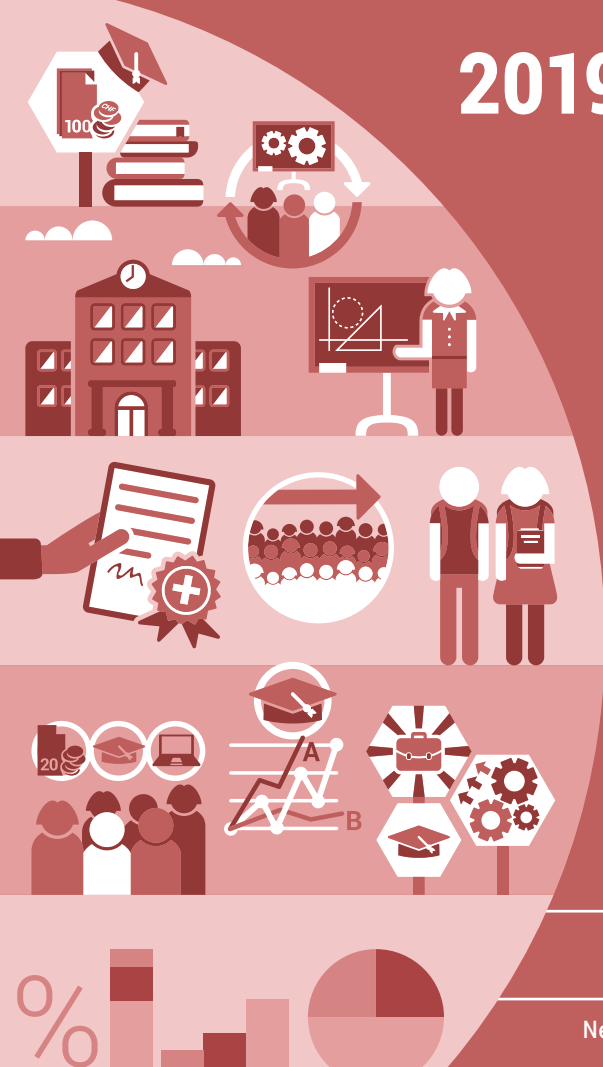


2019/20



15

Education
and science

Neuchâtel 2022

Education finance

Financial years 2019/20



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Table of contents

Introduction	5
Public expenditure by function	6
Financial flows for education	7
Public education expenditure by educational level	8
Public education expenditure by administrative level making the expenditure	9
Public education expenditure by type of expenditure	10
Per capita public education expenditure	11
Education expenditure per person in education	12
Education contributions	13
Federal subsidies to persons in professional education	14
Students and costs in higher education	15
Costs per student in higher education	17
Types of activities at higher education institutions	20
Funding of higher education	21
Sources	22
Abbreviations	23

Introduction

This brochure provides a summary of the financing of the education system. It presents a selection of results from four statistics of the Federal Statistical Office (FSO).

The **public education expenditure statistics** examine the finances of the education system on a national scale from primary level to the higher education institutions. The **Cantonal grants and loans statistics** and the **statistics on subject-based funding in professional education** describe public contributions to education and training at the upper secondary and tertiary levels. Lastly, the **higher education funding statistics** present results on the costs and services of the higher education institutions, detailing both public and private funding sources. The results refer to the most recent accounting year, i.e. 2019 for public expenditure on education¹ and 2020 for the other three statistics.

In 2019, the Confederation, cantons and communes spent CHF 40 billion on education. The public sector invested the largest proportion of this expenditure in compulsory education.

Around one percent of public expenditure on education is paid out in the form of grants and loans. In 2020, it was CHF 385 million. In the same year, the Confederation granted CHF 72.7 million in the form of subsidies for the costs of preparatory courses for federal examinations.

Higher education institutions are mainly funded by the cantons. In the universities, the greatest costs are generated by research and development (R&D). At the universities of applied sciences and the universities of teacher education, teaching constitutes the greatest cost.

¹ Due to the extensive collection and harmonisation work, the final results of public expenditure on education for an accounting year are available two years later.

Public expenditure by function

In 2019 the Confederation, cantons and communes spent 17% of their total expenditure of CHF 230 billion (including social insurances) on education.

Funding for education comes mostly from public authorities. The graphic shows that in relation to other functions, education is a major public undertaking.

Public expenditure by function, 2019

In CHF million

Social security	89 676	39.0%
Education (incl. basic research)	39 977	17.4%
General administration	20 714	9.0%
Public order and security, defence	17 567	7.6%
Transport and communications	17 109	7.4%
Health	16 245	7.1%
National economy	9 425	4.1%
Culture, sport and recreation, church	7 270	3.2%
Environmental protection and regional planning	6 351	2.8%
Finance and taxation	5 429	2.4%
Total	229 763 m CHF	100.0%

Sources: FSO – ÖBA; FFA – FS

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In 2019, at 39%, the social security is the public sector's largest budget function. This is followed by the education (incl. research). Since 1990, these two functions have occupied the first and second place.

The distribution of total expenditure of the cantons and their communes by function varies depending on the canton. Education is the biggest function in nearly all cantons, accounting for between 17% and 34% of total expenditure.

Financial flows for education

The 17% of total expenditure allocated to the public education expenditure corresponds to CHF 40 billion.

Education is not always funded directly, but also in the form of contributions towards the expenditure undertaken by other administrative levels. The Confederation contributes to the costs of vocational and professional education in accordance with the Vocational and Professional Education and Training Act with approximately 25%. Most expenditure at this level, however, is made by the cantons.

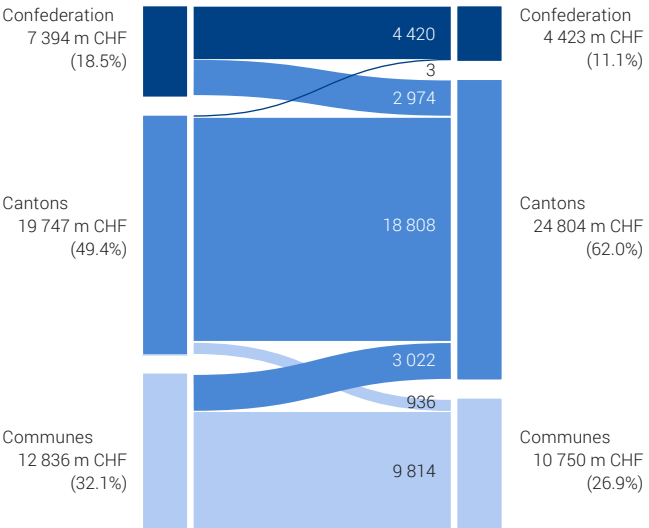
The graph below shows on the left side, which is the financing administrative level, and on the right side the one that makes the expenditure.

Financial flows for education, 2019

Total: 39 977 CHF millions

...from which financing comes

...making expenditure



Sources: FSO – ÖBA; FFA – FS

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In 2019, the Confederation accounts for 19% of **funding** for education, the cantons 49% and the communes 32%.

If the administrative levels that **make the expenditures** are considered, cantons account for nearly two thirds (62%) of educational expenditure, communes for a quarter (27%) and the Confederation for the remainder 11%.

Public education expenditure by educational level

The greatest share of public expenditure on education (50%) is spent on compulsory education. This level also has the greatest number of students, some 915 000¹. This corresponds to 60% of the total of all persons in education².

A quarter of the expenditure is dedicated to the tertiary level (professional education and university). 18% of people in education are to be found at this level. The upper secondary level (vocational and general education) accounts for 15% of public expenditure on education as well as 22% of people in education.

The proportions of expenditure on education by educational level changed little between 1990 and 2019.

Public education expenditure by educational level, 2019

In CHF million

Compulsory education (incl. Special needs schools)	19 901	49.8%
Upper secondary level	5 864	14.7%
Tertiary level	9 091	22.7%
Research	4 450	11.1%
Non-attributable expenditure	670	1.7%
Total	39 977 m CHF	100.0%

Educational levels in accordance with the harmonised accounting model HAM2.

"Research" comprises the categories "basic research" and "R&D in education".

"Non-attributable expenditure" corresponds to the HAM2 category "Other education expenditure".

Sources: FSO – ÖBA; FFA – FS

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¹ This page only considers people in education who attend public or government dependent private schools

² FSO – Statistics on pupils and students (SDL), Students and degrees of higher education institutions (SHIS-studex)

Public education expenditure by administrative level making the expenditure

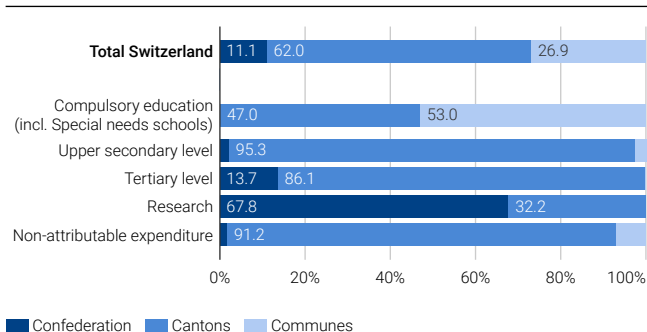
The responsibility for educational funding is distributed among the Confederation, cantons and communes to varying degrees depending on the educational level concerned.

The cantons and communes share expenditure for compulsory education (including special needs schools) equally.

The greater part of expenditure for the upper secondary level (vocational and general education) as well as for the tertiary level (professional education and university), is covered by the cantons.

The Confederation makes direct payments at the tertiary level, in the area of research and the Federal Institutes of Technology.

Public education expenditure by educational level and administrative level making the expenditure, 2019



Educational levels in accordance with the harmonised accounting model HAM2.

"Research" comprises the categories "basic research" and "R&D in education".

"Non-attributable expenditure" corresponds to the HAM2 category "Other education expenditure".

Public education expenditure by type of expenditure

In Switzerland 92% of expenditure on education is incurred as current expenses, the remaining 8% as investments.

With CHF 19 billion, 47% of total education expenditure is spent on teaching staff. The remaining current expenses are divided among other staff, material costs and other current expenses (subsidies and grants to private institutions and households).

Public education expenditure by type of expenditure, 2019

In CHF million

Teachers' wages	18 795	47.0%
Other personnel wages	7 661	19.2%
Material costs	5 743	14.4%
Other current expenditure	4 405	11.0%
Investment expenditure	3 374	8.4%
Total	39 977 m CHF	100.0%

Sources: FSO – ÖBA; FFA – FS

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Teachers' wages remain the most important item for the compulsory education, the upper secondary level and the tertiary level considered separately.

The breakdown in percentage of education expenditure by type of expenditure has hardly changed since 1990.

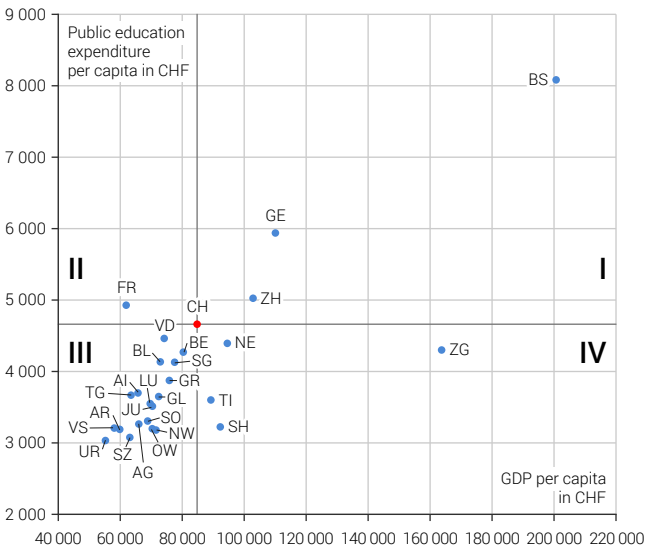
Wages of teachers and other personnel account for the greatest share of public expenditure on education in most cantons.

Per capita public education expenditure

A direct comparison of costs can be made between cantons by means of per capita public expenditure on education. At the national level, the annual per capita education expenditure was CHF 4662, although considerable differences can be observed between the cantons.

Another means of comparison between cantons is the gross domestic product (GDP). The GDP quantifies the economic performance of the national economy. It is an estimate of the value of goods and services produced in a country as far as they are not used as input for the production of other goods or services, in other words it is the value added.

Public education expenditure and gross domestic product, 2019



Sources: FSO – ÖBA, GDP by canton; FFA – FS

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The urban university cantons of Basel-Stadt, Geneva and Zurich show a high GDP and above-average per capita expenditure on education (quadrant I).

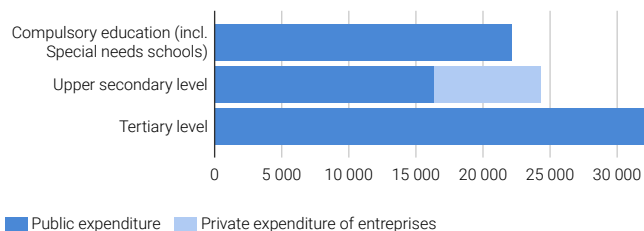
The cantons in the quadrant III show a comparatively low GDP and below-average per capita education expenditure.

Education expenditure per person in education

In 2019, CHF 22 100 was spent per person in education in compulsory education (incl. special needs schools). At upper secondary level, CHF 16 400 was spent and at tertiary level CHF 32 100. These figures represent only the amount contributed by the public sector.

Education expenditure per person in education by educational level, 2019

In CHF



Sources: FSO – ÖBA, SDL, SHIS-studex; FFA – FS

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Private contributions are particularly relevant for professional education as well as for vocational education. Estimates exist regarding dual-track VET programmes for the educational expenditure undertaken by enterprises³. In 2019 private enterprises spent around CHF 2.7 billion on their apprentices. If this amount is taken into account, expenditure per person in education at upper secondary level was CHF 24 300.

Overall, i.e. by including private expenditure at upper secondary level, education expenditure increases as the level of education gets higher. The higher the educational level, the higher the cost of wages and the need for administrative and technical staff as well as the infrastructure requirements. This applies at national level as well as in the cantons.

³ Kuhn, A.; Schweri, J. (2019): Methodenbericht zur vierten Kosten-Nutzen Erhebung der beruflichen Grundbildung. Eidgenössische Hochschule für Berufsbildung EHB

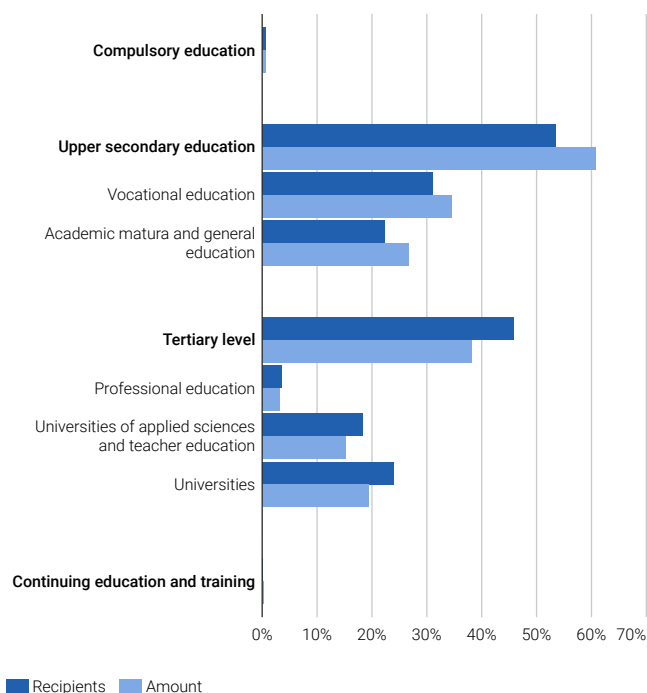
Education contributions

Cantonal grants and loans, as well as education contributions from the Confederation to the cantons are part of public expenditure on education (1%).

In 2020, the cantons paid a total of CHF 364 million in grants and CHF 22 million in the form of loans to persons in education. Although loans are also an important tool in the financial support of education, they are only a small part of the cantons' financial commitment (5% of education contributions).

Grants in 2020

Recipients and amounts by educational level



Source: FSO – STIP

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Grants play an important role at all levels of post-compulsory education. For compulsory education and further education, their importance is minimal.

44% of the total amount of grants is allocated at tertiary level and 55% at upper secondary level. As for the recipients, 37% are tertiary level students and 62% are upper secondary level students.

Federal subsidies to persons in professional education

Since 2018, students who complete preparatory courses for a federal professional examination (levels 1 and 2) have received financial support directly from the Confederation. 50% of the course fees are reimbursed.

In 2020, 12 248 grants were approved for a total of CHF 72.7 million. The Confederation has allocated 58.2 million in contributions to finance preparatory courses on level 1 and around CHF 14.5 million for preparatory courses on level 2. On average, the reimbursement payment per application was CHF 5900.

Applications and federal subsidies by type of examination, 2020

	Applications	Federal subsidies	Average payment per application
	Number	CHF	CHF
Total	12 248	72 686 000	5 900
Professional Examination – level 1	10 096	58 195 000	5 800
Professional Examination – level 2	2 152	14 492 000	6 700

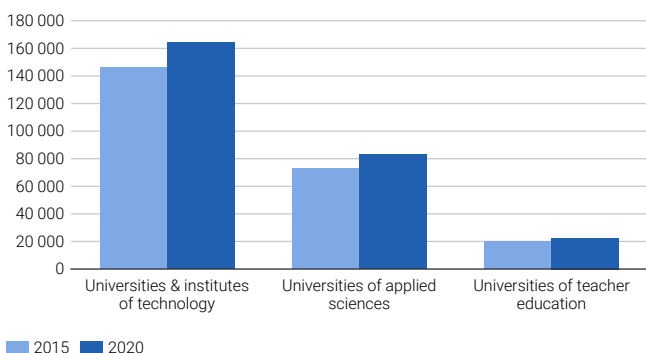
Source: FSO – aHBB

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Students and costs in higher education

In recent years, student numbers have constantly increased at the three types of higher education institution. The majority of students are enrolled at universities and institutes of technology (UNI): in 2020 164 575 students were enrolled, corresponding to a five-year increase of around 13%. Higher education costs rose by more than 10% over the same period, reaching a total of more than CHF 8.8 billion.

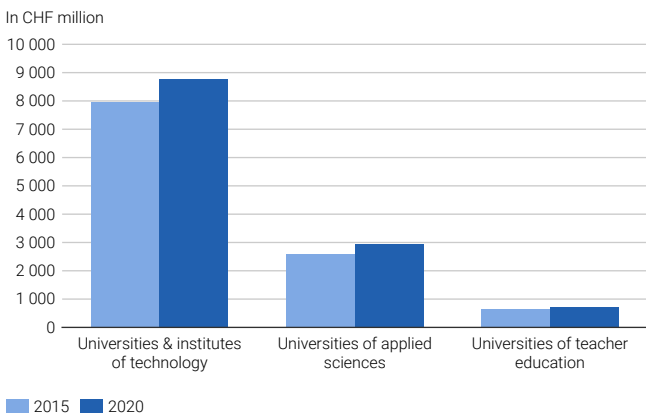
Students of higher education institutions, 2015 and 2020



Source: FSO – SHIS


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Costs of higher education institutions, 2015 and 2020



Source: FSO – SHIS

© FSO 2022



The greatest relative increase in the number of students, however, was seen by the universities of applied sciences (UAS) with an increase of around 14% with more than 83 000 registrations in 2020. At 13%, costs of UAS increased in comparison with the students almost as much and reached in excess of CHF 2.9 billion.

The growth of the universities of teacher education (UTE) was comparable between 2015 and 2020 with over 22 500 students registered, i.e. an increase of 14%. The annual growth stabilised compared with previous years. The total cost of this type of higher education institution is now greater than CHF 700 million, i.e. 8% more over the same period.

Excursus: Finance of higher education institutions and the COVID pandemic

The increase in the number of students in basic tertiary education and training (diploma/bachelor/master) was higher than average for all types of higher education institutions compared with previous years (increase between 2019 and 2020: UNI 5.7%, UAS 4.7%, UTE 5.8%; average annual increase between 2015 and 2019: UNI 1.7%, UAS 3%, UTE 2.3%), which was due to the higher number of first-year students.

Although total costs rose between 2019 and 2020, the increase was below average in comparison with the previous years (increase between 2019 and 2020: UNI 0.8%, UAS 1.6%, UTE 0.6%; average annual increase between 2015 and 2019: UNI 2.4%, UAS 2.7%, UTE 1.6%). Material costs fell almost without exception for all types of activity (UNI: –16% to –5%, UAS: –20% to –6%, UTE: –12% to –6%, with the exception of UTE material costs for basic tertiary education and training: +2%). Although IT investments rose, laboratory costs and travel declined.

As a result, the costs per student in 2020 compared with the average cost between 2015 and 2019 decreased in most fields of study (UNI: for more than 90% of the fields of study, UAS: for more than 80% of the fields of study, UTE: for more than 90% of the fields of study).

Total revenue increased to a lesser extent (increase between 2019 and 2020: UNI 0.8%, UAS 0.7%, UTE 0.8%; average annual increase between 2015 and 2019: UNI 2.4%, UAS 2.9%, UTE 1.5%). The revenue in the types of activity “Continuing education and training” (UNI: –3.2%, UAS: –3.8%) and “Provision of other services” (UNI: –3.2%, UAS: –11.2%) actually fell in comparison with the previous years, except for at the UTEs. This decrease results from the cancellation (sports) or postponement of some face-to-face activities or from the change to another form of teaching and learning (e-learning).



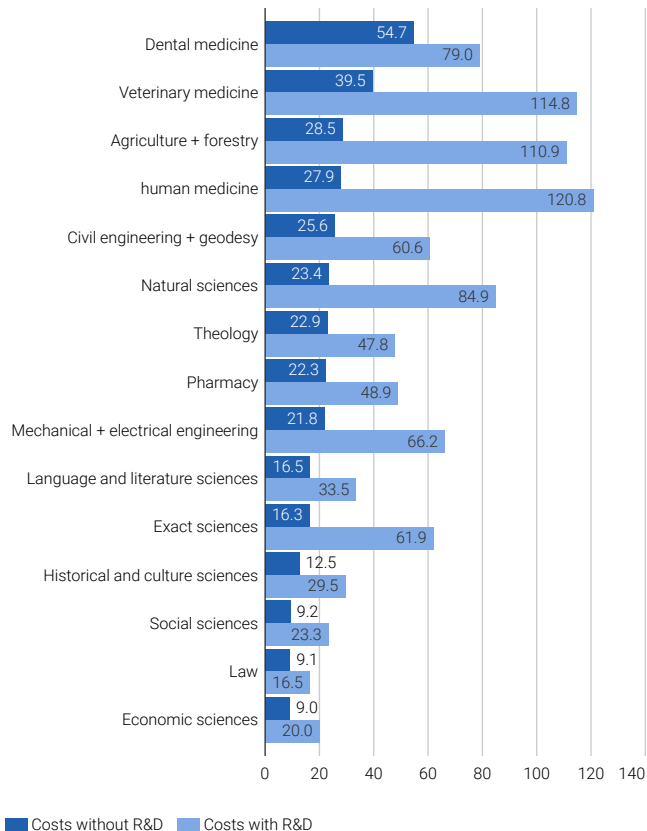
Costs per student in higher education

Cost indicators per student allow average costs to be compared between the different categories of study. On average, a university student costs between CHF 9000 and CHF 55 000. This indicator ranges from 13 200 to 48 000 per year in the universities of applied sciences and the universities of teacher education. If, in addition to teaching, research and development (R&D) is also included in the calculation, the costs per student increases considerably. For the universities, the least costly fields cost around CHF 16 500, while the most expensive can cost more than CHF 120 000. In the universities of applied sciences, the minimum costs is around CHF 19 500, while the maximum cost is below CHF 71 000.

Costs per student by field of study, 2020

Universities & institutes of technology

In CHF thousand per year



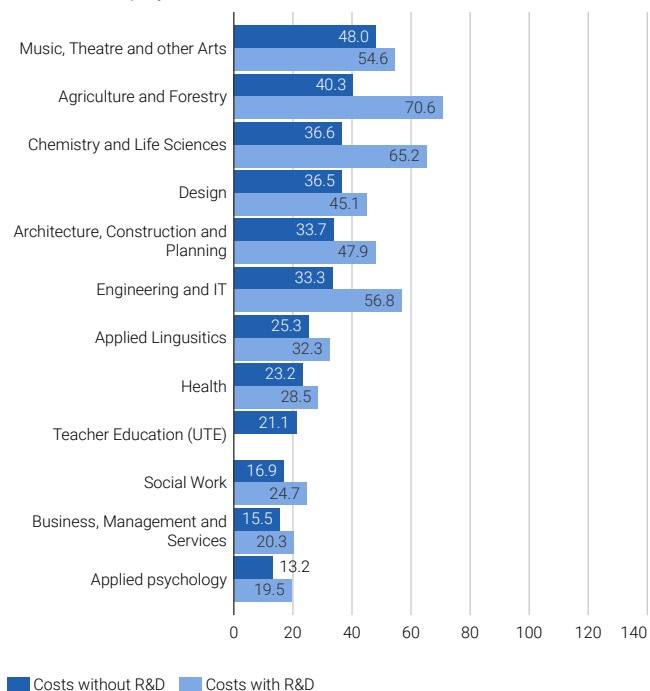
Source: FSO – SHIS

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Costs per student by field of study, 2020

Universities of applied sciences and of teacher education

In CHF thousand per year



Source: FSO – SHIS

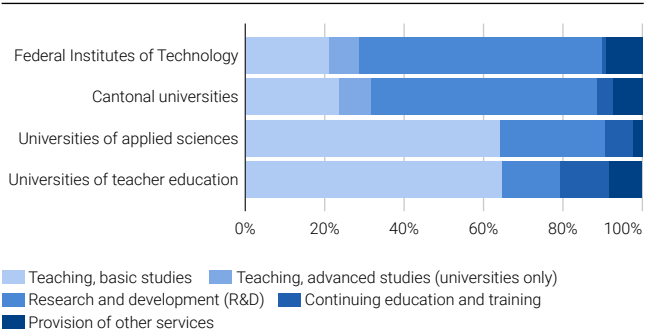
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Types of activities at higher education institutions

The universities provide five types of higher education: teaching for basic studies, teaching for advanced studies, research and development, further education and the provision of other services. In this type of higher education institution, which includes the cantonal universities as well as the two EPF/ETH, research and development represent the largest budgetary item, with more than half of the costs. In second place comes teaching for basic studies, which generates almost a quarter of the costs of these universities.

In the universities of applied sciences and the universities of teacher education, the courses of study are oriented towards obtaining skills linked to a well-defined occupation. They offer an education and training that is practical in nature and for this reason, the teaching of basic studies is by far the main service provided with almost two-thirds of all costs in these two types of establishment. Applied research and development represents the second biggest cost item in the universities of applied science; in the universities of teacher education, continuing education and research generate similar costs.

Higher education institutions costs by type of activity, 2020



Source: FSO – SHIS

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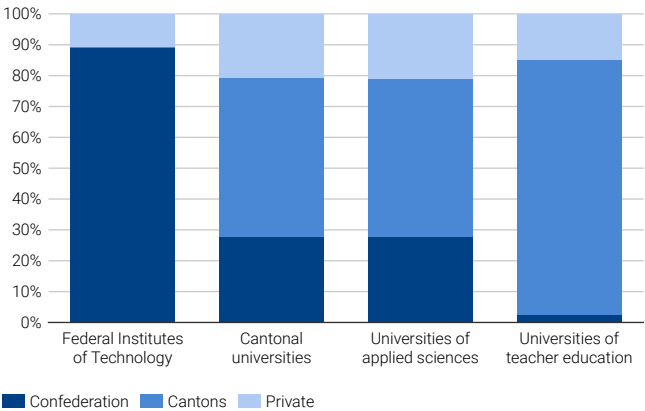
Funding of higher education

While the following data for UAS and UTE are also based on their cost calculations, the data source for the UNI is the expenditure statistic. This is because the cost accounting model of the UNI does not allow for detailed funding information.

Since 1999¹ the Confederation (28%) and cantons (52%) have been responsible for most funding of the cantonal universities. More than 89% of the costs of the federal institutes of technology (EPF/ETH), which fall within the responsibility of the Confederation, are met by federal funding sources, in particular global EPF/ETH budgets.

The cantons (51%) are the main funder of the universities of applied sciences, through ICA-UAS contributions² and budgetary coverage of the cantons responsible. Similarly to the universities of applied sciences and by means of the same sources of funding, the cantons are the main funders of the universities of teacher education and cover some 83% of their needs.

Financing of higher education institutions by funder, 2020



Source: FSO – SHIS

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¹ Since the coming into force of the Federal Act on University Funding and Cooperation in the field of University Education (UFundA). Its successor, the Higher Education Act (HEdA), came into force in 2016.

² Intercantonal Agreement on Universities of Applied Sciences

Sources

Statistics on public expenditure on education (ÖBA)

The statistics on public expenditure on education is the share of the public expenditure of the Federal Finance Administration (FFA) that concerns "Education". It comprises public sector expenditure on education from compulsory education to higher education institutions, therefore enabling the analysis of education expenditure across all educational levels. Childcare prior to starting school and further education are not included.

The finance statistics model is based on the harmonised accounting model used by cantons and communes (HAM2). The survey units of the finance statistics are the public authorities, i.e. Confederation, cantons, communes and public social insurances. In accordance with HAM2 expenditure on basic research is included in expenditure on education.

Higher education funding statistics

At higher education level, the cost and performance accounting for the three types of higher education institution provide information about the costs and performances of the individual institutions. They include both public and private funding (e.g. tuition fees, R&D commissioned by companies as well as contributions from foundations).

For universities, the FSO has collected data on expenditure since the financial year 1996 and on costs since 2006. For universities of teacher education, data has been collected since 2008. The State Secretariat for Education, Research and Innovation (SERI) has provided information on the costs of the universities of applied sciences since 2000.

Further sources

Information on financial assistance towards education from the cantons is based on the FSO's **Cantonal grants and loans statistics (STIP)**, which has existed since 2004 and which comprises data from the cantonal grantproviding agencies.

The data used to calculate the expenditure per person in education is based on the **Statistics on pupils and students (SDL)** and on the **Swiss Higher Education Information System (SHIS)**.

Private education expenditure is only partly taken into account. Apart from higher education information is only available for the upper secondary level. Estimated expenditure by enterprises for dualtrack VET programmes is used to this end.

The results on subsidies in professional education are derived from the **statistics on subjectbased funding in professional education (aHBB)**. The statistics are based on administrative data from the SERI.

Abbreviations

aHBB	Subject-based funding in professional education
EPF/ETH	Federal Institutes of Technology
FDF	Federal Department of Finance
FS	Financial Statistics
FSO	Federal Statistical Office
ÖBA	Public education expenditure
R&D	Research and development
SERI	State Secretariat for Education, Research and Innovation
SDL	Statistics on pupils and students (without universities)
SHIS	Swiss Higher Education Information System (SHIS-studex: students, SHIS-FIN: finance)
STIP	Cantonal grants and loans
UAS	Universities of applied sciences
UTE	Universities of teacher education
UNI	Universities and Federal Institutes of Technology

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The information in this publication contributes to the measurement of sustainable development goal (SDG) **no. 4 "Quality Education"** of the UN's 2030 Agenda. In Switzerland, the MONET 2030 indicator system is used to track the implementation of these goals.



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