



Switzerland

Country Report on ICT in Education

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1 THE EDUCATION CONTEXT

1.1 EDUCATION REFORM

Reform processes are underway at various levels of the education system at present. The key political goals in education are to safeguard Switzerland's competitive position, to assure the quality of the education system, to assure permeability between different types of education and to facilitate mobility in education. Numerous developments are currently being realised, which will have a decisive influence on the Swiss education system in the coming years, particularly with regard to cooperation and harmonisation.

The main thrust of educational reform in Switzerland currently concerns the question of harmonisation. Differences in education systems from one canton to another can be a considerable barrier to mobility within the country. One approach to the issue is to improve the coordination between the many actors involved in the education system. In May 2006, the Swiss population voted massively in favour of modifying the Constitution so as to oblige the Confederation and the cantons to coordinate their actions and collaborate more closely in the field of education from primary school to university. One key aspect was the will to fix the duration of each level of education and the specific objectives to be attained by pupils at the end of each level. The latter is the subject of the HarmoS project led by the Swiss Conference of Cantonal Directors of Education (CDIP).

Currently, HarmoS is being ratified by the cantons. It is the cantons (cantonal parliaments, with a possible optional referendum) that decide whether to join the new agreement. If the agreement is accepted, the cantons initiate steps in order to harmonise their cantonal structures and objectives concerning compulsory education. The HarmoS agreement will come into effect once ten cantons have joined. It will only apply to those cantons that have ratified it. These cantons will then have a transition period of six years in order to transpose whatever adaptations are necessary within the HarmoS framework. By September 2009, eleven (out of 26) cantons had joined the agreement.

1.2 KEY CHALLENGES /PRIORITIES FOR EDUCATION

Overall Federal policy on research and development is fixed in a framework document entitled "The Message of the Federal Council on Education, Research and Innovation". The most recent version covers the period 2008-2011. A total budget of about 20 billion Swiss francs (12 billion Euros) is to be voted for the four-year period. Two underlying principles govern this policy framework:

- Ensuring the sustainability and quality of education;
- Stimulating competitiveness and growth via research and innovation.

Within this framework, the federal contribution towards the Swiss Educational Server (as well as participation in PISA and the monitoring of the education system) is to be funded via the Federal Office for Professional Education and Technology (OPET).

The State Secretariat for Education and Research supports the international activities of the Swiss Centre for Educational Technologies in Teaching (CTIE) in the area of ICT and education. These activities aim at:

- ensuring that Switzerland is represented in the EUN and assuring the exchange of information between Switzerland and other European countries on ICT and education issues;
- coordinating the possible participation of Swiss Educational System institutions (co-coordinating institution, departments, schools, classes) in international projects in the fields of ICT and education and ICT;
- allowing Swiss Education System institutions, especially schools, to benefit from the country's participation in international projects, particularly those concerning electronic resources for teaching and learning

The CTIE has created a section within the Swiss Educational Server dedicated to international collaboration. This includes descriptions and analyses of official documents linked to ICT as well as to the principal international programmes, and went online in December 2008.

The recent foundation of Teacher Training Universities has led to a general rise in the quantity and compre-

hensiveness of Swiss educational research. However, so far only a few projects have focused on the use of ICT in K12 teaching and learning. Only one Teacher Training University has set up a dedicated research institute on this topic: the Institute for Media and School Education (IMS) at the Teacher Training University of Central Switzerland (PHZ).

To encourage the development of research in vocational training, six networks of competence (or leading houses) have recently been created by the Federal Office for Professional Education and Technology (OPET). One of these, called DUAL-T, is dedicated to new technologies and brings together CRAFT (EPFL), Futura (University of Fribourg) and TECFA (University of Geneva). The process of creation of these leading houses was particularly praised in the recent OECD national review of educational R&D in Switzerland as one of the potential solutions to shortcomings in applied research.

2. ICT POLICY

2.1. RESPONSIBILITIES

Responsibilities at the various educational levels

Pre-school and compulsory education

According to the Federal Constitution, the cantons are responsible for school education. The cantons and their municipalities bear all responsibility for regulation and implementation in the field of compulsory education and pre-school. The municipalities assume various capacities. In general, the municipalities are responsible for the schools (in some cantons, for schools at lower secondary level, the canton can also be responsible).

Upper secondary level

At the upper secondary level, the cantons and the Confederation each bear responsibility for parts of the public education system. Vocational education and training as a whole (basic vocational education and training, higher vocational education and training, and vocationally oriented continuing education) is regulated by federal law and is within the capacity of the Confederation. The Confederation, cantons and professional organisations work together as partners. The cantons are responsible for the implementation of basic vocational education and training, and are responsible for

the establishment and maintenance of educational institutions. The professional organisations perform important tasks in the field of basic vocational education and training.

The cantons and the Confederation jointly regulate the recognition of matura certificates. The cantons establish and maintain the matura schools. Inter-cantonal regulations apply to the recognition of specialised middle schools and their certificates. The cantons establish and maintain the specialised middle schools.

Coordination and cooperation among the cantons at the national level have been established over a long period of time. They are based both on "hard law", which is binding for those which abide by it and on "soft law" which functions as mere recommendation for the cantons to abide by. In the realm of "soft law" the EDK/CDIP has issued several recommendations concerning ICT, the most recent concerning the overall strategy of the EDK/CDIP with regard to ICT, dating from March 1, 2007.

ICT is one of those realms that have profited from long established cooperation between the national and cantonal levels, involving both *the Bundesamt für Berufsbildung und Technologie* and the *Staatssekretariat für Bildung und Forschung* at national level and the EDK/CDIP at cantonal level as well as several other players. It is the Swiss Conference for the Coordination of ICT (SKIB)'s responsibility to coordinate the activities of the various bodies involved.

2.2. ICT POLICIES FOR SCHOOLS

Until recently there was no overall strategy for the integration of ICT in schools, although there was a more general Information Society Strategy, which was updated in 2006. It is noteworthy that the Federal Council very recently decided to set up its own delegation to handle the Swiss Information Society strategy, placing it at the highest possible governmental level. The strategy fixes two main objectives:

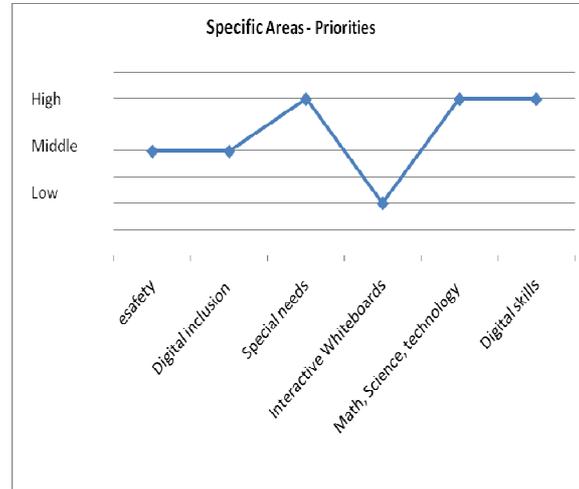
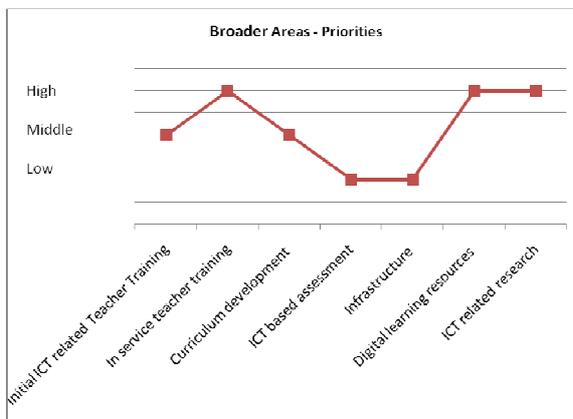
- Integrating ICT in teaching at all levels both as a tool and also as a resource for all subjects, as well as a set of related competences to be taught in the framework of general media education.
- Ensuring digital literacy to enable all pupils to acquire the necessary competences but also pro-

motoring equal opportunities with respect to ICT and media.

It goes on to fix six “areas of coordination”, i.e. topics to be dealt with by cantons within the framework of the CDIP. These topics aim at:

- ensuring that ICT as tools, resources and also as a set of competences is fully integrated into curricula.
- guaranteeing the availability of suitable digital content by creating the appropriate context, for example by encouraging networking between content makers or developing policies to ensure standards of quality.
- improving teacher competences for the use of ICT in education by complementing existing actions such as implementing recommendations regarding ICT in teacher training.
- providing suitable information about the education system as a platform for exchange and collaboration via the Swiss Educational Server.
- ensuring the sustainability of the development and maintenance of infrastructure via framework agreements with private actors and through public-private partnerships.
- strengthening Swiss and international collaboration thanks to expert networks, the gathering and sharing of information and improved dissemination of international projects on ICT use in education in Switzerland.

2.3. ICT PRIORITIES



2.4. NATIONAL CHARACTERISTICS (OPTIONAL)

The education system reflects the way Switzerland is organised politically. In accordance with Switzerland’s federal structure, the tasks of the education system are shared between three political levels, i.e. the confederation, the cantons and the municipalities, which work together in their respective areas of responsibility to ensure high quality in the education system.

Characteristics of the Swiss education system

The principle of subsidiarity plays a key role: the superior level only passes regulations or undertakes corresponding tasks if the subordinate level is not in a position to do so. The education system is characterised by a high degree of anchoring in local areas, cantons and linguistic regions. The main responsibility for education lies with the cantons. There is no ministry of education at a national level. The tasks of the Confederation in education are performed by the Federal Department for Home Affairs (EDI) (via the State Secretariat for Education and Research [SER]) and by the Federal Department for Economics (via the Federal Office for Professional Education and Technology [OPET]). Important key parameters in education are uniformly regulated, either on a nationwide or inter-cantonal basis. The cantons are responsible for the education system wherever the Federal Constitution does not stipulate that the Confederation is responsible. Each canton has its own legal regulations for education.

The responsibility for legal implementation, execution, supervision and financing varies depending on the type



of educational level and the respective educational institution.

The primary responsibility for education lies within the cantons: Each canton has its own legal regulations for education. Essentially, the cantonal school laws or education laws in all 26 cantons are based on the same foundations and comprise similar objectives. Wherever the Confederation has legislative authority according to the Federal Constitution, the Confederation passes the legal regulations and entrusts the cantons with their implementation. The revision of the education regulations in the Federal Constitution provides a constitutional legal basis for inter-cantonal cooperation and for cooperation between the cantons and the Confederation.

The cantons share responsibility for the oversight of compulsory education with the municipalities: They can transfer various powers to the municipalities. In particular, the municipalities assume various capacities at the pre-school, primary and lower secondary levels. Supervision and funding of compulsory education schools, in particular primary schools, lies generally with the municipalities. However, the cantons are alone responsible for the supervision and funding of general education at upper secondary level.

There are ten cantonal universities that are under the responsibility of the cantons and which receive additional funding from the Confederation and from those cantons which do not have their own university.

3. THE CURRICULUM AND ICT

3.1. THE CURRICULUM FRAMEWORK

There is no national curriculum in Switzerland, as devising the curriculum is the legal responsibility of the cantons. However, work is currently going on at both federal and regional levels to harmonise the curriculum and other aspects of schooling during the years of compulsory schooling. The national HarmoS project, developed by the Swiss Conference of Cantonal Directors of Education (CDIP) amongst other things aims to guarantee the quality of education by fixing standards to be attained by pupils in languages, mathematics and science at the end of the 4th, 8th and 11th year of their studies (including two years of kindergarten (ages 4 to 7, depending on the canton)). These standards can be

defined in terms either of the content to be studied or the competences to be acquired. Experts are currently working on the definition of these standards and their propositions are to be ratified by the cantons via the CDIP.

Regional educational organisations, such as the CIIP, which brings together the French-speaking cantons, are working on regional curricula (Plan d'Études Romand, PER). The proposed curriculum for the French-speaking cantons structures the curriculum in terms of:

- General education, structured around three axes: the relationship to oneself, the relationship to others, relationships with the world;
- Subject content, organised into five areas: arts, body and movement, languages, mathematics and natural sciences, human and social sciences;
- Transversal competences: collaboration, communication, reflection, critical approaches and creative thinking.

The curriculum is divided into three cycles, each with an indication of the study time to be spent on the five areas that are to be covered. Fifteen percent of the time allotted can be given over to activities not in the curriculum. It should be noted that ICT is included in the languages subject-content group and is present in both general education and transversal competences.

The PER (regional curricula) is currently the subject of consultations in the French-speaking cantons. The CIIP's objective is for this regulation to come into effect by the start of the school year 2010-2011. A similar programme is being put in place in German-speaking Switzerland. Consultation is taking place in German-speaking cantons on the *Lehrplan* (Learning Plan). Its implementation in schools is scheduled for the school year 2011-2012.

3.2. ICT IN THE CURRICULUM

The 2007 strategy of the cantons with respect to ICT in education fixes the achievement of digital literacy as one of its two general aims. Three objectives are indicated:

- to allow all pupils who attend compulsory education to acquire basic competences in ICT use;
- to promote equal opportunities with respect to ICT and media;



- to ensure that upper secondary school students are conversant with basic technical notions in the field of ICT.

Amongst the proposed actions aimed at achieving these goals, the ICT strategy mentions the possibility of fixing pedagogical objectives for ICT competences as constraints for cantonal curricula within the forthcoming HarmoS educational harmonisation programme. To ensure the necessary technical competences in upper secondary school, computer science has just been reintroduced as a subject in the Federal matriculation exams (which determine access to higher education). Inclusion was initially optional but became obligatory from 2008.

According to the PPP-ésn (School on the Net) study, there are considerable differences between the linguistic regions when it comes to the development and implementation of a plan for the integration of ICT in schools. In the German-speaking part of Switzerland, 33.4% of schools have such a concept whereas only 5.8% of French-speaking schools have an ICT plan.

A survey carried out by the CTIE in 2008 provides an overview of the political and educational measures addressing the integration of ICT in the Swiss Educational System. The survey is based on a questionnaire addressed to those responsible for such matters in the cantons and asking them to report on existing measures.

Results from the cantons show that 22 out of 26 specify concepts including components to further the integration of ICT during the years of compulsory schooling. From a more didactic point of view, 24 out of 26 cantons have adopted a curriculum that integrates ICT. The two cantons without such a curriculum mention that they are waiting for the forthcoming French-speaking curriculum (PER), which will provide a curricular programme integrating ICT.

As for the non-compulsory level of upper secondary schooling (ages 16-19, but excluding vocational schools) results from the cantons show that 10 out of 26 specify concepts including components to further the integration of ICT during the years of compulsory schooling. From a more didactic point of view, 11 out of 26 cantons have adopted a curriculum that integrates ICT.

3.3. STUDENTS' ICT COMPETENCE

The HarmoS programme being currently ratified provides a general framework for the specific competences to be achieved by students. Presently there is no national curriculum in Switzerland, and as a result, cantons still use rather varied curricula.

This situation is currently changing as the cantons (grouped by linguistic region) are working together on common curricula, such as the French-speaking areas' PER (*Plan d'Étude Romand*) and the German cantons' *Lehrplan* (Learning Plan).

As regards ICT the PER, currently in the process of consultation, suggests integrating ICT within the field of media education, this subject itself being a part of general education. General educational objectives are organised primarily according to the level of education. In particular, the intention as regards the specific competences to be achieved by students is:

- to foster a selective and critical approach to media at key stage 1 (kindergarten and the first and second years of compulsory schooling);
- to decode the presentation of various types of message at key stage 2 (the third and fourth years of school);
- to foster multiple approaches to the consumption and production of media and information (the fifth and sixth years of school).

Each of the general objectives is broken down into specific objectives which can be consulted online on the PER site. Information on the contents of the *Lehrplan* (the curriculum for German-speaking areas of Switzerland) will become available as from October 2009.

3.4. ASSESSMENT SCHEME

Currently there is no national testing of pupils' ICT competences. However, within the HarmoS framework, the CDIP has called upon a group of experts in order to draw up training standards to apply to all pupils and to be monitored by the CDIP. For the moment ICT is not a part of these performance standards; these will for the time being apply to mother-tongue language skills, modern foreign languages, mathematics and natural sciences. Nonetheless, it is possible that as part of a second phase of this project content stan-

dards will be defined and thus provide a possible framework for ICT competences, which might then be tested nationally.

3.5. ICT BASED ASSESSMENT

There are no ICT-based assessment schemes at national level. However, a very few such assessment schemes exist at cantonal level, the most important of which is called “Stellwerk”, a web-based and curriculum-linked assessment tool for gauging and comparing – according to pre-defined standards – the performance in German and mathematics of pupils from different classes and schools at the end of forms 8 and 9 (age groups 15-16). At present the “Stellwerk” tool is officially used by the cantons of St. Gallen and Berne.

Computer-based ICT assessment

In the context of the PPP-School on the Net project a system of competence evaluation on computer skills has been developed. It is called “Test your ICT competences” and is available on **educanet²**, at present in German only. ECDL is available on the same platform, payable according to the status of the schools using it.

3.6. QUALITY ASSURANCE OF THE USE OF ICT IN SCHOOLS

In most cantons the evaluation of the teaching body from pre-school (kindergarten) to upper secondary stages is in the hands of the school management, often in partnership with the corresponding teaching monitoring authority (school board, school inspectorate, etc.)

The monitoring authorities take part more often at lower levels, from kindergarten to lower secondary (Secondary I), than at upper secondary level in the assessment of teaching staff. According to regulations in the cantons, colleagues and pupils are rarely involved in this evaluation, and only at the upper secondary level (although all may participate at all stages in internal quality processes).

Presently the Institute for Media and Education (IMS) is carrying out a survey on the educational platform **educanet²**. Financed by the Swiss National Fund, research began in 2007 and was completed in spring 2009. The purpose of the study was to give a detailed and scientifically sound overview on the use of edu-

canet² by schools. It will shed more light on the link between use of the platform and the following factors:

- technical facilities in schools;
- schools’ organisational framework;
- support structures;
- teachers’ knowledge of ICT;
- use of the platform’s functions in combination with learning objectives.

The study further intends to identify the different variables facilitating a successful use of the platform by schools. Also any differences in uses at the primary, lower secondary and upper secondary levels will be taken into account. Analysis of the results will deliver a basis for reflections on the possible emergence of a new educational culture and its relation to the use of **educanet²**.

4. DIGITAL LEARNING RESOURCES AND SERVICE

4.1. CONTENT DEVELOPMENT STRATEGIES

There are no content development strategies involving publishers or open source initiatives at national level.

4.2. E-CONTENT DEVELOPMENT

With its second framework, the CDIP’s strategy aims at promoting production of digitalised pedagogical contents, ensuring their quality with reference to cantonal and regional curricula and enabling access via the Swiss Educational Server. The objectives are:

- to encourage networking and collaboration by producers (production);
- to give access to existing content via a benchmarking, description and evaluation system (access);
- to compile and formalise pedagogical and didactic experience in each discipline, as well as examples of good practice;
- to train teachers and lecturers;
- to devise a policy for production and quality assurance for digitised learning content, while clarifying the distribution of roles among the actors concerned.

The Digital School Library Project, launched in 2006 by the Swiss Institute for Educational and Cultural Media (educa.ch) and mandated by the Swiss Conference of Cantonal Ministers of Education (EDK), is aimed at creating an interactive database bringing together educational resources in an interdisciplinary manner. The project is part of the area of “electronic resources for teaching and learning” and has three themes:

- The dissemination and exchange of information
- Developing a framework for implementing electronic resources in teaching and learning
- Establishing partnerships with content providers.

The opening of the Digital School Library was expected towards the end of 2009.

4.3. USER - GENERATED CONTENT

The digital school library project, launched in 2006 by the Swiss Institute for Educational and Cultural Media (educa.ch), is intended to create an interactive database bringing together educational resources in an interdisciplinary manner.

4.4. WEB 2.0

Personal Smartphones in Primary Education

All fifth-form pupils (age group 11-12) at *Projektschule Goldau* are given an Apple iPhone 3G for them to use in and out of school as a part of their personal learning environment between August 2009 and July 2011. The project is being supervised and evaluated by the *Institut für Medien und Schule (IMS)* of the *Pädagogische Hochschule Zentralschweiz - Schwyz (PHZ Schwyz)*. It is sponsored by Swisscom and does not entail any extra costs for school, pupils or parents.

4.5. CONTENT SHARING

The cantonal strategy for ICT states that one of its aims is to “make existing content more accessible by a system of tagging, description and evaluation”. In addition, it mentions pedagogic practices (treated here as potential online resources) and the need to identify and formalise them. In the framework of PPP-School on the Net, sixty exemplary e-learning “products” have been developed. They include learning scenarios, educational software, information systems and open educational programmes. Further learning scenarios have

been collected in a database on the Swiss Educational Server (SSE). Some cantons (in particular Fribourg and Zurich) have piloted the creation of learning scenarios. In addition, there is a dossier of learning scenarios on the SSE.

The Swiss Virtual Campus Project (SVC), financed by the Swiss Confederation, was carried out in two phases (launch 2000-2003, consolidation 2004-2007) and has encouraged Swiss Institutions of Higher Education to use ICT. In recent years, emphasis has been placed on sustaining and transferring the skills attained in the project. One example is the development and implementation of on-line inter-institutional teaching units, where 112 projects have been realised.

An important element of the project has been to encourage installing competence centres and services and production units (CCSP) in all higher education institutions. These centres are commissioned to realise online teaching units and to offer advice and services to all levels. Thanks largely to the CCSP, online learning has been well established in higher education institutions. In 2007, priority was given to measures allowing long-term utilisation of online teaching units. On this, various scenarios have been devised and published.

Created in collaboration with SWITCH, the “Swiss E-Hub” (provisional title) aims to promote the exchange of content between higher education institutions, as well as to develop strategies to open the contents to commercial use outside the framework and to continue in collaboration with the wider community as well as the exchange of experiences. After the lifecycle of the confederation project, responsibility for online learning will pass to the higher education institutions. Thanks to its achievements, the SVC project enjoys an excellent reputation at both national and international levels.

The digital school library project, launched in 2006 by the Swiss Institute for Educational and Cultural Media (educa.ch), is intended to create an interactive database bringing together educational resources in an interdisciplinary manner.

4.6. LEARNING PLATFORMS

The Swiss Educational Server provides a vast amount of information about education in Switzerland, as well as an e-learning platform called **educanet²**.



According to the PPP-ésn study on the integration of ICT in schools (2007), 48% of schools use an online platform. The most widely used platform is educanet² (91.7%). Other platforms include Moodle (4.8%), BSCW (3.2%), Ilias 1.6%. The study also shows that the most widely used functions are: online calendar (28.5%), wiki (28.5%), online publishing (26.1%) and forums (25.5%). It is noteworthy that more French-speaking schools tend to use these platforms than German-speaking schools.

Launched in 2004 (as a follow-up to the former educanet site), the collaborative platform educanet² is organised around the concept of a virtual school with four distinct but interrelated areas: a private space including a document store, a task manager, a personal website and short-messaging facilities; an institutional space where teachers can create online classrooms, set tasks for their pupils, provide material and use a number of interactive tools with their students such as notice boards, a shared calendar and online forums; a community space for collaborative working; a space for online courses with a site generator; an online course-authoring tool and the management of online courses. New features include an in-built wiki, an alert system and online surveys.

As of October 2009, 3,321 Swiss schools subscribed to educanet², with more than 109,000 teachers and 362,000 pupils in more than 28,000 classes (updated statistics can be consulted on the educanet² website).

This platform is used by more than 3,300 schools and offers four distinct areas of activities: a "private" space for each user, an "institutional" space for schools, a "community" space where groups can work together, and a space for online learning. Tools include an address book, a task manager, electronic messaging, an instant messaging system, a workbook, a website generator etc.

Mathematics 7/8/9 is a major project of the French-speaking cantons, bringing together all available teaching resources for the official mathematics curriculum at the 7th, 8th and 9th grade of schooling. These resources are available to teachers via their login to educanet².

The Lehrplan tool, available on demand on educanet² offers teachers the possibility of creating a work and learning plan for their pupils and classes, structuring and timing collective and individual activities. Lehrplan

gives g to pupils and teachers alike to monitor and assist learning progresses.

5. TEACHER EDUCATION FOR ICT

5.1. ICT COMPETENCE TARGETS

In 2004, the Swiss Conference of Cantonal Directors of Education (CDIP) agreed recommendations for the initial and continuing training of teachers and lecturers in the area of ICT.

The appendix to the recommendations lists training objectives, dividing them into five categories:

- Use of standard software and technologies;
- Use of current modes of communication and information search tools;
- Knowledge and experience of online teaching and digital teaching methods;
- Sociological, ethical and economic expertise;
- Legal aspects of ICT.

It is important to note that these recommendations have no binding status. However, in 2006, in response to the questionnaire sent to cantonal representatives, 15 cantons stated that the recommendations had influenced their canton's plan for integrating ITC. Five other cantons, which had already adopted their strategy, stated that it was in accordance with the CDIP recommendations.

5.2. ASSESSMENT SCHEMES

No nationwide assessment schemes exist for teachers using ICT in teaching. The EDK/CDIP has regulated the recognition of diplomas awarded for the successful completion of in-service ICT training courses for teachers.

5.3. ICT IN TEACHER EDUCATION

In the PPP-ésn study on ICT integration in education, over 70% of those responsible for ICT in schools pointed to the lack of knowledge and know-how on the part of teachers as being a barrier to objectives set for ICT use. As for the teachers, over half (57.1%) assessed their ICT competences to be above average although women generally judged their competences

to be on average half a point less than the men (on a scale from 1 to 5).

The 2006 report of the CTIE on teachers' professional development in ICT use stresses that considerable progress has been made since the last report was published in 2001. Teacher development in ICT use is now organised in optional, in-service training courses although some courses have been made compulsory. Demand for courses from 2000 to 2004 was mainly centred on technical competences. However, the content of training is increasingly shifting towards methodological and didactical considerations and the practical integration of ICT in teaching and learning. In addition, efforts are currently being made to include pedagogical use of ICT in initial teacher training.

When asked to identify future challenges, the cantonal representatives in the PPP-School on the Net pointed amongst other factors to the need to achieve better integration of ICT use in teaching. Concern was also expressed about the sustainability of ICT training when federal funding expires with the end of the PPP-ésn (in 2007).

5.4. TRAINING THE TEACHER TRAINERS

The issue is not addressed at national level. There are two inter-cantonal initiatives in the field. The teachers' association MITIC in the French-speaking part of Switzerland offers ICT courses for in-service teacher trainers as well as general help and guidance in the field.

"PICTS - Pädagogischer ICT-Support" is the corresponding body in German-speaking Switzerland. It offers a course on the theme of pedagogic ICT support, which caters for those in-service teacher trainers who are in charge of ICT issues, irrespective of subject or school type or level.

5.5. INCENTIVES

As mentioned above, most training of teachers in ICT use takes place in in-service training courses, a few of which may be obligatory.

In the framework of the PPP-ésn initiative between years 2001-2006 several cantonal and inter-cantonal projects were initiated with a view to training teacher trainers in ICT. In the course of these projects a number of pedagogical scenarios for the use of ICT in the

classroom have been realised by participants. These scenarios are publicly available for all teachers on the Swiss education server.

SOURCES

Pedagogical scenarios for using ICT in teaching:

<http://ppp-sin.ch/dyn/58565.asp> (French)

<http://ppp-sin.ch/dyn/57497.asp> (German)

EDK/CDIP, Recommandations relatives à la formation initiale et continue des enseignantes et enseignants de la scolarité obligatoire et du degré secondaire II dans le domaine des technologies de l'information et de la communication (ICT) du 25 mars 2004 (in French and German) <http://edudoc.ch/record/24706>

Barras J-L, Petko D, School and Internet in Switzerland. Overview and Developments between 2001 and 2007. (In French and German):

<http://www.educa.ch/dyn/171225.asp>

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