences. The range of the themes taught is diverse: it includes word processing and the use of the internet, but also getting to know programming languages.

The IT knowledge field is divided into seven fields by the NCC 2007:

1. The use of IT tools
2. IT-applying knowledge
   2.1. Processing everyday written forms, aiming at conciseness and aesthetic appearance.
   2.2. Applying databases, data tables, searching in databases
3. Information technology (problem solving with IT tools and methodology)
   3.1. Choosing the tools and methodology needed to solve a certain problem
   3.2. Making algorithms, making data models (recognition of the parts of activities in reality for which algorithms can be made and defining these parts of activities in different forms)
   3.3. Modelling simple processes, modifying parameters
4. Info-communication

4.1. Information searching, information disclosure
4.2. Communication forms based on information technology
5. Media informatics
6. The Information Society
7. Library informatics
8. The role of e-commerce in the 21st century

3.3. STUDENTS’ ICT COMPETENCE

Knowledge, skills, attitudes needed: targets set in the National Core Curriculum

The National Core Curriculum 2007 considers digital competence as a key competence: “digital competence comprises the confident, critical use of Information Society Technology (IST) in work, communication and leisure time. This is based on the following skills and activities: recognition, research, evaluation, storage, preparation, introduction and editing of information; and communication and networking through the internet.”

Digital competence means understanding and knowing the nature, as well as the role and possibilities of IST in personal and social life and in work. It includes the main computer applications – word processing, data tables, databases, information storage and handling, possibilities provided by the internet, electronic communication (e-mail, net tools) – in learning, searching and leisure time, in information sharing, and in the field of cooperative networking. One must understand how IST helps creativity and innovation, must be aware of the problems around the authenticity and reliability of the information, and the ethical issues regarding the interactive use of IST.

Needed skills include searching, collecting, processing, critical use of information, and distinguishing real and virtual relations. The use of tools helping to understand, to prepare and to introduce complex information, access to internet-based services, doing research supported by these services, applying IST in the field of critical thinking, creativity and innovation also belongs to these skills. The use of IST requires a critical and mature attitude towards the responsible use of the accessible information and interactive media. Further to the previously mentioned, participation in communities and networks serving cultural, social or professional goals can also help the development of digital competence.
3.4. ASSESSMENT SCHEME

No data available.

3.5. ICT BASED ASSESSMENT

No data available.

3.6. QUALITY ASSURANCE OF THE USE OF ICT IN SCHOOLS

In the framework of the NHDP “ICT and school development” project, an ICT-qualification framework is to be elaborated. The aim of the project is to draw up an indicator system which is capable of measuring the educational IT development of secondary education institutions, and which provides a proper benchmark for further improvements based on a common policy.

Present status of the ICT school development project:

- Analysis of the national and international resources has been done. A pilot measurement will be made this year. According to the plans, in the 2-4 years of the research the main goals are powerful development to integrate ICT and dissemination.

Indicators will be developed and organised according to the following steps:

1) Identifying international resources
2) Identifying national goals and planned monitoring activities (where these exist)
3) Forming professional working groups to review steps 1 and 2 and to integrate the results of this into the process
4) Workshops including all stakeholders
5) Pilot version, pilot measurement
6) Finalisation

Presently the indicator system is being elaborated by experts in the framework of workshops including stakeholders. Two publications will be published soon. The current fragmentation of the “ICT-mosaic” (studies, lesson-plans, calls for proposals, exam works, ideas, recommendations, collection of links) is being tackled and “best practice” is being disseminated. The report was to be published in April 2010. The “School portrait”, monitoring the effects and changes of ICT in different schools of the country, is being edited.

4. DIGITAL LEARNING RESOURCES AND SERVICE

4.1. CONTENT DEVELOPMENT STRATEGIES

In the framework of the New Hungary Development Plan, HUF 21bn will be used for digital content development. The aim is to promote the use of digital content (SDT, Sunflower, Reallka, Apertus, Mythware) in lessons – meanwhile increasing the proportion of contents developed on the market (compared to the proportion of centrally developed contents, which are free to use) among all used digital contents – and to ensure high quality. Digital IWB content, being the “soul” of the IWB, is also available in almost every subject on the Sulinet Digital Knowledgebase (Sulinet Digitális Tudásbázis).

4.2. E-CONTENT DEVELOPMENT

Sulinet Digital Knowledge Data Management System

Sulinet Public Education system (www.sulinet.hu) was created as a necessary response to the restructuring
of the Hungarian educational system, and to make the best use of ICT infrastructures, offering students and end-users access to knowledge, data and information in new and improved ways.

Changes in the expectations of the Hungarian education system have been so great over the past few years that the Ministry of Education has conducted a complete reorganisation, rendering it more efficient and user-friendly. These changes have mainly come about as a result of the continuously changing characteristics of the Hungarian (and international) labour market and its requirements.

The key changes needed to address this situation were identified as the following:

- The enhancement of core service characteristics.
- Increased use of digital tools.
- Skills to handle digital content.
- Wide use of open standards.
- The introduction of flexible, responsive learning programmes.
- The introduction of the notion of education for life (duration and scope).
- The introduction of policies and programmes to enable social inclusion.

In order to implement these changes, great use has been made of ICTs, which are already used widely at national and local government levels. As a first step in the reorganisation, the Ministry of Education founded Education Kft, a public company which now provides several eTechnology-based teaching programmes, materials and related services.

The Sulinet programme provides internet access, as well as online content and advice to the whole Hungarian public education structure and includes:

- 9,800 new learning objects
- 3,000 animations
- 600 activities
- 2 types of interactive software
- 2 complete sets of interactive curricula
- More than 10,000 images
- 510 movies
- 20 volumes of the periodical História, 5 specialist books and the Imagine LOGO software in digital form
- 4,600 learning objects revised according to the demands of the Sulinet Digital Knowledgebase

Contents for teachers and students in grades 7-12 (topics of the knowledge fields according to the National Core Curriculum) can already (summer 2009) be found on the portal; the content repository for grades 1-4 had not yet been opened. SDT contains more than 11,000 digital contents for lessons, and altogether more than 1,000,000 learning objects, categorised in thesauri, that can be used individually.

### 4.3. USER - GENERATED CONTENT

**Teachers** themselves prepare digital contents with the help of IWB software. In some schools “digital exercise-banks” have created, where teachers can integrate their own content by subjects, and can use content prepared by other teachers. This system has a very positive impact on teachers’ professional cooperation, and provides an intensive internal in-service training and self-training.

In Hungary, in the framework of subject meetings during the school year, several in-service training programmes are held for teachers to improve their knowledge. At the end of the school year results of the programmes are summarised and teachers “peer-learn” based on their own experiences.

The **Sulinet Digital Knowledgebase** (SDK) is a content management system, which contains more than 11,000 digital contents for lessons, and all together more than 1,000,000 learning objects, categorised in thesauri, that can be used individually. SDK’s priority is to ensure reusability and revalorisation of the created digital contents; therefore the elements are stored in a tool-independent repository, the contents of which can be built in different ways supporting learning both in schools and at home. SDK can be reached on the Sulinet portal on the Web together with a content editor module and a module that helps editing based on categories.

In addition, **companies and schoolbook publishers** offer a variety of digital contents for teachers. Contents are prepared using high-quality graphical elements with the help of practising teachers, as a result of which the contents can be handled very easily without any IT qualification: there are no unnecessary, complicated menus. Neither the content nor the form of
these complete digital contents – which can be bought mostly on CD-ROMs – can be modified by the user. Typically, methodological instructions are also attached to the contents, and – varying from content to content – contents can be used as a part of a lesson or as a tool for an entire lesson.

4.4. WEB 2.0

Officially there is no such initiative, but it is included in the syllabus of the eWinning National Service Centre’s (NSS) accredited in-service training.

4.5. CONTENT SHARING

Hungary is participating in international projects, CELEBRATE, CALIBRATE, MELT and ASPECT, aiming at digital content exchange. The biggest digital content repository, which can be used free of charge in public education, is the Sulinet Digital Knowledgebase.

CELEBRATE, a 30 month-long Information Society Technology (IST) project with a budget of 5 million euros, ended in November 2004, coordinated by European Schoolnet (EUN), aimed at the development of eLearning. Hungarian representatives attended two work sessions of the project on digital content development and on piloting the use of the digital contents during lessons. Sulinet Programme Office chose the 20 attending schools by launching a call for proposals. The programme focused on Maths, Science and Technology (subjects Mathematics, Physics, Chemistry, Biology) with 12-16 year-old students. As a result of fruitful cooperation of 22 partners from 11 countries – researchers from universities, ministerial background institutions, developer companies, publishers – a significant quantity of digital contents, for 3,000 to 5000 lessons, have been created and are available on the internet. Novel features of these contents are that on the one hand they are based on modern pedagogical methodology (they require the active and creative work of the students, they develop problem-solving skills, they loosen the rigid boundaries of the subjects), and on the other hand they can be edited and modified; teachers can create new versions based on the contents, according to their needs.

The CALIBRATE project (Calibrating eLearning in schools) derived from the cooperation of eight ministries of education, and aimed at the exchange and common use of schools’ learning resources. The project was based on three earlier successful IST projects, which were parts of the Fifth Framework Programme of the European Commission (CELEBRATE, ITCOLE and VALNET). The 17 partners undertook:

- the development of an open-source architecture
- the development of an open-source learning tool repository and its implementation
- the use of the repository
- the research and testing of new attitudes.

In addition, Calibrate connected to other EUN-coordinated projects and initiatives (Learning Resource Exchange, LRE).

The MELT (Metadata Ecology for Learning and Teaching) is a 27 month-long content development project, which was supported by the European Council’s eContentplus programme coordinated by EUN. Eighteen partners from both public administration and the private sector took part in the work, which was launched in October 2006. The main goal of the project was to set up a freely available common learning resource database, and to enrich the repository’s contents with metadata that reflect the use of the given learning resources in different learning situations for teachers and students. The eLearning Directorate of Educatio Ltd. helped the successful implementation of the project with one of the biggest quantities of learning resources among the cooperative partners in the international project. The Hungarian partner made available a part of the multiple award-winning Sulinet Digital Knowledgebase for the participating countries’ teachers and students.

ASPECT is a 30 month-long international project supported by the European Union’s eContent Plus programme, with 22 partners from 15 countries, 9 ministries of education among them. The goal of the project is to ensure a sufficient quantity of learning resources – provided by content developer partners – on the existing Learning Resource Exchange (LRE) portal for the teachers and students of European schools. Partners attending the project – IT suppliers, experts, content suppliers – are searching, working out and finally determining the most appropriate standards that efficiently support the search and use of educational contents. Content suppliers will apply the commonly chosen standards to the contents they provide, which will be tested by 40 schools from four
countries. Schools will examine during the tests whether these standards ease the use of the learning contents in education or not.

Based on the results of earlier projects – CALIBRATE and MELT – ASPECT aims to support the participating countries in realising their own eLearning developments based on a common, harmonised strategy.

### 4.6. LEARNING PLATFORMS

**Sulinet Digital Knowledgebase (SDK)**

In recent years approximately 10,000 teachers have been trained to use SDK, and there are plans to train 10,000 more. Besides, many teachers have acquired the use of SDK individually, without any training. A difficulty can be that there are institutions where internet access is not provided in all classrooms; developers try to bridge this gap with offline content players [http://sdt.sulinet.hu](http://sdt.sulinet.hu).

**The Moodle learning management system**

The freely accessible Moodle, a learning management system with free source code, can be personalised for institutions and individuals and provides the possibility to store and access learning content, to organise courses and prepare tests, provides space for cooperation, and creates a virtual learning environment. The participants of the "courses" can communicate as a learning tool, and as a way of learning through fora, via a chat facility. The Moodle learning management system is used in only a few secondary schools; it is mainly used in higher education.

**Hungarian Digital School**

The Hungarian Digital School[^1] is a digital secondary school for adults introduced as a pilot project in 2003. It uses blended teaching methods (distance and traditional learning), integrated into the current legislative framework for secondary education, and it is state financed and free of charge for its enrolled users. The diploma is awarded after four years.

[^1]: [www.digitaliskoepiskola.hu](http://www.digitaliskoepiskola.hu)

The digital school consists of three main elements:

- Networked technology (internet access)
- Digital content portal
- Network of institutions

The portal has been adapted in line with identified methodological needs with a focus on enhanced access to technology, institutional processes and exercises. This includes the assessment and structuring of teacher/student interaction. The decision to utilise tried and tested rather than cutting-edge technology was based on a wish to ensure accessibility in remote areas and for disadvantaged people. As a consequence very few technical problems have occurred.

The portal is the backbone infrastructure that structures student-teacher interaction and orientates the users towards content, methodology and learning. Content has been adapted to methodology i.e. 4 year study, 11 subjects in 20 modules with a fixed number of subjects per module and year being pre-set.

The network of institutions consists of a project centre (virtual school portal, digital material, quality management and methodological support), a regional centre (accreditation of curriculum and examination; digital tutors; overseeing the network of lower level institutions), a number of consultation centres (consultation and examinations), community access points (internet access and mentoring) and local access points.

The infrastructure, consisting of PCs, the portal and naturally the digital educational content, has required €400,000 in investment to date. The solution operates on a per capita state financing scheme for distance learning of £200 per student per year. Currently 500 students are enrolled. Dropout rates are high from first to second year of the four-year programme. Approximately 32% of the students complete the diploma, which is a satisfactory result when compared to the 19% completion rate of traditional adult education.

Consisting of an internet portal, digital courses, online tutoring and community and local access points (for individual access) the virtual school mixes physical presence with online work and teaching. Some physical attendance is compulsory, e.g. initial introduction and examinations, for methodological and
5. TEACHER EDUCATION FOR ICT

5.1. ICT COMPETENCE TARGETS

According to the recommendation of Educatio Nonprofit Plc., an institution of the Ministry of Education and Culture responsible for ICT developments, the teacher should learn about:

- ICT-based constructivist pedagogy
- ICT-based organisation of the learning processes (cooperation based learning-organisation, project-based education, etc.)
- digital learning tools, Sulinet Digital Knowledgebase
- ICT tools, software.

5.2. ASSESSMENT SCHEMES

No information available.

5.3. ICT IN TEACHER EDUCATION

ICT in initial teacher education is not compulsory.

For the ca. 1,000 beneficiaries of the SROP it is compulsory to use ICT tools in 25% of the lessons when applied in any competence field. These teachers are obliged to improve their digital competence, and it is compulsory to attend accredited in-service training with 30 lessons.

In-service teacher education to train teachers in the use of ICT is not compulsory.

Most of the NHDP calls for proposals related to public education require the institutions to prepare their ICT strategies by the end of the term of the implementation of the project, which has to cover the development of digital competence as well as the purchase and maintenance of ICT tools.

5.4. TRAINING THE TEACHER TRAINERS

Teacher professional training – development of digital skills

In the framework of the New Hungary Development Plan, the training of 40,000 teachers will be guaranteed with HUF 40bn (146m euros). The aim is to teach them to integrate ICT skills in teaching – so these are teacher in-service training courses with ICT skills practice. They use individual digital content (framework, tests and quizzes), electronic lesson administration, online help, tutoring via chatting, tracking development.

5.5. INCENTIVES

Tenders:

Competence-based education, equal access in innovative institutions

The programme aims at widely spreading the methodology and tools for competence-based teaching, modernising the methodological culture of teachers, individualised improvement and strengthening of student’s skills and key competences, decreasing selection in the existing system, trying to enforce equal opportunities.

Social Infrastructure Operative Programme (Hungarian abbreviation: TIOP) 1.1.1. and Regional Operative Programmes (Hungarian abbreviation: ROP)

Development of the ICT infrastructure supporting pedagogical, methodological reform

A priority of the programme is IT improvement in schools, to create the “Intelligent school” focusing primarily on the development of IT infrastructure. As a result of the development, public education institutions will have the same level of basic IT infrastructure (except for kindergartens), which is prerequisite for spreading competence-based education, and contributes to the equalisation of territorial differences.
Annex

Available ICT Structure

<table>
<thead>
<tr>
<th>ICT tools</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of computers</strong></td>
<td>259,265</td>
</tr>
<tr>
<td>of which</td>
<td></td>
</tr>
<tr>
<td>total number of net servers</td>
<td>6,348</td>
</tr>
<tr>
<td>total number of PCs</td>
<td>218,260</td>
</tr>
<tr>
<td>of which</td>
<td></td>
</tr>
<tr>
<td>PC I. (1 year-old technical level)</td>
<td>27,926</td>
</tr>
<tr>
<td>PC II (1-3 year old technical level)</td>
<td>55,307</td>
</tr>
<tr>
<td>PC III (3-5 year old technical level)</td>
<td>67,446</td>
</tr>
<tr>
<td>(more than 5 year-old technical level, other, uncategorised PCs)</td>
<td>67,581</td>
</tr>
<tr>
<td>workstation used for education</td>
<td>146,386</td>
</tr>
<tr>
<td>of which</td>
<td></td>
</tr>
<tr>
<td>workstation used for networking</td>
<td>20,272</td>
</tr>
<tr>
<td>workstation used for administration</td>
<td>28,554</td>
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<tr>
<td>laptop</td>
<td>34,657</td>
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<tr>
<td><strong>Total number of monitors</strong></td>
<td>220,706</td>
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<tr>
<td>of which</td>
<td></td>
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<tr>
<td>Number of CRT monitors</td>
<td>121,708</td>
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<tr>
<td>Number of LCD monitors</td>
<td>94,675</td>
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<tr>
<td><strong>Total number of printers</strong></td>
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<tr>
<td>of which</td>
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<tr>
<td>inkjet printer</td>
<td>14,380</td>
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<td>laser printer</td>
<td>25,336</td>
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<td>----------------</td>
</tr>
<tr>
<td>multifunction printer (copy, scan, fax)</td>
<td>6,044</td>
</tr>
<tr>
<td><strong>Total number of other ICT tools</strong></td>
<td><strong>68,804</strong></td>
</tr>
<tr>
<td>of which</td>
<td></td>
</tr>
<tr>
<td>Video cassette recorder</td>
<td>24,947</td>
</tr>
<tr>
<td>Video camera</td>
<td>7,172</td>
</tr>
<tr>
<td>Copy machine</td>
<td>12,647</td>
</tr>
<tr>
<td>Projector</td>
<td>16,434</td>
</tr>
<tr>
<td>Interactive White Board (fixed or mobile)</td>
<td>5,184</td>
</tr>
</tbody>
</table>

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