

**ICT Cluster**  
**Peer Learning Activity (PLA) on e-Inclusion and digital  
competences**

31.11 / 03.12.2008 Vienna, Austria

**PLA Summary Report**

The 8<sup>th</sup> PLA by the ICT cluster in 2008 focused on the theme of e-inclusion and digital competences. The cluster contributed actively to the sessions on Digital Literacy and competences at the e-inclusion Ministerial conference and the discussions on the Digital High-level Expert Group recommendations attached to the Commission SWP: *Digital Literacy Report: A review for the i2010 e-Inclusion initiative*.

As such the PLA had a direct impact on European policy making in the domain of digital literacy and competences. DG EAC has been very close to the policy development and work done by DG INFSO in Digital Literacy. The concept of DL is based on the one of DC as defined in the key Competences Recommendation (2006).

The PLA continued its activities after the e-inclusion conference with a specific programme organised by the Austrian Federal Ministry of Education and the Austrian member of the ICT cluster, Mr. Helmut Stemmer.

The PLA summary report has three parts: (i) the contributions of the ICT cluster members to the e-inclusion conference, (ii) the discussions at the Digital Literacy meeting after the conference and (iii) the Austrian PLA programme.

This PLA meeting together with the 7<sup>th</sup> PLA meeting in Thessaloniki resulted in a set of recommendations on Digital Literacy and competences for LLL highlighting the following main message:

**Lifelong learning strategies need to answer to the growing need for advanced digital competence for all jobs and for all learners. Learning digital skills not only needs to be addressed as a separate subject but also embedded within teaching in all subjects. Building digital competence by embedding and learning ICT should start as early as possible, i.e. in primary education, by learning to use digital tools critically, confidently and creatively, with attention paid to security, safety, and privacy. Teachers need to be equipped with the digital competence themselves, in order to support this process.**



## Peer Learning Activity (PLA) on e-Inclusion and digital competences

31.11.2008 / 01.12.2008

Venue: e-inclusion Ministerial Conference

**e-Inclusion conference**: Almost 1500 delegates attended the 2008 Ministerial e-Inclusion Conference and exhibition in Vienna on 30th November to 2nd December 2008. Highlights include Ministers and senior officials from more than 30 European countries met during the conference to recognize the progress and successes already achieved in the field of e-Inclusion in Europe and to consider the challenges that still remain. The **Presidency of the Council of the European Union** concluded that, in these difficult economic times, it is more necessary than ever to support vulnerable people in our society. ICTs constitute an essential tool to achieve this objective. Joint action in the area of e-inclusion can at the same time contribute to creating new jobs and to improving their quality. Better digital inclusion will contribute to strengthening the main asset of Europe: its human capital.

Extracts from the Presidency conclusions (underlined by author):

*"The efforts of the European Commission in this direction are particularly welcomed, especially ...- the documents of Commission services on the ICT and social agenda, digital skills, digital literacy, and technologies for lifelong-learning*

*Underlines that:...*

- *Measures to improve digital inclusion constitute an investment in the future and have to be at the center of public policies addressing the information society. Actions have to contain measures related to social inclusion, employment, education, administrative reform, A strong political commitment, targeted to vulnerable social groups, is necessary in order to improve digital inclusion. Efforts have to be agreed upon in particular regarding the accessibility of ICT ("e-accessibility") and acquisition of digital competences ("digital literacy")*

*On digital competences*

- *Digital competences have become an essential element in the education of individuals, and this in a context of life-long-learning. The education systems must integrate ICT in pupils' courses, teachers' training and teaching methods.*
- *It is equally important that digital competences are promoted through vocational and continuous training as well as through measures in support of the elderly. Social intermediaries who are in regular contact with the target groups have an essential role to play in this regard, and have to be trained and supported by the public authorities. Community centers are an important instrument in the work of social intermediaries of the target groups, in particular those suffering from poverty, social isolation or who otherwise are at risk of social exclusion.*
- *Employers, both public and private, also must contribute to ICT training of their employees, and should be encouraged in this sense, including possibly through taxation incentives.*
- *Beyond large scale programmes stimulating access and basic skills, the new generation of digital literacy programmes should prevent the emergence of new digital divides in access to and use of information by increasing trust and confidence in the use of technology and in new forms of participation through social networks.*

**Recommendations discussed and endorsed by the PLA members:**

## **1. Definition of digital competences need to be broadened towards the development of users' critical thinking, cultural and creative skills and the ability to make 'one's voice heard'.**

DC's are an essential life skill and part of the three R's, and has major consequences on the social engagement of an individual in the society. One has to broaden the concept as it is not only about access and use but quality of use and critical understanding of the use. Broaden the measurements and evaluation of Digital Competences. It is about awareness, critical thinking, problem solving and not just about operational skills, though they can be a first pre-condition.

The DL Expert Group and the EP suggested that digital literacy should be merged with media literacy. This recommendation is in particular important for E&T as the emphasis would be more on the critical use of media literacy than the functional IT component. The PLA agreed in principal with a closer interaction between digital and media literacy but suggested to build links instead of merging the issues.

## **2. What does this mean for education and training ?**

During the e-inclusion conference, speakers emphasised strongly the direct role that education and training could and should play. However the e-inclusion debate at this moment is taking place outside education. Many key speakers argued strongly for a closer and stronger involvement of education and training, being the start of any inclusion.

It is recognised how difficult it is to get innovation into mainstream education and training due to the difficulties around digital competence education and the particular barriers of E&T to take up ICT. Digital competences should become integral part of the curricula both as part of subjects such as media literacy and technical education as well as embedded in all the other subjects. Without a more proactive role of E&T, new digital divides in terms of levels of skills and understanding will emerge next to the remaining divides of access of marginalised groups.

## **3. What does it mean for training of teachers /trainers ?**

Teacher training has entered a new stage beyond access but looking into the skills required and the use in creative and critical ways.

Teacher training is central to any digital competences development but also forms the core bottleneck to any further embedding of digital competence education. The following common characteristics of best practices and approaches of teachers training regarding DC have been identified and endorsed by the PLA:

- bottom-up developments stimulating engagement and involvement
- engage teachers getting in touch with practice and hands-on experiences closely related to their daily life (e.g. problematic issue of safety of use of internet)
- voluntary; but engage teachers in long-term training from initial training to continuous regular in-service training through 'real' incentives for teachers
- emphasise the introduction of eLearning didactics courses for teachers
- use of simple, easy to learn platforms
- open to free courseware development by the teachers themselves; blended learning resources are the way forward
- collaborative peer learning approach with coaches and buddies
- learn in particular how to use critically ICT for all kinds of subjects and the added-value of ICT as a teaching tool involve all the teachers from the earliest education levels
- use of learning networks between educational and training institutions

## **4. What does it mean for lifelong learning ?**


Most of the digital literacy practices have an important learning dimension but this takes place outside formal education and training. More efforts have to be taken by both E&T and by e-inclusion policies to transfer and embed these digital literacy practices in formal E&T.

The practices which showed to be sustainable and successful have the following characteristics in common:

- Development of partnerships with organisations which are close to the target group and have the trust and confidence to act as an intermediary.
- Envisioning meaningful initiatives which are directly relevant (context of use)
- Start-off in the informal learning sphere before the formal E&T
- Use collaborative and peer learning approaches

**5. Recommendation to keep working closely** with DG INFSO on e-inclusion and in particular on '**Digital Literacy**' and DG Enterprise on '**e-Skills**' to emphasise the transversal nature of digital competences development.

### **Documents and websites related to this topic**

- Presidency Conclusions 
- *The Commission has carried out a review of 470 digital literacy initiatives in Europe. Read the [Review](#) and the [recommendations](#) based on its findings.*
- *Report on media literacy in a digital world, Committee on Culture and Education, Rapporteur: Christa Prets, 2008/2129 (INI)*
- *I2010 e-inclusion national reports, December 2008-12-15*
- *Digital Literacy and Competences national reports, December 2008*
- *Seniorwatch 2: assessment of the senior market for ICT progress and developments (incl. ICT and work), April 2008*
- *Measuring progress of e-accessibility in Europe, A study funded by the EC*
- Policy Briefs. JRC Technical Notes, European Commission, Joint Research Center, Institute for Prospective Technological Studies.  
<http://www.jrc.es/publications/pub.cfm?id=1819>

# **Peer Learning Activity (PLA) on e-Inclusion and digital competences**

Vienna, 2 December 2008

Venue: After-conference Meeting of the Digital Literacy Expert Group,

## **Participants:**

Frank Mather (DG INFSO) ; Anna Maria Sansoni (DG INFSO); Members of the DL high level expert group (Kjersti Sjaatil ; David Buckingham ; Nikos Ioannou ; Carmen Stadelhofer ; Jim Devine; Anne-Sophie Parent ; Elena Bonfiglioli) ; Susanne Krucsay, Austrian Federal Ministry of Education and member of the Media Literacy expert group; Representatives of the ICT Cluster

## **General issues**

The last meeting of the Digital Literacy Expert Group aimed at discussing next steps for EU policies and actions in the field of digital literacy, following the dissemination of the Digital Literacy Report and Recommendations at the e-Inclusion Ministerial Conference in Vienna.

The participants agreed that digital skills have become a policy priority and that it is important to keep this issue high in the EU political agenda.

They suggested improving the links between the i2010 High Level Group and the e-Inclusion subgroup and the digital literacy stakeholders (i.e. they proposed to organise meetings to present Recommendations and to discuss "success stories in the field of digital literacy). They also suggested adding the question "*What have you done to improve e-inclusion using ICT?*" to the Lisbon questionnaire addressed to the Member States.

Finally, they agreed that Recommendations should be presented to the Media Literacy Expert Group and its members should be asked for their views on implementation.

Regarding the future of the Digital Literacy Expert Group, the experts agreed that the group is valuable and should be maintained.

However, as the European Commission stressed that it fulfilled its mandate, they were in favour of merging digital and media literacy expert groups, provided that the focus on the disadvantaged groups is kept.

Therefore, they suggested that it might be better to use "inclusion" as an umbrella term for both groups.

The ICT Cluster Representatives welcomed the Recommendations on Digital Literacy and declared that their group would reflect on them. They suggested that more emphasis should be put on formal education, particularly early school, and on teacher training. They also agreed that better training should be extended to all intermediaries.

## **Suggestions for Commission actions**

The experts made some suggestions for future Commission actions in the area of digital literacy.

First of all, they asked to clarify terminology on "literacy" and to use consistently across the Commission and to improve the links with the civil society and key stakeholders.

They stressed that all relevant Commission services should be involved in this process of clarification and should present co-ordinated policy views.

They suggested exploiting upcoming initiatives, such as the "e-Skills Raising Awareness Campaign" promoted by the European Commission, the "2009 - European Year of Creativity

and Innovation" and the "2010 - European Year for combating Poverty and Social Exclusion", to generate actions in the field of digital literacy.

The experts proposed to set actionable target measures toward the EY 2010 and to get in contact with Spain, which will take up the EU Presidency in the first half of 2010.

They also asked to extend supporting initiatives and funding to bring stakeholders together and exchange good practices.

Finally, they invited the European Commission to make future events of e-Inclusion better focused and to ensure a better engagement of Government representatives.

### **Conclusions**

The European Commission thanked the experts for the very good cooperation and work and said it was going to take into consideration their suggestions and keep them informed on relevant next steps in the area of digital literacy.

# Peer Learning Activity (PLA) on e-Inclusion and digital competences

2 -3 December 2008 (PLA), Vienna, Austria

## Venues: e-LISA Academy and Federal Ministry of Education, Vienna

Austria	Helmut Stemmer	Federal Ministry of Education, the Arts and Culture
France	Nathalie Terrades	Ministry of education
Slovakia	Viera Blahova	Ministry of Education
Bulgaria	Silvia Kantcheva	Ministry of Education
Estonia	Peeter Normak	Tallinn University
Finland	Jouni Kangasniemi	Ministry of Education
Hungary	Zsuzsa XY	Ministry of Education and Culture
Norway	Guri Skoklefeld	Ministry of Education and Research
Austria	Barbara Buchegger	Austrian Institute for Applied Telecommunications
Austria	Erika Hummel	eLISA Academy and Federal Ministry of Education, the Arts and Culture
Commission	Lieve Van den Brande (Chair)	DG EAC
Commission	Friedrich Scheuermann	CRELL/JRC

## 1. Overall purpose

The 8<sup>th</sup> ICT Peer Learning Activity (PLA) was hosted by the Austrian Federal Ministry of Education, Art and Culture and organised by the Austrian member of the ICT cluster from said Ministry. The PLA focused on digital competences and eLearning, and starting with Austrian experiences in eLearning and good practices in teacher training.

The PLA lasted one and a half days and was preceded by the eInclusion Conference, taking place in Vienna from 30 November 2008 to 2 December 2008 (lunchtime). Virtually all PLA delegates attended the 2008 eInclusion Ministerial Conference. The PLA was also thought as a platform to discuss results from the eInclusion Conference and in particularly the recommendations of the Digital Literacy High Level Group (set up by DG INFSO).

### 1.1 Themes of the PLA

1. Austrian experiences in eLearning
2. Digital key competences for teachers

## 2. Programme

Day 1: Austrian experiences in eLearning. Presentations by Austrian experts and discussions.

- **Christian Dorninger** – future(e)Learning concept of the Ministry of Education
- **Thomas Narosy** – edumoodle and other central services
- **Stefan Waba** – EPICT in Austria; e-LISA academy – cooperative online learning teacher courses
- **Students** (Purkersdorf) presenting an Austrian-wide strategic eLearning project (eLSA)
- **Marion Grabenweger** – Motivating and professionalizing teachers: which e-competences are necessary and what can be done to achieve them? Experiences from everyday life
- **Christian Fuchs** – experiences from the eLearning strategy implemented in Burgenland.

Day 2:

- Visit to the Bundesrealgymnasium Pukersdorf which has a focus on eLearning
- Discussion of the results of the eInclusion conference, in particular the sessions on digital literacy and competences.
- Digital key competences for teachers

### 3. The sessions in summary

#### 3.1 Austrian experiences in eLearning

The goal of the session was to learn from experiences and different strategies and to exchange ideas on digital competences of teachers.

##### 3.1.1 The *Futur(e)Learning* strategy of the Ministry of Education

The first presentation of the afternoon was given by Mr Christian Dorninger from the Ministry of Education. He spoke about the *Futur(e)Learning* strategy, the new programme of the Austrian Ministry of Education. The programme was started in Austrian schools in 2007.

The new strategy focuses on central services, such as

- **New learning arrangements** by central services (individual tools for students; Web 2.0. schools – see for example edumoodle; eContent etc. There is a study financed by Telecom Austria on the subject of how to quickly introduce Web 2.0. in the classroom.)
- **Teacher training** (EPICT; online courses with ECTS; eGovernment teacher training – something Austria is very proud of)
- Innovative **pilot projects** (Internetpolicy; mobile learning – special software was developed in conjunction with universities; game-based learning – here, a project was done with the Danube University of Krems; gender IT)

An important part of the strategy are **ePortfolios** (<http://www.e-portfolio.at/>), which are increasingly being used to complement traditional training, especially with regard to individual learning. The main components are the *process portfolio* for reflecting learning and the *application portfolio* for assessment purposes and job applications. E-portfolios are in line with the European Qualification Framework (EQF).

At the beginning, **eContent** was produced by teachers but it was not very successful. So textbook editors were asked, but it was too expensive. Now education servers in the Austrian provinces do most of the work, which is paid for by the national government. 15% of teachers use content available on the education servers, while students prefer Google or Wikipedia.

In Austria, there is an initiative called Schulbuchaktion (“textbook initiative”), meaning that schools get high-quality textbooks for free. The situation is different for digital content. Given the good quality of traditional books, there is not so much need for it. The groups who produce digital content look for it on the Web and edit it for their own purposes.

Ten schools have introduced a so-called **EduCard**. Basically, it is an ID card which students can use when accessing IT, transportation services, buy food etc. As it does not solve any pedagogical problems, Christian Dorninger is slightly sceptical. Also, there is opposition from students, some of whom think the EduCard serves to monitor them.

Many of the projects are still in an experimental phase. There are a number of problems to solve before they can be scaled up to the system as a whole. One problem is that there are only two people in the Ministry working on the subject.

### *3.1.2 eLSA - eLearning in daily school*

Students from the Bundesrealgymnasium Pukersdorf, a school participating in the eLSA project (see box below), talk about their experiences with eLearning.

In their school, the students learn to use computers and the Internet step-by-step. For example, they use **ePortfolios**. ePortfolios can be created easily and be used by students to show what they have learnt. The teacher gives them some initial information, but it is up to them what they do.

The most frequently used platform is **Moodle**. Students can download files and upload answers, and teachers correct their assignments and give feedback. They can also discuss topics in discussion forums. They also use GeoGebra, a dynamic software to display figures and graphics, and Derive for math lessons.

Sometimes, they get instructions to create a **podcast**, in which they have to explain topics to other people. Also they work with screencasts.

One of the advantages of using computers at school is that students can find information easily. The students cannot imagine working without computers at school.

#### **The eLSA project**

eLSA is a project by the Federal Ministry for Education, Science and Culture in Austria for students from the age of 10 up to the age of 15 (lower secondary school, years 5-8).

In 2002 eLSA started as a pilot project with four schools, a few months later with nine schools, each located in one of the nine Austrian provinces. Each of the participating schools established at least one core “eLSA class”. In this class, eLearning had to be implemented in all subjects; teachers had to act as a teaching team.

Teachers tried to implement E-teaching and E-Learning in everyday teaching situations by offering the students E-learning sequences in very different and creative variations. As a common communication and working platform they were using “blackboard ®”. The initial phase was systematically evaluated by the University of Innsbruck, and there were several case studies during the first three years of the pilot project.

One of the objectives of eLSA pilot project (as well as ELSA II) is that teachers should acquire an in-depth knowledge of the learning platform (Blackboard in the pilot projects, different platforms in eLSA II as Moodle, WeLearn etc.) and of the potentials it offers in everyday school routine (developing and testing e-learning teaching sequences). Approx. 50% of the eLSA school teachers and pupils are meeting these challenges with great enthusiasm and achieve exceptional results. One of these results: There is no problem for children from the age of 10 (and maybe even younger) to use e-Learning platforms and e-learning offers.

Since March 2006 a nationwide platform (Moodle) has been available for eLSA-schools all over Austria. Schools of different provinces realise projects together. Currently, eLSA is a school network of around 100 schools, mainly lower secondary, located all over Austria.

### 3.1.3 Edumoodle and other central services

Thomas Nárosy from the e-LISA Academy gave a presentation on edumoodle (see [www.edumoodle.at](http://www.edumoodle.at)).

The Austrian Federal Ministry of Education has launched the project edumoodle with the idea that all Austrian schools should have the opportunity to use Moodle without having to maintain a Moodle server themselves. Indeed, the problem which led to the invention of edumoodle was that most schools are not able to set up a Moodle server themselves. There are some advantages to edumoodle:

- It is cheaper to maintain than Moodle.
- Teachers can use edumoodle much more easily than Moodle.
- It is connecting people all over the world.

The system is hosted at the Ministry, and so far it is free for schools. The cost is between 20 cents and 1 Euro per student per year. Austria is cooperating with Germany with regard to e-Education. However, it is not so easy to implement eMoodle in another country as educational systems vary widely between countries.

Other central services include

[www.schule.at](http://www.schule.at) (contains among others educational material)

[www.bildung.at](http://www.bildung.at) (eLearning portal for education, higher education and adult education)

[www.epict.at](http://www.epict.at) (European Pedagogical ICT Licence, see below)

All websites are in German.

### 3.1.4 Cooperative online learning teacher courses at the e-LISA Academy

Presentation by Stefan Waba on teacher training at the eLISA Academy.

The **e-LISA Academy** has been responsible for eLearning in teacher training for more than ten years. It offers more than 70 courses for individual studying as well as co-operative online seminars. More than 10,000 teachers have participated in e-LISA courses over the last ten years. At the moment, they have a bit more than 1500 participants. The courses are paid for by the regular budgets.

In Austria, there are about 120,000 teachers. At the moment, there are very few incentives for them to engage in further education, particularly in eLearning. However, under the new government further education is going to be compulsory.

The e-LISA Academy introduced the **cooperative online seminars** in 2007. They are scheduled in a time slot between 2 and 4 weeks. The seminars involve small groups of up to 12 participants and allow collaborative work and communication among them. Trainers provide input, individual coaching and feedback. The certificate participants get upon completion of the course is accepted by all pedagogical academies.

The feedback from the cooperative online seminars is very good. Cooperative online seminars allow participants to experience the high potential of eLearning at first hand and get a feeling of community. Evaluations constantly show very good results.

### 3.1.5 EPICT in Austria

Stefan Waba also presented the European Pedagogical ICT Licence EPICT, as implemented in Austria (<http://www.epict.at>).

EPICT is a Danish teacher training programme, whose emphasis is on the didactics of ICT use for teaching. Participants learn to put their ideas into teaching practice. They are also encouraged to get involved in team-oriented and dynamic processes.

EPICT is being implemented in the province of Burgenland. It is a pilot project at the moment. One problem is that in Austria education is decentralised, and the Federal Ministry cannot force anything on anybody. Stakeholders have to be convinced that eLearning is useful.

### *3.1.6 Motivating and professionalizing teachers*

Presentation by Marion Grabenweger on motivating and professionalising teachers – which eCompetencies are necessary and what can be done to achieve them?

Everyday experience shows that the main difficulties are that the teachers responsible for IT change and that teachers lack IT skills and the motivation to improve them. Sometimes, the equipment is a problem too, e.g. if there are only IT rooms for 250 students. The worst case is a breakdown of the Internet.

According to Marion Grabenweger, e-competences include

- To be open for new challenges: students have fun working with the Internet. Teachers need to enter the world of the children.
- Interest in applying new methods
- No fear of PCs
- Computer literacy: Office Applications and Internet
- Interest in further education for teachers: e.g. at the e-LISA Academy

eBuddy: One of the motivational activities was to bring teachers together, so that they can learn together and motivate each other. Usually, the networks created are sustainable.

Interestingly, religion and language teachers are very proactive. Science and mathematics teachers are not that open – they have quite traditional viewpoints on didactics. Teachers invest a lot of time in preparing classes electronically – they use more time than they would do using traditional material.

The schools involved in eLearning go through a certification process. One of the impacts is that students remember things longer. Students say that if their computers were taken away, they would not remember things any more.

## **3.2 School Visit**

### *3.2.1 Introduction*

The PLA delegates visited the Bundesrealgymnasium in Pukersdorf (near Vienna). The Bundesrealgymnasium teaches children aged 10 to 18 (lower secondary and upper secondary school). It has a focus on science and maths. The school has 900 students and 80 teachers (some part-time); there are between 20 and 33 students in a class.

The Gymnasium is a pioneering school in terms of eLearning. It was one of the four schools that started the eLSA project. It has recently been accredited. eLearning has been extended to upper secondary school; the project is called eLC (eLearning Cluster).

The visit was guided by Erika Hummer, from the eLISA team and BMUK, and the facilitator Barbara Buchegger, from the Austrian Institute of Applied Telecommunication.

Welcome and preliminary discussion with the head of school and two teachers involved in e-learning:

- Irene Ille, head of school, teaches maths and physics
- Dagmar Furch, teaches English and musical education, involved in eLSA
- Christoph Krehlig, teaches maths and history, has been member of eLSA for the last 3 years and is an eLSA coordinator

### *3.2.2 ICT use in the Bundesrealgymnasium Purkersdorf*

The head of school displays strong leadership in terms of eLearning. She stresses that pupils grow up with ICT and the internet and have to learn how to live and cope in this world. This is one of the motivations for the school's eLearning focus.

Every class is introduced to working with computers in the first year. The school works a great deal with Moodle. Every classroom has one PC (for the teacher to use).

PCs are used in classrooms, and most subjects use PCs.

Different uses of ICT:

- Handouts and assignments sent out to students by email
- Moodle platform
- Networks
- Exercises (very useful in English and maths)
- Web quests (searching for information on the internet)
- Communication with other schools all around the world, not just chatting but joint projects. Example: four schools in Austria cooperate in religious instruction
- Each child has an email account
- Examinations on the computer: the Matura (school-leaving certificate) is going to be partly on the computer (in German, maths, technical drawing/descriptive geometry, and English). It is a pilot.
- The electronic portfolio project is in its infancy still, used in upper secondary school for students above 15 years of age.

Cyber bullying is not an issue at the school in Pukersdorf. However, Barbara Buchegger tells about a recent conference in Vienna, where a 1/3 of around 60 heads of schools from Vienna said they had problems with cyber bullying. Schools with a good tradition in peer mediation etc. seem to be better equipped to handle the problem. Interestingly, most schools with cyber bullying do not use ICT in education.

### 3.2.3 Certification process

There are eight (high-level, visionary) goals in the ELSA network that schools have to attain (see box below). The certification process involves interviews by external experts and schools visits.

The certification lasts for 3 years only and has to be renewed after that. It costs a lot of money and time but the head of school thinks it is worthwhile because of the benefits.

The benefits of certification are: contributes to school development; boosts motivation of the people involved; informs parents that processes of learning are changing; boosts visibility. The project is important for teachers as well: teachers can teach themselves.

There is not enough money for eLearning from the federal government. Hence, the school has sought commitment from private sources. It receives money from parents and other sponsors.

#### **The Eight Objectives for “eLSA” Schools**

The basis of the eLSA project is that participating schools commit themselves to goals before participating in the project.

An eLSA school must fulfil 8 objectives and – in the medium term – anchor these objectives in its school programme.

*1. Each student will try out “e-learning sequences” in class during the course of the project.*

The successful transformation of a school must be reflected in its teaching. The first transformation parameter begins directly with the students in class. The pedagogic background of this first objective is that each of the students get an idea of how he/she can personally profit (or not profit) from an electronically supported learning environment. This basis of reflection derived from teaching sequences in the various subjects must be offered to all secondary school students, at least in the upper levels (9th - 12th school levels).

*2. Each teacher will have gained experience with e-learning sequences in his/her own subjects (in at least one subject) and will have put this experience at the disposal of all members of the teaching teams involved with these subjects and the participating classes.*

This transformation parameter reflects the transparency of the transformation process up to the teaching level. The objective is to convince a qualified majority of teachers in a particular school of the value of achieving the objectives of e-learning. A fundamental transformation, however, means that everyone in the school system must become familiar with the new requirements. Only in this way is it possible to ensure that all the students will notice the results in their work and profit from them.

*3. Teachers of the same subjects and the teaching teams of the various classes test the possibilities, potential and limits of e-learning together in a coordinated way.*

This parameter measures team performance. E-learning promotes and demands cooperation among teachers at both the class and subject levels. This can be done, independent of time and location, through professional organizational environments such as learning platforms; however, the new developments are so extensive that real innovations in teaching can only be realized through teamwork. When drawing up “e-content” and “teaching sequences”, a high degree of cooperation among the teachers is required.

*4. The pilot schools develop concrete models for testing “e-learning” teaching sequences in cooperation with one another and put their experience at the disposal of all other schools.*

At the school (management) level as well, new possibilities for cooperation should be tried out. The cluster constitutes the organizational framework of this inter-subject and inter-school cooperation.

*5. The school programme (short and medium-range school objectives and implementation measures) continually integrates newly gained “e-learning” insights into the daily school routine.*

In order for a transformation process to become an ongoing routine, it is necessary to anchor “e-learning organization” in the school programme. The school programme creates the basis for a school’s operative annual goal planning and goal reviews. Innovations in the organization of the learning process must be integrated into the school curriculum and anchored in an annual program. This is the only way, from a management perspective, to ensure that e-learning processes will be more than a passing trend and become a viable element of the daily school routine.

*6. Testing “e-learning” in class is an important concern of the head of school. The project has high priority in the school routine.*

In the final analysis, professional leadership is the decisive factor in the success or failure of transformation processes: In the evaluation of the e-learning notebook classes, it was apparent that in the end only schools whose heads strongly supported and involved themselves in the project succeeded in achieving extensive innovations.

*7. There is a steering group that coordinates and harmonizes the “e-learning” content developments and their testing in class and ensures that the project progresses.*

In Austrian schools the head of school is responsible for a broad range of management duties and at the present time has little possibility of delegating any of these to a subordinate level. In order to ensure the involvement of the teaching staff of a school in e-learning projects on a broad level, a management organization is needed to supervise the project at the school.

*8. The school offers its students the possibility of obtaining at least one IT or e-learning certificate (on a voluntary basis).*

The school must offer its students, in the form of an educational grant, practice-oriented IT certificates on a voluntary basis. This ensures that the reality of economic practice is implemented on a concrete basis in e-learning schools. Typical IT certificates appropriate to the secondary school levels are, for example, the ECDL (European Computer Driving Licence) and the ECDL-Advanced.

### *3.2.4 Effects of ICT in learning*

The effects of ICT in education are not only educational but also social.

Effects include: ICT promotes teamwork (at Pukersdorf, it was not difficult to introduce team-teaching); leads to different attitudes to teaching in classroom and willingness to change; promotes cooperation and communication both at the levels of teachers and students. 'Open classes' are no problem: it's no problem if a pupil from another class sits in on the lesson.

Learning outcomes: does the use of ICT enhance performance and learning outcomes? Dagmar Furch thinks that it does. It also allows differentiated teaching in the classroom.

The head of school does not see any negative effects. ICT in learning means more work for teachers but also more fun. But at school level, it costs a lot.

The social disparities are not too large at the Pukersdorf school. Still, there is a PC lab for pupils who do not have a PC or internet access at home.

### *3.2.5 Visit to computer lab*

The PLA delegates visit a computer lab. Second-year children show them how they use the computer in different subjects (French, English, descriptive geometry/technical drawing, religious instruction etc.). PLA delegates individually talk to the students. They seem to enjoy working at the computer a great deal.

### *3.2.6 Discussion*

Discussion of the PLA members with the head of school and two teachers who use ICT in classrooms on common experiences in various MS. The two teachers are

- Elisabeth Berger, teaches English and geography
- Christian Auinger, teaches English, psychology and philosophy

### **ICT in schools**

In Finland, children sent out to do their own studies. There is less practice and drill in eLearning. Austrian experts confirm that drill and practice is not what they would like to see either.

At the Pukersdorf school, not all teachers are convinced that ICT is good. But that is not necessarily a bad thing. It makes for change for students.

How does the head motivate teachers to use ICT? She offers seminars and other resources.

Teachers quickly get a feel of whether students like ICT in the classroom or not.

Teachers discuss among themselves what textbooks are successful, the same is true for software. Teachers are organised in teams at the Pukersdorf school.

### **Salaries and incentivisation**

In Norway, salaries are negotiated with the head of school. This measure has been newly introduced, and only for upper secondary schools. It is said not to create a good atmosphere among teachers. However, heads of schools have the opportunity to reward teachers who use ICT.

In Estonia, only minimum salaries are fixed. On top of that, there are five quality levels of teaching.

In Finland, teachers have a great deal of freedom in the classroom, and salaries are decent. Also, teachers get 2.5 months off in summer. These are some reasons why there are 7 applicants for 1 place at university.

In Austria, salaries are provided and fixed by the federal government, so incentivisation is not possible. However, the head of school underlines that time can also be given to individual teachers to get additional qualifications etc. In a Norwegian context, where primary school and lower secondary school wages are low and teachers are generally overworked, further education is more of a punishment than a reward.

## **Communities of practice**

Estonia encourages communities of practice. What is the situation in Austria? At the Pukersdorf school, co-operation within the single subjects is the norm. In fact, it has been endorsed by the head of school. But it is not like this in every school. There are also get-togethers of teachers from different schools. But the majority of all contacts are voluntary.

## **Maintenance**

The school has an external company for servicing the ICT infrastructure, but only for the bigger jobs. Normally, teachers maintain the infrastructure. This is a problem in such a large school. In fact, maintenance tends to be a problem everywhere.

The school would need a full-time ICT support person. There are regional systems (in Burgenland and Tyrol) where a specifically trained teacher is in charge of ICT maintenance in different schools in the area.

## **Involvement in international project**

For the last 5 years, the Pukersdorf school has been in contact with a Polish school in the context of the “climate alliance” (<http://www.klimabuendnis.org/>). The school also has an exchange programmes with Mexican schools (as part of Spanish). The international contacts tend to be bilateral.

## **Drop-outs**

Norway has a 30% drop-out rate at upper secondary level, 90% of the drop-outs are boys. The problem is practically non-existent at the Bundesrealgymnasium.

## **3.3 Discussion of the results of the eInclusion conference, in particular the DL sessions**

### **Digital literacy**

One of the recommendations from the e-Inclusion Conference is that digital literacy should become a part of media literacy, be embedded in media literacy, as it is not just about having access to ICT, it's also about the right skills to understand digital media. Is this a good idea from the ICT cluster's perspective? What are the implications for teacher training?

Digital literacy and media literacy are considered to be interconnected, but the borders are blurred, and sometimes it is difficult to draw a line. Perhaps we can say that media literacy is broader, as it includes media other than ICT such as films, papers etc. Furthermore, media literacy centres around media and communicating something, while digital literacy centres around information. The former is taught by social scientists, the latter by information scientists, and bridges between both communities are scarce.

The PLA delegates agree that there are links between the two but they are different.

Also, there appear to be different definitions used in different countries. In Finland, digital competences and media competences are dealt with separately, with media literacy having its roots in journalism. In Bulgaria, an altogether different terminology is used.

The PLA members recommended therefore to explore in-depth the connection between Digital Literacy and Media Literacy before integrating both. More is needed to clarify the fields of digital literacy. Another link has to be clarified with the work around e-skills.

Information literacy is missing in the duo of digital literacy and media literacy: the competence to deal with information (and information overload).

E-skills are related to work, that's why they are located in DG Enterprise. But e-skills is not enough. We need to be discussing digital literacy. Critical attitudes and skills, creative use, cultural dimension: these are used outside education but students don't pursue them in education.

### **Informal and formal education**

The informal and formal dimensions of learning were both mentioned at the Conference. While many of the of the key speakers referred to the core role formal education should play the issue of formal education and DL was not enough discussed., The PLA members found this disappointing, as formal education is essential to ICT teaching. School is mandatory for all, meaning that all have the opportunity to acquire (some) ICT skills. However, a critical sense is needed, not only access and use.

The cluster agrees that digital literacy should be taught at an early age, as set out in the recommendations formulated by the cluster for the e-skills Conference in Thessaloniki. Digital literacy should also be included in the national curriculum.

### **Recommendations of the ICT cluster**

The Norwegian member followed by the other PLA endorse the idea that the ICT cluster's recommendations formulated following the PLA in Thessaloniki are very good and could be further extended and completed with the recommendations formulated on digital literacy. The Estonian member feels that the third recommendation, Point 3 should perhaps be a bit more specific.

### **LLL and e-inclusion – an important dimension to be include in eLearning and DL**

Adults need to stay up to date in ICT. Adult education should make provisions. There should be a right to adult education. Adult education is particularly important at the moment because of the economic crisis.

There is a link between ICT and entrepreneurship that needs to be explored, especially now that we are experiencing a global economic downturn.

Schools should be opened up to adults for lifelong learning and the eInclusion idea. Schools have the technical infrastructure, the class rooms, the PC rooms and the support structures needed. Schools should be accessible in the evenings and at weekends as well.

Teachers need to take over a much more important role. As methodological and pedagogical competences are essential for teaching; hence, integrating teachers will be of primary importance.

Video transmission (via the Internet) allows to diffuse socially relevant topics to people while at the same time allowing people to ask back; the video files can also be used for time-shifted information and communication (use of blogs, Wikis etc).

The advantage of opening up schools will be that the technical infrastructure of schools will be better secured, also in the long-term (regular updating of ICT infrastructure).

## **3.4 Digital key competences for teachers**

### *3.4.1 Good practice in teacher training – what approaches to adopt?*

- **Co-operative on-line courses:** they promote teamwork, teachers take up co-operative ways of working in their schools
- **Learning networks:** collaboration between 11 schools and a teacher training college, teacher training college provides didactics, 200 schools have participated.
- **Making ICT mandatory in initial teacher training:** the only way to get the teacher training colleges on board is to make ICT mandatory in initial teacher training. A distinction has to be made between initial and in-service training.
- **Engage** teachers in long-term training from initial training to continuous regular in-service training. Emphasise the introduction of eLearning didactics courses for teachers.

- Offer training to a **team of teachers with full endorsement by the Head teacher**. Heads of schools need to back up the scheme. Thus, personal and organisational transformation processes are started.
- **Incentives for first steps:** (monetary) incentives are important, teachers without ICT knowledge are often afraid of taking up ICT.
- **eBuddy training (one-to-one training):** creates a comfortable atmosphere in which to learn. High success rate. Contacts continue after actual training. **Blended learning resources:** blending of professionally produced and self-produced content. Professionally produced software is very expensive, self-produced content does not always exploit the opportunities of ICT. Blending is a solution.
- **Engage teachers getting in touch with practice and hands-on experiences.** Start from **direct need:** happy slapping, cyber bullying etc. makes schools think about and take up ICT. Are **Safe Internet Guidelines** used in teacher training in Austria? Yes, experts are invited to give talks. Special brochure published. Reality helps: things are happening all the time, so there is demand for safe internet guidelines.

### **Experiences of MS:**

Digital learning resources are a bottleneck. Developing digital resources is a profession. In **Norway**, digital content is not used often because of low quality (developed by teachers). In contrast, professionally edited hybrid textbooks are more successful (textbook, website and CD-Rom) than digital textbooks. In Finland, there is a repository of digital clips but it is rarely used by teachers.

In-service teacher training in **Bulgaria:** Language training for teachers with the British Council. The course involves creating content, how to make films etc. The result is that teachers who attended the training continue to use ICT in education. The training is not mandatory, it is bottom-up and easy-to-use. There is also mandatory (basic) ICT training for teachers (Office applications, European Computer Driving Licence).

In **Estonia**, there are educational technologists who support teachers in developing content. Educational technologists must have completed a Masters course in educational technology. The scheme is paid for with Structural Funds. In Estonia, there are no companies developing digital resources, as the market is too small.

**Austria** has tried to use the competences of universities to introduce eLearning in schools. Without success because universities think in terms of adult education.

University of Klagenfurt, Corinthia/**Austria: students teach university professors.** Students have to complete four semesters of training in ICT didactics.

**Mandatory services** such as putting exam results on the web etc. require that teachers have some ICT skills. Estonia has quite a large e-administration that makes teachers take up and use ICT. Hence, a good practice is when teachers *have* to use an information system.

Is **E-Twinning** a good model to teach ICT? E-Twinning is a bottom-up model, easy to join and access. Austria wanted to e-twin e-learning schools within Austria. In order to do so, they twinned with a school outside Austria who then twinned with another Austrian school. It would be good if twinning could be done nationally, in one's own language. There is no copyright on the e-Twinning concept. The concept could be easily copied but the software would be needed at national level.

## 4. Conclusion

The 8<sup>th</sup> PLA of the ICT Cluster may have been a small PLA in terms of participants but its outcomes are immensely valuable. It had an excellent programme; and discussions among PLA delegates and experts were lively, interesting and of high quality.

The PLA showed the importance of a comprehensive and well-thought out strategy to develop e-Learning, as pursued in Austria. It was particularly impressive to see Austria's focus on the pedagogical dimension of e-learning. The PLA delegates were also impressed by the enthusiasm students and teachers showed with regard to eLearning and the pride with which they presented their e-learning project. The PLA also showed how critical it is, for e-learning to succeed at school level, to have a strong head of school whom has a clear vision and can motivate teachers.

The PLA fulfilled the objectives of being a stock-taking and learning exercise. The PLA also provided a logical continuation to previous PLA discussions. The conclusions are

- Education has to do more to achieve digital literacy. Awareness has to be raised. The recommendations formulated after the PLA in Thessaloniki not only show how digital literacy can be achieved, they are also an excellent instrument in the hands of the ICT Cluster to raise awareness.
- Teacher training remains the most significant bottleneck. – But we have experience enough to know how to tackle teacher training and how to enthuse teachers for e-learning. The experiences and good practice cases set out above are showing the way.

Appendix 1 Programme

Appendix 2 Participants

Appendix 3 The ICT Cluster's activities in the immediate future: practical information

# Appendix A

Bundesministerium für  
Unterricht, Kunst und Kultur



Geschäftszahl: BMUKK-305.000/0035-I/9/2008  
SachbearbeiterIn: MR Mag. Helmut Stemmer  
Abteilung: AL I/9  
E-Mail: [helmut.stemmer@bmukk.gv.at](mailto:helmut.stemmer@bmukk.gv.at)  
Telefon/Fax: +43(1)/53120-3526  
+43(1)/53120-813526

Ihr Zeichen:

Antwortschreiben bitte unter Anführung der Geschäftszahl.

## **PLA-Meeting in Vienna; official invitation of the members of the ICT Cluster**

Dear members of the ICT cluster!

In accordance with the Chair of the ICT cluster we have organised a PLA meeting in Vienna following the e-Inclusion Conference.

The Federal Ministry of Education is happy to invite all members of the ICT cluster to the PLA meeting.

Key dates of the PLA meeting:

**2 December 2008, 2.30pm – 3 December 2008, 5pm**

**Place: Federal Ministry of Education, Minoritenplatz 5, 1014 Vienna,  
room “Blauer Salon”**

The Ministry is inviting all PLA participants to a dinner on 2/12/08 (Restaurant LUX, Spittelberg) as well as a lunch on 3/12/08 (at the Ministry).

### **Detailed programme:**

Digital competences and eLearning

## **Tuesday, 2 December 2008**

14.30 – 17.30

“Blauer Salon”, Federal Ministry for Education, Arts and Culture, Minoritenplatz 5, 1014 Vienna

Goal:

- Learning from experiences and different strategies
- Exchanging ideas on digital competences of teacher

### **Programme:**

#### **Austrian experiences in eLearning**

Input (short presentations) and group discussions

Discussion in small groups (regarding prepared questions, after every input (presentation) 5 min discussion in group)

Input (Presentations on Austrian experience):

**Christian Dorninger** – futureLearning concept of the Ministry of Education

**Thomas Narosy** – edumoodle and other central services

**Stefan Waba** – EPICT in Austria; e-LISA academy – cooperative online learning teacher courses

**Students** (Purkersdorf) presenting an Austrian-wide strategic eLearning project (eLSA)

**Marion Grabenweger** – motivating and professionalizing teachers: which e-competences are necessary and what can be done to achieve them? Experiences from everyday life

**Christian Fuchs** – experiences from the eLearning strategy implemented in Burgenland.

16.15 – 16.45 Break

16.45 – 17.30 Experiences from other countries

17.30 – open end

20 minute walk:

Christkindl-Markt am Spittelberg (X-mas market with hot drinks and shopping possibility)

19.30 Dinner: Restaurant LUX (invitation by the ministry of education); Spittelberg

## **Wednesday, 3 December 2008**

School Visit

Please choose:

**Highschool with an eLearning focus (eLSA) in Purkersdorf (nearby Vienna)**

**Meeting point 8.30 Westbahnhof (guide: Erika Hummer, eLSA-Team)**

**Option:**

- Bilingual Primary School with eLearning Experience
- Secondary Schools for Business Colleges with an eLearning focus (Hertha Firnberg Schule für Tourismus)

12.45 – 17.00

“Blauer Salon”, Federal Ministry for Education, Arts and Culture

Minoritenplatz 5, 1014 Vienna

Key competences ICT and equity

Together with Austrian experts we will try to name relevant key competences for teachers.

Group work and plenary discussion.

Key factors will be named.

Reflection on eInclusion Conference and previous discussion (and school visit):

“Relevant factors for achieving key competences” – group work and plenary summary

13.45 lunch at Minoritenstüberl (in house; invitation by the Ministry of Education)

14.45 Group work: Describe relevant key factors for teachers competences

5-7 working groups; each group will have members from different countries in order to achieve a general picture

15.45 – 16.00 Break

16.00 plenary discussion (including final version of joint recommendations)

17.00 end

Best regards

Helmut Stemmer

Wien, 24. November 2008

Für die Bundesministerin:

Mag. Helmut Stemmer

**Elektronisch gefertigt**

# Appendix B

<b>Country</b>	<b>Name</b>	<b>Institution</b>
Austria	Helmut Stemmer	Federal Ministry of Education, the Arts and Culture
Bulgaria	Silvia Kantcheva	Ministry of Education
Estonia	Peeter Normak	Tallinn University
Finland	Jouni Kangasniemi	Ministry of Education
Hungary	Zsuzsa XY	Ministry of Education and Culture
Norway	Guri Skoklefeld	Ministry of Education and Research
Austria	Barbara Buchegger	Austrian Institute for Applied Telecommunications
Austria	Erika Hummel	eLISA Academy and Federal Ministry of Education, the Arts and Culture
Commission	Lieve Van den Brande (Chair)	DG EAC
Commission	Friedrich Scheuermann	CRELL/JRC
Consultant	Alexandra Rammer	Technopolis Group
Consultant	Barbara Good	Technopolis Group

# Appendix C

## The ICT Cluster's activities in the immediate future: practical information

- The Chair is going to send intermediate results of the study on the **impacts of eLearning** (conducted by Empirica and the European Schoolnet) to the ICT cluster members and PLA delegates. The study is a meta-analysis. The study is the first full European-wide comparative study on the Impact of the use of ICT for education.
- The Chair is wondering whether the ICT cluster should issue recommendations on digital competences including **good practice cases**? However, this might require (too) much work if done seriously. The Chair suggests that the Cluster members think about this suggestion of a compendium of good practices on digital competences.
- The Chair and the Consultant will bring together **recommendations from all PLAs**. These will be sent to the ICT cluster members for approval. The aim is to produce a policy paper/consolidation report.
- The facilitator Barbara Buchegger attended the **Youth Protection Round Table** in London two weeks previously. The Round Table is looking for best practice cases; people who have something interesting to present should get in touch until the end of December. The ICT Cluster could present its conceptions of digital literacy. Barbara Buchegger thinks this would be very interesting, as the Round Table is very technology-focused.
- The Austrian member refers to an **OCED conference** in Paris: "ICT and initial teacher training". The OECD is asking member countries to finance the national part of the study and to contribute content. Perhaps the ICT cluster could send its collection of good practice cases in teacher training (from the Compendium of Good Practice Cases of eLearning)?
- The Chair suggests that the **next ICT cluster meeting** take place in March 2009, close to a meeting of the teacher training cluster. She proposes a half-day meeting with the teacher training cluster. The Chair and Consultant will make sure that the teacher training cluster receives the collection of good practice cases in teacher training already existing (from the Compendium of Good Practice Cases of eLearning).
- Short notes on recent policy initiatives in member states would be useful to complete the Compendium. The Chair and the Consultant will put together what is already known about policy initiatives, and ICT members can then complete them.