



FutureLearning – the successful next development of the eFit initiative

The rapid change of the information and knowledge society does not stop at education: communication, teaching and learning are changing due to digital media (ICT-information- and communication technologies).

The internet loses its pure “publication” function because of newly developed portals and is getting interactive. The web is changing within a very short period of time not only in a technical way but also in all areas of application and especially in using the net. With the next steps of “social software” and “Web 2.0” the internet is changing to a distributed net. In contrast to other mass media it is very easy in a “web by users for users” not only to be recipient but also appear as sender and author of messages to an infinite amount of users.

Two focal points of “FutureLearning”

1) New forms of learning and new learning arrangement

FutureLearning is deals with new forms of learning and learning arrangements which move into another direction, away from a classical frontal education situations. By using non directive learning arrangement it should be possible to gain results from group-, partner, or single works. Those results are then structured to build a new learning environment.

2) Creativity

The MIT professor Seymour Papert got acquainted with a concept called “mindstorms” approximately 15 years ago: children have to prepare their working environment themselves by using appropriate instruments so that they have a chance to develop a “creative thinking environment”. Through this initiative, among other things, a didactical based, list oriented programming language named LOGO was developed.

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and behaviour patterns. Those tools have to be available for personal use – preferably in one's ownership and be always with them (because they are very small in volume).

3) Mobil Computer Interface

Today most people have a “communication machine”, the mobile telephone (or cellphone). Mobile phones are getting more and more application areas – a connection to the internet would be a great advantage. It makes no difference which tool you are using a notebook PC, subnotebook, a “Communicator”, a “Classmate”-PC, a PDA or a webphone, the connection to the internet via an UMTS connection – makes it a “communication machine”! “Web 2.0 goes mobile” is the key word! This learning engine has to be very easy to use.

“FutureLearning” intends to open up a connection for all pupils, teachers, working students and students to a web driven communication and learning tool (this could be defined as Mobile Computing Interface) and to adjust the learning possibilities to reasonable learning and school environment.

Targets for FutureLearning

In using the ideas mentioned above a number of targets could be set. It is very important that these quantified objectives get indicators to measure the success of this initiative. The discussion at Austrian Schools about quality has led to the evaluation culture of visualising activities taken. This will happen in FutureLearning as well. All of the following considerations assume that all schools will be supported in structure and networks to work together (this has been happening since 2002 in two projects eLSA – “eLearning in daily school live” and eLC “eLearning Cluster”). In an “eCo-operation Project” starting autumn 2007 today's 120 locations will become 220 locations which will work according to the outlines of FutureLearning.

eContent and mid term IT-services for complete education

The aim of the eContent initiative is, according to the eContent master plan (bmukk 2007), to support approximately half of the classes with elearning material in all subjects until the end 2010 (and learning environment). According to the “principle of workload” the number of all learning and study activities in relation to the use of relevant learning material will be the basis of the implementation. In view of the study “eContent in education” (Salzburg 2006) from Salzburg-Research about the usage of eContentmaterial” the usage is about 20% (it varies according to school type and “Schulbuch extra = SbX” was added). The usage of the eContent should be doubled by various measurements.

The great success of the “Edumoodle” – initiative (own instance for school locations, the learning platform “Moodle” as allocation service providing model, hosted by eLISA and the Federal IT Center – BRZ), very important issue of this eContent and IT-service will lead to an additional support and extension of this service. Currently Edumoodle reaches approximately 600 school locations (September 2007) including approx. one third of the secondary schools. Till 2010 at least 60% of all school locations should use a learning platform. Because of this the central services will be further developed.

Social Software

The aim should be (through usage of humble public funds) some kind of “market” for tools and environment which could be used on an autonomous basis by school locations for their own usage. While in Austria there is good improvement in usage of Wikis and ePortfolios, the usage of tools for learning communities and weblogs for education and homework could be expanded.

Learning-communities, Wikis, Weblogs and ePortfolios will be implemented systematically in education and pedagogical used. Pupils therefore get an active role in generating knowledge. As well teachers are networking and the school becomes a "learning organisation".

ePortfolios are used in approx. 20 classes with 300 pupils. An extension of this number to 500 classes and approx. 12.000 pupils is realistic. This type of software has implication for the interaction between education- and occupation systems. Nonetheless a number of questions of acceptance has to be discussed.

New equipment – New initiatives

Target will be the test and tentative use of new processes and equipment for the learning process. The range starts from a sub notebook PC (like the often mentioned "one laptop per child") to mobile telephones with web access. 10 concrete tests will be performed in primary and lower secondary schools till 2010.

The sub notebook/handheld has to be extended in schools with pupils aged 10-15 years, as well as initiatives in trial schools at our pedagogical universities. Recent development focuses on a JAVA capable mobile telephone ("cellphone") which has such a good resolution to display all websites and audio visual presentation in the necessary sharpness. Some experience is also available with PDA's and sub notebooks.

Teachers training

New concepts for teachers training like a e-learning didactic, online-academy, eBuddy/eTutor concept, real time platforms (like Macromedia Breeze) or development processes of the teaching staff has to be renewed and developed. In this area there is already exist a lot of experience and attempt for new. A close co-operation with the pedagogical university is necessary; especially if there are classes with ECTS (European Credit Transfer System) points (e.g. the class "new media in education/eLearning"). It is planned to increase the European approach "EPICT" (European pedagogical ICT licence) drastically. Also it is necessary to increase the usage of other forms material developed by public administration in schools (e.g. Museum online or co-operations with the Federal Chancellor, development of learning material - E-Government practically).

Here the target is to offer nation-wide online-courses for teacher training and knowledge management systems for teachers. A good example (for a working system) is the eLISA academy. A second aim is the development of a good eLearning didactic which makes it possible to use content and learning platform efficiently in education and afternoon mentoring. Successful didactical classes should be performed as classes with a certificate.

The eGovernment elements should be included as content into the teachers training, e.g. concrete applications like how to find workers tax-assessment (www.help.gv.at) .

Equipment guidelines and equipment initiatives

Equipment guidelines are necessary for renewal or exchange of equipment in a school location. First approaches for notebook/PC classes already exist. The Ministry will have to foster frame agreements and public-private partnerships with commercial companies to offer schools low priced or funded hard and software for the FutureLearning initiative.

Target are easy to understand guidelines how to purchase new equipments or to exchange used ones in order to fulfill the needs of the information society. In addition the technical fixture for notebookPC classes are necessary or better: equipmet in the school to offer everybody (teacher and pupil) the possibility to connect wirelessly to the internet.

Common thoughts are discussed. There are no costs during the planning phase but during realisation additional costs in the building or facility budget have to be taken into account.

Educational offers for employed persons

It is the target to equip, if possible, all approx. 30 locations of schools and departments for employed persons with pedagogic and technical fittings in order to offer studies under gentle social requirements (e.g. not more than three evenings attendance at the school location, personal coaching, teaching monitoring, preparation for exams etc.). Within the scope of the focus of the bmukk (“education for employed persons”) and supported by the European social fund educational offers will be continuously extended.

Reduction of barriers

For special target groups (isolated children and children in hospitals – project ICC, migration pupils, mentally and physically disabled pupils, but also the design of “free learning locations in full-day schools”) the information technology will be a part of the learning process. Barrier free websites and virtual networks have to be further developed (e.g. www.cisonline.at). This means also that the eInclusion/eIntergration aspect is of importance.

The support of isolated children is a successful project which should be continuously developed. Pupils with migration background should have the chance to learn, with recent developed learning software and in modern program structures their own mother tongue **and** German. The aim of a co-operation with “Schulen ans Netz” (Lift-Project) in Bonn /Germany has to be aspired. This idea is new for Austria and can be foreseen until 2010. The same accounts for free learning spaces in full-day schools.

Quality projects in schools and integrative IT-use

In education policy, school quality projects, the development of educational standards and the implementation of the full-day school are of special importance. Here, all kinds of IT applications, learning platforms and learning objects could support the process very well. All quality projects can be found on online servers (e.g. QIBB server – server for vocational education) and allow an efficient exchange on all levels. With the educational standards the distribution and execution of proto type targets or tests are defined as well as the modern formulation of tasks of electronic learning objects will be described. The development will be improved continuously.

Questions about security for their IT infrastructure (by IT responsible) are of the same priority in schools as in small medium enterprises. As mentioned shortly in the media: “two out of five go bankrupt if they lose their data”. Nevertheless nobody is ready to invest in necessary measures. (IT strategy for managers, Munich Computerweek publishing house) This means that the Ministry has to work in co-operation with internet providers (association ISPA) to define guidelines for the technical infrastructure and internet connection in schools.

Under the framework of the open source initiative the “two world IT postulate has to be realised – every pupil has to be acquainted with the two IT worlds. In co-operation with Novell/SUSE and free groups the usage of open source products has to be taught. Good examples for this are the “desktop4education” of the Styrian Open Source Team or the Exabis-Moodle-ePortfolio-Extension for the use of Moodle for the creation of individual related data which are SCORM compatible e.g. the data can be exported on a USB stick. The target is the broad acceptance by the user of the content visualised in those projects. In the area of open source the Ministry has to take great efforts so that in a few years no commercial products have to be purchased or leased for office applications.

Artistic-creative projects

To use existing synergies it is proposed to bundle already existing projects in the area of creativity and to present them as visible part of FutureLearning to the public.

Examples in this area are projects like MuseumOnline, Briding the Generation Gap, Netdays, eTwinning – European Scholl co-operation without borders, Cyberschool, OCG software programming contest, Lörnie-Award, School homepage Award, etc.

The results of such projects could be cross-linked better in FutureLearning by a common guideline and therefore better communicated to the public.

The different initiatives and contests shall strengthen their project profile under the common roof of FutureLearning but set clear differences and foster the idea for distributed focal points. Simulation and computer animation could be areas of interest for the future. On the one hand to use it for teaching material, on the other hand for the independent active discussion of young people with the tools used to build a creative environment.

The perspective for new artistic-creative projects offers a broad field which could be extended by co-operation partners like "KulturKontakt Austria" as well as other forms of co-operation with Ars Electronica Center Linz/Wien and Salzburg Research.

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PAPERT, S. (1993). *Mindstorms: Children, Computers and powerful ideas*, Basic Books, Boston.

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