



Konferenz der Fachhochschulen der Schweiz

KFH

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Bachelor for the labour market

Professionally oriented higher education

Country report of Switzerland

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The Balama project

The Balama project – a project in the framework of the SOCRATES program - is put together by 8 associations of higher education institutions in Europe: Germany, Ireland, Austria, Denmark, Finland, the Netherlands, Estonia and Switzerland. The aim of the project is to focus on the issue of employability in the first cycle. On the one hand, the participants would like to create an inventory in each country which shows the way professionally oriented higher education programmes in the first cycle are described in terms of competences. On the other hand, they would like to study how each country enables employers to give an input on these competences and on curriculum development. The results of these studies will be compiled and common elements will be highlighted. Good practices and lessons learned will be exchanged. Some subject areas will be used as examples.

With this report, the rector's conference of the universities of applied sciences wants to describe the situation in Switzerland. The report follows the questionnaire in appendix 1

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1 Motives, Objectives and Methodology

This study examines on a European level whether the structure of the bachelor study programmes offered by the universities of applied sciences is based on competences, i.e. if developments and internationally developed guidelines as well as recommendations concerning education theory and policy have been incorporated in their design and implemented accordingly. In particular, it will be interesting to determine whether the competences that have been defined correspond with the requirements of practitioners, and to what degree the concerns of the professional field have been taken into consideration in defining the competences and developing the study programmes. These aspects will be highlighted, first in general terms, then by describing three of the seven study programmes in more detail.

From each of seven different fields, those responsible chose the study programme which was offered most frequently by the universities of applied sciences in the German-, French- and Italian-speaking regions of Switzerland. To help define the objectives and motives of this report, 29 study programme leaders were asked to fill in a questionnaire (see appendix 2). At the same time, the study programme summaries submitted for the accreditation of the study programme, as well as the competence profiles which had been developed for each individual school, were analysed with regard to the above aspects. The questionnaires had a 66% return rate; in other words, 19 of the 29 questionnaires sent out were returned.

Sample

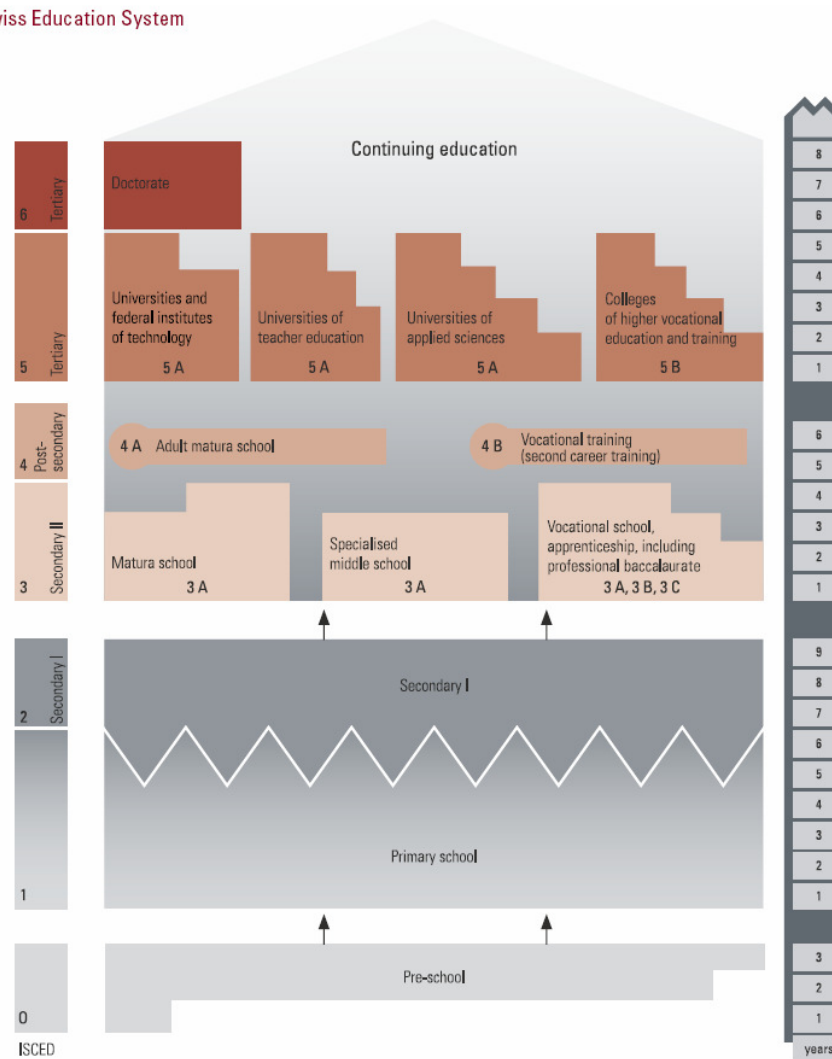
Field of Study	Bachelor Degree Courses selected	Number of Bachelor Degree Courses surveyed	Number of competence profiles surveyed
Engineering and IT	Electrical Engineering	2	1
Architecture and Building Engineering	Civil Engineering	7	1
Life Sciences	Chemistry	2	1
Business, Management and Services	Business Administration	7	1
Arts	Visual Communication	2	1
Social Work	Social Work	7	1
Music and Theatre	Musicology	2	1
Total	7	29	7

2 General facts, figures and mission

2.1 Description of the Higher Education System

The Swiss education system can be divided into four levels: primary, secondary, tertiary and quaternary (see SER / OPET 2006). Compulsory schooling includes the primary and a part of the secondary level (secondary level I) which correspond to stages 1 to 2A in UNESCO's International Standard Classification of Education (ISCED). A comparison of the other levels with the ISCED is shown in Figure 1. Following compulsory education, Swiss students can take one of two directions: one leading to a sound general education, the other to preparation for a specific trade or profession. The streaming continues at the higher education level with the federal professional and higher qualifying examinations as well as the colleges of higher professional education and training (Tertiary B level) on the one hand and the universities and the universities of applied sciences (Tertiary A level) on the other hand. All levels include a broad selection of continuing education possibilities.

Figure 1: Diagram of the Swiss Education System



Source: Swiss Conference of Cantonal Ministers of Education 2005

Higher education in Switzerland on Tertiary A level comprises both academic studies at the traditional «scientific» universities and federal institutes of technology and rather more professionally oriented studies at the universities of applied sciences («Fachhochschulen» / «Hautes Ecoles Spécialisées») Figure 2 shows the percentage of pupils and students, entering the different ways of education.

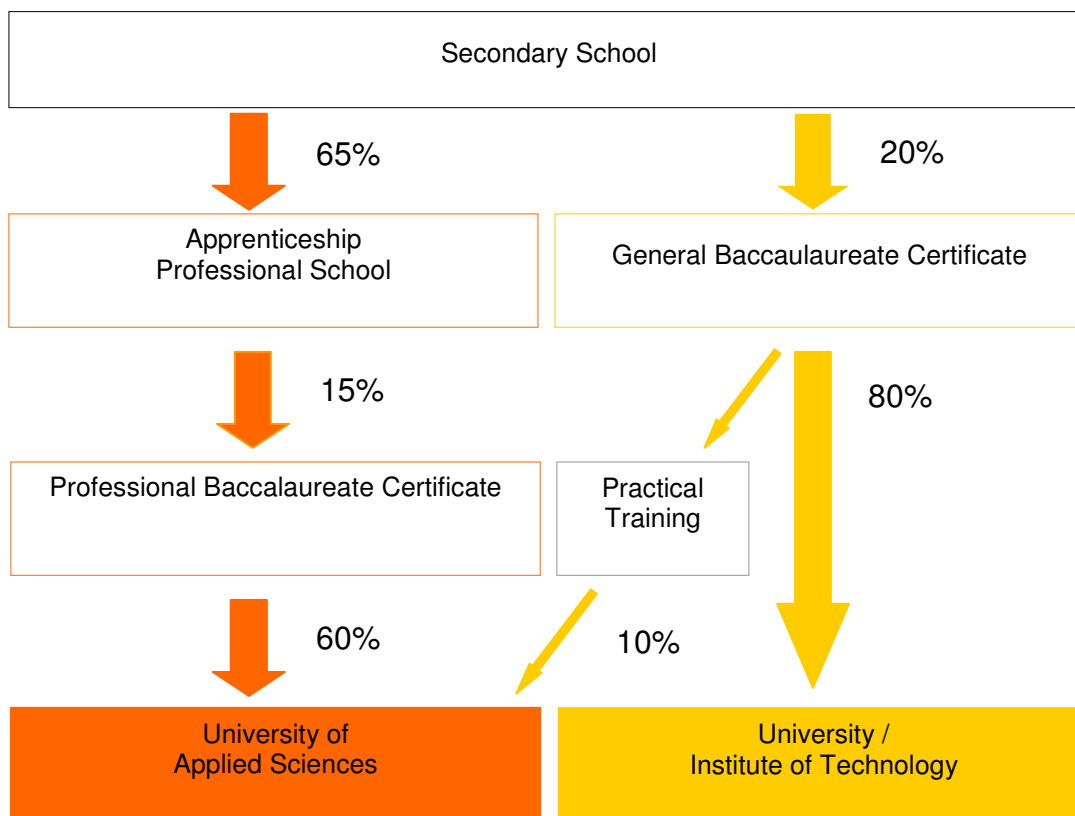


Figure 2: The Swiss Dual Higher Education System on Tertiary A level.

The main tasks of the ten cantonal universities and the two federal institutes of technology are teaching, research and provision of services. While the universities have extensive academic, financial and organisational autonomy, the Swiss University Conference (SUC) is responsible for coordination at the national level. In the 2004/2005 winter semester there were approximately 111,000 students enrolled at all the universities. At the same time around 29,000 fulltime staff (professors, lecturers, assistants, administration) were working at the universities. The annual budget for the universities is currently CHF 4,9 billion (a little more than € 3,3 billion) of which 46% comes from the Confederation, nearly 40% from the cantons and the other 15% from other sources. The financial structure of the federal institutes of technology (ETH) and the cantonal universities is different. For example the state-financed federal institutes of technology receive the lion's share of the Confederation's funding earmarked for universities. The cantonal universities are funded differently: on average the home canton bears 56% of costs while the Confederation supplies 25% of the required budget. These 25% include the research subsidies from the Confederation paid through the Swiss National Science Foundation.

The term «universities of applied science» includes the seven regional organised universities of applied sciences (UAS). By providing practice-oriented university education the universities of applied sciences prepare students for employment requiring the application of scientific findings and methods or the use of the applied arts. The tasks allotted to the UAS are as follows: provide practice-oriented education, carry out applied research and development, provide continuing education, provide services for companies and public bodies, cooperate with education and research institutes in Switzerland and abroad. The sector of the universities of applied sciences also includes the universities of teacher education («Pädagogische Hochschulen»). These, however, are regulated and funded by the cantons. They form part of a university of applied sciences in two regions, in the others they exist as separate entities or as part of a university. There are currently 16 teacher training institutions in Switzerland.

The recent expansion of the Swiss higher education system through the establishment of the universities of applied sciences UAS aimed at integrating this new type of university as an equal though different partner of the traditional universities. This modernised system of Swiss higher education – diversified but coherent – is not only better suited to meeting the needs of the students, the scientific community, modern society, and the new economy, it is also more directly compatible with other European educational systems.

The universities of applied sciences play an active role in the country's economic and social life by acting as an intermediary in transferring knowledge and technologies. National networks of universities of applied sciences give significant impetus to cooperation among them, as well as with universities and the economy.

One more reason for the expansion of the UAS is the great value placed on the apprenticeship system in Switzerland. A clear majority of young people (65%) in Switzerland take the apprenticeship route instead of the high school route (Gymnasium) mainly because of the broad range of higher professional training and an interesting educational payback. That explains why the 25% of students who graduate from secondary school or professional matriculating school is considered modest by international comparison.

Holders of a baccalaureate or maturity certificate («gymnasiale Matura») have access to the traditional academic universities, or they may enter a university of applied sciences after completing a one-year internship or work placement. Holders of a professional baccalaureate or professional maturity certificate («Berufsmaturität») are entitled to study at a university of applied sciences or, after passing a supplementary examination, at a traditional university or a university of teacher education.

2.2 Characteristics of Swiss Universities of Applied Sciences

2.2.1 Number and type of the universities of applied sciences

Since 1997 the Swiss higher education landscape has received a second type of school in addition to the «old» universities, the universities of applied science (UAS), originating from a concentration of main focuses of around 70 colleges of higher vocational education (technical schools, higher business comprehensive schools, etc). Switzerland now has seven universities of applied sciences, which are organised regionally (see figure 3) and one privately run and financed UAS, the Kalaidos.¹ The regional UAS are: University of Applied Sciences of Western Switzerland (Haute école spécialisée de Suisse occidentale HES-SO), University of Applied Sciences of Bern (Berner Fachhochschule BFH), University of Applied Sciences of Northwestern Switzerland (Fachhochschule Nordwestschweiz FHNW), University of Applied Sciences of Zurich (Zürcher Fachhochschule (ZFH), University of Applied Sciences of Central Switzerland (Fachhochschule Zentralschweiz FHZ), University of Applied Sciences of Eastern Switzerland (Fachhochschule Ostschweiz FHO) and University of Applied Sciences of Southern Switzerland (Scuola universitaria professionale della Svizzera italiana SUPSI). Each UAS corresponds to a particular region and in fact consolidates a number of previously independent partner institutions.

Universities of applied sciences



- 1 Haute école spécialisée de Suisse occidentale
- 2 Haute école spécialisée bernoise, Berner Fachhochschule
- 3 Fachhochschule Nordwestschweiz
- 4 Zürcher Fachhochschule
- 5 Fachhochschule Zentralschweiz
- 6 Fachhochschule Ostschweiz
- 7 Scuola universitaria professionale della Svizzera italiana

¹ Kalaidos is a state approved private university of applied sciences which offers study programmes in Business Administration and Health.

2.2.2 Figure 3: UAS in Switzerland; Conference of the Universities of Applied Sciences Switzerland 2006

The seven UAS offer around 300 study courses. A full-time study Bachelor Degree Course at a UAS lasts three years. Part-time courses, taken while employed, last between four and five years. The Master Degree Courses last additionally 1 1/2 – 2 years. In response to the needs of the economy the UAS are also very active in the field of continuing education. A total of around 1,000 continuing education and postgraduate courses and studies are on offer.

University of Applied Sciences Western Switzerland at a glance

Languages of instruction	French/German/English
Number of students (diploma studies)	10,008
Proportion of full-time students	83 %
Proportion of part time students or taking courses while employed	17 %
Proportion of female students	48.6 %
Proportion of foreign students	13.1 %
Graduates 2003 (diploma studies)	1,182
Diploma supplement	Yes
ECTS	Yes
Annual expenditure (incl. research)	CHF 340.5 million
Funding	
▪ Public contributions (Confederation and cantons)	97.1 %
▪ Third parties	2.9 %
Faculties with proportion of students	
▪ Construction and environment	5.4 %
▪ Chemistry and Natural Sciences	4.3 %
▪ Information and Communication Technologies	9.2 %
▪ Industrial Technologies	11.1 %
▪ Economics and Services	28.3 %
▪ Fine Arts	4.5 %
▪ Social Work	13.1 %
▪ Health and Health Training	17.9 %
▪ Mobility and Rehabilitation	6.2 %

University of Applied Sciences of Zurich at a glance

Languages of instruction	German/English
Number of students (diploma studies)	9,181
Proportion of full-time students	78 %
Proportion of part-time students	22 %
Proportion of female students	49 %
Proportion of foreign students	10 %
Graduates 2004	
▪ UAS diploma	1,770
▪ UAS post-diploma	290
Diploma supplement	Yes
ECTS	Yes
Annual expenditure (incl. research)	CHF 403 million
Funding	
▪ Tuition fees	12.5 %
▪ Public contributions (Confederation and cantons)	81.5 %
▪ Third parties	6.0 %
Faculties with proportion of students	
▪ Economics and Services	28.2 %
▪ Teacher Training	21.0 %
▪ Technology and IT	12.1 %
▪ Music, Theatre and other arts	11.3 %
▪ Design	6.3 %
▪ Chemistry and Life Sciences	6.2 %
▪ Social Work	5.5 %
▪ Architecture, Construction and Planning	3.8 %
▪ Applied Psychology	3.0 %
▪ Applied Linguistics	2.6 %

University of Applied Sciences of Southern Switzerland at a glance

Languages of instruction	Italian, distance learning offered in German, some graduate studies in English
Number of students (diploma studies)	1,706
Proportion of full-time students	59 %
Proportion of part-time students	41 %
Proportion of female students	36 %
Proportion of foreign students	17 %
Graduates 2004 (diploma studies)	274
Diploma supplement	Yes
ECTS	Yes
Annual expenditure (incl. research)	CHF 65 million
Funding	
▪ Public contributions (Confederation and cantons)	60 %
▪ Third parties	40 %
Faculties with proportion of students	
▪ Architecture (SUPSI)	6 %
▪ Civil Engineering (SUPSI)	4 %
▪ Interior Design (SUPSI)	3 %
▪ Visual Communication (SUPSI)	5 %
▪ Conservation and Restoration (SUPSI)	1 %
▪ Business Administration (SUPSI)	31 %
▪ Social Work (SUPSI)	12 %
▪ Computer Science (SUPSI)	14 %
▪ Electronics (SUPSI)	5 %
▪ Mechanics/Microtechnics (SUPSI)	1 %
▪ Engineering and Management (FFHS)	3 %
▪ Business Information Technology (FFHS)	5 %
▪ Theatre (STD)	2 %
▪ Music (CSI)	8 %

University of Applied Sciences of Bern at a glance

Languages of instruction	German, French, English
Number of students (diploma studies)	> 5,000
Proportion of full-time students	80 %
Proportion of part-time students	20 %
Proportion of female students	25 %
Graduates 2003 (diploma studies)	1,500
Diploma supplement	Yes
ECTS	Yes
Annual expenditure (incl. research)	CHF 190 million
Funding	
▪ Public contributions (Confederation and cantons)	70 %
▪ Third parties	30 %
Departments with proportion of students	
▪ Mechanics and IT	36 %
▪ Economy and Social Work	32 %
▪ Arts	13 %
▪ Architecture	11 %
▪ Agriculture	5 %
▪ Sports	3 %

University of Applied Sciences of Central Switzerland at a glance

Languages of instruction	German, partly English
Number of students (2004/2005)	2,839
Proportion of full-time students	81 %
Proportion of part-time students	19 %
Proportion of female students	39 %
Proportion of foreign students	8 %
Annual number of graduates (diploma studies)	586
Postgraduates per year	448
Since fall 2005:	
▪ 14 Bachelor's programmes with 25 courses	
▪ One Master's course in architecture	
From fall 2006:	
▪ English-language studies in Design Management International	
From 2008:	
▪ Master's courses	
Annual expenditure (incl. research)	CHF 131 million
Funding	
▪ Public contributions (Confederation and cantons)	73 %
▪ Third parties	27 %
Faculties with proportion of students	
▪ Engineering and IT	19 %
▪ Architecture, Construction and Planning	11 %
▪ Economics and Services	27 %
▪ Social Work	16 %
▪ Design	6 %
▪ Arts	3 %
▪ Music	18 %

University of Applied Sciences of Eastern Switzerland at a glance

Languages of instruction	German, partly English
Number of students (diploma studies)	2,800
Proportion of full-time students	74 %
Proportion of part-time students	26 %
Proportion of female students	27 %
Proportion of foreign students	12 %
Graduates 2003 (diploma studies)	650
Diploma supplement	Yes
ECTS	Yes (partly)
Annual expenditure (incl. research)	CHF 95 million
Funding	
▪ Public contributions (Confederation and cantons)	79 %
▪ Third parties	21 %
Faculties with proportion of students	
▪ Engineering and IT	50 %
▪ Architecture, Construction and Planning	13 %
▪ Economics and Tourism	24 %
▪ Social Work	13 %

University of Applied Sciences of Northwestern Switzerland at a glance

Languages of instruction	German, partly English
Number of students (diploma studies)	about 6,000
Proportion of female students	38 %
Proportion of foreign students	12 %
Graduates (diploma studies)	1,500
Diploma supplement	Yes
ECTS	Yes
Annual expenditure (incl. research)	about CHF 300 million
Funding	
▪ Public contributions (Confederation and cantons)	82 %
▪ Third party	18 %
Faculties with proportion of students	
▪ Architecture, Construction and Geomatics	4 %
▪ Technology and IT	19 %
▪ Life Sciences	3 %
▪ Economics	23 %
▪ Art and Design	8 %
▪ Social work	14 %
▪ School of Applied Psychology	3 %
▪ Teacher training	26 %

Figure 4: Universities of applied sciences in Switzerland at a glance; see SER / OPET 2006: 90-117.

2.2.3 Orientation of study programmes offered in the universities of applied sciences

The main assignment of the universities of applied science consists of:

- Diploma studies: Bachelor Degree Courses and Master Degree Courses
- Further education: Master of Advanced Studies (MAS) (60 Credits)
- Application orientated research and development (R & D)
- Services for the benefit of third parties
- Co-operation with colleges and research institutes in Switzerland and abroad.

The duration of a bachelor programme is 3 years (6 semesters, 180 ECTS credit points), and includes a practically oriented undergraduate dissertation and sometimes a period of practical training. Part-time studies (combined with employment) require a minimum of 4 years to complete. The bachelor programmes are often divided into a period of basic or introductory studies, which lasts 2 semesters, and a period of advanced studies, which culminates in the final degree examination. In many subjects, the programme includes one or two practical semesters spent in business, industry or the civil service, accompanied by tuition at the UAS to complement the knowledge students have gained in practice. UAS programmes end now with the award of a Bachelor degree (the former programmes had ended with a Diploma). Both types of degree count as a professional and academic qualification. The study and examination regulations differ from institution to institution. Each UAS or school will be pleased to provide its study and examination regulations on request. Every UAS or school also publishes a course catalogue and offers study counselling. The duration of a master programme is 1.5 or 2 years (3 or 4 semesters, 90 or 120 ECTS credit points),

All UAS offer a number of postgraduate courses, including degree courses (Master of Advanced Studies MAS, Executive Master of Business Administration EMBA or Nachdiplomstudiengänge NDS), for professional development and continuing education. Since they lead to an advanced qualification, these courses are of particular interest to students from abroad. Full-time study on a Master of Advanced Studies programme lasts a minimum of one year (60 ECTS credit points).

The universities of applied sciences in Switzerland offer Bachelor Degree Courses in:

Fields of Study	Bachelor Degree Courses
Engineering and IT	Electrical Engineering Automobile Engineering Energy and Building Technology Mechanical Engineering Microengineering Media Engineering Computer Science Telecommunications Systems Engineering Engineering and Management
Architecture, Building Engineering and Planning	Architecture Spatial Planning Landscape Architecture Civil Engineering Wood Engineering Geomatics
Chemistry and Life Sciences	Chemistry Biotechnology Food Technology Life Technologies Environmental Engineering Oenology
Agriculture and Forestry	Agriculture Forestry
Business, Management and Services	Business Administration Facility Management Hospitality Management Tourism Business Information Technology Information Science Communication
Design	Visual Communication Product and Industrial Design Interior Design Conservation and Restoration
Health	Nursing Physiotherapy Occupational Therapy Midwifery Nutrition counselling
Social Work	Social Work Social Pedagogy Socio-cultural Animation General Social Work
Music, Theatre and other Arts	Instrumental and Vocal Music Pedagogy Interpretation and Performance School and Church Music Conducting Music Specialities Acting Theatre Direction Fine Arts Teaching in Design and Art
Applied Psychology	Applied Psychology
Applied Linguistics	Translating Interpreting

Alongside the cantonal universities and federal institutes of technology, the universities of applied sciences constitute one pillar of the Swiss system of higher education institutions that could be described by the motto «equivalent but different». The equivalence involves the training mandates with

joint elements of general professional training, and the difference stems from the close link in universities of applied sciences between the scientific spirit and the practical approach – teaching and research geared towards practicality. The main task of the «old» universities is to carry out basic research and teaching. This division of tasks is important if the network of higher education institutions is to be harmonised. But working together and the horizontal and vertical possibilities for transferring between the two are also essential. This cooperation and division of tasks is also part of the missions of Switzerland's universities and UAS. The Rectors' Conference of the Swiss Universities (CRUS), the Rector's Conference of Universities of Applied Sciences in Switzerland (CUAS) («Konferenz der Fachhochschulen», KFH) and the Swiss Conference of the Universities of Teacher Education (SCTE) encourage exchange programmes and work together readily. In addition, there has traditionally been close cooperation between the federal institutes of technology and the universities of applied sciences in the field of engineering sciences.

2.2.4 Number of students

The young UAS are attracting more and more students. At present 54,000 are enrolled throughout Switzerland, and numbers are still climbing. The number of students has climbed from about 5,000 by a regular 5,000 to 6,000 every year.

The number of entrants is still growing today, but the growth rate is slowing down. In the academic year 2004/05 some 14,000 newcomers began their first semester of studies. One year before, this figure was 13,000 and a year before that, nearly 10,000.

The two biggest UAS are the ones in Western Switzerland with an enrolment of about 10,000 and Zurich with about 9,000 students. Of the 15 different field of studies, the most attractive for students include Business, management and Services, teacher training, the various technical professions, followed by social work, music and theatre. (See Figure 5)

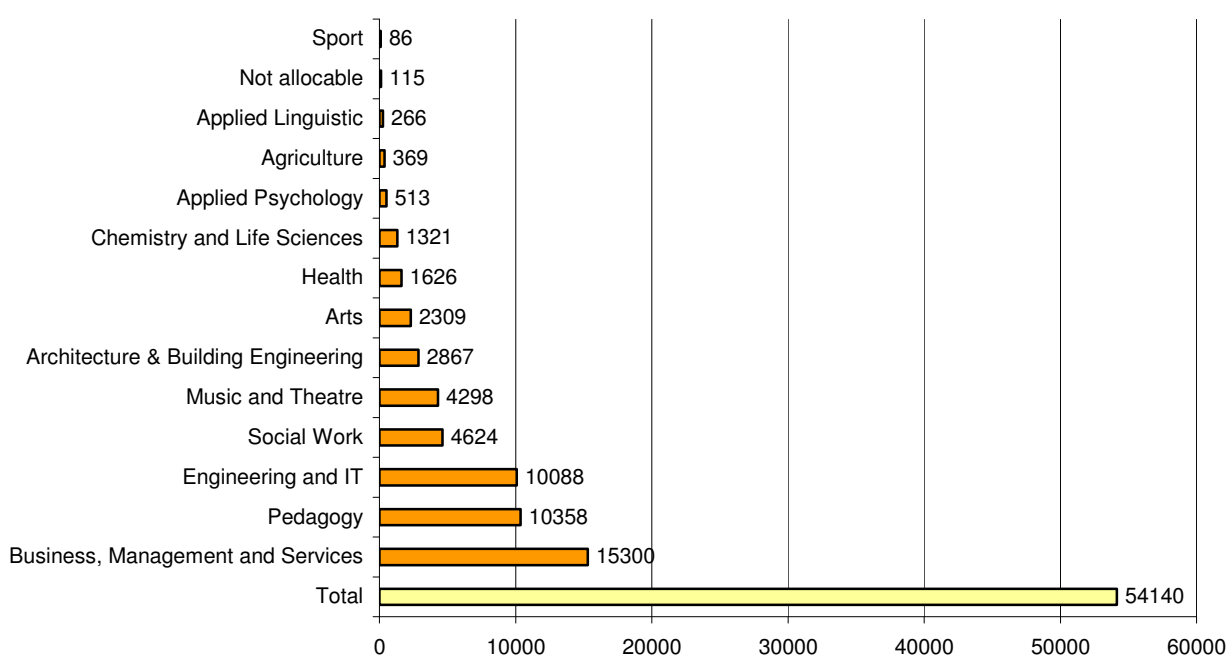


Figure 5: Number of Students in UAS in Switzerland 2005; Swiss Federal Statistical Office

42% of the student body are women and according to forecasts, this will continue to increase slightly in the years to come.

The proportion of foreigners is 16% and growing.

In 2004, the universities of applied sciences granted slightly more than 7,200 diplomas compared with nearly 4,500 two years before.

The quota of women receiving diplomas was 40%.

According to present forecasts, the number of 10,000 persons newly granted a diploma will be exceeded as early as 2008. Postgraduate studies are developing satisfactorily. In 2003, more than 2,300 persons graduated with a degree.

In 2003, the total budget for all seven UAS was slightly more than CHF 900 million (approx. € 600 million) (see SER / OPET 2006: 20).

2.2.5 Research function and mission of the universities of applied sciences

Switzerland is a country that, by international standards, invests heavily in research. As it is poor in natural resources, it places great importance on Research and Development as a means of ensuring its long-term prosperity and social security system. R&D constitutes one of the four central performance mandates. The universities of applied sciences focus on applied research and development activities closely related to the needs of the market. One of the reasons why they were established was to forge a closer link between higher education and businesses, especially SMEs.

2.3 Characteristics of national higher education policy

The lawful bodies in the tertiary area are the cantons as well as the Confederation. According to the federal constitution, the Confederation possesses the guideline competences for the universities of applied sciences. Both of the Federal Institutes of Technology also fall under the responsibility of the Confederation. The individual cantonal locations are responsible for their cantonal universities and the universities of teacher education. The latter are also subject to inter-cantonal guidelines.

The revised Law concerning Universities of Applied Sciences (FHSG), as well as its four ordinances, came into effect on 04.10.2005. Within the scope of the Bologna Declaration, the newly structured programmes of study were anchored in federal law. At the same time, the legal scope was extended, thus creating the basis necessary for meeting the requirements of the constitutional mandate. All paths of professional education not yet regulated by the cantons have now been transferred to the scope of the Swiss Confederation (except the universities of teacher education). In 2005, the two councils of the Federal Assembly adopted new constitutional articles governing education. According to these, the Confederation and the cantons are meant to coordinate their responsibilities with regard to educational issues. The new constitutional articles adopted by the Swiss people in May 2006 provide a basis for the framework law on institutes of higher education currently in preparation, as well as for the future landscape of higher education in Switzerland. The old Law concerning Universities of Applied Sciences (FHSG) and the Federal Law on Financial Aid to Universities (UFG/LAU) will be replaced by one single framework law applicable to all types of higher education.

After hearing the federal and cantonal authorities concerned with higher education and research policy as well as the institutions of higher education themselves, the Swiss Federal Council will issue its objectives to the universities of applied sciences. The Confederation and the cantons will conclude an agreement in which the fundamental principles with regard to the programmes of study will be set out. The Federal Department of Economic Affairs (DEA) will determine the programmes of study and their designations and will assign them to suitable schools or departments. In making these decisions, it will mainly hear the cantons, the respective bodies which are responsible for the universities of applied sciences, as well as the joint bodies, i.e. the Conference of the Universities of Applied Sciences Switzerland (CUAS). There will be three bodies, each with separate responsibilities: a) A Swiss conference of higher education will be comprised of representatives of the Confederation and the cantons. It will regulate the higher education system as a whole and will determine the basic parameters that are necessary for the higher education system to function as an entity. b) A conference comprised of rectors and presidents of institutions of higher education will handle coordination on the level of the institutions themselves. c) A Swiss universities' council will accompany the developments in higher education policy as a consultative body.

2.3.1 Level of autonomy of Universities of Applied Sciences

Each university of applied sciences has a strategic and an operational body. Some of the universities of applied sciences have a global budget and are very autonomous in the guidance, others depend at present still more strongly on their funding provider.

The Confederation supervises and funds the federal institutes of technology, is responsible for promotion of research, legislates on higher professional education and training and the universities of applied sciences, funds professional education and training, the universities of applied sciences and the cantonal universities.

The cantons are responsible for the universities and are their main source of financial support. (see SER / OPET 2006:14)

The Rector's Conference of the Universities of Applied Sciences Switzerland (CUAS) («Konferenz der Fachhochschulen», KFH) represents the interests of the universities of applied sciences before the Confederation and the cantons as well as other educational and research political bodies. The Conference maintains close links to the Federal Office for Professional Training and Technologies (BBT), which regulates and jointly finances the universities of applied sciences at a Swiss level.

The Swiss Council of Universities of Applied Science (Fachhochschulrat) of the Swiss Conference of the Cantonal Educational Minister (EDK) is the strategic and political organ for all matters concerning co-operation between cantons. This person coordinates the development plan throughout Switzerland and works together with the Confederation.

The future Swiss conference of higher education (see above) is meant to regulate the system as a whole, not individual universities. This national body will have no direct control over the strategies to be followed by the universities, the contracts of performance concluded with individual universities or Switzerland's overall portfolio policy. Each respective body responsible for a particular university shall be able to decide which scope of action a university should be granted and will delegate the strategic and operative responsibilities to that university. The university portfolio is situated at the intersection of state institutional policy and university strategy. The question has yet to be finalised which will be the responsibilities of the respective bodies and which will be the responsibilities of the universities. An instrument used frequently for coordinating institutional policy and university strategy is a target agreement about global budgets and reporting. The universities themselves are called upon to establish a suitable management structure and to agree to regulate themselves.

2.3.2 Funding of education and research

In 2004, various donors invested approximately CHF 1,365 million (about € 600 million) into the universities of applied sciences (see figure 6).

Of this total about

- 58% (793 million) came from the cantons
- 22% (295 million) from the Confederation
- 20% (278 million) from third parties

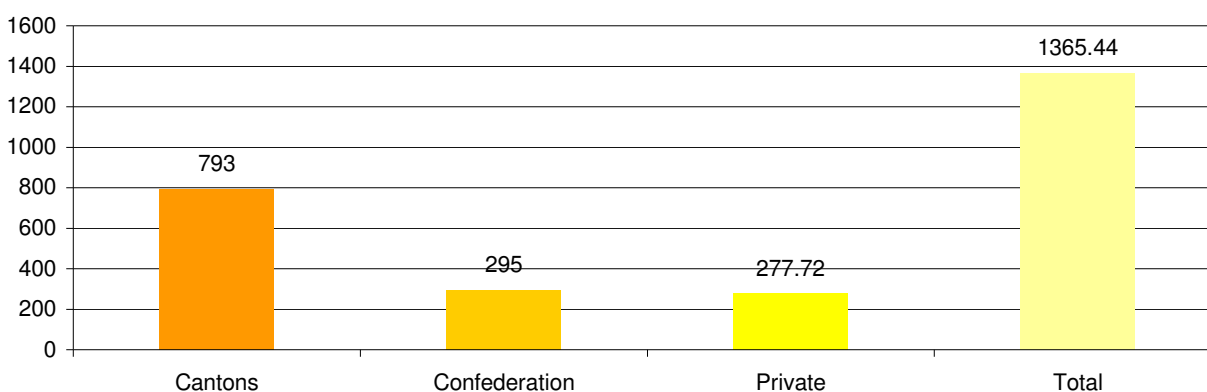


Figure 6: Funding of the universities of applied sciences 2004 in million CHF; Swiss Federal Statistical Office

72% of the funds were spent for «education on the diploma level», a further 7% for «education on the postgraduate level», 14% went to «applied research and development» and 7% into «services» (see figure 7).

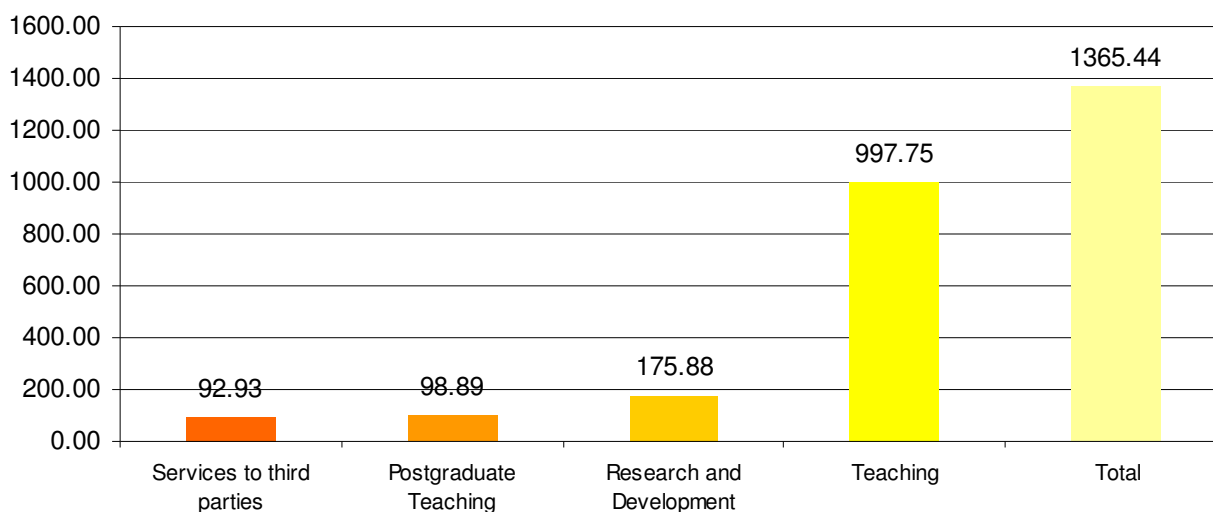


Figure 7: Funding of the different tasks of the universities of applied sciences 2004 in million CHF. Swiss Federal Statistical Office

The main private-law institution responsible for promoting research in Switzerland is the Swiss National Science Foundation (SNSF). It is a foundation, financed primarily with public funds. In addition to promoting projects involving basic research, the Foundation is also responsible for implementing the various national research programmes: National Research Programmes, Priority Programmes and the National Centres of Competence in Research. The Commission for Technology and Innovation (CTI), which is under the supervision of the Federal Office for Professional Education and Technology, is another important institution for the promotion of research in Switzerland.

Research in fields like social work, health, music and theatre, fine arts, education, applied psychology and applied linguistics holds great potential for society, economy and science. The Swiss National Science Foundation (SNSF) and the Innovation Promotion Agency (CTI) therefore promote good market- and application-oriented research in these areas. CTI and SNSF function differently (see figure 8 and figure 9). But they complement one another.

CTI promotes market-oriented research that aims to have an effect on the political economy (see SNSF/CTI 2006). CTI's promotion is in principle open to all disciplines. About CHF 100 million are available per annum as promotion resources.

SNSF supports research foremost in universities with the objective of encouraging scientific excellence. SNSF has promotion resources of about CHF 500 million per annum.

SNSF and CTI have reviewed and coordinated their activities to facilitate researchers' access to funding in the areas of social work, health, music and theatre, fine arts, education, applied psychology, and applied linguistics (see figure 8 and figure 9).

An special programme called DORE (DO-REsearch) has been created and integrated with SNSF to support applied research in the above-mentioned areas at Universities of Applied Sciences and Universities of Teacher Education.

DORE supports four types of funding:

- Project funding
- Funding of scientific conferences (max. CHF 5,000)
- Funding of publications (max. CHF 10,000)
- Funding of scientific courses for promising young researchers (max. CHF 25,000)

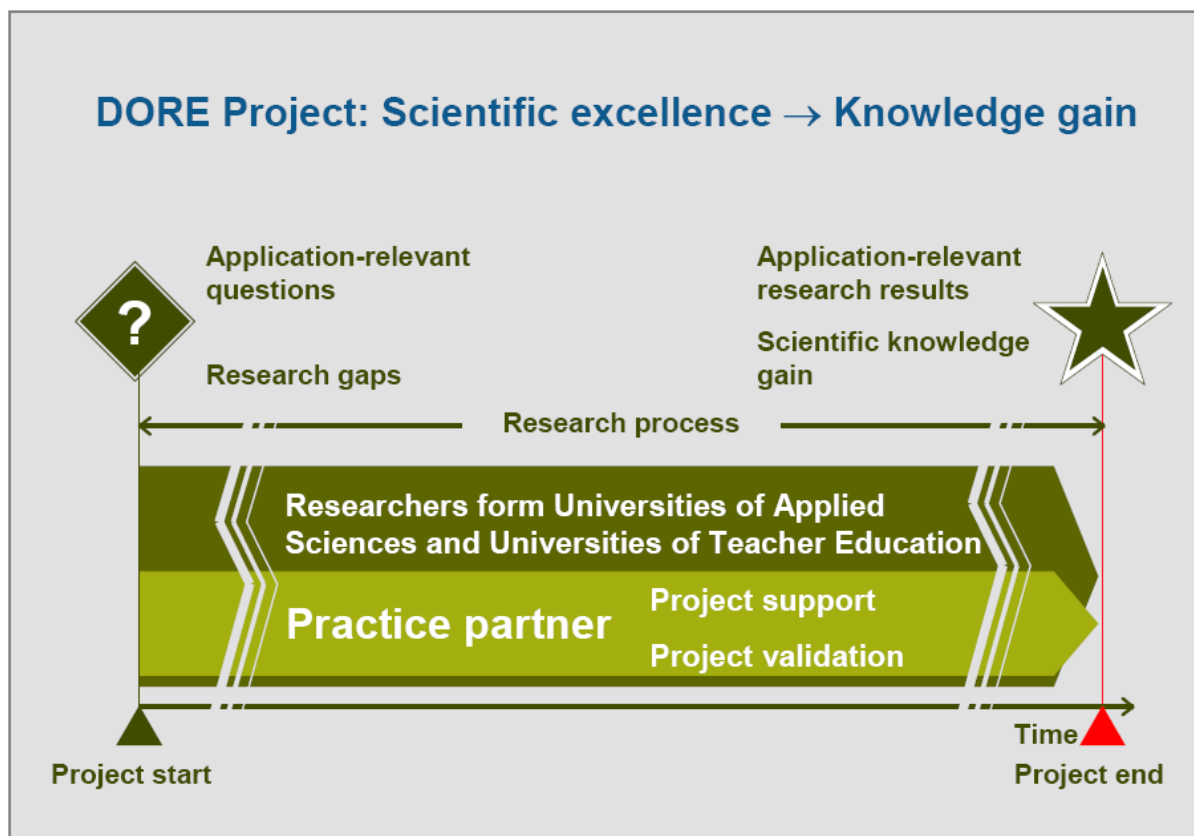


Figure 8: The characteristics of a DORE-Project

A precondition for project promotion is the participation of a partner who will look to the practical relevance of the project and who is interested in applying the research results. This partner must bear at least 30% of the project expenses – in the form of a financial contribution and / or material or staff provision.

In the year 2005 by DORE 4,638,639 million were granted (see SNF 2006).

The research projects CTI supports are always executed jointly by a minimum of one implementation partner – companies, the public authorities, non-profit organisations – along with a research partner from the Swiss Federal Institute of Technology (ETH), another university, or a university of applied sciences. Applications for funding may be submitted at any time. These are evaluated by top-class scientific and economic experts. The most important selection criteria are innovative content and the effect that can be achieved in the economy and society through subsequent utilisation of the further-developed research results. It is therefore of decisive importance that the implementation partner is committed from the very beginning to investing further time and money after CTI's financing – assuming that the designated objectives were achieved – so that the research results can be made use of, for instance in the development of a product or process or the introduction of a service in the market-place. Accordingly, the value-added chain, implementation model and corporate approach, and sustainability are taken into consideration when evaluating the application to CTI. The financial support – normally up to 50% of the project costs – goes to the participating universities. The implementation partners finance the remaining costs, mostly their own expenditures, themselves.

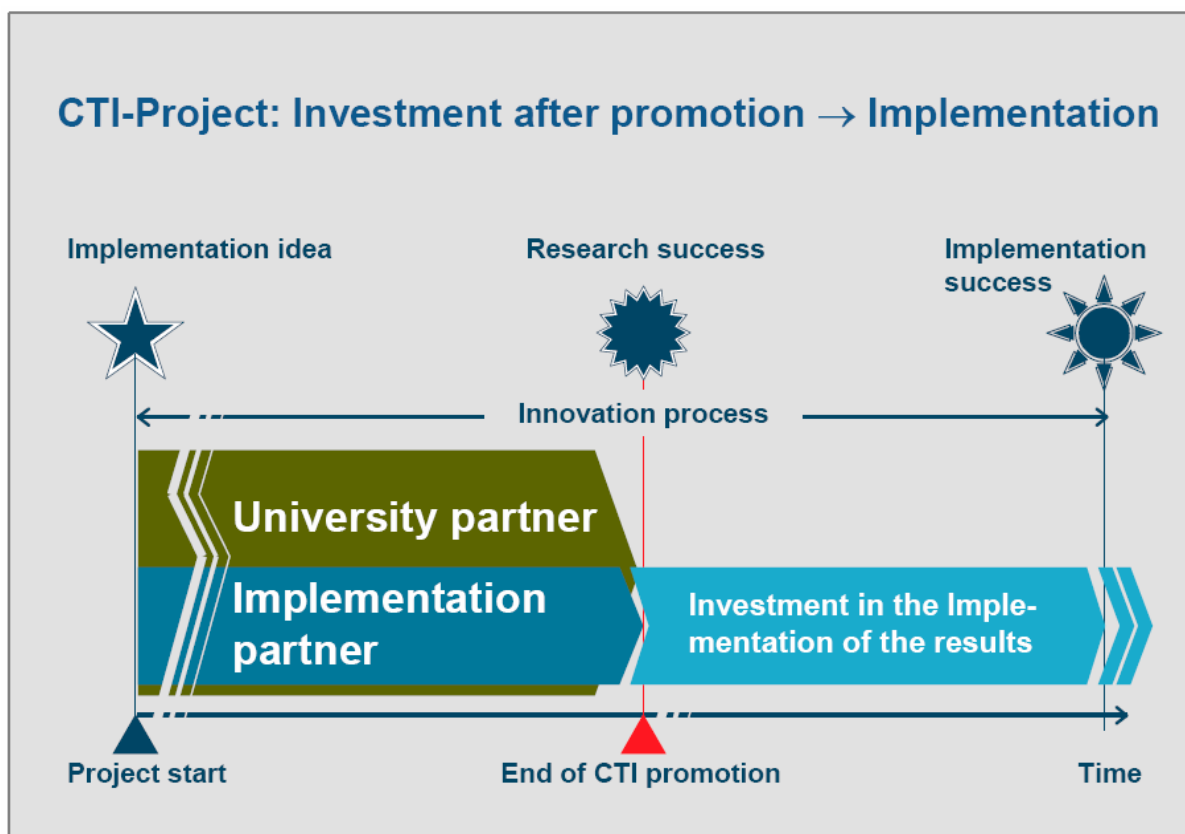


Figure 9: The characteristics of a CTI-Project

In the year 2005 the universities of applied sciences received from the CTI CHF 32 million. Those are over 40% of the spoken promotion funds (see KTI 2006)

2.3.3 World of work influence on professionally oriented higher education

The mission of the universities of applied sciences is to provide and develop professionally oriented higher education and to conduct Research and Development which serves working life and regional development, as well as teaching. The responsibility for the study programmes lies within the institutions themselves. They are autonomous. An analysis of the study programme concepts as well as the evaluation of the questionnaires distributed to the study programme leaders confirms that there is a very close connection between practice and the UAS, affecting all study programmes and all four performance areas. In the domain of teaching, this link is established predominantly via internships for the students, work projects, as well as the exchange with academic staff who have a professional background. In most study programmes, there are many lecturers from the professional field. Practitioners can often also be found in consultative councils and commissions. They serve as examiners (e.g. for the entrance examinations for social work, music education or fine arts), act as mentors for seminar and certificate papers and take part in consultation sessions to develop the concepts of study programmes.

In the area of research and development, this exchange takes a different form: The majority of the research programmes has a regional basis and is generated from requests submitted by practitioners in the field. The services rendered are always a direct consequence of an enquiry from the professional field. Furthermore, there are events, conferences and congresses which are organised together with representatives from the world of work.

The analysis makes it clear that the basic idea of the universities of applied sciences (i.e. the close ties to the professional world), which distinguishes them from the other universities, has been realised.

2.4 Quality Assurance of Higher Education Institutions in Switzerland

The responsibility for quality assurance (QA) lies – by law – with the institutions themselves. They are expected to establish QA systems that guarantee a high level of quality in education and research. By 2007 all study programmes will be accredited by the Federal Department of Economic Affairs. It issues guidelines for the accreditation and is responsible for the accreditation of the universities as institution and their study programmes. The screening can be outsourced.

The system of accreditation is based on a quality procedure which is constructed of a three-tiered evaluation process in accordance with international professional practice. In a first step, the university of applied sciences seeking accreditation produces a self-evaluation report. This is followed by a process of external evaluation by a group of experts (consisting of three to five peers). These assess the quality of the university of applied sciences or of the study programme by means of talks with the management, the academic staff and the students, as well as an analysis of their documentation. The final report produced by the group of experts contains a profile of strengths and weaknesses as well as the proposal with regard to the accreditation decision. Before the report passes from the accreditation agency to the Federal Department of Economic Affairs, the university of applied sciences in question has the right to comment. Primarily, the accreditation procedure is concerned with content; it guarantees their compliance with special standards of quality for the universities of applied sciences. In the procedure of assessing aspects of education policy, this is the essential condition for the approval of a «new» university of applied sciences or a «new» study programme.

2.5 Mission of the Conference of the Universities of Applied Sciences Switzerland

The Conference of the Universities of Applied Sciences Switzerland (CUAS) («Konferenz der Fachhochschulen», KFH) encompasses the seven state founded universities of applied sciences in Switzerland. The Conference was established in 1999 in order to represent the interests of the Rectors of the universities of applied sciences when dealing with the Confederation, the cantons and other institutions in charge of education and research policy as well as the public in general. It works in partnership with the Council of the UAS of the Swiss Conference of Cantonal Ministers of Education («Fachhochschulrat der Schweizerischen Konferenz der kantonalen Erziehungsdirektoren», FHR EDK) and maintains close contacts to the Federal Office for Professional Education and Technology, which regulates and cofinances the UAS on the national level.

In July 2001 CUAS was recognised as an association. Since May 2002 it has had a general secretariat to which the Information and Coordination Office for Continuing Education for UAS Teaching Staff is attached. CUAS members consist of the rectors of the Swiss universities of applied sciences. CUAS is headed by a committee of three members and elects the members of the special commissions as well as the delegates.

CUAS helps to guarantee that the Swiss University of Applied Sciences maintains its own, marked profile and that this profile is effectively communicated to the outside world. CUAS aims to establish national and international acceptance of the universities of applied sciences. It works closely together with the federal and cantonal authorities. CUAS strives to attain a uniform higher education policy and supports it in educational committees on the regional and national level, as well as in the public eye. At the same time, regional policy conditions are taken into consideration. CUAS is strongly committed to maintaining a harmonisation of quality in all universities of applied sciences whereby it is benchmarked against international standards. CUAS strives to integrate the universities of applied sciences into the currently developing European area of higher education. CUAS fosters collaboration with other institutions of higher education both at home and abroad. It is committed to national and international networking in higher education and encourages both teacher and student exchange programmes. CUAS supports the universities of applied sciences not only in their development but also in fulfilling their mission. It strives to create an interregional network through information and documentation exchange as well as by working on common projects. CUAS supports the principle of autonomy in universities of applied sciences and their administrative bodies according to effective basic principles. CUAS collaborates with other institutions in tertiary education. It also coordinates activities with upper secondary institutions. The KFH is at present in a strategy process.

2.6 Background of the students

The minimum entrance requirement is an upper secondary education, either an apprenticeship with a professional maturity certificate («Berufsmatura» / «maturité professionnelle») or a general (academic)

maturity certificate («gymnasiale Matura» / «bac général») plus one year of professional practice in the form of an internship or work placement. In some subjects (for example, social work, art or music) applicants must pass an entrance examination.

The following figure 10 shows the distribution of the bachelor and diploma degree students to Swiss, foreigners with education in Switzerland or foreigners with education abroad.

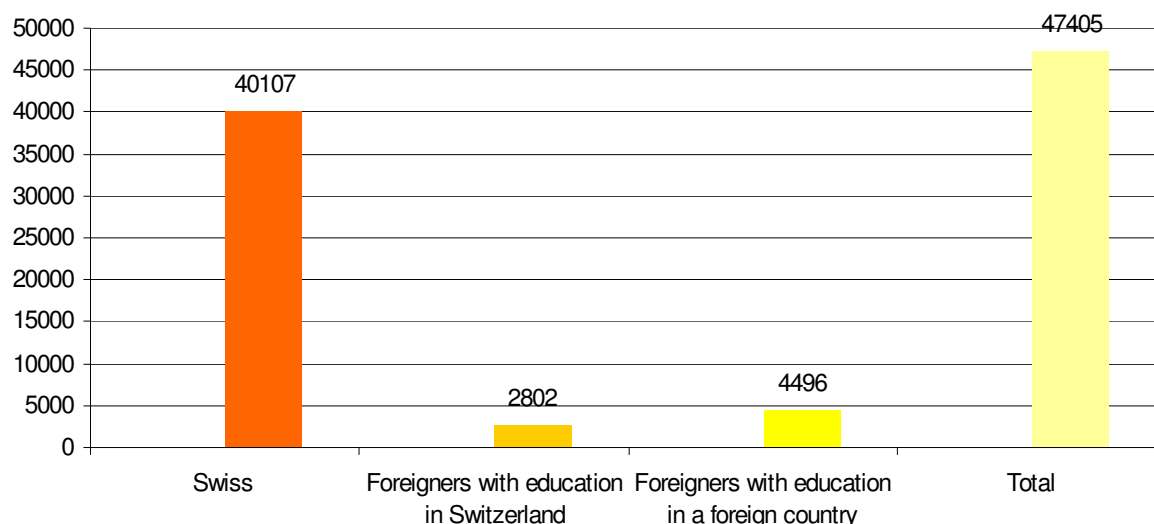


Figure 10 : Distribution of the bachelor and diploma degree students to Swiss, foreigners with education in Switzerland and foreigners with education abroad, 2005. Swiss Federal Statistical Office

2.7 Research and Development Policy

Switzerland is a country that, by international standards, invests heavily in research. As it is poor in natural resources, it places great importance on R&D as a means of ensuring its long-term prosperity and social security system. As mentioned earlier, R&D is one of the four performance mandates of the universities of applied sciences.

The universities of applied sciences focus on applied research and development activities closely related to the needs of the market. One of the reasons why they were established was to forge a closer link between higher education and businesses, especially small- and medium-sized enterprises (SMEs).

The function of the Conference of the Universities of Applied Sciences Switzerland (CUAS) with regard to R&D can be described as follows: The CUAS acts as liaison vis-à-vis all research and development issues. It has developed a concept for the implementation of their R&D performance mission. It coordinates R&D tasks among the universities of applied sciences and handles the exchange of information and experiences, both internally as well as with other national and international organisations.² For this a specialized commission was formed.

3 Organisation of study programme

In the context of the legal defaults the universities of applied sciences are free to offer bachelor degree courses. Master degree courses require a grant by the Confederation.

² For example with the Federal Office for Professional Education and Technology (OPET) («Bundesamt für Berufsbildung und Technologie», BBT), the State Secretariat for Education and Research (SER) («Staatssekretariat für Bildung und Forschung», SBF), the Innovation Promotion Agency (KTI) («Die Förderagentur für Innovation», KTI), the Swiss National Science Foundation (SNF) («Schweizerischer Nationalfonds», SNF), the research sections of Swiss government departments, scientific academies, the universities and other research policy bodies, as well as the Swiss Conference of Cantonal Ministers of Education («Schweizerische Konferenz der nationalen Erziehungsdirektoren», EDK).

In 2003, the CUAS issued recommendations for the harmonization of tiered study programmes («Best Practice»). This was a manual for the development of study programmes and a coordination aid within and among universities of applied sciences and the other types of tertiary institutions.

Based on «Best Practice» and the «Dublin Descriptors» which form part of them, the CUAS specialised committees (i.e. committees for the members of similar schools from all over Switzerland) went on to draft so-called «competence profiles». The aim of these competence profiles is to define, on a school / college level, common admission and graduation competences for bachelor and master study programmes.

These *general* competence profiles then became the basis for the *specific* competence profiles of the actual study programmes. The document entitled «Die Konzeption gestufter Studiengänge: Best Practice und Empfehlungen» (*the design of tiered study programmes: Best Practice and recommendations*), issued by the CUAS in 2003 and revised in 2004, as well as the competence profiles, the result of three specialised conferences, namely «Technology, Architecture and Life Sciences» (FTAL), «Social Work» (SASSA) and «Economy and Services» (FWD) can be downloaded from the website of the CUA (www.kfh.ch). These *general* competence profiles then became the basis for the *specific* competence profiles of the individual study programmes. «Best Practice» distinguishes between professional competence (= acquisition of different types of knowledge and cognitive skills), methodological competence (= the ability to apply professional knowledge in a focused and goal-oriented manner while performing professional tasks), social competence (= skills used to conduct social relationships in a professional context) and, finally, self competence (= the ability to act as an important instrument in one's professional activities). The analysis of the study programme concepts of all the schools has shown that the «Best Practice» recommendations have been implemented to a high degree. For the conception of new master degree courses the CUAS prepared a manual.

The studies are measured in credits. The annual workload of a full-time student is 60 credits (= 1800 hours). This annual workload includes all forms of studying (lectures, self study, internship, etc.). The studies and the teaching are organised in modules and courses. Modules and courses can be compulsory, alternative or optional. The curriculum of each study programme introduces the competences obtained by the graduates, the objectives of each study unit, contents, timing, extent of studies in ECTS credits, the share of student's workload, required assignments and assessment criteria (see «Best Practice»).

An English «Diploma Supplement» is issued to every student of every type of degree programme, together with their official diploma.

4 Accountability of professionally oriented higher education

4.1 Role of world of work in quality and student assessment

The UAS are responsible for their quality assurance. Professional practice plays an important part in quality assurance and development and participates, directly or indirectly, in a number of different procedures. This includes, in particular, the following scenarios:

- Many study programmes and / or schools have a consultative committee consisting of professionals with whom issues of education and quality are discussed.
- Representatives from the professional field contribute regularly to evaluation meetings as well as to curriculum evaluation.
- Representatives from the professional field are also involved in the evaluation of performance assessments and scientific studies.
- Furthermore, representatives from the professional field participate in peer review procedures.

The quality of an internship *post* (but not of the individual internship; for the evaluation of student internships, cf. Chapter 5) is evaluated by means of various procedures which, in the case of Social Work, are described as follows:

- The selection of internship positions takes the form of an approval procedure.
- The study programmes keep lists of approved internship positions.
- In the professional field, regular career talks are conducted during which the quality of the internship position is evaluated.
- Some study programmes regularly offer further education programmes for instructors who are involved in the direct supervision of the internships in the field, in some cases these are even free of charge.

In study programmes requiring an entrance examination, representatives from the professional field are involved in the examination and/or the marking procedure. In the other study programmes, the professional field still has an indirect involvement in the entrance approval procedure, since they control the award of internship positions (e.g. in the case of Social Work). What all the study programmes have in common is that representatives from the professional field participate in the evaluation of the performance assessment of the individual modules, as well as, frequently, also in the evaluation of bachelor theses, which themselves can be seen as a type of final examination. In accordance with Bologna, the actual final examination has been abolished. The studies consist of modules, which are all assessed separately.

4.2 National tracer studies

The students' employability and recruitment to working life are monitored regularly by the Swiss Federal Statistical Office («Bundesamt für Statistik», BFS). In particular, they examine two indicators, i.e. the «labour force participation rate» («*Erwerbsquote*») (see figure 11) and «the first employment rate» («*Berufseintrittsquote*») (see figure 12 for the year 2003) of graduates entering the job market.

The labour force participation rate shows the proportion of employed graduates compared to the total labour force of a particular graduation cohort one year after graduation:

	Men	Women	Total
Architecture, Building Engineering and Planning	95.9	96.1	95.9
Engineering and IT	87.5	80.8	87.3
Chemistry and Life Sciences	94.1	91.6	93.5
Business, Management and Services	93.0	94.6	93.4
Design	85.6	91.1	88.6
Sports	*	*	*
Arts	*	100.0	97.5
Music	95.8	97.0	96.5
Theatre	*	*	*
Social Work	100.0	99.2	99.4
Applied Psychology	*	*	96.6
Total	90.9%	94.8%	91.9%

less than 25 case

Figure 11: The labour force participation rate 2003 in percent. Swiss Federal Statistical Office

The first employment rate shows how long it takes for graduates to start their first job after they graduate:

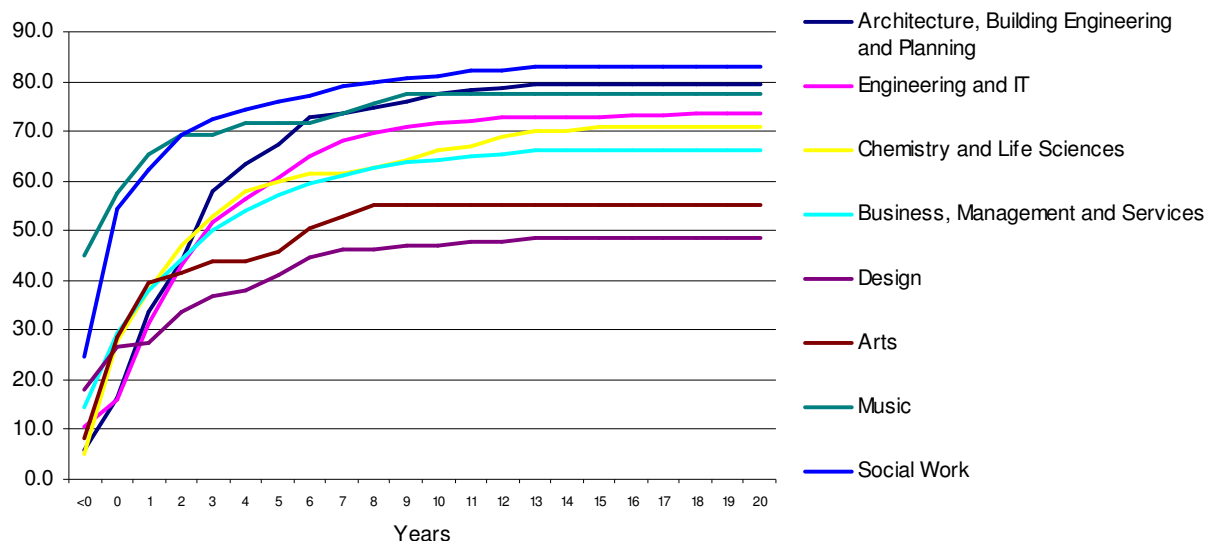


Figure 12: The first employment rate 2003 in percent. Swiss Federal Statistical Office

In 2003, the new graduates of the schools of Civil Engineering, Chemistry and Social Work could expect a relatively easy transition into working life. In each case, over 70% managed to find a suitable position and entered professional life within a period of six months. This was more difficult for graduates from other fields, e.g. Design: Here, a mere 34% had taken up appropriate employment one year after graduation (see figure 12).

In addition to these studies by the Federal Statistical Office, many universities of applied sciences conduct studies to assess graduate satisfaction. However, the students of all study programmes are surveyed in the course of their studies to assess their levels of satisfaction (e.g. during formal meetings with students or in the form of module evaluations).

4.3 Ability to adapt to changes in the world of work

Flexibility and adaptability as well as the ability and the will to listen to the interests of both practitioners and students are considered to be high priorities. Owing to the modularisation the adjustment of the study programmes became simpler. Much is done to meet the requirements (which are regularly evaluated) of the students and of the field. The following examples were mentioned:

Examples of how the students' needs are addressed:

- Different study models are on offer (full-time or part-time study, work and study programmes, evening modules)
- Flexible study programmes are on offer (extensive freedom of choice, high proportion of self-study, e-learning)
- Development of new learning settings and the involvement of «older» students to help «younger» students (mentorships, tutorials etc.)
- The students can contribute their own projects and, if these are suitable, carry them out.

Examples of how the needs of the professional field are addressed:

- Development of tailor-made further development and consulting opportunities
- Project work conducted by the students as a service benefiting practitioners in the field.
- Transfer institutions between schools and world of work facilitate communication and co-operation

5 Process of defining professionally oriented higher education

The basis for the design of the study programmes in Switzerland are the recommendations issued by the CUAS for the design of tiered study programmes, «Best Practice» (cf. also Chapter 2). «Best Practice» defines not only the fundamental principles for the profiling of the study programmes but also the development of the competence profiles. The specialised conferences of the CUAS formulated competences which are on a general level. These form the starting point for the work of the schools to further define and amend the profiles to suit their own special circumstances. Thus, each school / college has developed its own specific competence profile in which the study programme level is further differentiated. This school / college-specific competence profile was the basis for the next step, i.e. the development of specialised study programme competence profiles, which exist for most of the study programmes. No guidelines were issued as to the content of these individual study programme competence profiles.

In almost all schools, representatives from the professional fields were actively involved in defining the school / college and the study programme competence profiles (for further details, please refer to Chapter 5).

The resulting competence profiles are all structured along the lines of the competence areas recommended by the CUAS:

- Professional competence
- Methodological competence
- Social competence
- Self competence

All schools, including some school groups, have got a specialised conference which has approved the school competence profiles (Applied Linguistics, Applied Psychology, Health, Art and Design, Music, Social Work, Technology-Architecture-Life Sciences, Theatre, Music, Fine Arts and Design, Business and Services). In addition, there are various informal platforms or networks (student organisations, working groups, commissions etc.) where representatives of study programmes meet to discuss common educational issues and common developments in the professions (see Chapter 8).

6 Collaboration with the world of work

6.1 Cooperation with companies and other working life institutions

In some, but not all, universities of applied sciences, the world of work is represented in the board of the institutions. On the other hand, representatives from the professional field are represented in all the schools or study programmes as members of consultative councils, examination boards, working groups or expert commissions.

All the bodies responsible for the study programmes declared that the curricula and competence profiles were either designed jointly with representatives from the professional field or that already designed study programmes and competence profiles were submitted to representatives from the professional field for their comments and validation. Part of the modules is implemented in close cooperation with the representatives of working life. In these types of modules the representatives of working life are involved also in the assessment process. In many study programmes, there are also some modules that were entirely carried out by representatives from the professional field.

The following forms of collaboration were mentioned with regard to the development of the study programmes and the competence profiles:

- Representatives from the professional field were contacted and questioned before the study programme was developed.
- Representatives from the professional field were contacted and consulted using a consultation procedure after the study programme had been designed.
- In the course of developing study programmes, regular surveys are conducted in the professional field.
- Examiners working in the professional field were asked to assess the competence of students. Based on their answers, competence profiles and curricula were revised.

Bachelor study programmes designed for individual enterprises or non-profit organisations do not exist. On the other hand, there are «tailor-made further education programmes» being offered that cover the needs of single enterprises and certain non-profit organisations on an individual basis. Examples include the programme «Software Engineering in an Industrial Environment», designed for a specific company, or the certificate course «Managing Absenteeism and Promoting Good Health» which was developed by a Social Work school / college in collaboration with an insurance company.

All those responsible for the study programmes indicated that they enjoyed close and varied contact to practitioners in the field (cf. also Chapter 7). There are regular events (such as conventions, professional panels, lecture series, interdisciplinary lecture series, excursions, open days, etc.). In addition to this, the contacts to practitioners working in the field are especially close in the following areas:

- Internships by students supervised simultaneously by teaching staff and professionals, whereas the lecturers often attend career talks with the students at their place of internship.
- Projects undertaken by the students and supervised by the academic staff and professionals working in the field; in these cases, the project has frequently been commissioned by a company or organisation in the professional field.
- Joint colloquia between representatives of professional practice and the academic staff.
- The students' bachelor theses. These are also often the result of an enquiry or commission from the professional field and are supervised jointly by academic staff and representatives from the professional field.
- Research and development projects by academic staff and scientific staff, which also originate from orders placed by practitioners from the field.

The number of students who study part-time or who take part in a work and study programme very much depends on the study programme they have chosen. Whereas this is more frequently the case in Social Work, there are, on the other hand, study programmes where study takes place exclusively or predominantly full-time, such as in Music Education or Visual Communication. Some schools, e.g. in the case of Business Administration, mentioned that part-time students were on the increase. Approximately 70% of the students study full time (see SER / OPET 2006 and the Swiss Federal Statistical Office). The average study duration amounts to 3,8 years (see the Swiss Federal Statistical Office).

All study programmes also include offers for their alumni, which include lecture series and further education courses. Proper alumni associations or panels for former students are however very rare.

6.2 Role of internships in the study programme

All study programmes include internships and /or practical training and / or projects in the world of work and a thesis. Internships are carried out in work places and practical assignments of working life. The projects are often commissioned by the world of work. The representatives of working life have an important role in the assessment of these parts of the study programmes.

Proper internships which take place in the professional field and under the supervision of practitioners can be found in many, although not all, study programmes. In Business Economy, Electrical Engineering or Civil Engineering, for instance, internships are replaced by laboratory work and projects involving partners from the professional field.

The placement of the internships as part of a course of study, as well as their duration, vary considerably. The internships and the projects in the world of work last between one week and one year and take place at different times (anytime between the first and the last semester) during a course of study. (These differences are described in more detail in Chapter 8).

For internships, which are accompanied after defined criteria by the schools and locked with a performance record, ECTS credit points are assigned.

A basic requirement for both internships and work projects in the field is the close cooperation between the academic staff and those who supervise the projects and internships in the field. Thus, the evaluation of the internships or the verification of the competences which have been acquired are usually handled by a team. The professional field is also involved in the quality assurance of the internships.

Many study programmes keep lists of organisations, offices or agencies in the respective professional fields where successful internships have taken place in the past.

The following instruments are used in the evaluation of the students' internships:

- The students submit the work produced in the course of their internships and produce a report.
- The offices, agencies or organisations also produce a report about the intern.
- At the end of an internship, the intern has to sit a separate examination before a board of external and/or internal examiners.
- Using guidelines, representatives from the study programmes and representatives from the professional field conduct an evaluation, jointly with the student.

The following problems concerning the internships were mentioned more or less consistently:

- Finding good internship places (quality assurance).
- Incorporating the internship into the modularised study programme: The semester structure of the university of applied sciences does not necessarily correspond to dates requested by those working in the professional field.
- Considerable organisational effort.

7 Research and development (R&D)

Research projects can be organised in various ways:

- a university of applied sciences observes a demand for research
- institutions approach a university of applied sciences with a knowledge question
- students develop a research project in the framework of a project or a bachelor thesis
- the government ask universities of applied sciences to look for solutions

In most study programmes, research and development projects bear a significant relation to the world of work. R&D is usually the result of an order from the professional field. Most R&D projects have a duration of less than 2 years. In most study programmes, the students have the opportunity of participating in the R&D projects conducted by the academic or scientific staff of their institution, be it within the scope of an internship, a project or research workshop, a summer or winter school or an elective module. This enables the students to generate their own project, a seminar paper or their bachelor thesis, respectively.

With regard to the question concerning own enterprises and non-profit organisations at the universities of applied sciences or on campus, there are some differences depending on the school or college. In the schools of Engineering and IT, Architecture, Civil Engineering and Planning, Chemistry and Life Sciences, Business, Management and Services and Design, this does occur occasionally. The schools of Applied Psychology, Music and Theatre, Arts, Social Work and Health have no enterprises or non-profit organisations of their own.

8 Human resource policy

8.1 Requirements for staff recruitment and indicators assessment

The Federal law over the universities of applied sciences regulates the requirements to the staff. Professors and lecturers must prove itself over final university education, over interest of research as well as over a didactical qualification. The teachings in the specific subjects presupposes besides a professional experience of several years. Most of the study programme leaders questioned consider both the practical (professional) as well as the academic competences as equally important for recruiting academic and scientific staff. If they expressed a preference, practical (professional) competence was rated higher. Some study programme leaders differentiate according to function (academic staff, scientific staff, visiting lecturers) and area of employment.

The most important employment criteria are the same for all study programmes, i.e. «university certificate», «practical experience», «teaching experience» and «didactic competence». The two criteria «research experience» and «social competence» were mentioned far less often.

Approximately 25,500 professors, lecturers, assistants and administrative personnel are employed in this sector which corresponds to 8,000 full-time positions (see figure 13). Two-thirds of these are in teaching and research. For further information see: <http://www.bfs.admin.ch/bfs/>

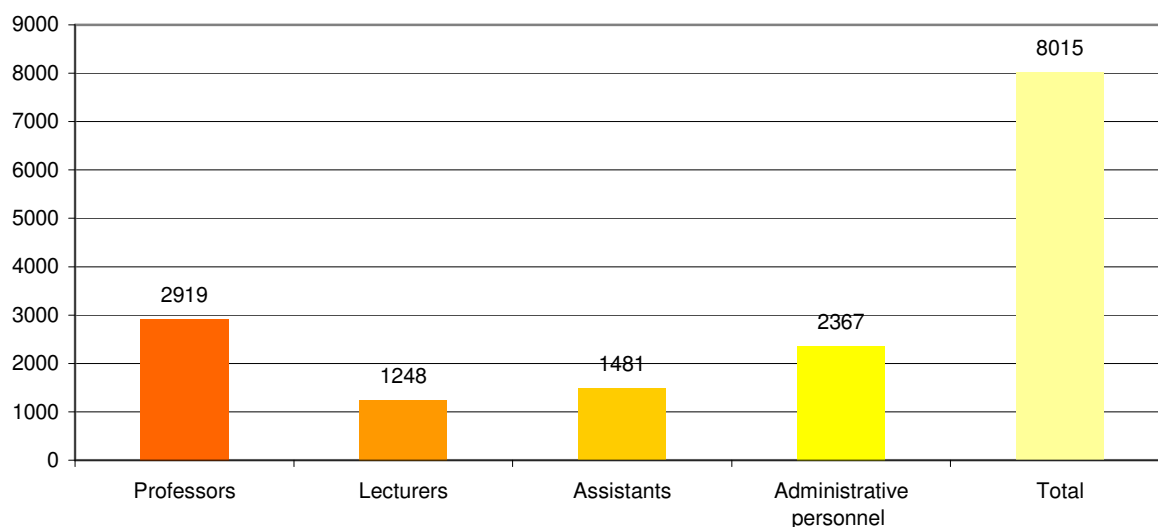


Figure 13: Number of staff in UAS in Switzerland 2004 (equivalent to full-time positions); Swiss Federal Statistical Office

8.2 Proportional distribution of the work time in the different tasks:

Research and Development	14%
Teaching	48%
Postgraduate Teaching	5%
Services to third parties	5%
Administration and Management	28%

Source: Source: Swiss Federal Statistical Office

8.3 Relation of staff with world of work

All the persons questioned said that the relationship between the staff and the world of work is a very close one. In certain study programmes, the staff, or part of it, works both at the university of applied sciences as well as in the field. On a temporary basis, the universities of applied sciences also recruit staff employed in the field or welcome practitioners as visiting lecturers, and professionals from the field hold lectures and guest lectures at conventions, congresses and symposia. Besides, there are other ways in which the contact to people from the world of work is maintained (cf. Chapter 5).

8.4 Organisation of teacher activities within the study programme

For each study programme there is a study programme leader and there are «module responsible person» for the individual modules. Teaching activities are for the most part planned by a team. The teaching activities usually take place without any external involvement, although the academic staff will frequently invite professionals from the field or from other universities of applied sciences (also from abroad) as visiting lecturers to their modules. In other study programmes, there are however also modules taught by several lecturers together. Projects, in particular, are supervised by a team of lecturers. The follow-up activities are handled in equal measure by one lecturer alone or by a team; in some cases, their supervisors are also involved.

9 Study programme level

9.1 Study programme for Civil Engineering

In Switzerland, study programmes for «Civil Engineering» are offered by all seven universities of applied sciences.

In the winter semester 2005/06 altogether 778 students studied «Civil Engineering» (see figure 14). Of it 40 (5%) are women.

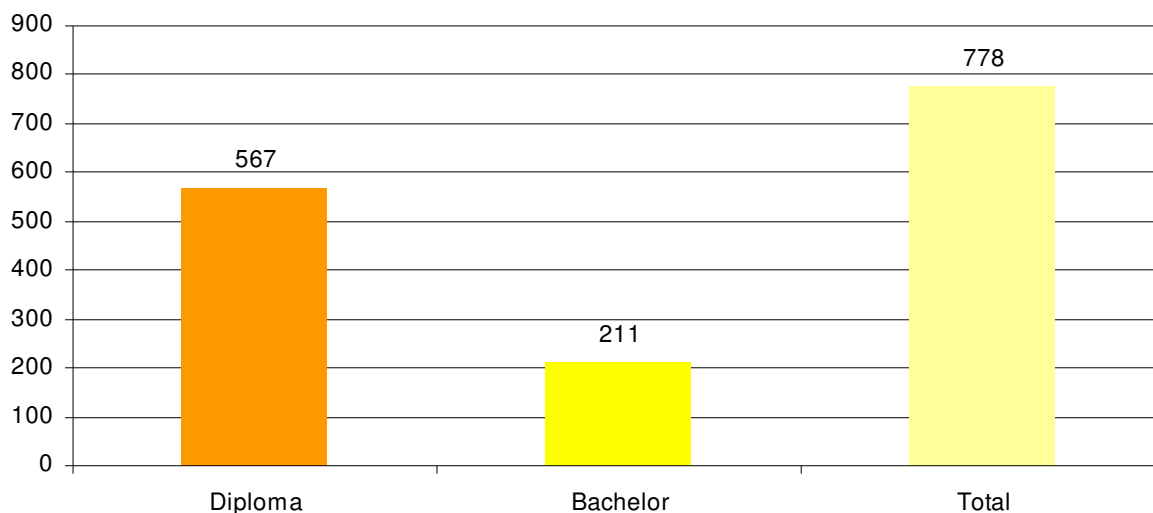


Figure 14: Students in Civil Engineering in 2005/06. See Swiss Federal Statistical Office.

In addition to the general information provided already (Chapters 1 – 7), it must be specified that this study programme does not include any internships that might take place in the professional field and under the supervision of professionals. Such an approx. one-year internship is however one of the *conditions* if someone wants to take up this course of study without having a professional, construction-related background in conjunction with a professional baccalaureate. The study of Civil Engineering offers alternatives, such as student projects, which enable the students to do some practical work.

The most important cooperation partners in the world of work are regional small and medium-sized enterprises in the construction and wood industry. These include, among others, engineering firms, planning firms, construction companies, companies dealing with construction materials, cantonal civil engineering departments, public administration departments and the Swiss Federal Railways. There are several national discussion platforms, such as the specialised conference for «Technology, Architecture and Life Sciences» (FTAL), the Civil Engineering student organisation (= formal organisation with representatives from all the universities of applied sciences); «Zukunft Bau» (“future of construction”, a discussion forum for practice-oriented research projects); the Verband Schweizerischer Untertagebauunternehmer (VSU) (the association of Swiss below-ground construction companies); study programme consultative councils; working groups for specific professional topics).

Most universities of applied sciences have representatives from the professional field sitting on the consultative councils, examination boards and expert commissions of their «Civil Engineering» study programmes. The study programme, the curriculum and the competence profiles were either designed in cooperation with representatives from the professional field or they were submitted to representatives from the professional field for their comments. There are, on the other hand, no official competence profiles provided by a professional body, such as the Swiss Society of Engineers and Architects (SIA) or the Swiss Master Builders' Association (SBV).

The staff is in regular communication with the world of work. The universities of applied sciences employ visiting lecturers working in the professional field, and professionals come to give guest lectures at conventions and congresses. There are regular events for professionals working in the field, such as construction panels, meetings, symposia and exhibitions. Furthermore, close links to the professional field are maintained within the scope of the following activities: student projects, the students'

bachelor theses or research and development projects conducted by the academic and scientific staff as a result of a task from the respective professional field.

Bachelor study programmes designed especially for certain individual enterprises do not exist. The same applies to «tailor-made further education courses» which might meet the needs of single companies on an individual basis.

Students studying part-time or as part of a work and study programme are relatively rare, albeit their number is on the increase.

In «Civil Engineering», R&D projects have, for the most part, got a strong practical side (although they are not necessarily tied to the region). The impulse for R&D usually originates from an order submitted by a professional organisation or company. Only one study programme leader has stated that their research is mainly sponsored by third-party funds. Most R&D projects take no longer than 2 years to complete. In all seven universities of applied sciences, the students are able to participate in research and development projects, either by doing a project, a bachelor thesis or a voluntary internship in an affiliated institute.

Where staff recruitment is concerned, either practical professional qualifications are rated higher, or practical and academic competences are considered to be of equal importance. None of the universities of applied sciences rates academic competence higher for this study programme. The most important recruitment indicators are: «certificate from an institution of higher education», «practical experience», «teaching experience» and «didactic competence». «Research experience» and «social competence» were only mentioned once.

The planning of all teaching activities is a team effort. The implementation and evaluation as well as the follow-up of teaching activities take place by individual lecturers and by teams.

Professional practice also plays an important role in quality assurance and development. (Representatives from the professional field regularly participate in evaluation meetings or are involved in the evaluation of performance assessments and scientific papers.)

Success and satisfaction surveys are conducted by some of the universities of applied sciences for this particular study programme, but not by all of them. Without exception, having the flexibility to address the interests of both the practitioners in the field and the students is rated as being very important.

The professional field that civil engineers operate in, i.e. the construction industry, is sensitive to economic change. Nevertheless, the employment situation for civil engineers who had graduated from a university of applied sciences was considered unproblematic in 2003 (see Table 1, Diem 2005, Federal Statistical Office 2003, 2006).³

In the year following their graduation, there are only very few unemployed civil engineers looking for work, and the proportion of unemployed civil engineers is smaller than that of the graduates from universities of applied sciences as a whole.

Table 2 provides an overview of the occupational fields that the graduates are employed in one year after completing their studies.

³ The following statistical data, processed by Markus Diem in his report which is referred to here (cf. Diem 2005), are all based on data from the graduate survey that is conducted every two years among Swiss graduates of institutions of higher education and issued by the Federal Statistical Office (BFS) in cooperation with the Federal Office for Professional Education and Technology (OPET), the Federal Office for Education and Science (BBW), the Swiss University Conference (SUK) and the Swiss Conference of Cantonal Ministers of Education.

Table 1: Employment Situation - Civil Engineering UAS 1993 to 2003 (in percent)

	employed	employment confirmed	looking for employment	choosing not to work	N
1993	87	3	5	8	118
1995	83	1	8	8	145
1997	80	2	10	8	126
1999	89	0	6	5	104
2001	93	2	4	1	130
2003	88	4	4	4	75

Table 2: Professional Fields, Civil Engineering UAS 2003

Building trade/construction	27	42%
Architecture, planning and engineering companies	23	36%
Institutions of higher education	9	14%
Miscellaneous	5	8%

9.2 Study programme for Social Work

The «Social Work» study programme is offered by all seven universities of applied sciences in Switzerland.

In the winter semester 2005/06 altogether 2242 students studied Social Work («Sozialarbeit» and «Allgemeine Soziale Arbeit») (see figure 15). Of it 1699 (75%) are women.

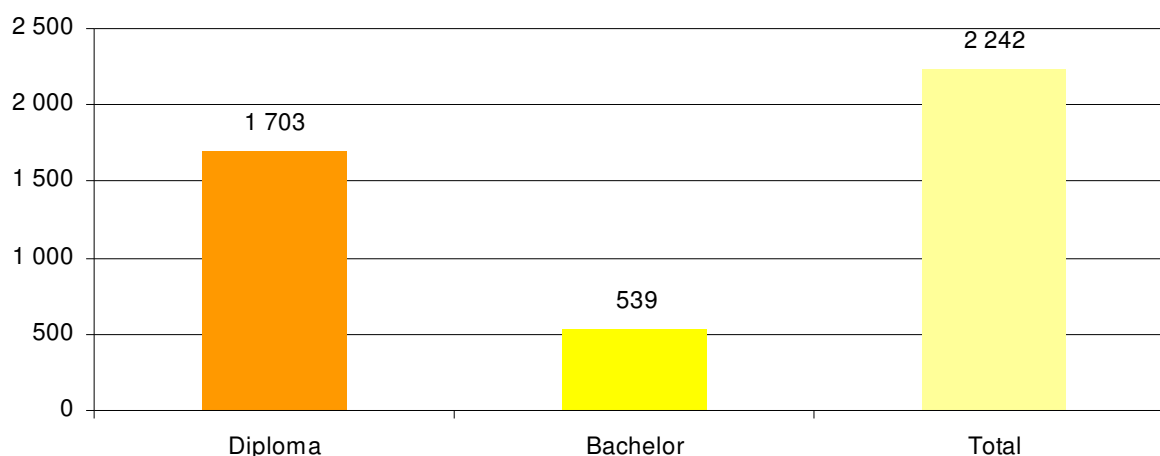


Figure 15: Students in Social Work in 2005/06. See Swiss Federal Statistical Office.

It is characterised by a high level of commitment to continually improve practical training, which forms an integral part of this study programme. (usually for the internships in a degree course 50 ECTS credit points are taken into account).⁴ Accordingly, various efforts are being made with regard to quality assurance and development of practical training, such as regular further education activities for

⁴ The internships are particularly important in the social work, because the students do not have a final vocational training in this special field. This will change with the introduction of the social apprenticeship

practitioners involved in the supervision of the students' practical training and annual career talks which take place between students, their practical training supervisors and the academic staff. The central partners in the professional field of social work include all practice organisations who have a social work, a social pedagogical or a socio-cultural mandate. These are, for instance, institutions dealing with children, adolescents and adults who have emotional, social and behavioural difficulties, information centres for marriage and family issues, parenting and mediation, school social work, as well as cantonal and communal social services and information centres. As a study programme, Social Work offers various formal and informal discussion panels where representatives of the study programmes can discuss issues of common interest, as well as developments affecting their profession. This includes, for example, the Schweizerische Arbeitsgemeinschaft der Fachhochschulen für Soziale Arbeit (SASSA) (Swiss conference of the universities of applied sciences for social work), the Fachverband Sozial- und Sonderpädagogik (Integras) (professional association for social education and education for special needs), the Swiss Society for Social Welfare, Avenir Social (professional social work association) and the Schweizerische Konferenz für Sozialhilfe (SKOS) (Swiss social services conference), as well as some informal bodies.

The foundation council or consultative council for the Social Work study programme includes representatives from the world of work. The development of the study programme, the curricula as well as the competence profiles was either handled in cooperation with representatives from the professional field or the documents were submitted to them for validation.

It is of great importance to those involved in this study programme to cooperate with practitioners in the field and to communicate regularly with them, for instance through the medium of conferences on professional academic and practice issues. Various other opportunities for professional exchange include evenings and panels on professional academic and practice issues, a consultative council for issues of importance in the world of work, as well as career talks. Representatives from the professional field are invited to serve as examiners for the entrance examinations or as visiting lecturers in various modules. They also supervise and evaluate the students' bachelor theses.

Bachelor study programmes designed for individual organisations do not exist, there are however a number of different «tailor-made further education programmes». The majority of the students work while pursuing their studies, either on a part-time basis or by following a work and study programme.

«Social Work» research and development projects are predominantly practice-oriented. Research projects commissioned by professional organisations usually take one or two years to complete. There are also larger research studies which last for more than two years. These are usually projects sponsored by the Swiss National Science Foundation.

The teams that work on these research projects include not only the university's academic and scientific staff but also students, in particular in the scope of their bachelor thesis, individual modules, research and project workshops as well as summer and winter school.

In connection with staff recruitment, the level of academic achievement as well as professional experience play a central role. Members of staff have usually got a university degree and extensive professional experience in the field.

In the Social Work study programme, teaching activities are planned either by the academic staff alone or by a team. The modules are mainly conducted by the academic staff, although the follow-up work usually involves a team.

Most universities of applied sciences use tracer studies to establish the whereabouts of the former students of their «Social Work» study programme. They also send out questionnaires to their alumni on a regular basis. The flexibility of the study programmes is considered to be of great importance. This is why diverse efforts are undertaken in this direction, such as the design of flexible study programmes, a high proportion of self study, as well as the active use of e-learning.

The employment situation for new Social Work graduates has been very favourable since 1995 (see Table 1, Diem 2005, Federal Statistical Office 2003, 2006). This can, among other things, be ascribed to the fact that many students do a study and work programme and then continue their professional work after they graduate. But even those who have studied on a full-time basis are only very rarely unemployed and looking for employment in the year following their graduation. In 2003, this applied to 1% of the graduates reviewed, while a 10% of all the graduates of the universities of applied sciences were without a position and looking for work. Considering that it is more problematic today for graduates of universities of applied sciences to find an opening in today's job market due to the difficult economic situation, the employment situation for the graduates of «Social Work» study programmes continues to be favourable. There are good possibilities for part-time employment in the social work pro-

professions. (88% work part-time, i.e. workloads of between 60% and 90%). The average proportion of part-time workers among all the graduates of universities of applied sciences is very much lower. Table 2 provides an overview of the professional fields of the graduates, one year after their graduation.

Table 1: Employment Situation, Social Work UAS 1995 to 2003 (in percent)

	employed	employment confirmed	looking for employment	choosing not to work	N
1995	91	2	4	3	453
1997	92	2	2	4	615
1999	94	1	3	2	557
2001	94	2	2	2	784
2003	94	2	1	3	208

Table 2: Employment Areas, Social Work UAS 2003

Social work, welfare	96	50%
Institutions (homes)	53	27%
General public administration	10	5%
Hospitals, clinics	5	3%
Public information offices for psychological problems	5	3%
Private information offices for psychological problems	5	3%
Charitable organisations (incl. church organisations)	5	3%
Career counselling	3	2%
Institutions of higher education	3	3%
Miscellaneous	9	5%

9.3 Study programme for Business Administration

The «Business Administration» study programme is also available at all seven universities of applied sciences, and thus in all linguistic regions of Switzerland.

In the winter semester 2005/06 altogether 8235 students studied « Business Administration » (see figure 16). Of it 2921 (35%) are women.

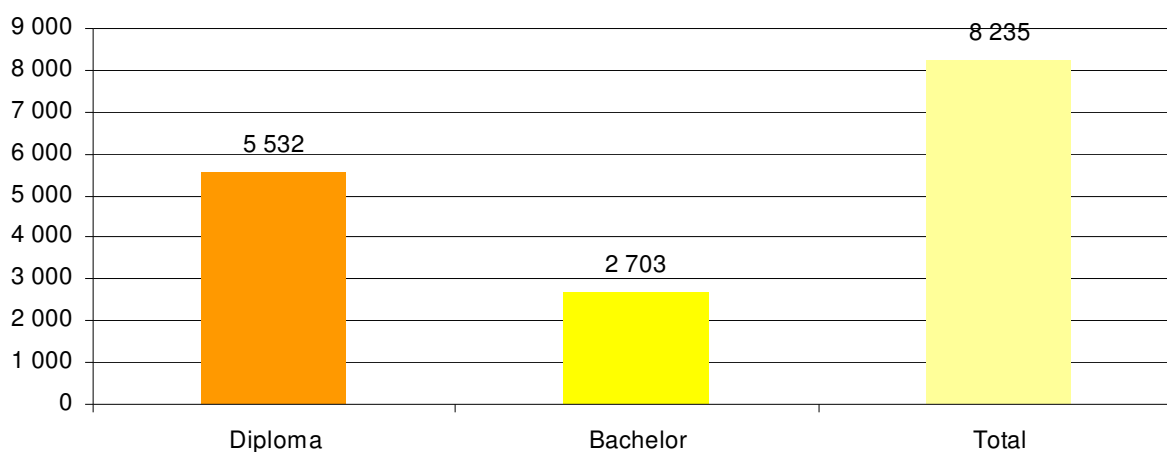


Figure 15: Students in Business Administration in 2005/06. See Swiss Federal Statistical Office.

What is special about this study programme is the fact that the students do not have to complete any internship in the course of their studies. Instead, an internship or practical experience in the field is one of the conditions for being admitted as a student.

The Business Administration school collaborates with regional and international partners from the professional field. There are various firms that offer staff for teaching activities. Common issues and developments in this profession are mainly discussed within the scope of the «Fachkonferenz Wirtschaft und Dienstleistungen» (business and services committee) as well as in formal and informal meetings. The committee makes use of various working groups where active participation is welcomed. Public administrative bodies were mentioned as formal contacts.

The study programme for Business Administration benefits from the involvement of practitioners from the professional field who mainly serve as members of supervisory boards and consultative councils. Active cooperation with the professional field also exists in connection with the development of study programmes, curricula and competence profiles. Examples for these cooperative efforts include the participation in the design of the study programme as a whole, as well as of individual study sections, the development of modules and the surveys conducted in a number of companies. Furthermore, representatives from the professional field were involved on a case-by-case basis and a permanent exchange with the professional field was implemented.

Contacts to practitioners are also maintained by means of joint projects as well as the cooperation that is required in connection with of student projects. Representatives from the professional field also participate in the modules and hold guest lectures.

Partners from the professional field and those involved in the study programme regularly organise meetings, such as the ones for school boards or working groups, as well as working dinners or lunches.

The Business Administration study programme has no study programmes which might be designed for individual companies.

The research projects conducted in Business Administration are for the most part practice-oriented. In addition to commissions received from the world of work, there are however also research projects financed by their own funds as well as some sponsored by third-party funds. Application-oriented research partially takes place on a regional, however also in a national and an international level. The majority of the research projects only takes one or two years to complete, but there are some that take less than one year. Most universities of applied sciences enable their Business Administration students to participate in research projects. This type of participation mainly takes place in the form of student projects (e.g. semester papers or their bachelor theses) as well as modules concerned with methodology.

An academic degree and professional working experience are prerequisites for being recruited as a staff member for a Business Administration study programme. Furthermore, lecturers have to have teaching experience as well as didactic and social competences.

Business Administration teaching activities are mainly prepared by teams, but the implementation and the follow-up is handled by the academic staff. At one university of applied sciences, the supervisory level also participates in the follow-up.

The professional field is also involved in quality assurance. Usually, this participation takes the form of a consultative council or an involvement with accreditation.

The Business Administration study programme conducts studies to establish the whereabouts of former students in the professional field and issues questionnaires to alumni. Both studies take place with differing regularity and at different intervals at the various universities of applied sciences.

Flexibility and openness vis-à-vis new developments and innovation are of great importance to the Business Administration study programme.

In 2003, the employment situation for the graduates of the school / college of Business and Services was mainly positive (see Table 1, Diem 2005, Federal Statistical Office 2003, 2006). The rate of unemployed graduates looking for a job was at 7%, which is low compared to the average of all the graduates of universities of applied sciences as a whole. Part-time work is rare among economists who graduate from universities of applied sciences. Only 8% of the graduates questioned work part-time. This is considerably less when compared with all university of applied sciences graduates, of which 22% are employed on a part-time basis.

Table 1: Employment Situation, Business, Management and Services UAS 1993 - 2003 (in percent)

	employed	employment confirmed	looking for employment	choosing not to work	N
1993	95	0	4	1	406
1995	96	1	3	0	412
1997	93	1	4	2	547
1999	96	1	2	1	552
2001	94	1	3	2	632
2003	89	2	7	2	778

Table 2 provides an overview of the employment fields of the graduates, one year after completing their studies.

Table 2: Professional Fields, Business, Management and Services UAS 2003

Banks and finance companies	137	20%
Trust companies, auditing companies	100	15%
Commerce (incl. hospitality and the repair business)	54	8%
Insurance companies	36	5%
IT and computer science	30	4%
Hotels, tourism	24	4%
Management consultancy	21	3%
Traffic, telecommunication	17	3%
Advertising, public relations	13	2%
Real estate	6	1%
Miscellaneous private services	16	2%
Industrial companies	74	11%
Public administration	30	4%
Public companies	31	4%
Library, documentation	18	3%
Health	14	2%
Institutions of higher education (teaching, research and administration)	22	3%
Miscellaneous	40	6%

10 Sources

- Bundesamt für Statistik (2003) Akademiker und Akademikerinnen auf dem Arbeitsmarkt. Wo stehen die Hochschulabsolventen und -absolventinnen vier Jahre nach Studienabschluss? Neuchâtel.
- Bundesamt für Statistik (2006) Von der Hochschule ins Berufsleben. Erste Ergebnisse der Absolventenbefragung 2003. Neuchâtel.
- Conference of the Universities of Applied Sciences Switzerland (KFH) (2006) Studying in Switzerland. Universities of Applied Sciences. Bern.
- Diem, Markus (2005) Die erste Stelle nach dem Studium - Fachhochschulstudien. Aarau: Arbeitsgemeinschaft für akademische Berufs- und Studienberatung. Heft 5.
- Fachkonferenz Technik, Architektur und Life Sciences (FTAL) (2003) Kompetenzprofile für Bachelor- und Masterstudiengänge im FTAL-Bereich.
- Fachkonferenz Wirtschaft und Dienstleistungen (FWD) (2004) Gesellschaftliche Rollen, Berufslieder und Kompetenzprofile als Grundlage für die Entwicklung von Bachelor- und Masterstudiengängen im Fachbereich Wirtschaft und Dienstleistungen.
- Konferenz der Fachhochschulen der Schweiz (2004) Die Konzeption gestufter Studiengänge: Best Practice und Empfehlungen. Zweite aktualisierte Auflage Juli 2004. KFH-Empfehlungen.
- Konferenz der Fachhochschulen der Schweiz (2005) Profil für Master-Studiengänge an Fachhochschulen. 27. Januar 2005. KFH-Empfehlungen.
- KTI – Die Förderagentur für Innovation (2006) Jahresbericht 2005. Bern.
- Schweizerische Arbeitsgemeinschaft der Fachhochschulen für Sozialarbeit (SASSA) (2003) Bologna Reform. Ausbildung in Sozialer Arbeit. Die zu erwerbenden Kompetenzen.
- SER / OPET - State Secretariat for Education and Research (SER) and Federal Office for Professional Education and Technology (OPET) (2006) Higher Education in Switzerland. Bern.
- SNF - Schweizerischer Nationalfonds (2006) Jahresbericht 2005. Bern.
- Swiss National Science Foundation (SNSF) and the Innovation Promotion Agency (CTI) (2006) CTI and DORE: Good research finds strong promoters. Bern.

11 Appendix

11.1 Questionnaire of the Country reports in the framework of the Balama study

In the Balama project, rectors' conferences of 8 countries have agreed to share and discuss their work in the field of professionally oriented higher education and institutions offering this education⁵. To be able to have a proper and informed debate, it is needed to do some preparative work in each country. This preparative work should be published in a country report, to be ready for use in the Summer. In order to have country reports that are comparable, the participants agreed to have a common outline of the report and use as much as possible the same questionnaires. In this document, the framework and elements of this country report are given.

BOX 1 General facts & figures & mission

1 Country description

Please use your national description for the Diploma Supplement for the general description of your HE system and characteristics of your country.

2 Characteristics of your member institutions:

- Number of students
- Orientation of study programmes offered in your institutions
- Number and type of institutions
- Research function/mission of your institutions.

3 Characteristics of your national HE policy

- one law on HE?
- One ministry of education / research?
- Level of autonomy of institutions
- Funding of education and research
- World of work influence on HE

4. Characteristics of your national Quality Assurance system

- Role of the ministry/government, national quality assurance institution(s) and the higher education institutions.

5. Please give a description of your mission on professionally oriented higher education as stated in the official mission of your association

6 Background of the students

In many countries, professional oriented higher education study programmes receive students from a variable background such as;

- students directly coming from general secondary education
- students directly coming from a vocational education programme
- students coming from the labour market, mature students, sometimes entering on basis of an assessment of prior learning.

How do institutions in your country deal with these differences? Do you have general policies on this on national level?

7 Describe in the national policy strategy towards research activities with the world of work, and the role of your institutions in this strategy

⁵ For Germany, the HRK only studied the *Fachhochschulen*.

BOX 2 Organisation of study programme

8 Are there any formal descriptors of professionally oriented education?

- At national / governmental level⁶ (give description in annex)
- At the level of your organisation (the rectors' conference) (please attach an example of these descriptors)
- At institutional level (give examples in annex of the report)
- At study programme level (see later)

9 How do you explain what you are doing in the learning process?

- Through measuring the student workload in ECTS?
- Through course descriptions in terms of modules, course level, subjects of lectures and/or practical work?
- Through the description of learning outcomes in terms of competences (knowledge, attitude and personal skills)?
- Through information on career options and/or further study possibilities

BOX 3 Accountability of profession oriented HE

10 Role of world of work in QA (we assume that the national system is based on the assessment of study programmes rather than the institutional review):

- Role of the world of work in quality assessment (f.e. participation in peer review, input in review, managing QA organisations, etc)
- Role of world of work in QA-policies (advisors to government, role in accreditation decisions, etc)
- Role of QA in quality assessment of internships

11 Role of world of work in student assessments

- Representatives involved as external examiners in (final) examination(s)?

12 National tracer studies

- Does your country undertake tracer studies to students' success in the labour market and satisfaction with their education in retro perspective?

13 Ability to adapt to changes in the world of work

How would you describe the institutions' abilities to adapt to the educational needs of the world of work and the students, and the speed of changing programmes, ie. Is the institution flexible and adaptable enough?

BOX 4 Process of defining 'profession oriented' higher education

14 National qualification framework

- Does your country have a national framework of qualifications using educational descriptors?

15 Professional bodies / profiles

- Does the world of work draft professional profiles? Do you base your educational programmes on these professional profiles?
- How do you evaluate the involvement of the world of work in professional higher education in general?

16 (National) platforms/networks

- Describe whether national platforms/networks exist where representatives of study programmes meet to discuss common educational issues and common developments in the professions
- What nature do these platforms have? F.e. independent formal organisations; independent but informal networks; commissions or working groups within the rectors' conference; commissions or working groups within another national body, etc)

⁶ For Germany (and perhaps Switzerland and Austria as well) regional differences can be added

- Does the national discussion lead to a formal decision on core curricula for study programmes?

BOX 5 Collaboration with the world of work

17 Explain how institutions work together with the world of work (companies, institutions, not-for profit institutions and government institutions):

- World of work is represented in the leadership of institutions
- Institutions have educational programmes carried out together with the world of work
- Institutions regularly carry out tailor made education programmes for individual companies or institutions
- Institutions exchange staff with the world of work
- Institutions educate a large number of mature students that are working and studying
- Institutions have regular meetings with the regional representation of the world of work (eg. Industrial Advisory Boards)
- Institutions have special alumni activities

18 Role of internships in the study programme

- Is there a general policy on institutional level concerning internships, including systematic contacts with the world of work on this subject? Add elements such as the time period for internships, which year(s) of the bachelor programme they take place, the guidance and mentoring during internships from the institution and from the company.
- Who is responsible for the assessment of internships? What is the role of the world of work in supervision and assessment of internships?
- Are ECTS attached to internships?
- How is the quality of internships in general assessed?
- Is the world of work involved in QA of internships and how?
- What problems / challenges do institutions have regarding internships? Examples;
 - introduction 2 cycle system
 - legal obstacles / insurance
 - security issues

19 If internships do not form part of your study programmes, please indicate how you prepare your students for labour market

BOX 6 Research

20 Are common research⁷ projects with the world of work, or consultancy work for the world of work predominant in the research work of institutions?

- How do you organise research projects?
- Who is the main source of research initiatives? F.e. The world of work – demand driven; The university – supply oriented; Joint research activities are dominant.

21 Do institutions have a regional focus in you research activities with the world of work? What volume does research have in the institutions, on average?

22 What is the link between education and research?

- Students participate in research projects? (f.e during internships or final thesis)
- Do Enterprise Development Centres exist within your institution or on campus? How does it function? Do entrepreneurs/students/teachers participate and profit from it?

⁷ With research we mean all activities leading to knowledge production, regardless how they are called in the national context.

BOX 7 Human resource policy

23 Describe the requirements for staff recruitment and assessment within your institutions?

- What is dominant, academic or professional competences?
- On what indicators is the assessment of teachers based?

24 Relation of staff with world of work

- (Part of) staff is part time employed within the university and part time active in the world of work?
- (Part of) staff has regular contact with the world of work (f.e. through internships)?
- University offers temporary placements to representatives of world of work?
- Representatives of world of work offer guest lectures?

25 Organisation of teacher activities within the study programme

- How is the work of the teacher organised in your institution? In teams or predominantly alone?
- What role does management have regarding teachers and education planning?

PART Two

Study programme level

We would like you to answer similar questions from the perspective of an individual study programme. How do they deal with education descriptors? For this study, we have selected three study programmes as an example and we would like you to answer from the perspective of one or more of these 3 programmes (civil engineering/ construction, social work, or business administration).

Description of education

1. How do you explain what you are doing in the learning process?
 - Through measuring the student workload in ECTS?
 - Through course descriptions in terms of modules, course level, subjects of lectures and/or practical work?
 - Through the description of learning outcomes in terms of competences (knowledge, attitude and personal skills)?
 - Through information on career options and/or further study possibilities
 - Are descriptors used in your contacts with the government for recognition of degrees awarded and/or with the national bodies for external quality assurance for this study programme?

Internships

2. Is there a general policy on study programme level concerning internships, including systematic contacts with the world of work on this subject? Add elements such as the time period for internships, which year(s) of the bachelor programme they take place, the guidance and mentoring during internships from the institution and from the company.
 - Who is responsible for the assessment of internships? What is the role of the world of work in supervision and assessment of internships?
 - Are ECTS attached to internships?
 - How is the quality of internships in general assessed?
 - Is the world of work involved in QA of internships and how?
 - What problems / challenges do institutions have regarding internships? Examples;
 - introduction 2 cycle system
 - legal obstacles / insurance
 - security issues

Research

3. Are, within this study programme, common research⁸ projects with the world of work, or consultancy work for the world of work predominant in the research work?
 - How do you organise research projects?

⁸ With research we mean all activities leading to knowledge production, regardless how they are called in the national context.

- Who is the main source of research initiatives? F.e. The world of work – demand driven; The university – supply oriented; Joint research activities are dominant.

4. Does this study programme have a regional focus in research activities with the world of work?

5. What is the link between education and research?

- Students participate in research projects? (f.e during internships or final thesis)
- Do Enterprise Development Centres exist within your institution or on campus? How does it function? Do entrepreneurs/students/teachers participate and profit from it?
- Is there a policy for the study programme as a whole concerning staff exchange with the world of work? *Please explain your answer*

Collaboration with the world of work

6. Describe shortly which type of institutions/companies are the main partners in the world of work for this particular study programme

7. How is the world of work involved in the education process (explain all appropriate answers)?

- They are part of the management of the study programme
- They sit in national education committees, or committees for the evaluation or accreditation of a programme
- The world of work drafts a profile for workers in the field. Our education programme is based on that profile
- They take part in different courses, for example in guest lectures of practical work
- They sit in Industrial Advisory Boards, advising the study programme on regional level

8. What procedures exist on the cooperation of the world of work in determining the content of education or the education descriptors of the programme? Please describe clearly. How do you evaluate these procedures?

11.2 Questionnaire for the swiss report

Bachelor for the Labour Market (BaLaMa). Professionally oriented higher education in Europe.

Organisation des Studiengangs

8	Inhaltliche Vorgaben und Kompetenzprofile	
8c/14	Liegt für die Ebene des Fachbereichs bzw. der Hochschule ein verbindliches gesamtschweizerisches Kompetenzprofil vor? (ja/nein)	
8d	Liegt für die Ebene des Studiengangs ein verbindliches Kompetenzprofil? (ja/nein)	
15a	Existieren Kompetenzprofile auf Seiten der Praxis? (ja/nein)	
15b	Wurden diese Kompetenzprofile aus der Praxis in das Kompetenzprofil des Studiengangs integriert? (ja/nein)	
16b	Gibt es nationale inhaltliche Vorgaben für das Kerncurriculum Ihres Studiengangs und welche sind dies?	
9/l	Dokumentation der zu erwerbenden Kompetenzen (outcome) und weiterführenden Möglichkeiten	
9a/la	Werden die Studienleistungen mit dem ECTS-Punktesystem ausgewiesen? (ja/nein)	
9b/lb	Gibt es von allen Kursen und/oder Modulen eine Beschreibung (inkl. Modul-Level und Modul-Inhalte)? (ja/nein)	
9c/lc	Werden die zu erwerbenden Kompetenzen pro Kurs oder Modul ausgewiesen? (ja/nein) Wo werden diese ausgewiesen?	
9d/ld	Ist für die Studierenden ersichtlich dokumentiert, welche Berufsmöglichkeiten und weiterführenden Studienmöglichkeiten für sie bestehen? (ja/nein) Wie/wo ist dies dokumentiert?	

Rolle der Praxis

10	Rolle der Praxis bei der Qualitätsentwicklung und -sicherung des Studiengangs	
10a	Welches ist die Rolle der Praxis in der Qualitätssicherung (z.B. Teilnahme bei der Peer Review oder bei der Durchführung der Qualitätssicherung)?	
10b	Wird die Qualität der Praktika überprüft? (ja/nein) Und wie?	
11	Rolle der Praxis bei der Bewertung der Studierenden	

11a*	Sind Vertreter/innen aus der Praxis bei Aufnahmeprüfungen involviert? (ja/nein) Auf welche Weise?	
11b*	Sind Vertreter/innen aus der Praxis bei der Abnahme von Leistungsnachweisen involviert? (ja/nein) Auf welche Weise?	
11c*	Sind Vertreter/innen aus der Praxis bei Abschlussprüfungen involviert? (ja/nein) Auf welche Weise?	
12	Erfolgs- und/oder Zufriedenheitsstudien	
12a	Führen Sie Studien über den Verbleib der Studierenden in der Berufspraxis durch? (ja/nein) In welcher Frequenz?	
12b	Führen Sie bei den Absolventinnen und Absolventen Studien über deren Zufriedenheit mit dem Studium durch? (ja/nein) In welcher Frequenz?	
13	Flexibilität	
13a	Schätzen Sie die Hochschule/den Fachbereich als flexibel genug ein, um sich den Erfordernissen der Berufspraxis und den Bedürfnissen der Studierenden anzupassen?	
13b	Beschreiben Sie beispielhaft, wie Sie in den letzten zwei Jahren die Bedürfnisse der Studierenden und der Berufspraxis aufgenommen und umgesetzt haben	

Nationale Diskussionsforen / Netzwerke?

16	Nationale Plattformen / Netzwerke	
16a	Existieren nationale Diskussionsforen, in denen Vertreter/innen des Studiengangs gemeinsame Themen und Entwicklungen in der Profession diskutieren? (ja/nein)	
16b	Wenn ja, welche und welche Form haben diese Plattformen? (z.B. formelle oder informelle Organisationen, Kommissionen, Fachkonferenzen, Arbeitsgruppen etc.?)	

Zusammenarbeit mit der Praxis

17/VII	Wie arbeiten die Hochschulen mit der Praxis zusammen?	
VI	Welches sind die wichtigsten Praxispartner in der Ausbildung?	
17a*/VIIa	Sind Vertreter/innen aus der Praxis im Fachhochschulrat vertreten? (ja/nein)	

VIIb	Sind Vertreter/innen aus der Praxis in Aufsichtskommissionen oder Beiräten vertreten? (ja/nein) Wenn ja, wo?	
17b	Wurden die Studiengänge in Zusammenarbeit mit Vertreter/innen aus der Praxis entwickelt? (ja/nein)	
15c/VIII	Falls ja bei 17b: Wie wurde der Einbezug der Vertretung aus der Praxis gestaltet und wie wurde er evaluiert?	
17c	Entwickeln Sie auf bestimmte Unternehmen / Organisationen zugeschnittene Studiengänge? (ja/nein) Bitte geben Sie ein aktuelles Beispiel	
17d	Werden Mitarbeitende zwischen Hochschule und Praxis ausgetauscht? (ja/nein)	
17e	Ist der Anteil der Studierenden, die gleichzeitig arbeiten und studieren hoch? (ja/nein)	
17f	Gibt es regelmässige Treffen / Veranstaltungen zwischen Hochschule und Praxis? (ja/nein) Welche?	
17g	Hat die Hochschule spezielle Angebote für ehemalige Studierende? (ja/nein)	
18/II	Rolle des Praktikums im Studiengang	
18a/IIa	Sind Praktika ein konstitutives Element des Studiums? (ja/nein)	
	Wie lange dauert das Praktikum? (ja/nein)	
	In welchem Studienjahr findet es statt?	
	Wird das Praktikum seitens der Fachhochschule und seitens der Praxis begleitet? (ja/nein)	
18b/IIb	Wer bewertet die Praktika?	
	Was ist die Rolle der Praxis bezüglich Supervision während der Praktika?	
18c/IIc	Werden für die Praktika ECTS-Punkte vergeben? (ja/nein)	
18d/IId	Wie (mit welchen Instrumenten) werden die Praktika bewertet?	
18e/IIe	Wird die Praxis in die Qualitätssicherung der Praktika einbezogen? (ja/nein) Und wie?	
18f/IIf	Welche Probleme haben Sie bezüglich der Praktika? (z.B. Akquisition, Versicherung, Qualitätskontrolle, Sicherheitsmassnahmen etc.)	
19	Wenn Praktika im Studiengang nicht vorgesehen sind, wie werden die Studierenden sonst auf die Praxis vorbereitet?	

Forschung

20a/IIIa	Sind die Forschungsprojekte mehrheitlich praxisorientiert? (ja/nein)	
20b/IIIb	Welche der folgenden Kategorien bildet die Mehrzahl Ihrer F&E-Projekte? Aufträge aus der Praxis aus eigenen Mitteln finanzierte Forschung drittmittelfinanzierte Forschung (SNF, KTI, Stiftungen etc.) andere, nämlich:	
21a/IVa	Findet die anwendungsorientierte Forschung vor allem in einem regionalen Bezug statt?	
21b/IVb	Welche der folgenden Kategorien bildet die Mehrzahl Ihrer F&E-Projekte? Projektdauer: weniger als 1 Jahr Projektdauer: 1 bis 2 Jahre Projektdauer: mehr als 2 Jahre andere, nämlich:	
22/V	Verbindung zwischen Lehre und Forschung	
22a/Va	Können die Studierenden an Forschungsprojekten teilnehmen? (ja/nein)	
22b/Vb	In welchen Modulen / Gefässen können die Studierenden an Forschungsprojekten teilnehmen?	
22c/Vc	Existieren Unternehmen / Non-Profit-Organisationen an der Fachhochschule oder auf dem Campus? (ja/nein)	

Personal

23	Auswahlkriterien für die Wahl des Personals	
23a	Was ist zentraler bei der Auswahl der Mitarbeiter/innen: akademische oder berufspraktische (professionelle) Kompetenzen?	
23b	Auf welchen Indikatoren basiert die Wahl der Dozierenden?	
24/VII	Beziehung zwischen dem Kollegium bzw. den Mitarbeitenden und der Praxis	
24a	Ist das Kollegium halbezeitlich an der Fachhochschule engagiert und halbezeitlich in der Praxis? (ja/nein)	
24b	Hat das Kollegium regelmässig Kontakt mit der Praxis? (ja/nein) Wie?	

24c	Ermöglicht die Fachhochschule temporäre Anstellungsverhältnisse für Repräsentant/innen aus der Praxis? (ja/nein)	
24d/VIIId	Halten Repräsentant/innen der Praxis Gastvorträge oder Lehrveranstaltungen? (ja/nein)	
25	Organisation der Dozierenden-Aktivitäten	
25a	Findet die Planung der Lehre vorwiegend alleine oder im Team statt?	
25b	Findet die Durchführung der einzelnen Lehrveranstaltungen vorwiegend alleine oder im Team statt?	
25c	Findet die Nachbereitung der einzelnen Lehrveranstaltungen vorwiegend alleine oder im Team statt?	



Konferenz der Fachhochschulen der Schweiz

KFH

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