

# VOCATIONAL & PROFESSIONAL EDUCATION AND TRAINING IN SWITZERLAND: A SUCCESSFUL PUBLIC-PRIVATE PARTNERSHIP

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## Abstract

By systematically linking training components to the labour market, Switzerland has managed to achieve with 7.0 % one of the lowest youth unemployment rates compared to the OECD average of 12.4%. The following article describes the main features of the Swiss vocational and professional education and training (VET/PET) system as well as of the Swiss system of universities of applied sciences (UAS). The entire education system has various pathways enabling people to shift from one part of the system to another. About 90% of all vocational education and training (VET) programmes in Switzerland are based on the dual-track approach in which, vocational schools partner with host companies and – in some cases – industry training centres to share the burden of education and training across school-based and work-based training segments. Responsibility for vocational and professional education and training is shared by the Confederation, the Cantons and the professional organisations. This public-private partnership ensures a close match of the content of vocational and professional education and training (VET/PET) programmes with the needs of the employers and the labour market.

## Introduction

The Swiss VET/PET system traces its roots back to the guild system where education and training was provided by businesses specialised in craftsmanship. The first vocational schools to combine theory and practice were the watchmaking school in Geneva, founded in 1924, and the trade school in Bern, founded in 1928. These schools emerged from commercial activities and private initiative. Larger industrial companies would also play a pioneering role. In 1870, the Swiss technology corporation Sulzer created a school that would later provide inspiration for combined school/work-based VET programmes in Switzerland. At the time, the Sulzer school trained metalworkers and foundrymen on two fronts: theoretical principles would be taught in a classroom setting and then these principles would be applied during paid apprenticeships at the company. Other companies followed suit and in 1933, the first Federal Vocational Education and Training Act came into force. The combined school/work-based model was adopted for upper-secondary level VET programmes. With this approach, pri-

ivate host companies and public vocational schools began working closely together. In 2004, a new piece of legislation was enacted, the Federal Vocational and Professional Education and Training Act (VPETA). The act covers all fields, including health care, social care and art (which were previously excluded from the scope of VET and PET programmes). VPETA is very flexible and leaves room for various types of education and training models. The individual branches may therefore make targeted adjustments to their training plans whenever the need arises.

## 1 Overview of the Swiss VET/PET System

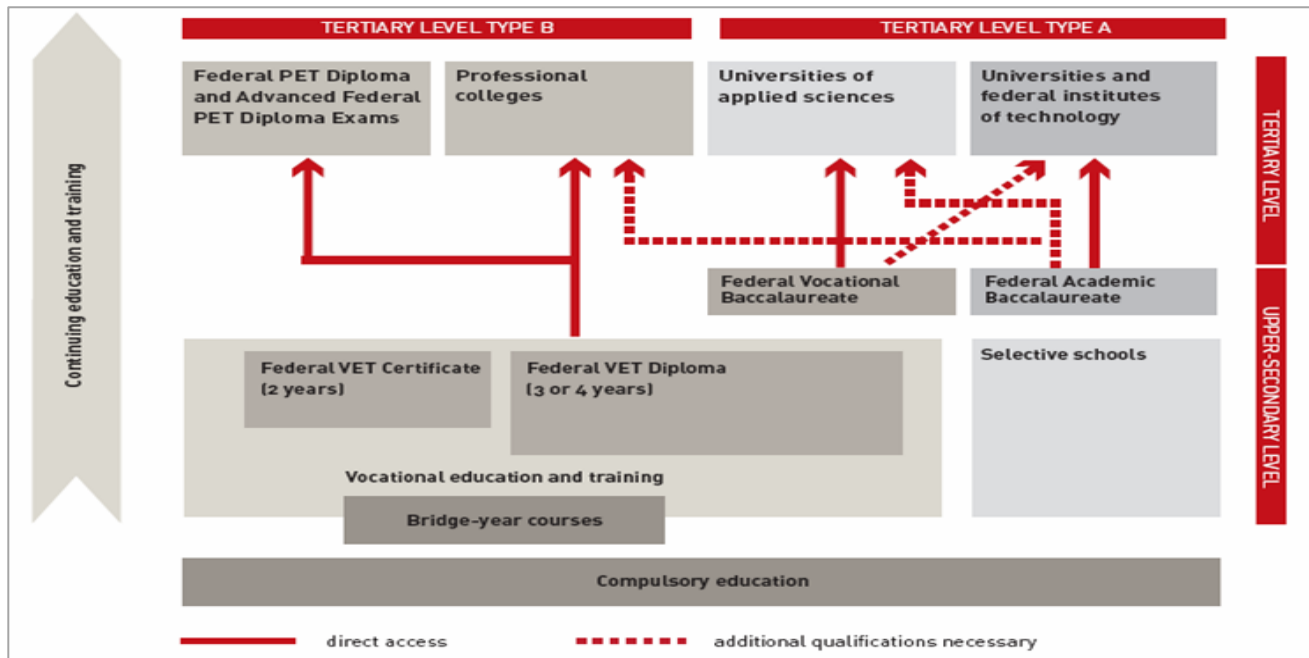
Responsibility for the Swiss education system is shared by education institutions on the one hand and the three policy-making levels (i.e. Confederation, Cantons and Communes) on the other. The Cantons have authority over all matters that are not entrusted to the Confederation. At the national level, there is no Ministry of Education. It is the Cantons that bear most of the responsibility for education. At the federal level, education matters are handled by three different federal departments: the Federal Department of Home Affairs (FDHA), the Federal Department of Economic Affairs (FDEA) and the Federal Department of Defence, Civil Protection and Sport (DDPS). The Federal Department of Economic Affairs (FDEA) works in the area of education through the Federal Office for Professional Education and Technology (OPET). OPET is the federal competence centre for vocational education and training (VET, upper secondary level), professional education and training (PET, tertiary level type B), universities of applied sciences (UAS), occupational, educational and career guidance counselling, training of VET professionals and innovation technology grants.

Switzerland's VET/PET system covers both, the upper secondary level and tertiary level type B (see Figure 1). Its legal basis is the Federal Vocational and Professional Education and Training Act (VPETA). The act was revised in 2002 and came into force in early 2004. Switzerland promotes a principle of potential upward mobility from all parts of the VET/PET system (see paragraph 1.3).

### 1.1 Vocational Education and Training (VET)

Vocational education and training (VET) belongs to upper secondary level and immediately follows compulsory educa-

Figure 1: The Swiss education system



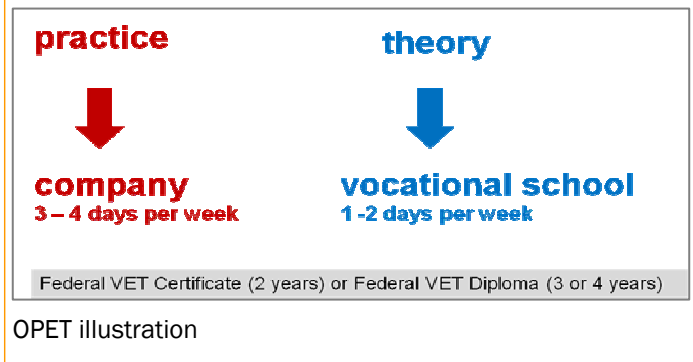
Source: OPET (2009): Facts and Figures. Vocational and professional education and training in Switzerland. Bern: OPET, p.5

tion (i.e. lower secondary level). To enrol in a VET programme, students must successfully complete lower secondary level. Special bridge-year courses are offered to young people coming out of compulsory education who have not yet gained the skills and aptitudes needed to enrol in post-compulsory education (i.e. starting upper-secondary level).

The VET programmes at upper-secondary level last two, three or four years. The two-year programme leads to the Federal VET Certificate and is intended for students whose academic achievement during compulsory education is low and does not permit them to enrol directly into a three- or four-year VET programme. Students who complete a two-year VET programme receive a Federal VET Certificate, which gives them the option of completing the three-year or the four year VET programme in less time. Students who complete a three-year or four-year VET programme receive a Federal VET Diploma, which allows them (with work experience) to continue their education at the tertiary B level and progress to professional college degrees programmes or to prepare and take national professional examinations to earn the Federal PET Diploma or the Advanced Federal PET Diploma.

VET students who obtain their Federal VET Diploma and who complete additional general education courses may also take an examination to obtain the Federal Vocational Baccalaureate. It entitles the holder to study in any of Switzerland's universities of applied sciences (UAS). If the holders of the Federal Vocational Baccalaureate success-

Figure 2: Dual-track VET approach



fully pass an additional University Aptitude Test, they are entitled to enrol (at tertiary level A) in any of Switzerland's cantonal Universities or in either of the two federal institutes of technology (ETH Zurich and EPF in Lausanne).

Approximately two-thirds of all young people entering upper-secondary level education opt for a vocational education and training programme. About one-third enrol in a general education programme. In 2007, 126,000 young people entered upper secondary education. There are 75,000 new VET students each year.

A single or dual-track approach is used to provide students with vocational education and training (see Figure 2). With the single-track approach, all general education courses, vocational courses and vocational training courses are provided exclusively by the vocational school as a part of a full-time VET curriculum. This is also referred to as an entirely school-based VET programme. With the dual-track ap-

proach, vocational schools partner with host companies and – in some cases – industry training centres to share the burden of education and training across school-based and work-based training segments. This is also referred to as a school/work-based VET programme. About 90% of all VET programmes in Switzerland are based on the dual-track approach.

With the dual-track approach, practical training courses are carried out by host companies. These host companies organise paid apprenticeships for VET students. The apprentices spend 3 to 4 days at the host company where they do productive work while undergoing practical training. The vocational schools provide students with general education courses and vocational instruction courses. VET students spend 1 to 2 days per week at the vocational school.

In Switzerland, there are VET programmes for over 200 different occupations. These VET programmes prepare students for initial entry into the labour market. The legal basis and the definition of content for each vocational education and training programme can be found in the education ordinances issued by the Federal Office for Professional Education and Technology (OPET). They are prepared through the joint efforts of the Confederation, the Cantons and the corresponding professional

organisations (trade associations, social partners and other organisations and VET/PET providers). In addition to the education ordinances, there are training plans to structure vocational education and training courses. Professional organizations are responsible for establishing and updating the content of VET and PET programmes. The 20 most popular occupations in 2007 account for about 61% of all VET programmes (see Figure 3).

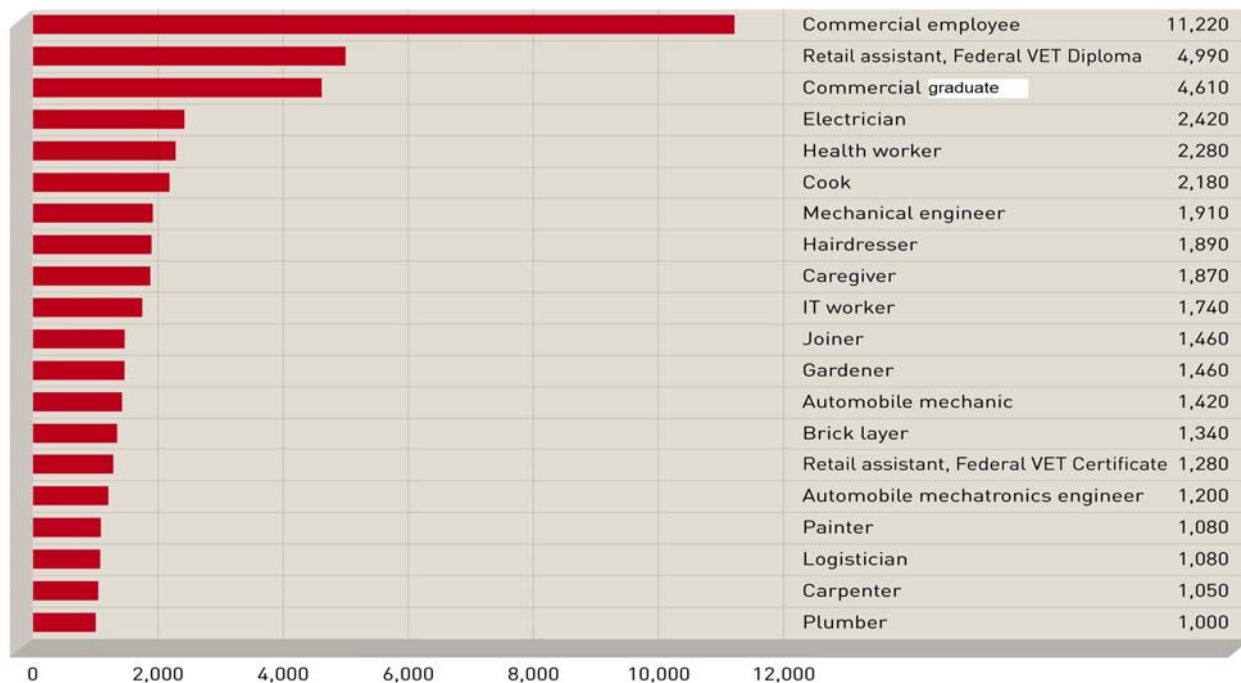
Switzerland's VET programmes are designed to match labour market needs in terms of qualifications and vacancies. The direct link between VET programmes and the labour market is the reason why Switzerland has one of the lowest youth unemployment rates: 7.0 % compared to the OECD average of 12.4.% (see Figure 4).

## 1.2 Professional Education and Training (PET)

Professional education and training (PET) falls into the tertiary-level type B category. It focuses on providing people with professional qualifications that enable them to handle challenging specialised or managerial tasks. Access to PET qualifications is basically open to holders of a Federal VET Diploma who have also gained the necessary professional experience. Holders of equivalent upper-secondary level qualifications who have some years of professional experience may also gain access. Graduates

Figure 3: The 20 most popular occupations

### Number of newly enrolled VET students in 2007



Source: OPET (2009): Facts and Figures. Vocational and professional education and training in Switzerland. Bern: OPET, p.14

from specialised schools may also be admitted to PET programmes.

PET programmes can be split into two main categories: PET programmes leading up to the national professional examinations (Federal PET Diploma Examination and Advanced Federal PET Diploma Examination) and PET programmes offered by professional colleges. In both cases, the PET qualifications are recognised at the federal level. The Federal PET Diploma examinations are handled by professional organisations. The same qualification procedures apply throughout Switzerland, regardless of which institution is responsible for providing the preparatory courses. Professional organisations are also responsible for organising national professional examinations for the Federal PET Diploma and Advanced Federal PET Diploma (both are tertiary-level type B qualifications). OPET supervises these examinations and issues the corresponding qualification. There are currently about 400 different national professional examinations and around 16,000 Federal PET Diplomas are issued each year. Professional colleges provide specialised degree programmes. In addition to attending theoretical courses, students either work in their field or take part in a traineeship. The degree programmes provided by the professional colleges are regulated and recognised by OPET. They are based on the curriculum established by the corresponding professional organisation and therefore are strongly based on the needs of the market. Around 4,000 professional college degrees are awarded each year.

### 1.3 VET/PET partners

Responsibility for vocational and professional education and training is shared by the Confederation, the Cantons

and the professional organisations (see Figure 5). This cooperation is a fundamental principle of the VET/PET system and is set forth in Art. 1 of the Vocational and Professional Education and Training Act (VPETA). Together the three partners ensure a high level of quality of VET/PET programmes and an adequate number of apprenticeships for VET students and traineeships for PET students.

The Confederation (OPET) is mainly responsible for developing and ensuring the quality of the entire VET/PET system as well as for ensuring that courses are comparable and transparent throughout Switzerland.

The Cantons are responsible for implementing and supervising the VET/PET system. Each of the 26 Cantons therefore has its own VET/PET agency. Cantonal activities specifically include creating vocational schools and introducing VET programmes in these schools, providing advice to the parties to apprenticeship contracts (VET students and host companies), and drawing a sufficient number of companies willing to offer paid VET apprenticeships.

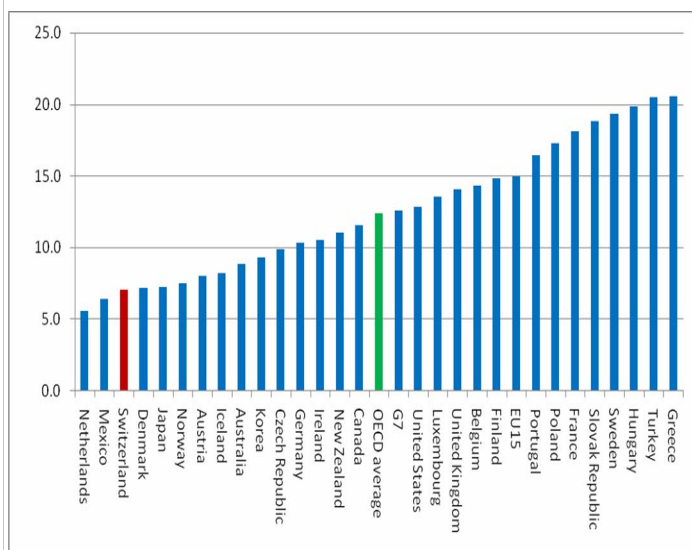
Professional organisations (which include trade associations, social partners and other organisations and VET/PET providers) are responsible for establishing and updating the content of VET and PET programmes. This ensures that the education and training programmes correspond to economic requirements, match the competencies needed and take into account the actual number of jobs available on the labour market. Professional organisations work with the Federal Office for Professional Education and Technology (OPET) and the Cantons on legislation and enactment of VET ordinances.

Companies provide VET apprenticeships and PET traineeships, thereby ensuring the next generation of qualified workers. Apprenticeships and traineeships provide students with practical training. In order to formalise the in-company training relationship, apprenticeship contracts are signed by VET students and the host company. Legally binding, these contracts must remain in effect for the entire duration of the VET programme. In almost every respect, apprenticeship contracts are equivalent to work contracts. The only difference is that apprenticeship contracts include a clause whereby the host company agrees to provide the student with practical training. The apprenticeship contract also sets forth the salary conditions for the entire period of training. The involvement of the companies in VET/PET programmes is voluntary.

Vocational schools are also important players within the VET sector of the VET/PET system. Vocational schools that provide school/work-based VET programmes handle the school-based training segment, which covers both vocational instruction and general education courses.

Efficient cooperation with VET/PET partners takes place within the following four federal standing commissions:

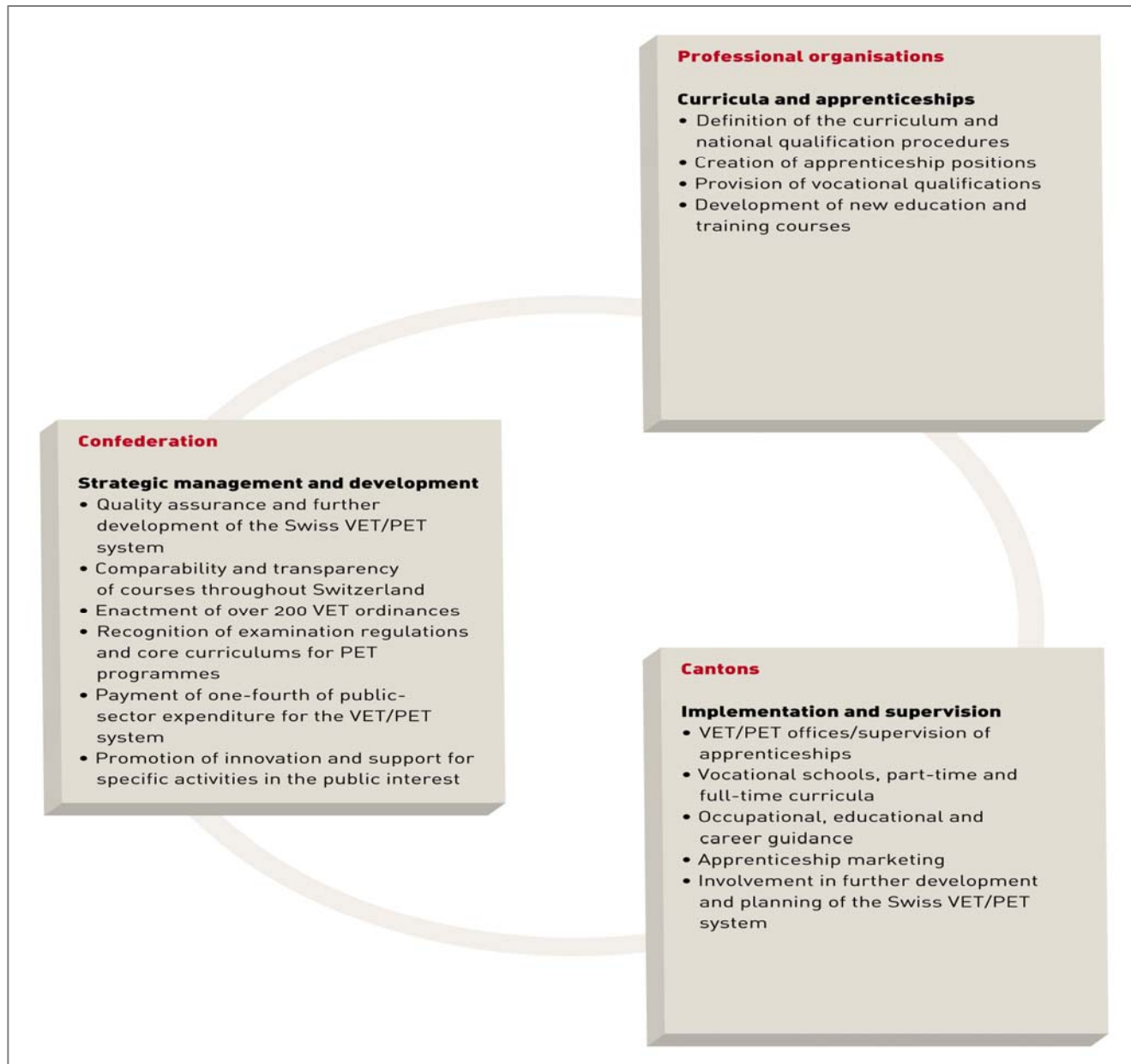
Figure 4: Youth unemployment under 25 years (OECD 2009)



Source: OECD in figures 2009 (reference year 2008)



Figure 5: VET/PET Partners



Source: OPET (2009): Facts and Figures. Vocational and professional education and training in Switzerland. OPET, p.6 - 7

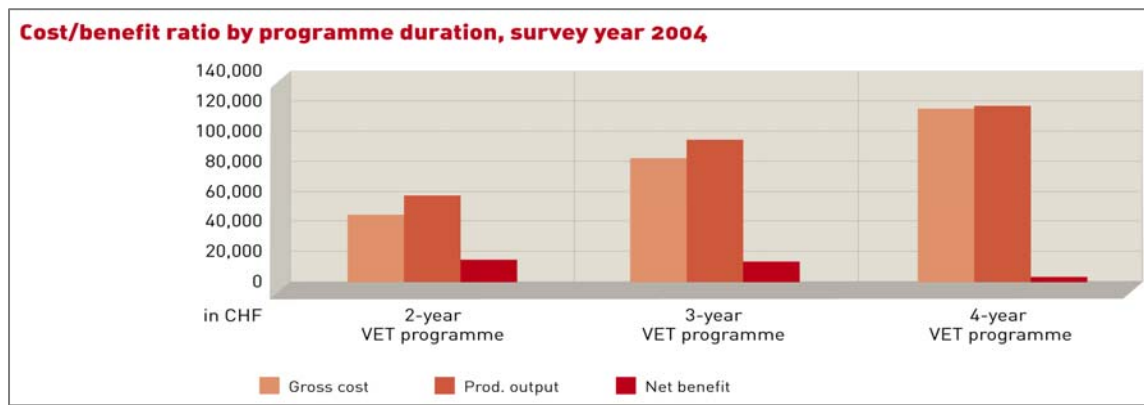
Federal Commission for Vocational and Professional Education and Training (EBBK), Federal Commission for VET Professionals (EKBV), Federal Vocational Baccalaureate Examination Board and Federal Commission for Professional Colleges.

Cooperation takes also place in three major national conferences every year: the VET/PET Conference, which is presided by the head of the Federal Department of Economic affairs (FDEA), the VET/PET Partner Conference and the OPET Conference in May. The Federal Office for Professional Education OPET organizes these conferences in order to enable discussion.

#### 1.4 VET/PET Funding

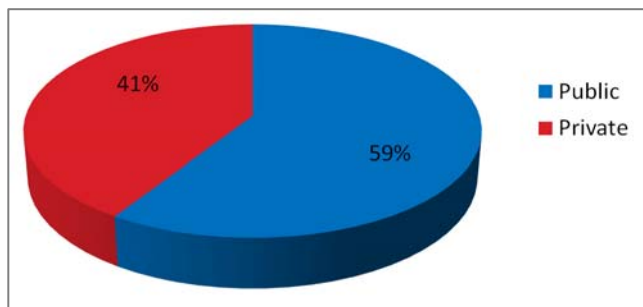
Switzerland's VET/PET system receives both public and private sector funding. On the public side, funding is provided by the Confederation, the Cantons and the Communes. The Cantons contribute the highest share of public funding. On the private sector side, funding comes from host companies, offering apprenticeships and traineeships, from trade associations, as well as from students and their families, who pay tuition and costs for education and training. Most of the costs for **professional education and training** are paid by students themselves, with a portion of these costs being paid by the students' employers. The figure

Figure 7: Cost and benefit



Source: OPET (2009): Facts and Figures. Vocational and professional education and training in Switzerland. Bern: OPET, p.19

Figure 6: VET Funding



Source: Federal Statistical Office and Mühlemann et al.

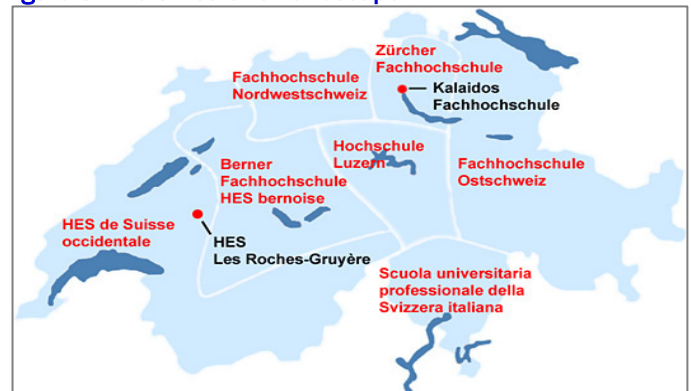
below shows the proportion of public and private expenditure for vocational education and training (VET). The public funding is around 59%. The private expenditure figure of 41% is an estimation and takes into account expenditure by companies but not by individuals (see Figure 6).

In 2004, host companies spent CHF 4.7 billion to train students enrolled in VET programmes.

Over the course of their apprenticeships, these students provided an economic output of CHF 5.2 billion. The cost/benefit ratio was positive for two-thirds of all host companies involved in VET programmes. For the remaining one-third that reported a negative cost/benefit ratio, the host companies in question often gained a short- to medium-term benefit by having to spend less money on such things as recruitment and orientation of new employees (see Figure 7).

For the 2008-2011 budgetary period, a total of CHF 270 million has been set aside for development of the VET/PET system. This corresponds to roughly 10% of the Confederation's total 25% contribution to all public expenditure relating to the VET/PET system Confederation's total commitment in 2008 – 2011: CHF 2.7 billion).

Figure 8: The Swiss UAS Landscape



OPET illustration

For the period 2008 – 2011, CHF 20 million have been set aside in a separate budget for VET/PET research. OPET provides funding to seven Leading Houses. Each Leading House is managed by a university chair who conducts research on a specific aspect of the VET/PET system. In addition OPET has two other tools at its disposal: it can provide grants for VET/PET development projects run by third parties and it may also play a more active role by issuing specific research contracts for its own needs.

As the institution responsible for training VET and PET professionals, Swiss Federal Institute for Vocational Education and Training (SFIVET) ensures that research findings are adopted and applied in practice.

## 2 Universities of Applied Sciences

Universities of applied sciences provide practical education and training at tertiary A level. Universities of applied sciences act as a relay for holders of the Federal Vocational Baccalaureate (FVB), allowing them to raise their level of qualifications to university level. Unlike PET programmes, universities of applied sciences also focus on fundamental and applied research.

Switzerland has seven public and two private universities of applied sciences. Creation of the UAS system began back in 1996 when the Federal Act on universities of applied sciences (SR 414.71) came into effect. This led to a major overhaul of the professional education and training domain. Seven UAS were created out of 28 engineering colleges, 21 economics and management colleges and 9 design colleges. Previously, all of these colleges provided tertiary level type B education and training and their legal basis could be found in legislation on professional education and training. After these colleges were merged into the UAS domain, their status changed from tertiary level B to tertiary level type A. This, alongside a general increase in student enrolment in tertiary level programmes, led to a significant shift in enrolment from tertiary level B to tertiary level A.

The Confederation and the Cantons work together to manage UAS system. Both are committed to maintaining the high quality of teaching and research at universities of applied sciences and to providing the best conditions for further development of the system. The Confederation is represented by the Federal Office for Professional Education and Training (OPET).

In Switzerland, the seven public and two private UAS provide education and training in challenging occupational fields that require scientific or artistic knowledge and a mastery of corresponding methods. There are study programmes in fields like technology, business, design, social work and art. Compared to Switzerland's cantonal universities and its two federal institutes of technology (FIT) in Zurich and Lausanne, UAS are more oriented towards practical aspects. Like the cantonal universities and the federal institutes of technology (FIT), UAS are based on the Bologna system. UAS do not, however, have the right to issue PhDs.

UAS are currently faced with a number of challenges; these include the ongoing reform process resulting from the Bologna Declaration, positioning of UAS in Switzerland's higher education landscape and the international context, expanding applied research and development activities and closer networking with the traditional universities and the federal institutes of technology (FIT). Courses in the fields of technology, economics, design, health, social work and the arts will also be restructured to better meet today's needs.

### 3 Summary and Outlook

Switzerland's long tradition of upper-secondary level VET and tertiary level PET ensures optimal cooperation between the three main partners of the Swiss VET/PET system (Confederation, Cantons and professional organisations). Some of the strong features of the VET/PET system

include the following: cooperation between the three main partners and the combined school/work-based approach, which ensures that the content of VET and PET programmes closely match the needs of employers and the labour market; the Swiss education system is highly permeable in the sense that students may transfer from one segment to another (e.g. type B to type A programmes and vice versa) with relative ease; the ability of the Swiss VET / PET system to quickly adapt to new labour market conditions. In addition, qualified workers may be trained both at upper-secondary and tertiary level. These features enable the Swiss VET/PET system to bring a "skill-grade-mix" (i.e. ratio of specialised workers with upper-secondary and tertiary-level qualifications) that matches the needs of the labour market. In addition, students receive high-quality training, as attested by Switzerland's performance over the years at the WorldSkills Competition (ranking 2<sup>nd</sup> in 2009).

In the future, Switzerland will focus on bringing greater attention to its VET/PET system both within Switzerland and in other countries. Emphasis will be placed on combined school/work-based VET programmes. While the Bologna Process has enabled tertiary level type A qualifications to be recognised internationally, upper-secondary and tertiary level type B qualifications are hindered by a lack of transparency and/or recognition. The challenge is to create general conditions that will enable upper-secondary and tertiary level type B qualifications to be compared internationally, which should lead to greater mobility for the holders of such qualifications. In order to achieve this objective, Switzerland takes part in the Copenhagen Process, which seeks to bring permeability, transparency and mobility to VET and PET in Europe. Switzerland also strives to obtain mutual recognition of VET and PET qualifications in selected countries outside of Europe.

### References

1. OPET (2009): Facts and Figures. Vocational and Professional Education and Training in Switzerland. Bern: OPET
2. OECD (2009): Learning for Jobs. OECD Reviews of Vocational Education and Training. Switzerland.
3. Rolf Marti und René Grebasch (2009): "Wegbereiter der Berufsbildung war das Zunftwesen" (espace einsteiger 11.Februar 2009, [www.espace.ch/einsteiger](http://www.espace.ch/einsteiger))

### For additional information see:

Federal Office for Professional Education and Training (OPET)

[www.bbt.admin.ch](http://www.bbt.admin.ch)

Federal Statistical Office (FSO)

[www.education-stat.admin.ch](http://www.education-stat.admin.ch)

Swiss Federal Institute for Vocational Education and Training (SFIVET)

[www.ehb-schweiz.ch](http://www.ehb-schweiz.ch)

Swiss Conference of Cantonal Directors of Education (EDK)

[www.edk.ch](http://www.edk.ch)

Portal for occupational, educational and career guidance

[www.berufsberatung.ch](http://www.berufsberatung.ch)

Swiss education server

[www.educa.ch](http://www.educa.ch)

Electronic VET/PET newsletter

[www.panorama.ch](http://www.panorama.ch)

VET/PET Lexicon

[www.lex.dbk.ch](http://www.lex.dbk.ch)

OECD Learning for jobs

[www.oecd.org/edu/learningforjobs](http://www.oecd.org/edu/learningforjobs)

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