Education and Culture

Leonardo da Vinci

Description of example of good practice in modular education and vocational training

1.   Policy/practice

1. Title	Initial and further vocational training in ICT sector. The acquisition of a diploma
2. Name and full contact details of key contact person[1]	Filippo Bignami USR - Ufficio Studi e Ricerche ECAP Via Industria 6814 Lamone Svizzera Tel. +41 91 6042030 (Segr.); +41 91 6042035 (diretto) Fax + 41 91 6042031 Mail: fbignami@ecap.ch
3. Keywords (These should also refer to themes relevant to other objectives groups where appropriate)	General education, life-long learning, vocational training, ICT, labour market education.
4. Duration of policy/initiative	**Annual**
5. Outline, Summary (max. 500 characters)	Potentialities of modularisation in Switzerland are provided by the evolution of initial and further vocational training in ICT sector. The acquisition of a diploma in this area are is traditionally based on 2 distinct pathways: - the general education path - the vocational training path

2.   Background

* Related national/regional policies/initiatives
The dual system. Switzerland has a training system which is quite similar, in its philosophy and organization, to the German system, where there is a strong link between education and formal/professional training. The entire system is heavily geared to the definition of training aims and *curricula*, to the needs of the economy in general and to the requirement of the employment market. One fundamental pillar of the system - as in Germany - is the provision of professional training inspired by the principle of alternating formal education (in the classroom) with experience at work (for dual apprenticeships, in upper secondary schools for professional training "*en emploi*", and even in some Universities).

3.   Content of policy/initiative

* Implementation (*programmes, methods, measures and actions*)
The potentialities of modularisation in Switzerland are provided by the evolution of in this area are is traditionally based on 2 distinct pathways: -   the general education path, moving from high schools towards academic degrees specialisations (tertiary level: Universities and *Fachhochsculen*) -   the vocational training path, moving from dual apprenticeship towards higher professional examinations delivering certificates and diplomas. The second pathway has been interested by a comprehensive restructuring process, coordinated by *Arbeitsgruppe Informatik Berufsbildung Schweiz I-CH*, and supported by the Federal Authorities. The reform aims at simplifying the system in a more rational way, assuring transparency and flexibility, and developing a global modularised approach to basic education and continuous vocational training. As usual in Switzerland the reform has been prepared activating a partnership between private bodies and institutions, giving to the professional representatives the responsability to find proper solutions in a cooperative way. This purpose has been persecuted through the constitution of the I-CH cooperative, founded in September 2000 with the widespread support of the working world (mainly professional associations). I-CH started operations in the early part of 2001. The new framework regulations concerning initial and further training entried in force at the beginning of 2005 [2]. In the start-up phase I-CH model tried to reach some general goals: -   foster dual apprenticeship model, face to the new challenges of market evolution: one of the primary tasks of I-CH is to significantly increase the number of apprenticeship positions in information technology. As from 2004, 3'000 - 3'500 new apprenticeship contracts should be signed each year in the IT sector in Switzerland. -   provide equal gender opportunities, increasing the percentage of women in ICT training: I-CH has instructions to ensure that the percentage of women in basic education starting an IT apprenticeship strongly increases and reaches at least 20% by 2004. -   develop the modularisation of basic and further education in ICT branch: I-CH develops the modular structure of information technology training for basic and further education. In information technology, the traditional orientation to

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[1] Please note that it is important to provide the details of an individual who may be contacted by the consultants should they require further information.

[2] Information and data are available consulting www.i-ch.ch

individual subject matter is replaced by orientation to competencies (in activity). Competencies are the sum of the technical, methodical and social resources of a person enabling him of her to act competently in a specific professional situation.

∗ Scope or level: national, regional, local

Switzerland - National

∗ Partners involved *(in the design, implementation and evaluation of the policy/initiative)*

Design phase	· Swiss Federal office of vocational training and technology · Cantonal VET adiministrations · Arbeitsgruppe Informatik Berufsbildung Schweiz
Implementation phase	**Leader/supervision Authority:** Swiss Federal office of vocational training and technology
	Contributes as implementation: Ecap Foundation

Target Group(s) and beneficiaries *(definition and estimated numbers)*

ICT workers

Form of the support

Blended and training platform available

4. Outcomes and results

∗ Outcomes, specific achievements; Perceived strengths, weaknesses and priorities for improvement *(qualitative and quantitative evidence)*

One of the most important element of I-CH engagement is an extensive plan of modules which try to attune the supplies of vocational IT education to activity goals, close to real working conditions. In several workshops, an I-CH team worked on finding solutions for contents and wordings, terminology definitions and competencies in information technology. Now the foundations are laid for the projects which are to be realised. The module plan and the allocation of the individual IT modules to fields of competence are a core element for implementation of the reform (see annex).

In the meantime, the module plan has been defined to the extent that the reform in basic and further education can begin. In the cantons of Berne, Geneva, Lucerne, Neuenburg, Ob- and Niedwalden, Tessin and Zurich, the first generation of students has started its vocational training in 2001 within the framework of the new, modulised I-CH concept.

To implement I-CH reform the decisive factor is to recruit enough IT specialists who work on the structuring of the modules. It must be noted that many IT specialists who are already active today in basic and further education aside from their jobs will be required to take on a substantial additional burden. The existing and the new system must be maintained parallel to each other in the transitional period.

The I-CH *Baukasten* (modularised) model could be described highlighting some specific outcomes and goals:

- in the modularisation project, all information technology competencies are described in modules with the aim at representing all IT competencies used in the working world in a modular kit for information technology

- it is important for the purposes of clarity and completeness that the kit is organised into fields of IT competence. All IT competencies have to clearly belong to one of these fields of competence. A module plan divided into fields of competence and competencies of activity identified for each module serve as a basis for the development of the individual module descriptions (see annex 5).

The module descriptions are designed in accordance with the conditions of Swiss modular system (ModuQua), containing prescriptions related to module identification standards, proof of competence, supplier identification. In addition, module manuals are provided as a teaching aid. The norm of a module is usually 40 lessons.

∗ Transferability *(how this example may have relevance in the European context?)*

This practice fit better the VET systems that has a certain duality, but if implemented as modules can work well also in other contexts.

Sources of the information provided

websites www.i-ch.ch
Publications: