AUSTRIA

Country Report on ICT in Education

Available on http://www.eun.org/observatory

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1. THE EDUCATION CONTEXT

1.1 KEY EDUCATIONAL CHALLENGES AND PRIORITIES

In the last months, a major key challenge for Austria has been the introduction of a general computer-based school-leaving exam ("Zentralmatura"). In the school year 2014/15, the "Zentralmatura" was implemented in all schools in Austria. This is a major step towards a more modern education system in Austria. The overall aim of the reform is a sustainable increase of quality in education, offering transparency, objectivity and comparability of results. It is based on three pillars:

1. One pre-scientific paper ("vorwissenschaftliche Arbeit – VWA") including presentation
2. Three or four written exams
3. Two or three oral exams

First pre-tests in 2014 called for several changes and also emphasized the importance of careful planning. In particular, the implementation of the pre-scientific paper created some technical issues that had to be solved. The institution responsible for the implementation and deployment is BIFI (https://www.bifie.at/).

"digi4school"

Another key issue in Austria is the new initiative "digi4school" that will be launched by February 2016. Digital version of school books and material for education and teaching will be available online for the first time. This initiative is seen as an important step for the improvement of schools in terms of useful use of ICT and is fostered by the Federal Ministry for Education and Women’s Affairs (BMBF) as well as the Ministry for Family and Youth (BMFJ).

See Section 3.1 ICT based assessment.

Recently, the ministry funded the purchase of interactive whiteboards, but also mobile applications (tablets, mobiles) and supported accompanying research on related school pilots (e.g. CCL – Creative Classrooms Lab http://creative.eun.org). Also the change to transform the way that technology is used in schools is topic in recent years (e.g. iTec http://itec.eun.org/) as well as how schooling will look like in the future (FCL – Future Classrooms Lab http://fcl.eun.org).

1.2 EDUCATION REFORMS

The secondary school reform targets secondary students aged 10 to 14. The reasons behind the reform lie in the challenge of creating an educational policy that reflects contemporary society. Above all, this requires the communication of key competences such as autonomy, responsibility, creativity, flexibility, the ability to communicate, the ability to solve conflicts and to work in teams, as well as social learning. All of these topics call for a rethinking of the academic organisation process. Changes, such as increasing globalisation, the fast-paced development in the areas of media and technology, dramatic evolutions in the employment sector and in the age structure of society, increasingly individualised lifestyles, multicultural environments and changing family models constitute an additional challenge for the Austrian educational system. The idea is for the school not to be a place of 'indoctrination' but to become a place for responsible, self-organised and cooperative learning, bringing together all the members of school institutions. The possibility of a 'new secondary school' was first trialled in pilot schools and model regions. Its goal is to educate, train and encourage students with different skills and social origins, in accordance with their capabilities and interests. At the same time, the reform aims to avoid a premature fixation on certain study paths, by providing differentiated performance requirements, choices and supportive pedagogical measures.
2. ICT IN EDUCATION POLICY

2.1. NATIONAL/REGIONAL ICT POLICIES

The eFit 21 Agenda (www.efit21.at) summarises the basis of Austria’s ICT policy and covers numerous IT projects, such as pilot or evaluation projects and initiatives in schools. It defines strategic fields and measures that are of importance in the fields of education, arts and culture in Austria. Strategic objectives are to:

1. **Enhance quality**: The use of ICT in schools should systematically enhance the quality of teaching and learning.

2. **Teach digital competences**: Students and adults should be aware of the necessity of digital skills for their personal, professional, social and cultural success.

3. **Improve success in the labour market**: ICT education in school should teach the basic qualifications needed by students to enter the labour market; i.e. common and job-related e-skills.

4. **Enhance efficiency**: The use of ICT in the educational and cultural administration should help to make the organisation more efficient and modern. Therefore, it is important to have a powerful infrastructure and services, as well as applications for target groups.

5. **Integrate society**: The use of ICT should boost e-inclusion and social integration, all obstacles to the use of ICT should be removed. The focal points are media skills and security.

In Austria, ICT education is integrated as a transversal key competence in the curriculum for primary and secondary education. The development of digital competence is integrated into existing curriculum subjects. The strategies for digital competence are wide-ranging, encompassing several areas such as infrastructure and broadband connectivity, ICT safety and e-Skills development, as well as ICT in schools.

**Initiatives to foster digital competence**

BMBF initiated the ‘Digital Competences, basic education in ICT’ initiative', together with the regional education Authority of Upper Austria, to strengthen key competences. A stakeholder panel was established with representatives from universities, teacher-training institutions and regional education authorities. A pilot project was set up in lower secondary schools, with the aim to encourage student participation, using the EDUMOODLE platform and providing resources for teachers. This pilot will be the basis for further decisions on a political level. [http://www.digikomp.at/](http://www.digikomp.at/)

Projects like ‘mobile Lernbegleiter’ (mobile learning tutors) promote the use of mobile learning devices like notebooks, netbook and tablets to foster digital competence, autonomous learning and critical thinking by learning with digital educational content in different curriculum subjects. [http://www.eeducation.at/netbook.php](http://www.eeducation.at/netbook.php)

**KeyCoNet Case Study on the project**

The IMST ‘Innovationen Machen Schulen Top’ (Innovations Make Top Schools) is a flexible support system in Austria that encourages a culture of innovation in five different competences (Mathematics, ICT, Natural Science, German and technology) in order to ensure a sustainable integration. [https://www.imst.ac.at](https://www.imst.ac.at)

LMS “Lernen mit System” (Learning with System) is a highly visible project with more than 10 million hits to the page each month. LMS offers learning modules for teachers that are compatible with competence-orientated teaching. [http://www.bildungsserver.com](http://www.bildungsserver.com)

**Other initiatives**

The PH Vienna initiated the long-term programme “Literacy” that tackles students’ low reading skills in Austria. This new action plan aims to develop competences that go beyond basic reading skills;
it also includes ensuring to achieve quality standards (based on the key competences), as well as developing language competence and skills in new media. It is the new national coordination point for further education and training.  
http://www.literacy.at/

“Sparkling Science” is one of several projects and initiatives that have been launched with the aim of raising interest in Natural Science and Mathematics. Sparkling Science is a unique research programme, launched in 2007 by the Federal Ministry of Science and Research (BMWF – now Federal Ministry of Science, Research and Economy), which adopts unconventional methods to encourage young scientists.  
http://www.sparklingscience.at

“Fti Remixed” aims to develop learning in research.  
http://www.fti-remixed.at/

2.2. RESPONSIBILITIES

The Federal authorities have exclusive responsibility over legislation and implementation in the entire field of general upper secondary education, intermediate and upper secondary technical and vocational education and in training for kindergarten teaching staff and non-teaching supervisory staff, as well as with regard to the conditions of service and staff representation rights of teachers at these schools/colleges.

The Federal Parliament is responsible for basic legislation, and the Länder are responsible for issuing and implementing laws with regard to the organisational structure of federal education authorities in the Länder and the external organisation of public sector schools within compulsory education. External organisation includes the development, construction, maintenance and approval of schools, but also the establishment of student numbers per class and teaching periods. All basic legislation has a framework character and is expressed through the implementation of laws decreed by the Landtage (the legislative bodies at Länder level). The Länder are responsible for the legislation and implementation regarding, for example, kindergartens.

In general, the Federal Government introduces draft laws, known as government bills, in the National Council. The draft produced by BMBF is first submitted to a number of relevant authorities (Collegiate Councils in the District and Provincial School Boards, provincial governments, various interest groups, etc.) for an expert opinion.

Basic laws enacted by the Federal Parliament will normally prescribe a deadline by which the Länder must issue the relevant implementing laws (within six months to one year). Implemented laws are passed by the Landtage. More detailed provisions are drafted in the individual constitutions of the Länder.

2.3. SPECIFIC ICT INITIATIVES

1:1 mobile learning initiatives (including the use of netbooks, laptops, tablets, mobile phones or other mobile devices)

Peer Learning School projects with Tablets (PLT)

The Project starts in school year 2015/16.

Aim: Fostering and disseminating the application of new technologies in education and the sustainable integration of e-Learning in schools. Innovative pedagogical concepts of schools should be applied in order to support the use of ICT in teaching. The project is based on the aims and focus points of:

- the “eFit21” initiative,
- the teaching principles of “e-Learning/application of new technologies in teaching”,
- the content of the national curricula,
- the “Grundsatzерlass” of project lead teaching,
- the pedagogical model “digital competences”.

Target groups:
- Expert schools (advanced schools) from the school networks with focus on ICT: eLSA, eLC, ENIS, KidZ
- Partner schools from primary schools and secondary schools

Methods of project:

Peer learning and cooperative learning: exchange of experiences and learning from each other. The transfer of know-how from ICT experienced (advanced) schools to other schools will be supported. Different evaluation measures will ensure the sustainable integration. The individual responsibility of each school will be strengthened by this activity, and the transformation towards a sustainable development concept for the use of ICT in teaching will be extended step by step.

Implementation:

Two rather inexperienced schools connect with one ICT firm school within one regional cluster and they commonly develop a pedagogical concept that shall be deployed in the schools of the cluster.

The experienced school yields its experience to the cluster and supports the two other partner schools with advice on an equal basis, if needed.

The SchÜLF/PH guides and supports the project on the pedagogical level.

How does the selection and nomination of the PLT Cluster take place?

The nomination takes place via the ICT school networks, respectively via nominated representatives of eLSA, eLC, ENIS and KidZ. The selection is steered by a BMBF- expert group with the consolidation of the ICT- supervisor (‘Fachinspektoren’).

For further information: Michaela Wieser (Michaela.Wieser@bmbf.gv.at)

Learning Analytics

Some limited offers via projects are provided for teachers regarding Learning Analytics i.e. LEAs Box.

In principle, the idea is to find theoretical frameworks, models, procedures, and smart tools to collect, aggregate, analyze, reason on and visualize large scale educational data. Via workshops, the teachers cover the topics of personalization, competence orientation and formative evaluation – technology in day-to-day teaching.

For further information:

MOOCs for teacher professional development or initial teacher training or MOOCs for students, including certification

In cooperation with the Online Learning Center for Technology-enhanced learning and the Ministry for Culture, Youth and Sports, Baden-Württemberg, Austrian teachers have recently been offered MOOCs to foster the deployment of mobile learning. Topics cover: how to use smartphones and tablets for the day-to-day school teaching.

Further, the European Schoolnet Academy is becoming increasingly interesting for Austrian teachers since they can learn about innovation in the school and classroom through MOOCs.

For further information:
- innovation.virtuelle-ph.at
- https://lehrer2020-bw.fsz.kit.edu/
- http://www.europeanschoolnetacademy.eu/

ICT for inclusion (early school leavers, migrants, etc.) and special needs (physical, mental, emotional)

BMBF has taken part in the SENnet project (2011-2014) that developed a special educational needs network. SENnet provides information and sup-
port for those working to develop the use of technology to improve access for students with special educational needs.

On a national level, the BMBF has established a database where materials and information is collected for ICT for inclusion topics.

For further information:
- [http://workspace.eun.org/web/sennet/home](http://workspace.eun.org/web/sennet/home)
- [http://www.cisonline.at/home/](http://www.cisonline.at/home/)

ICT for learning initiatives targeted to boost employability and entrepreneurship

Numerous initiatives and institutions are strategically developing the key competences of sense of initiative and entrepreneurship. The main objective of their activities is to strengthen the quality and scope of entrepreneurship education and training, especially for students aged 14+ in vocational schools. The Ministry has put the EESI centre (Entrepreneurship Education for School Innovation) in charge of developing this key competence in all secondary schools in Austria. EESI produces materials for schools in the form of school books, competitions, workshops and scientific papers that are presented at the Entrepreneurship Symposium, teacher trainings (in close collaboration with the teacher training colleges) and software tools that measure personal attitudes and entrepreneurship skills.

Teachers have several offers via project initiatives to foster entrepreneurship and ICT, i.e.:

**ICT-Go-Girls** is a European project, co-financed by the European Commission, under the Comenius LLP program. It’s main goal is to empower secondary school girls with the knowledge, skills and values to help them be able to create future opportunities for innovation and quality ICT related employment.

The **Entrepreneurial Skills Pass** (ESP) is an international qualification that certifies that students (15-19 years old), who have had a real entrepreneurship experience, hold the necessary knowledge, competences and skills to start a venture of their own or be successfully employed.

ESP includes:
- a full-year in-school mini-company experience;
- a test in business, economics and financial knowledge;
- the possibility to access further opportunities offered by small and large businesses, top higher institutions and international organisation across Europe.

For further information:
- [http://www.eesi-impulszentrum.at/](http://www.eesi-impulszentrum.at/)
- [http://ictgogirls.eu/](http://ictgogirls.eu/)
- [http://entrepreneurialskillspass.eu/](http://entrepreneurialskillspass.eu/)

Cloud computing and connectivity (e.g. wireless Internet, optical fibre connections)

There is currently no national initiative on cloud computing and connectivity. As for now, measures are set to enable the infrastructure for the Austrian broadband initiative 2020. An assessment of needs, especially of schools, built the basis for the extension of this initiative of the BMVIT (Ministry of traffic, innovation and technology). The aim is to reach nationwide at least 100Mbit/s.

Other ICT initiatives of interest to other policymakers

Connectivity of mobile connection has developed further and LTE (4th generation of mobile connectivity) is made increasingly available also in rural areas. This helped to bridge broadband internet gaps. The BMBF also ensures this service for schools participating in the tablet project.
2.4. ICT PRIORITIES

A: Digital Competence Development

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<th>Low</th>
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<tbody>
<tr>
<td>Developing measures to support digital competence for future teachers (a)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Developing measures to support digital competence for in service teachers</td>
<td>X</td>
<td></td>
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<tr>
<td>Developing measures to support school leaders in the integration of ICT</td>
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<td>X</td>
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<tr>
<td>ICT for learning initiatives targeted to boost youth employability and entrepreneurship</td>
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<td>X</td>
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<tr>
<td>ICT for accessibility and inclusion: early school leavers, migrants, etc... and special educational needs</td>
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B: ICT in Curricula and Assessment

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<tbody>
<tr>
<td>Developing computer/programming skills</td>
<td>X</td>
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<tr>
<td>Developing key competences</td>
<td>X</td>
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<tr>
<td>Developing 21st century skills (critical thinking, problem solving, communication, collaboration, and creativity and innovation)</td>
<td>X</td>
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<tr>
<td>Assessing with ICT/ICT based exams</td>
<td>X</td>
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<tr>
<td>Learning Analytics</td>
<td>X</td>
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C: System-wide innovation

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<tr>
<td>Piloting and validating innovative uses of ICT</td>
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<tr>
<td>Mainstreaming ICT in schools</td>
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D: Mobile Devices

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<tbody>
<tr>
<td>Use of tablets (a)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Use of mobile phones</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Bring Your Own Device (b)</td>
<td>X</td>
<td></td>
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<tr>
<td>Cloud computing</td>
<td>X</td>
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</table>

Reference to policy action measures related to Mobile Devices:

- Peer Learning School projects with Tablets (PLT)
  See 2.3 Section Specific ICT Initiatives (a)
- Mobile Learning Tutors
  See Section 2.1. National/regional ICT policies (b)

E: Use of digital resources

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<th>Area</th>
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<tbody>
<tr>
<td>Developing educational content repositories/metadata (a)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Supporting the development of open educational content and resources</td>
<td></td>
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<tr>
<td>Supporting the development of educational content/resources provided by publishers (b)</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Promoting the use and sharing of educational resources with teachers (c)</td>
<td></td>
<td>X</td>
<td></td>
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Reference to policy action measures related to the use of digital resources:

- See Section 4.2. Content-sharing Subject oriented Portals (a)
- “Digi4Schoo” Schoolbooks and material for education and teaching can be ordered online (b)
- eTapas: small learning sequences The school network eLearning Cluster provides by each school two learning sequences per year and and distributes them on a common platform: http://elc20.com/index.php?id=33
F: Learning environments

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<th>Area</th>
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<tbody>
<tr>
<td>Linking formal and informal learning using ICT</td>
<td></td>
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<td>X</td>
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<tr>
<td>Providing equitable access to ICT (infrastructure, devices and content) (a)</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Providing a safe learning environment to students and teachers</td>
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<td></td>
<td></td>
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<tr>
<td>Commissioning ICT related research</td>
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Furthermore, the online tool „digicheck“ allows teachers to self-evaluate their digital competences and receive qualified feedback and recommendations for further training [http://www.digicheck.at/](http://www.digicheck.at/).

Different development measures are taken for the schools, on the basis of set criteria, and in the framework of eLsa (certification/re-certification) and ENIS (European Network of Innovative Schools) [http://elsa20.schule.at/qualitaetssicherung/zerfizierungen/](http://elsa20.schule.at/qualitaetssicherung/zerfizierungen/) [www.enis.at](http://www.enis.at).

**eLSA project**

The additional value of e-teaching was systematically evaluated by the University of Innsbruck to give reason for initiating the project. Cooperation, exchange and transfer of knowledge between the schools has been supported and furthered by a nationwide eLSA platform put online in March 2006. Also, international cooperation is encouraged, so there always is a high proportion of eLSA schools participating in international e-Twinning and Comenius projects. A school commits itself to the eLSA goals before joining the project. Therefore it is essential to convince a qualified majority of teachers as well as the administrative staff in a school of the additional value of e-learning. Once participating in the network eLSA schools need to document their transformation into an eLSA school. Schools are required to undertake a three year certification process before being rewarded by being awarded the title ‘Certified eLSA School’.

**3. THE CURRICULUM AND ICT**

**3.1. ICT BASED ASSESSMENT**

Austria has introduced computer-based standard school-leaving exams (German, English or other foreign languages, mathematics), for general education in 2015 and for VET schools in 2016. Related pilots and field studies are currently taking place.

*See Section 1.1. Key educational challenges and priorities*

**3.2. SCHOOL IMPROVEMENT WITH ICT**

Specific ICT inspectors (school inspectors) evaluate, in coordination with the IT administrator, the progress of the implementation of ICT in schools. These inspectorates work on the basis of different schemes and guidelines in the different Austrian Länder.

The BMBF promulgates curricula on the basis of the School Organisation Act. The spadework for curricular development is entrusted to working groups of teachers which have been set up and cover most subject areas. All curricula provide for areas of school autonomy, which schools are allowed but not required to use:
1. **Learning autonomy**: Within a specific context (partial autonomy) schools are allowed to modify the number of lessons for specific subjects, introduce new mandatory subjects, non-binding exercises or complimentary subjects and support classes.

2. **Other issues** which schools might, depending on their type, be able to decide themselves are the size of classes and groups, the budget, their partial legal capacity and autonomy regarding time and free days.

As in the case of all other provisions of the school law, any draft curricula must be submitted to the provincial governments, provincial school boards, social partners, parents’ associations or other public institutions for their respective opinions, in order to include them in the decision-making process. Curricula come into force by decree of the BMBF.

### 3.4. ICT IN THE CURRICULUM

**Vocational Schools:**

1. **Lower Secondary Schools:**
   If specific school curricula are in force, media teaching can take place in all subjects, as it is rather an educational principle than a separate subject. As media teaching competes with other educational principles, the way it is taught depends on the focal point of the individual school. At some schools, students are prepared for the challenge of living in an information society in a comprehensive way. A working group developed a framework of reference of (desirable) digital competences for the 8th grade.

2. **Upper Secondary Schools:**
   In upper Secondary School, IT is taught at least two hours a week. Digital devices are provided in specific classes such as notebook classes. The topic media competence is touched upon as an educational principle in a number of subjects. This interdisciplinary approach focuses on the respective subject taught, e.g. basics of e-commerce, business models and political education. Furthermore, a variety of specializations exist depending on the school type:
   - Communication and network technology (HTL);
   - Database systems (HTL);
   - Digital business (HAK);
   - Webdesign and publishing (HUM).

3. **Secondary Academic Schools:**
   The recommendation to use ICT to motivate and individualize the students’ learning is part of all curricula, e.g. for foreign language subjects. A specific subject IT is taught in the 9th grade and as a complimentary subject in the 10th to 12th grade. The educational principle of media education also applies to this school type.

### 3.5. STUDENTS’ ICT COMPETENCE

Since 2013, a special **ECDL (European Computer Driving License)** is offered to schools; students can earn different certificates. The compact ECDL Base profile consists of four base modules to provide digital literacy for students.

**1. Computer essentials**
   - PC, mobile devices, storage media and software
   - Operating system and office programmes
   - Create and organize files and folders
   - Internet and wireless networks
   - Computer viruses and handling threats

**2. Online Essentials**
   - E-government, e-banking, e-learning
   - Search for information critically
   - Download, save and print web content
   - Data protection and copyright
   - E-mail and online communication
3. Word Processing
- Write and save letters and documents
- Automatic spell check
- Format documents efficiently
- Use tables, images and charts
- Print documents

4. Spreadsheets
- Use worksheets for numbers and text
- Work with formulas and functions
- Create column, pie and line charts
- Move, copy, sort and arrange data
- Print tables, charts and lists

3.6. ASSESSMENT OF ICT COMPETENCE

Since 1998, the ECDL is offered to different types of schools, supported by the BMBF. ECDL in Education Austria allows to earn different certificates especially catering to the needs of young people. Since 2013, Students can have their ICT competences verified by doing a special ECDL (European Computer Driving License). This additional qualification for students is offered on a voluntary basis. Many schools have already integrated the learning contents of the ECDL into their IT curricula.

Students can study for their tests in any way they like. There is approved learning material available (in German). The Austrian association “Verein ECDL an Schulen” is responsible for the administration of the assessment. As partner of the OCG (Österreichische Computer Gesellschaft) and authorised ECDL Test Center, it works on behalf of and is supported by the BMBF. http://www.it4education.at/ecdl/

In addition, the association “Competence Centers for Information Technology”, that includes also representatives of the BMBF, offers the possibility to get specific IT certificates to teachers and students. http://www.it4education.at/high-level-it.html

4. DIGITAL LEARNING RESOURCES AND SERVICES

4.1. E-CONTENT DEVELOPMENT

A wide range of educational e-content development projects and databases were funded. Austrian schools and teachers now benefit from a vast pool of commercial and freely accessible material on central platforms (e.g. http://www.bildung.at or www.sbx.at) and platforms of regional e-learning content initiatives. Up to this date, approx. 85% of the schools are using these digital platforms and protected online spaces.

Austria’s Textbook Initiative has existed in its current form since 1972. Financed by the Family Relief Fund, it provides school children with the learning materials they need, while at the same time relieving the financial burden on parents. The core materials were decided upon by a methods commission in 1975, and subsequently by a textbooks committee and the textbooks commission. These decisions formed the basis for the list of textbooks, the inclusion of audio-visual and electronic learning materials, and the broadening of the Appendix to include general education items since 1998. In terms of content, these texts cover the entire curriculum for the school year in question. The Appendix to the Textbook List contains numerous printed and audio-visual learning materials and CD-ROMs as supplements to textbooks, used to boost students’ motivation to learn at school and at home. Their content covers specific aspects of instruction. SbX provided students with digital content related to specific textbooks. SbX expired in 2014 and is followed up by the digi4school project. The content is delivered over the internet, and provides interactive and new media content on a particular subject. This online content is developed by authors and educational publishers in the same way as traditional textbooks.
**Bildungspool Austria**

The BMBF’s education portal offers a one-stop-shop for all eLearning activities within the framework of the Ministry and became an eContent clearing house offering an interesting range of quality web-based educational content for teachers and students in Austria. A defined metadata specification is the base on which the distributed commercial and non-commercial content-server are consolidated to form a structured eLearning Education Pool for all available elementary learning objects and resources. [www.bildung.at](http://www.bildung.at)

### 4.2. CONTENT SHARING

**Gegenstandsportalinitiative**

[http://www.schule.at/portale.html](http://www.schule.at/portale.html)

The portal currently provides eLearning materials for about 40 subjects, which has been tested by ca. 80 teachers. The tool „Subject Portal“ ViS – EU Projects (.„Gegenstandsportal“ ViS – EU Projekte) was designed as part of the portal, that allows for the use, re-use and enrichment of existing eContent as a result of EU-funded projects.

**Participation in international eContent and Repository – Projects such as:**

- ATLAS@CERN - Learning with ATLAS @ CERN
- COSMOS – Repository for Science Teaching and Learning, Astronomy
- INSPIRE – Innovative Science Pedagogy in Education
- Open Science Resources – Development of a Common Repository for Science Education
- Organic.Edunet – Learning Repositories, Biology
- LRE - Learning Resource Exchange for Schools/eQnet

**Learning Resource Exchange for Schools**

[lferschools.eun.org](http://lferschools.eun.org)

As a result of several EU-funded programs, this portal provides access to didactic teaching and learning resources.

*See also Section 4.1.E-content development*

### 4.3. ACCESSIBILITY FOR LEARNER WITH DISABILITIES AND SOCIAL INCLUSION

The project **ECDL for children and teenagers with cancer** is offered in hospitals throughout Austria. The project was launched by the parents' initiative Childhood Cancer Organisation for Vienna, Lower Austria and Burgenland. Together with its partners, the consulting company ‘die Berater’ and Microsoft Austria, the OCG offers children and teenagers the opportunity to participate in free training programmes and tests to achieve the ECDL Standard or other ECDL certificates directly in the hospital. The young people are assisted by experienced trainers. If necessary, also laptops are provided. This project allows young patients to keep in contact with the world outside the hospital. The ECDL certificates are awarded to the children and teenagers in a special ceremony once a year.

### 4.4. WEB 2.0

The project **E-STEP** is a European project funded by the Comenius program to help teachers and school managers acquire and reinforce attitudes, web2.0 skills, knowledge and qualifications that will enable them to effectively engage parents in schools and interact with them through social networking technologies. The main focus is on how to support, engage and motivate parents to utilize social networking systems in order to collaborate with teachers and headmasters. [http://www.estep-project.eu/](http://www.estep-project.eu/)

In many schools, Web 2.0 tools are used occasionally, depending on the needs of the different topics or projects launched.
Further, the Web2.0 tools and their applications are topic within the safer internet trainings in schools (http://www.saferinternet.org/).

4.5. LEARNING PLATFORMS

In 2007, the Ministry of Education launched the initiative Futur(e)Learning to support new forms of teaching and learning using ICT in education. Futur(e)Learning supports modern approaches to learning, moving away from the traditional teacher-centred classroom and promoting individual learning pathways. In order to allow schools to concentrate on pedagogy rather than technology, central services were provided, such as education portals, central services for learning platforms (moodle, dotLRN, Ilias) and the collation and distribution of resources and software (both commercial and open source). The development of the programme “Edumoodle”, the central service to provide a Moodle-instance for all school locations for free has shown that such offers are eminently requested by the school locations.

Furthermore, the LMS “Lernen mit System” (Learning with System) is a highly visible project with more than 10 million hits to the page each month. LMS offers learning modules for teachers that are compatible with competence-orientated teaching. http://www.bildungsserver.com

5. TEACHER EDUCATION FOR ICT

5.1. ASSESSMENT SCHEMES

The online Tool „digicheck“ allows teachers to self-evaluate their digital competences and receive qualified feedback and recommendations for further training. http://www.digicheck.at/

5.2. SCHOOL LEADER SUPPORT

The PHS (Pädagogische Hochschule) as well as LEA offer training with a focus on basic competences necessary for the implementation of ICT. BMBF runs the one year programme Leadership Academy (LEA) which aims to give pedagogical leaders a new perspective of leadership, taking account of the specificities of the field of education and demands made on those in leadership positions. The aim of LEA is to develop an understanding of leadership characterized by clarity and transparency and to trial a leadership style based upon respect, dialogue and shared leadership.

Another project that supported school leaders with the implementation of ICT was the European funded project LSL – Living Schools Lab (2012-2014). This project enabled a sustainable, growing network of primary and secondary schools, based around regional clusters that showcase and share best practice and ways to successfully embed the use of technology in teaching and learning (T&L) across the whole school. LSL worked via a peer-to-peer approach that allows a strong community of practice, with supporting continuous professional development opportunities for teachers. It also offered opportunities for schools to get involved in action-based research, creating links with outside partners including industry and other pan-European projects. http://lsl.eun.org

5.3. ICT FOR INCLUSION

BMBF participated in the SENnet project that developed a special educational needs network. SENnet provided information and support for those working to develop the use of technology to improve the access of students with special educational needs. One goal was also to raise awareness and promote competences which enable teachers, school leaders and others in schools to understand, promote and practice the inclusion of learners with SEN in mainstream classrooms, making full use of ICT.
On a national level, the BMBF has established a database where materials, publications and information is collected for ICT for inclusion topics. Teachers and other stakeholders can find information also for the use of ICT and inclusion on this website.

http://sennet.eun.org/

5.4. ICT IN INITIAL TEACHER EDUCATION

In Austria, universities and university colleges offer teacher education curricula. The educational path chosen to reach a teaching certificate determines the possible future employment positions of a student. At the moment, there are nine public and five private university colleges of teacher education and eight universities and six universities of arts (located in all federal states).

The Austrian universities and university colleges offer different programmes to student teachers. These programmes are intended to prepare them for the pedagogical use of ICT in teaching. The universities provide optional courses such as the E-learning Certificate (E-Learning Kompaktausbildung; eTutor) or the Media Certificate for Student Teachers (Medienpass für Lehramt; eTutor). The university colleges also provide a range of optional course offers such as eTutor, eBuddy, Didactic Pass and EPIC T courses. In general, these non-compulsory offers only reach student teachers who are already interested in using ICT for teaching.

The University College of Lower Austria is the only teacher training institution that currently requires compulsory courses on pedagogical ICT competences. It has also introduced innovative elements such as e-portfolio work beyond pilot projects. Most of the institutions introduced courses on techno-pedagogical competence building on a voluntary basis. Further, the UC Vienna requires their student teachers to create a “Teaching Portfolio” which should include a software evaluation and reflection on ICT enhanced teaching experiences.

The university college of Lower Austria, for example, requires ICT use in three different phases of the study programme:

1. **Use of ICT for administration purposes** (PH Online): self-assessment tests on the LMS on the level of media competences; with the support of trainers from the Department “IT-Informationstechnologien, Blended Learning, E-Office” (ECDL level);
2. **Media didactics in subject courses**: Since 2007, every student is obliged to go through training on the pedagogical use of ICT in the first subject and second subject;
3. **ICT in school practise**: The university college plans to integrate the EPIC T concept of team teaching in its curriculum (practical ICT in field placement supervised by certified EPIC T mentors).

5.5. ICT IN IN-SERVICE TEACHER EDUCATION

University colleges offer EPIC T certificate courses both to in-service teachers and student teachers.

The Virtual PH is a common service facility for all colleges of education. It should enable the establishment of a virtual learning space for all teachers in the Austrian education space – platform independent and across all platforms.

5.6. TRAINING THE TEACHER TRAINERS

The PH (Pädagogische Hochschulen) – that are in charge of the education of teachers – are also responsible for providing regular trainings to teacher trainers.