

# 2017/18



15

Education  
and science

Neuchâtel 2020

## Education finance

Financial years 2017/18



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## Introduction

This brochure provides a summary of education finance in Switzerland. It is based on the public education expenditure statistics, the Cantonal grants and loans statistics, the statistics on subject-based funding in professional education and on the funding of higher education institutions statistics. In each case, the information is presented for the most recent financial year available: 2017 for public expenditure on education<sup>1</sup> and 2018 for education contributions, subject-based funding in professional education and higher education institution funding and expenditure.

At national level the public education expenditure of the financial statistics of the Federal Finance Administration is the only data source that enables a uniform analysis of education finance from primary to university.

To depict the detailed costs and performances of higher education institutions, the statistics on public expenditure on education are not sufficient. This information gap is filled by the higher education funding statistics that cover both public and private funding. These data offer a precise insight into the funding of higher education institutions, cost developments, performances rendered and enable the calculation of indicators such as costs per student.

The statistics on public expenditure on education and the higher education funding statistics differ in terms of the institutions surveyed and the scope of the survey. Both data sources cannot be compared directly and are therefore discussed in separate chapters.

In 2017, the Confederation, cantons and communes spent CHF 38.1 billion on education. The public sector invests the largest proportion of this expenditure in compulsory schooling.

One percent of all public education expenditure is paid out in the form of grants and loans. Benefiting students study at the upper secondary and tertiary levels.

The new subject-based funding regime in professional education has been introduced in 2018. The Confederation has allocated 16.3 million for the fees of preparatory courses for a federal professional examination.

Higher education institutions are mainly funded by the cantons. In the higher education institutions, the greatest part of the costs is generated by research and development (R&D) in the universities; at the universities of applied sciences and the universities of teacher education by teaching staff.

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<sup>1</sup> Due to the complexity of collecting and harmonising data, the final results on public expenditure of a given financial year are available two years later.

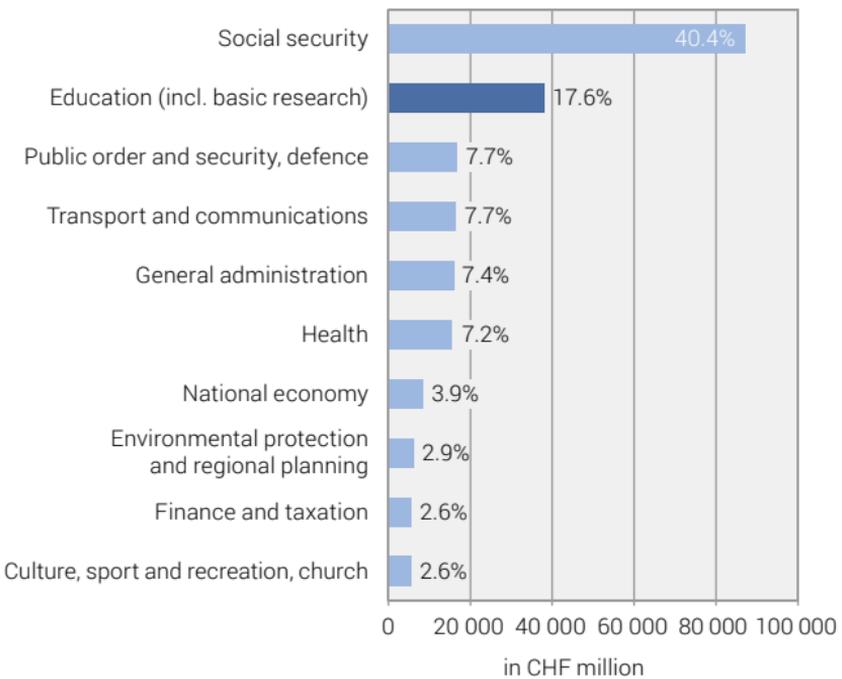
## Public expenditure by function

In 2017 the Confederation, cantons and communes spent 18% of their total expenditure of CHF 216 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, 2017

G1



Sources: FSO – ÖBA; FFA – FS

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In 2017, at 40%, “Social security” was the public sector’s greatest function. This was followed by “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 20% and 35% of total expenditure.

## Financial flows in education

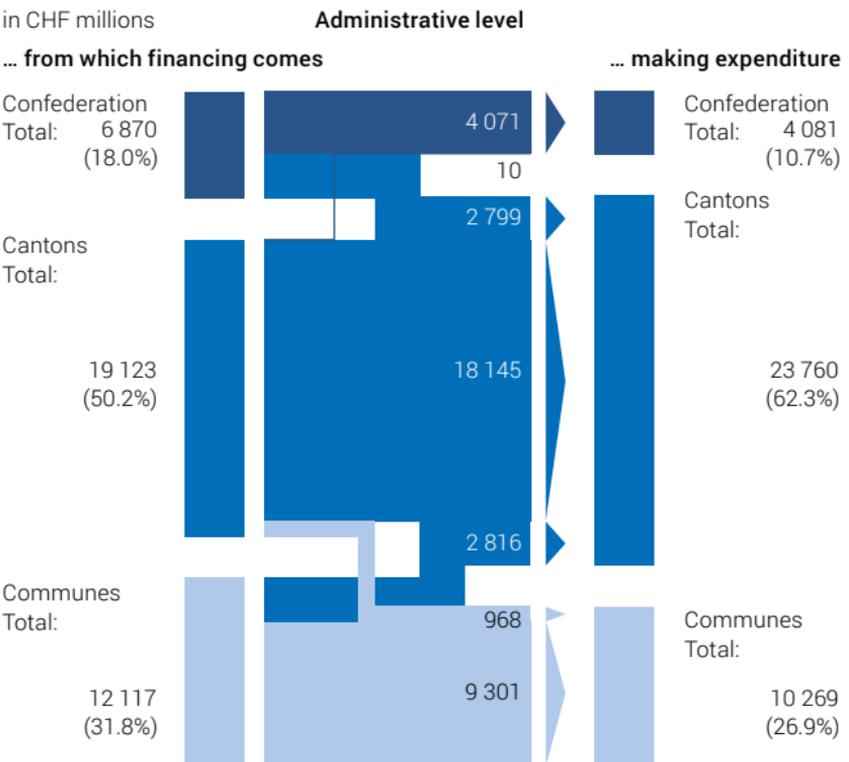
The 18% of total expenditure allocated to the public education expenditure corresponds to CHF 38.1 billion.

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 and training 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, 2017

G2



Sources: FSO – ÖBA; FFA – FS

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In 2017, the Confederation accounted for 18% of **funding** for education, the cantons 50% 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

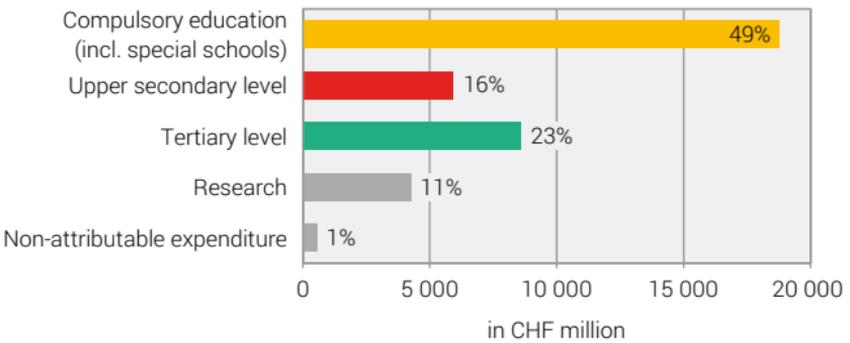
The greatest share of public expenditure on education (49%) is spent on compulsory education. This level also has the greatest number of students, some 950 000<sup>2</sup>. This corresponds to 59% of the total of all persons in education.

A quarter of the expenditure is dedicated to the tertiary level (professional education and university). 19% of people in education are to be found at this level. The upper secondary level (vocational and general education) accounts for 16% 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 2017.

### Public education expenditure by educational level, 2017

G3



Educational level in accordance with the harmonised accounting model HAM2.

"Research" comprises 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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<sup>2</sup> 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.

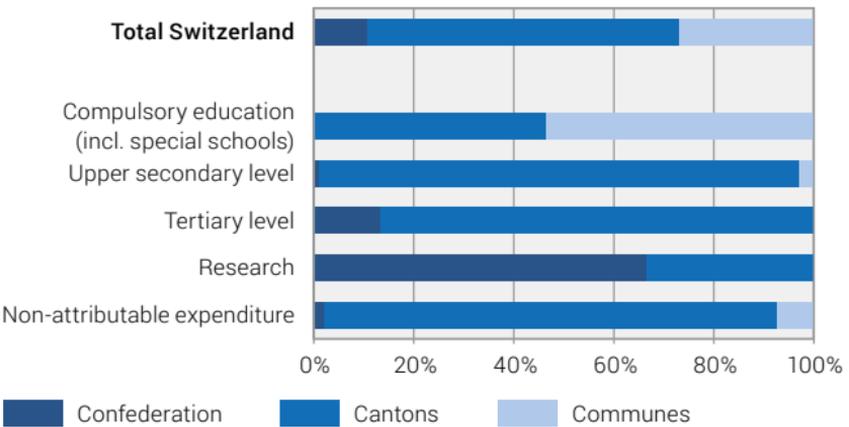
The cantons and communes share expenditure for compulsory education (including special schools) equally.

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 that makes the expenditures, 2017

G4



Educational level in accordance with the harmonised accounting model HAM2.

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

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

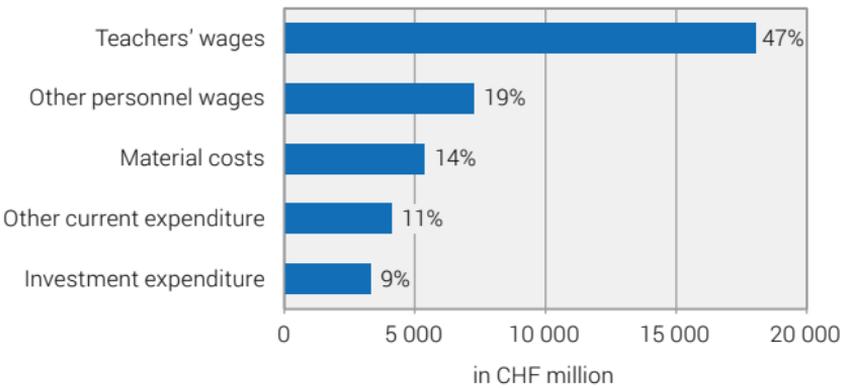
## Public education expenditure by type of expenditure

In Switzerland 91% of expenditure on education is incurred as current expenses, the remaining 9% as investments.

With CHF 18 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, 2017

G5



Sources: FSO – ÖBA; FFA – FS

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The same division of expenditure applies separately to compulsory education, the upper secondary level and the tertiary level.

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

Expenditure on personnel accounts for the greatest share of public expenditure on education in all cantons.

## Per capita public education expenditure

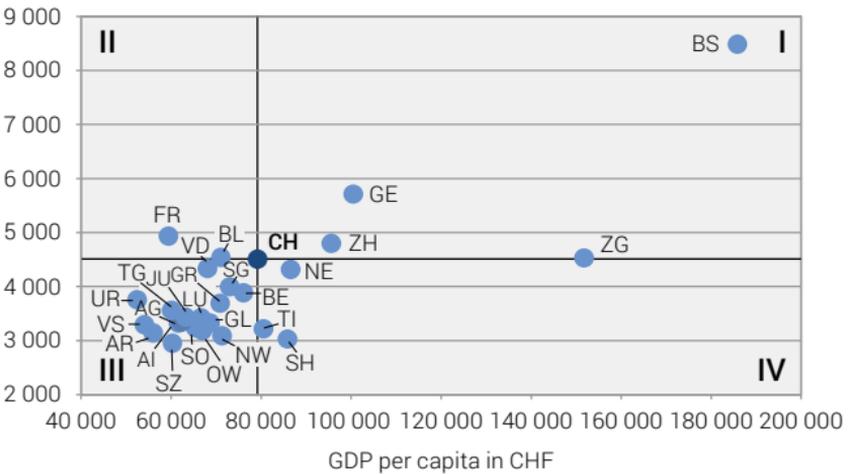
A direct comparison of costs can be made between cantons by means of per capita public expenditure on education. At the national level, the annual per capita education expenditure was CHF 4500, although considerable differences can be observed between the cantons.

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, 2017

G6

Public education expenditure per capita in CHF



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).

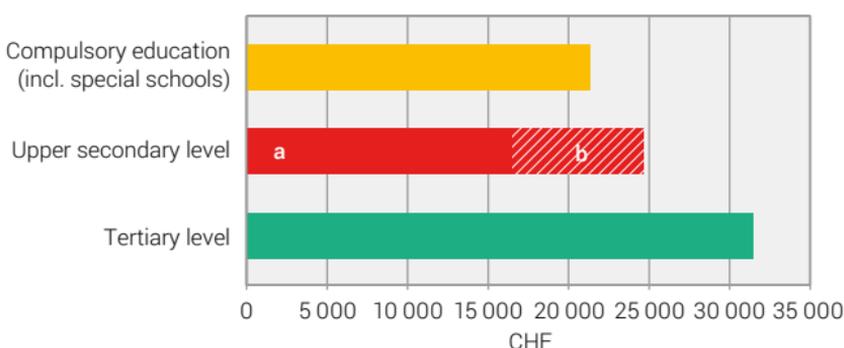
The cantons in the quadrant III show a comparatively low GDP and below-average per capita education expenditure.

## Education expenditure per person in education

In 2017, CHF 21 300 was spent per person in education in compulsory education (incl. special schools). At upper secondary level, CHF 16 500 was spent and at tertiary level CHF 31 400. These figures represent only the amount contributed by the public sector.

### Education expenditure per person in education by educational level, 2017

G7



<sup>a</sup> excl. private expenditure of enterprises

<sup>b</sup> incl. private expenditure of enterprises

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 enterprises<sup>3</sup>. In 2017 private enterprises spent CHF 2.6 billion on their apprentices. If this amount is taken into account, expenditure per person in education at upper secondary level was CHF 24 100.

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.

<sup>3</sup> Kuhn, A.; Schweri, J. (2019): Methodenbericht zur vierten Kosten-Nutzen-Erhebung der beruflichen Grundbildung. Eidgenössisches Hochschulinstitut für Berufsbildung

## Education contributions

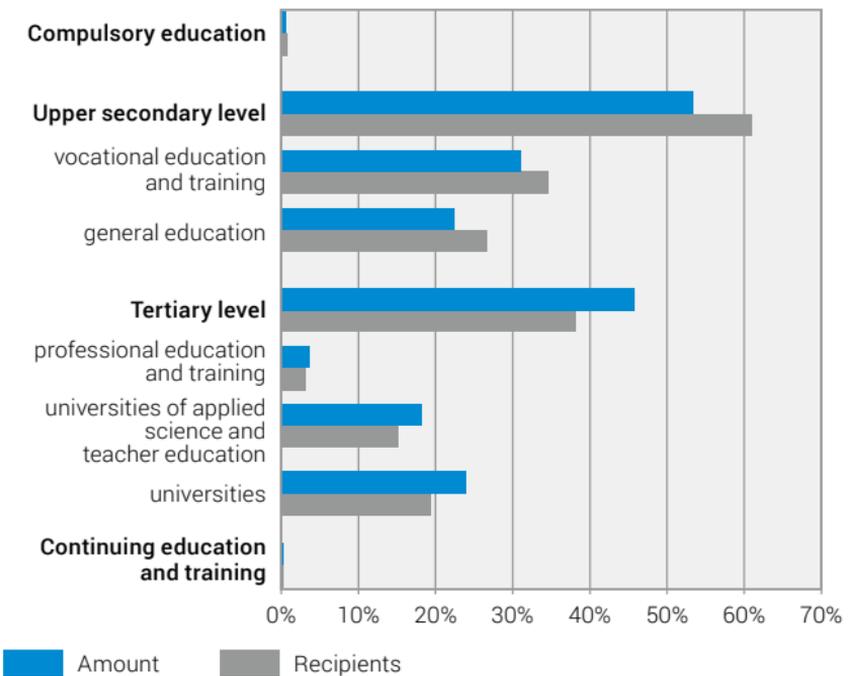
Cantonal grants and loans, as well as education contributions from the Confederation to the cantons are part of public expenditure on education.

In 2018, the cantons paid a total of CHF 346 million in grants and CHF 18 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 2018

Recipients and amounts by educational level

G8



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.

46% of the total amount of grants is allocated at tertiary level and 53% at upper secondary level. As for the recipients, 38% are tertiary level students and 61% 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.

For 2018, the first year of the new funding regime, 4096 applications for federal subsidies were approved and a total of CHF 16.3 million paid out. The Confederation has allocated 12.4 million in contributions to finance preparatory courses on level 1 and around CHF 4 million for preparatory courses on level 2. On average, the reimbursement payment per application was CHF 4000.

### Applications and federal subsidies by type of examination, 2018

T 1

	Applications	Federal subsidies	Average payment per application
	Number	CHF	CHF
<b>Total</b>	<b>4 096</b>	<b>16 331 000</b>	<b>4 000</b>
Professional Examination – level 1	3 199	12 370 000	3 900
Professional Examination – level 2	897	3 961 000	4 400

Source: FSO – Subject-based funding in professional education (aHBB)

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The year, 2018 may be seen as a transition period for the new subject-oriented funding regime. Only courses taken since 2017 and which do not receive any cantonal financial support are considered.

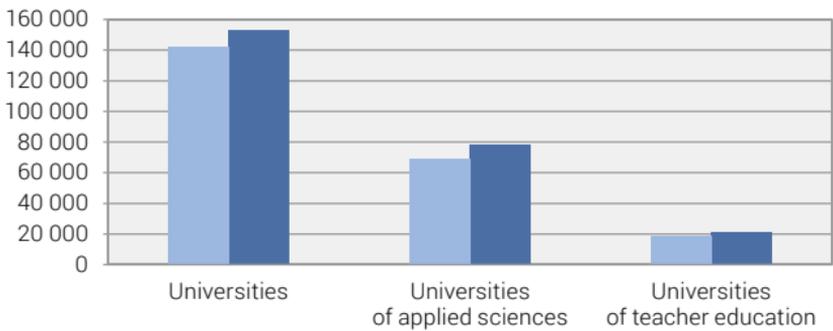
# Student numbers and costs in higher education

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 2018 152 858 students were enrolled, corresponding to a five-year increase of around 8%. Higher education costs rose by more than 11% over the same period, reaching a total of CHF 8.4 billion.

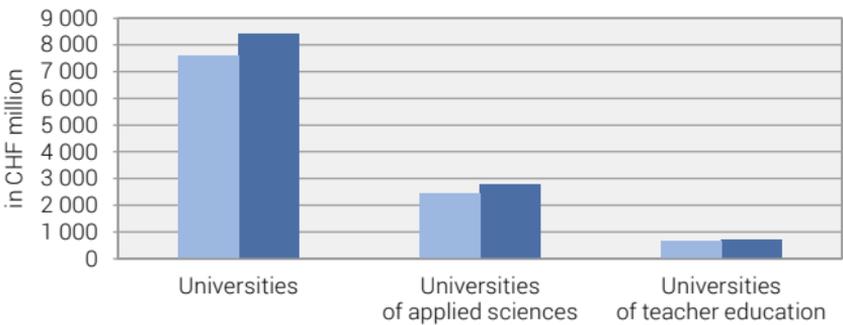
## Students and costs of higher education institutions, 2013 and 2018

G9

### Students



### Costs



2013 2018

Source: FSO – SHIS

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The growth of the universities of applied sciences (UAS) was even greater between 2013 and 2018 with over 78 000 students registered, i. e. an increase of almost 14%. At 14%, costs of UAS increased in comparison with the students almost as much and reached in excess of CHF 2.7 billion.

The greatest relative increase in the number of students, however, was seen by the universities of teacher education (UTE); with an increase of around 15% with more than 21 000 registrations in 2018. But annual growth stabilised compared with previous years. The total cost of this type of higher education institute is now greater than CHF 696 million, i. e. 12% more over the same period.

## Costs per student in higher education

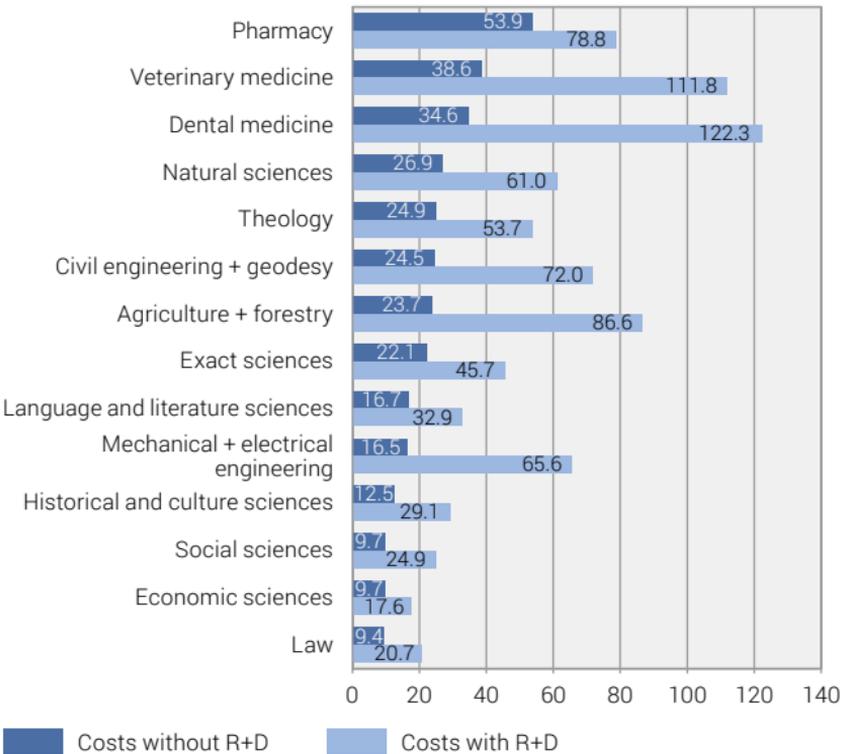
Cost indicators per student allow average costs to be compared between the different categories of study. On average, a university student costs between CHF 9700 and CHF 54 000. This indicator ranges from 13 900 to 48 500 per year in the universities of applied sciences and the universities of teacher 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 17 600, while the most expensive can cost more than CHF 122 000. In the universities of applied sciences, the minimum costs is around CHF 20 000, while the maximum cost is below CHF 71 000.

### Costs per student by field of study, 2018

Universities

G10

In CHF thousand per year



Source: FSO – SHIS

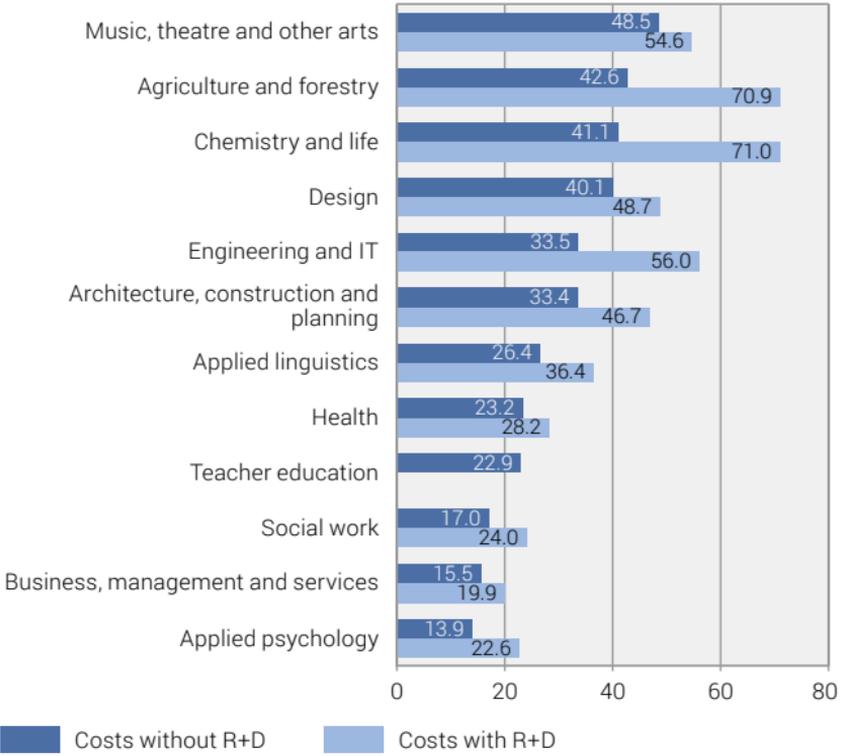
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# Costs per student by field of study, 2018

Universities of applied sciences and of teacher education

G11

In CHF thousand per year



Source: FSO – SHIS

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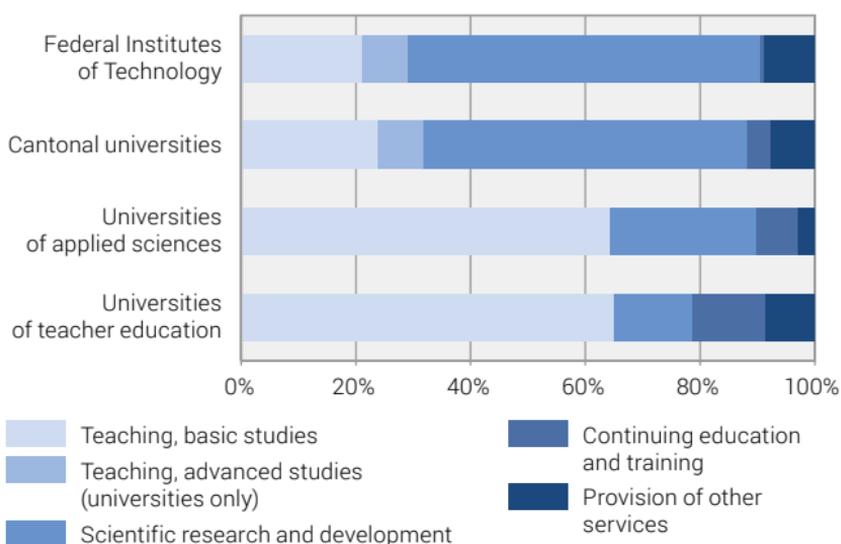
## Types of activities at higher education institutions

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 approximately 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 roughly 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 activities, 2018

G 12



Source: FSO – SHIS-FIN

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## Funding of higher education

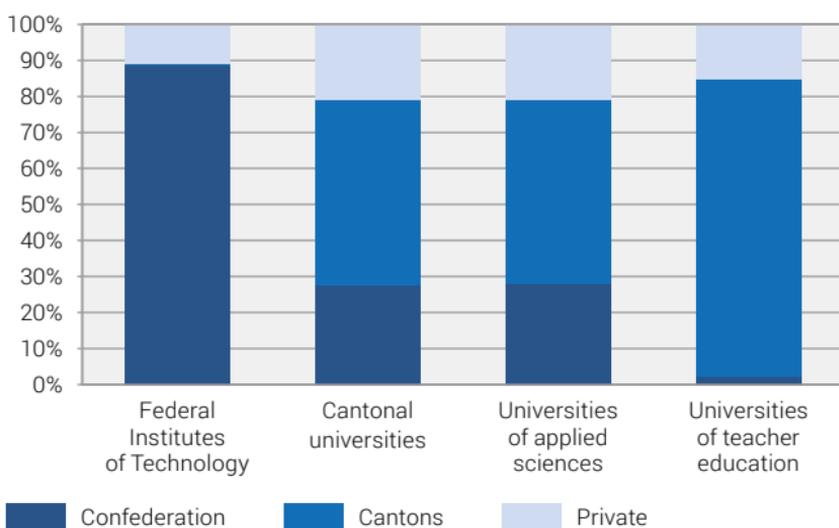
While the following data for UAS and UTE are also based on their cost calculations, the data source for the UNI is the expenditure statistic. This is because the cost accounting model of the UNI does not allow for detailed funding information.

Since 1999<sup>4</sup> the Confederation (28%) and cantons (52%) have been responsible for most funding of the cantonal universities. More than 88% 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 contributions<sup>5</sup> 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, 2018

G13



Source: FSO – SHIS-FIN

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<sup>4</sup> 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.

<sup>5</sup> 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 (SBFI) 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 grant-providing 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 university 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 dual-track VET programmes is used to this end.

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

## Abbreviations

<b>aHBB</b>	Subject-based funding in professional education
<b>EPF/ETH</b>	Federal Institute of Technology
<b>FDf</b>	Federal Department of Finance
<b>FS</b>	Financial Statistics
<b>FSO</b>	Federal Statistical Office
<b>ÖBA</b>	Public education expenditure
<b>R-D</b>	Research and development
<b>SBFI</b>	State Secretariat for Education, Research and Innovation
<b>SDL</b>	Student statistics (without universities)
<b>SHIS</b>	Swiss Higher Education Information System (studex: students, FIN: finance)
<b>STIP</b>	Cantonal grants and loans
<b>UAS</b>	Universities of Applied Sciences
<b>UTE</b>	Universities of Teacher Education
<b>UNI</b>	Universities and Federal Institutes of Technology

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