1. General political situation in post secondary education

In education as elsewhere, Switzerland is quite a complex construct of different governmental decision-making instances. In order to understand actual e-learning projects and implementations, a clarification of the system is necessary. As its name says, the Swiss Confederation, is composed of 26 Cantons and semi-Cantons. School matters are one of the prerogatives of the Cantons. This means that Switzerland has 26 different school systems for about 6 million people. Cantons are responsible for compulsory school up to secondary I level and the academic secondary II level that leads to a baccalaureate. Those Cantons who have academic universities are also responsible for this level.

Both, compulsory school with its academic secondary II level and the academic universities have each one created a co-ordinating network which tries to cope with the upcoming issues the educational system is confronted with. Both structures are a rather loose supra-cantonal institution that has narrow contacts with but does not belong to the central government.

The central government called Confederation co-finances the universities and finances entirely the famous Swiss Polytechnical Highschool in Zürich and Lausanne (ETH, EPFL). It is also responsible for the vocational education sector in terms of legislation and co-financing. The confederal laws are executed by the Cantons.

Vocational education is based on a dual apprenticeship system very similar to the German model. It's supported by the state and by the different employers unions. 60 % of the secondary II population are trained through this vocational system. Since 1992, the central government has radically reformed the tertiary level by concentrating the existing schools and transforming them into mainly regional vocational universities.

The same process goes on at university level where the confederation through financial incitations tries to create research competency centres. It's an important process of harmonising the Swiss university system where degrees from one university are still not automatically recognised by others.

2. Scope and trends of e-learning policies in post secondary education

According to the second report of the information society co-ordination group addressed to the Federal Council, information is missing weather Switzerland is lagging behind global development towards the mythical information society. As far as I know an estimate of national market size does not exist even if certain figures as telecommunications statistics might allow making an overall projection. Those figures indicate that the proportion of Internet users compared to total population lies at 23.37 % and the proportion of teleworkers in the employed population lies at 0.5%. According to the EITO (European Information Technology Observatory) expenditure for the new information and communication technologies (NICT) in Switzerland rose not only in absolute terms but also relatively. For several years, Switzerland has shown the highest expenditure per head world-wide (1.726 Euro in 1994, 2.030 Euro in 1998). The general political discussion however still considers that there continues to exist a major deficiency in the actual use of the NICT and the capacity to use such technologies in the society. The problem appears to be acknowledged in business and in politics and awareness of the profound economic and social changes that are currently taking place appears to be growing on the political and legal level.

In 1998 the Federal Council decided upon its strategy for an information society and instructed the concerned Departments and Offices to plan a wide range of actions among which education is an considered to be an important part. In the beginning of the project, the actions were intended to be financed within the framework of the regular budgets, idea that turned out to be unrealistic. In the educational sector the following initiatives were identified
mid-1999 quite apart from the structural problems of the Swiss educational system which almost automatically caused considerable delay their launching:

- training of teachers in the use of NICT
- e-learning enhanced vocational training situations different schools
- information platform (websites) for general education
- virtual learning zone at university level

Because its strong implication of economy, the project has been called "Public Private Partnership - Schools on the Net". It is a large program that mobilises 100 millions of CHF of federal founding over the next five years (2002 – 2006). This financial effort comes in addition to what is already done on the cantonal and communal level which over the same duration covers some 800 millions of CHF. The Confederation plays a catalysing role trying to equalise regional disparities.

The project is composed of 5 modules regrouped in three areas: infrastructure, pedagogical and didactical resources, and teacher training:

Module 1: connection to the net. All schools are linked with ISDN connections and a dedicated net for schools is created.

Module 2: infrastructure of the school. Schools are equipped with the necessary material. Local nets are installed in all the schools.

Module 3: content of training with adequate software learning tutorials, pedagogical tools are created.

Module 4: technical support through helpdesk.

Module 5: training of teachers through a modular training concept (initial training and in-service training) either to get sufficient training in general use or information technology in educational setting, or to train teacher to become experts in different specialisation of information technology.

The project creates a common structure that addresses all different levels of the very complex educational system of Switzerland. To support this, a Swiss Educational Server has been created. It functions mainly as support activity for teachers and pupils.

As module 5 points out, it is believed that teacher training would allow to obtain the integration of NICT in post-secondary education. It sounds very surprising that the not always shared enthusiasm about NICT suddenly should make possible what decades of teacher training and research on how teacher learn and work did not manage. NICT has major implications on how to teach and how to study. It can function as Trojan horse to change instructional and learning behaviour. But the political context and the self-identity of teacher are not necessarily willing to change. One has to ask if teachers in their professional development are capable to cope with the pace of technological evolution.

Other applications are prepared locally and supported through confederal founding. About 10 vocational training schools are developing special pilot experiences. The main objective is to explore different forms of e-learning applications all over Switzerland.

The Swiss Virtual Campus programme is a major e-learning initiative at the university level. It is part of a process that aims promoting the Information Society in Switzerland as well as enabling education - in particular higher education - to take advantage of the opportunities now available through new information and communication technology. The programme provides students with a virtual mobility that will enable them to play an active role in learning processes and follow high-quality courses on their computers. The programme develops accessible teaching modules through the Internet for basic and specialised study programmes, particularly for subjects that attract large numbers of students. It pursues the following developments:

- Improving the quality of student learning processes and strengthening interactive teaching by broadening university teaching into a range of available courses for both on campus and corresponding students. The students are encouraged to use all the information and resources available on the Internet as part of their real studies.

- Strengthening of collaboration between the universities which is sometimes a rather delicate issue. Here the project aims to involve several institutions through a system of
credits in the Swiss Virtual Campus system as well as for life-long learning.

- Producing of high quality teaching materials and methods. The steering committee's recommendation to create multilingual modules and use a common set of tools to set up modules and for management functions aims to ensure that the course programmes created by the Swiss Virtual Campus are of the highest quality. This high level of content, didactics and ergonomics should also guarantee a demand for these courses outside Switzerland.

Both initiatives are less created to empower the development of educational NICT but to integrate NICT in the existing school settings through hard and software equipment, financial and technical support and teacher training.

3. Legislative framework for e-learning

So far, there are no existing national legislative regulations on the federal level related to e-learning. It is possible that some cantons have already developed some local regulations. However e-learning cannot be detached from the rest of the educational system which is actually going through some major changes. These days for example, a cantonal vote will approve or reject a large reorganisation and relocatisation of university faculties in the French-speaking part of Switzerland. Furthermore, all the new regionally based former cantonal professional high-schools are still in a process of establishing the legal framework.

On the federal level again, but only for vocational education, a new law is actually in its consultancy phase. It will redefine much more openly the development of a large variety of new modalities in vocational training, of which e-learning could be one. It also creates some of the conditions for e-learning such as a framework for modular and credit oriented training, legal foundation for quality assurance and allows recognition of non formally acquired competencies.

In addition to this, a special law is discussed creating the basis of the above described private-public partnership project. It is also going through consultation right now. The law defines the rules for attribution of federal finances. It reinforces the confederal prerogatives for sponsoring of teacher training. It assigns a dynamic role to the Confederation as intermediate between private economy and Cantons and it fixes the rules of these joint ventures.

In respect to this law it is interesting to analyse the argumentation advanced for justifying its objectives. They are of different nature. A first group of arguments are of economic: NICT are understood as productivity factors in global economic competition. A second group of arguments are of social and political order: they assign almost a pedagogical mission to the project hoping it would allow to elaborate the development of e-conscious, responsible citizens whose attitude would weaken the possible negative social impact of the NICT. In other words, the educational post-secondary system is suddenly asked to minimise the risk of exclusion mechanisms and to educate for individual and social responsibility in an e-society. One has to ask to what extend these two sets of arguments are compatible and if the educational system as subsystem of the Swiss society can handle what the society has difficulties to do itself.

4. Quality assurance mechanisms

Little emphasis is actually given to the question of quality management in e-learning settings in Switzerland. This is probably due to the novelty of the ongoing projects. Quality concerns do exist but have probably not yet been translated into concrete action. The project Public Private Partnership in its teacher training and pilot experiences areas will definitely be accompanied by an evaluation. Central questions are those of what kind of learning takes place, what teacher support is needed, which is best practice and how were the financial resources handled. The results to such an evaluation will certainly give important material for e-learning quality management. Also, the very nature of the project with private public partnership and the general setting of the new law for vocational training will definitely conduct to the implementation of quality assurance mechanisms. For the moment however, they are not yet clearly defined.

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