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Education Satellite Account, 2017–18, Uttarakhand

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Preface

It is a great pleasure to note that Uttarakhand Directorate of Economics and Statistics is releasing the report on its first ever Education Satellite Account (ESA) for 2017-18 under the Support for Statistical Strengthening Project. The account is not just the first for Uttarakhand but is also the first in the country. This pioneer work is sure to benefit the Government of Uttarakhand in framing the policies for one of the most crucial social sector, that is, education. The report will also set a benchmark for other such studies in future.

I take this opportunity to thank the study team of the National Council of Applied Economic Research (NCAER) for undertaking this study and for preparing the sub-national ESA by adopting the methodology which largely conforms to the one recommended by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for the preparation of national ESAs.

I appreciate the efforts of DES Officers particularly Shri Sushil Kumar, Director DES and Dr. Manoj Kumar Pant, Additional Director/Nodal Officer SSS for initiating this study. I congratulate the whole team of DES and NCAER for their efforts to complete the study during covid-19 period.

(Manisha Panwar)

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Poonam Gupta
Director General

Foreword

Uttarakhand has a long tradition of education and culture. Some of its schools and colleges are world famous and date back to nineteenth century. Uttarakhand's Doon School, Sherwood college, Oak Grove College are some of these, which have produced famous academicians, writers, politicians and several gold medalist Olympians. Most of these schools were established with a blend of British education system and Indian values and traditions.

The state has also been performing very well with respect to the educational outcomes. Its educational parameters have been better than the national averages since the inception of the state. However, in order to improve further, the state needs to frame strategic investment policies which requires a comprehensive knowledge of the financing system of education in the state. It is in this context that the present study, undertaken by the National Council of Applied Economic Research (NCAER) to prepare the state's first Education Satellite Account (ESA) assumes great significance. Based on the methodology delineated by the United Nations Educational, Scientific and Cultural Organization (UNESCO), this study adopts the internationally accepted framework of ESA tables and accounts. The ESA establishes the financial flows in the education domain across the five key dimensions, that is, the financing units, which provide financial resources to the system; producing units, which receive these resources and provide education to the individuals and communities; levels of education, which represent the steps towards advancing education; activities refer to the items on which expenditures are incurred; and economic transactions, which represent the flow of funds across these dimensions.

I take this opportunity to thank the Director of Education, Government of Uttarakhand and Ms. Manisha Panwar, Additional Chief Secretary, Department of Planning, Government of Uttarakhand for initiating this important study. In the same vein, I express my gratitude to Mr. Sushil Kumar, Director, Department of Planning and Dr Manoj Pant, Additional Chief Executive Officer, Department of Planning, Government of Uttarakhand, for the valuable insights and constant cooperation he offered the NCAER team through the course of the study.The study team is also particularly grateful to Mr. Amit Punetha, Department of Education, Directorate of Economics and Statistics, Government of Uttarakhand for his useful comments and suggestions

I also express my gratitude to all the members of the NCAER study team, including Dr Poonam Munjal, Team Leader; Dr. Charu Jain, Associate Fellow; Mr Asrar Alam, Senior Research Analyst; Ms Sundus Usmani, Ms. Sonal Jain, Ms Gargi Pal, Mr. Rahat Hassan, Research Analysts, for their efforts in completing the study amidst the challenge of the pandemic in the country, which has not only resulted in lockdowns and travel restrictions but also posed health issues for some of the team members and their families. I hope that the study will prove to be a useful contribution to the literature on education for the State of Uttarakhand, in particular, and the country, as a whole.

Poonam Gupta

New Delhi
September, 2021

Dr Poonam Gupta
Director General, **NCAER**

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With the largest youth population in the world and the largest working-age population, India is expected to reap the benefit of demographic dividend till 2055, according to United Nations Population Fund. This offers a massive growth potential for India. However, only having a favorable demographic age structure does not guarantee economic boost for the country, it requires a strategic investment in human development indicators like health, education and employment.

In making strategic investment policies, a comprehensive knowledge of the sector is very important. However, the problem arises due to the paucity of data and insufficient data collection system. A complete picture of the financing of the sector is not possible only by looking at budget statements or education surveys. Realizing the importance of understanding financing of education, government of Uttarakhand has decided to prepare the Education Satellite Account (ESA).

II. The Education Satellite Account - Methodology

The Education Satellite Account is an accounting framework designed to address the issues in education domain by organizing the related multiple data from different sources. The education account or ESA provides a framework to compile data on education financing in an economy and helps in gaining more insight into education. ESAs aim to provide the financial data for all levels of education, cover all sources of finances and data for types of educational providers in a systematic and comprehensible manner by using a structured methodology.

The ESA also identifies two types of economic agents which undergo the economic transactions in this domain. These agents are financing units and producing units. The ESA brings out the flow of money from (or between) the financing units to the producing units, flowing further to the activities carried out by the producing units through the various levels of education. The ultimate beneficiary of the education system is the student.

The broad objective of this report is to prepare ESA for Uttarakhand for the year 2017-18; and to develop the capacity of the DES officials for preparation of Education Satellite Account of the state.

III. State Profile

The state's economic growth, in terms of the year-on-year growth in its Gross State Domestic Product (GSDP) was recorded at 4.3 per cent for 2019-20, which is a deceleration from the growth of 8.0 per cent and 5.8 per cent achieved in 2017-18 and 2018-19, respectively.

The total road length of the state is 69,777 km, of which surfaced road length is 52,140 km. Despite a tough terrain and natural disasters, the state have connectivity to all the major places in the state. Uttarakhand has two domestic airports. One at Jolly Grant in Dehradun district and another at Pant Nagar in Udham Singh Nagar district.

With regard to education, Uttarakhand's educational parameters have been better than the national averages since its inception.

Some of the key education related characteristics of the state are as follows:

- According to state's first Human Development Report(HDR), commissioned by DES, overall literacy rate in Uttarakhand improved to 87.4 per cent in 2017 from 78.8 per cent in 2011.
- The overall state adult literacy rate (HDR, 2017) was estimated at 84.6 per cent with 91.8 per cent for men and 77.0 per cent for women.
- Of the total 4.95 million persons, in Uttarakhand, in the age-group 3 to 35 years, 91.3 per cent enrolled in an educational institution but only 48 per cent of the population of age 3 to 35 years, were "currently attending" the institution they had enrolled in.
- In the state, persons pursuing primary level of education attended either government-run institution (49.1 per cent) or private unaided institution (42.6 per cent). Similar is the case with "postgraduate and above" level of education, where more than 90 per cent attended government institution.
- Overall, out of 27,580 schools in Uttarakhand, as per Unified District Information System for Education (U-DISE) data for 2017-18, 19,757 schools (or 71.6 per cent) are government schools, another 1308 are private-aided schools and the remaining 6515 are private-unaided schools.
- As per 2017-18, there were a total of 23.5 lakh students in the state. Of these, 45.6 per cent studied in primary schools and 25.4 per cent in middle school.
- The total number of teachers in Uttarakhand schools were 1,57,116 and 15770 teachers were teaching in higher educational colleges/universities in 2017.
- The average pupil—teacher ratio at elementary school level is 14 and 15 at secondary/senior secondary level.
- According to the latest data, as per U-DISE, 2017-18, the state's Gross Enrolment Ratio (GER) for elementary education is 105.7 per cent and for secondary education is 86.5 per cent.
- Gross Enrolment Ratio for higher education among the youth of age-group 18-23 years in Uttarakhand is low at 36.3 per cent.
- The Net Enrolment Ratio (NER), a better indicator of education outcome as it is an age-specific enrolment ratio, stands at 95.5 per cent for elementary level and 52.9 per cent for secondary level.

IV. Key Findings of the study

IV.1. General Government Expenditure

- The state's total expenditure on education (taking both revenue and capital accounts), at Rs 8493.5 crore, is 19.9 per cent of total state government exchequer.
- In terms of per cent to State Gross Domestic Product (GSDP), the education expenditure works out to be 3.8 per cent for 2017-18.
- The share of revenue or recurring expenditure in total education expenditure is 98.2 per cent. This is over 95 per cent across all levels of education.
- The compilation of the government expenditure on "general education" from different sources suggests that the maximum expenditure is incurred on secondary education. With its share of 25.2 per cent in number of students enrolled in all general education categories, the share of expenditure allocated to this level of education is more than twice at 56.2 per cent.

Government Expenditure by producing units

- Of the total expenditure on education, taking "general" and "technical" together, the share of expenditure incurred on technical education is 10.0 per cent, at Rs 845.1 crore.
- Of the total government expenditure, 68.2 per cent is spent on public sector units and the remaining 31.8 per cent is allocated for private-aided units as grants or assistance.
- The percentage distribution of total expenditure by all types of producing units and levels of education reveals that the highest share of government expenditure (31.9 per cent) is towards those public sector units which impart elementary education.
- The expenditure incurred on public technical education is only 2.0 per cent of total government expenditure on education, but due to low enrolment rate in this level, the per-student expenditure works out to be significant at Rs 99,079.

Government Expenditure by activities

- At an aggregate level, staff cost accounts for 92.6 per cent of total expenditure. Goods and services or the recurrent expenditure accounts for another 5.3 per cent.
- The share of staff cost is the highest (95.8 per cent) in the case of secondary education.
- Goods and services, which includes teaching material and other recurrent expenditure, is around 10 per cent in the case of both elementary and tertiary education.

IV.2. Private Expenditure by Households

- The households' expenditure on education is estimated at Rs 5004.8 crore, after correcting for underestimation. Households spent 6.2 per cent of their total expenditure on education in 2017-18.
- For lower levels of education, the proportion of students enrolled is higher than proportion of expenditure incurred therein. For levels of education beyond "secondary", the proportion of students enrolled is much less than the proportion of expenditure incurred.

- On an average, the per-student per-annum cost of education attainment in the state is estimated at Rs 17,746.

Household Expenditure by producing units

- The total households' expenditure incurred on education in public units, maximum is incurred on the attainment of tertiary education. This proportion stands at 62.6 per cent, while percentage of students enrolled in tertiary education is only 24.9 percent of total enrolled in public units.
- Among private unaided units, most of the household expenditure is incurred in the attainment of school-level education. The households clearly prefer private unaided units for school education and public or public-aided units for higher education, that is, tertiary and technical.
- With respect to an average per-student expenditure, at an aggregate level, the expenditure incurred in attaining education from private-aided units (Rs 24,680.36) is 3.3 times the expenditure incurred in public units (Rs 7513.08). Further, average expenditure incurred in private-unaided units (Rs 30775.67) is 4.1 times the expenditure incurred in public units.

Household Expenditure by activities

- In the case of enrolment in public schools (for school levels of education), the course fee is only about 30 per cent of the total expenditure and the remaining substantial 70 per cent is spent on purchasing books, uniform, stationery, etc. from outside the school.
- In the case of enrolment in private schools, both aided and unaided, the reverse pattern is observed. The maximum expenditure is incurred on course fee, its share ranging from 60 to 75 per cent.
- For higher education, course fee is significant in all the three types of producing units, the highest being in the case of private unaided institutes, where share of course fee is as much as 84 per cent for tertiary education and 77.7 per cent for technical education.

IV.3. Other Private Expenditure

- The expenditure incurred by private unaided producing units, which also represents the expenditure incurred by private financing units (households and others), is estimated at Rs 3040 crore.
- In terms of average annual per-student expenditure, the school expenses increase from Rs 23,240 for primary level to Rs 60,357 for senior secondary level, showing an increase equivalent to 2.6 times.
- The average per-student expenditure, taking all levels together, is estimated at Rs 31,248.

- The total remuneration to teaching staff is way higher than that of non-teaching staff in all the categories of producing units. This proportion is lesser in the case of private unaided schools, as compared with that in public and private-aided schools.

IV.4. Total Education Expenditure

- The sum total of general government expenditure, private expenditure by households and other private expenditure on education domain is estimated at Rs 14,758 crore. This total expenditure on education works out to be 6.6 per cent of the state GDP.
- The distribution by financing units reveals that the majority, at 57.6 per cent, is on account of general government expenditure; private households contribute another 20.0 per cent; and the other private entities account for the remaining 22.5 per cent.
- The school levels of education receive a total of 82.3 per cent of total expenditure from all the financing units, put together. Higher education, that is, tertiary and technical, account for 16.6 per cent of the total expenditure.
- The distribution by activities shows that staff remuneration (both teaching and non-teaching taken together) accounts for a significant 70 per cent of total education expenditure. The payments made outside the educational institution, but related to education, accounts for another 13.2 per cent.

I. Introduction

I.1. Context of the study

According to the System of National Accounts (SNA, 2008), adopted by the United Nations Statistical Commission (UNSC):

"The main reason for developing a satellite account is to encompass all the detail for all sectors of interest as part of the standard system would simply overburden it and possibly distract attention from the main features of the accounts as a whole. Many elements shown in a satellite account are invisible in the central accounts. Either they are explicitly estimated in the making of the central accounts, but they are merged for presentation in more aggregated figures, or they are only implicit components of transactions which are estimated globally."

Education Satellite Account is a new concept for India and is not common in international context as well. The concept of Education Satellite Account (ESA) comes from the idea of estimating the value of human knowledge and abilities as an asset, through the Human Capital Satellite Account. The Taskforce on Measuring Human Capital was established by Conference of European Statisticians (CES) in 2013 and it was realised that the estimates of human capital can be initiated by developing a satellite account on education and training.

In addition to providing estimate of the total expenditure on education and training, the objective of such a satellite account is also to distinguish and provide breakdowns of the various expenditures, including the identification of the financing arrangements for these expenditures. This account extends the production boundary of the SNA only slightly by recognizing the output from the internal expenditures on education and training by employers.

The ESA also helps in monitoring the progress towards the Sustainable Development Goal Number 4[1] which aims to "Ensure inclusive and equitable quality education and promote life-long learning opportunities for all" and also towards the "Education 2030 Framework for Action", which serves as the overall guiding framework for the implementation of the Education 2030 agenda.

[1] *UNs **Sustainable Development Goals** are a set of 17 global goals set by the UNs general assembly as part of post 2015 development agenda for the year 2030. The development agenda was adopted by the 193 UNs general assembly member countries on 25 September 2015 titled "Transforming our world: the 2030 Agenda for Sustainable Development".*

Realising the importance of Education in the economy, Government of Uttarakhand has decided to prepare its first ever Education Satellite Account. This account will not just be the first for the state but also for the country.

I.2. Education Satellite Account or Education Account

India has the largest youth population in the world and is expected to reap the benefit of demographic dividend[2] till 2055. This provides a massive opportunity for India especially if it is able to provide quality education to its masses. Education has been the most critical aspect of nation-building. Education boosts economic growth, builds human resources, reduces poverty and increases income. United Nations Sustainable Goal (number 4) on education "ensures inclusive and equitable quality education and promotes lifelong learning opportunities for all". It also provides a set of targets to be followed by member countries to provide universal education by 2030. Education has a catalysing impact on every other sector in the economy by providing a skilled and knowledgeable workforce which in turn boosts productivity and efficiency. It is the best investment any country could make as it shapes the next generation in keeping with the goals of sustainable development. Education can especially have a multiplier effect if it is provided to girls as it can ensure that these girls have a healthier lifestyle, earn more income, their fertility rate is lower leading to robust menstrual health and can provide better health care for their whole family.

The education account ESA comes into the frame to provide data for education financing in a country and gain more insight into education. ESA includes all the sources of education most importantly households and external sources. National Education Account (NEA) aims to answer the following questions.

- Who is funding education?
- How much does education cost at each level?
- What is the average financial support and cost per child?
- What are the differences in education funding at different levels?
- What are the educational providers spending on?

I.3. Relevance of ESAs

Many countries have taken initiatives to fulfill quality education to its masses but most of the time very limited data are available on the education sector. ESAs aim to provide the financial data for

[2] ***Demographic Dividend*** *is a change in structure of population and the economic benefits that can occur when the country's working age population (15-64 years) exceed the non-working population (< 14 years and> 65 years) due to declining mortality rates and a proportionately younger population.*

all levels of education, covers all sources of finances and data for types of educational providers in a systematic and comprehensible manner by using a structured methodology. The key characteristics of an ESA are:

- It provides a report card on the financial health of education and is instrumental in policymaking.
- It presents the gaps, mismanagement and funding mechanism for the education sector.
- It can answer whether the resources allocated in education are being distributed equitably in an effective manner.
- If there is disparity in distribution of resources, it helps in identifying the groups which are disadvantaged so that policy makers can allocate funds accordingly, hence improving learning outcomes.

The role of the ESA is not only collecting data from various sources but also processing data using a common classification framework so that it can be presented in a consolidated way. It, by providing an overview of all financial flows within the education sector, can serve as a supplement to other statistical information and data like human resources, enrolment and infrastructure.

ESAs are comparable among different countries as they classify each dimension using internationally accepted frameworks and definitions while also providing flexibility as each country can modify the ESAs to reflect their national realities. Economic transactions are classified according to the System of National Accounts[3] and Government Finance Statistics Manual[4]. The levels of education are prepared according to the International Standard Classification of Educational (ISCED) Programme[5] and various national programmes of the country. This flexibility allows for international comparison of education systems and global monitoring by world institutions. It also allows economies to gain some perspective to develop an action plan to improve their education sector.

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*[3] The **System of National Accounts** 2008, (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity. The SNA describes a coherent, consistent and integrated set of macroeconomic accounts in the context of a set of internationally agreed concepts, definitions, classifications and accounting rules.*

*[4] The **Government Finance Statistics Manual** 2014 (GFSM 2014), are the internationally recognized statistical reporting framework, aimed at helping national authorities to strengthen their capacity to formulate fiscal policy and monitor fiscal developments. The GFSM 2014 supports the balance sheet approach for analyzing economic policy by bringing together stocks and flows in a transparent and consistent framework.*

*[5] **ISCED 2011** is the reference international classification for organizing education programmes and related qualifications by levels and fields prepared by UNESCO. The ISCED 2011 classification was adopted by the UNESCO General Conference at its 36th session in November 2011. Initially developed by UNESCO in the 1970s, and first revised in 1997, the ISCED classification serves as an instrument to compile and present education statistics both nationally and internationally. The framework is occasionally updated in order to better capture new developments in education systems worldwide.*

I.4. History of Education Account

Widely known as National Education Accounts (NEA), these were first prepared by France around 1974 and continued until 2013. France's NEA was institutionalized and closely followed the pattern of National accounts. At the International Level, UNESCO[6] through its three institutes IIEP[7], UIS[8], and IIEP Pôle de Dakar[9] have been instrumental in providing technical support to many countries in preparation for National Education Accounts. Recently Global Partnership for Education[10] (GPE) which is a platform for providing global aid to education worked with UIS, IIEP and IIEP Pôle de Dakar to prepare NEAs for eight of their partner countries from 2013-16. These three institutes provided the resources required for developing methodologies for data collection, reporting and production to prepare quality finance data appropriate for comparison with different countries. The countries were:

- Vietnam
- Nepal
- Uganda
- Senegal
- Guinée
- Lao PDR
- Côte d'Ivoire

[6] ***United Nations Educational, Scientific and Cultural Organization*** *(UNESCO) are a specialized agency of the United Nations. Its constitution was adopted by 20 countries at the London Conference in November 1945 and entered into effect on 4 November 1946. It currently has 195 member countries and 8 associate members with its headquarters in Paris, France.*

[7] ***International institute for educational planning (IIEP)*** *is a capacity development institute that specializes in educational policy, planning and management. Its mission is to strengthen the capacity of countries to plan and manage their education systems in order to reach national and international development goals. IIEP develops its sustainable capacity through training, research, technical assistance, networking and information sharing.*

[8] ***The UNESCO Institute for Statistics*** *(UIS) is the statistical office of UNESCO and is the UN depository for global statistics in the fields of education, science and technology, culture and communication. The UIS was established in 1999. It was created to improve UNESCO's statistical programme and to develop and deliver the timely, accurate and policy-relevant statistics needed in today's increasingly complex and rapidly changing social, political and economic environments. The UIS is based in Montreal, Canada.*

[9] ***IIEP*** *Pôle de Dakar is a platform for expertise in education policy analysis. The Pôle works with ministries in charge of education and offers technical expertise to all African countries. The services offered by the Pôle de Dakar are organized upon request from governments or development partners as part of an overall approach to national capacity building. It was founded in 2001 to contribute to UNESCO's support for the development of effective, feasible, equitable and endogenous education policies in Africa.*

[10] ***Global Partnership for education (GPE)*** *formed in 2002 is an international organization that aims to provide worldwide quality educational opportunities to low and middle income developing countries. It currently has 65 member countries and is a multi-stakeholder partnership and funding platform solely dedicated to providing education to children in developing countries. It works with developing countries, international donors, organizations, civil society, teacher's organization, the private sector and foundations. It has a global vision for education to provide universal education to all children by 2030.*

UNESCO's International Institute for Education Planning too prepared NEAs for five countries namely Kenya, Madagascar, Dominican Republic, Benin and Mauritania by modifying some of the classifications and scope of the domain of France's NEAs. Attempts were also made by the countries to set up regional NEAs by Benin and Nigeria that prepared state-level NEAs for four of its states at the school level.

There were a lot of national initiatives taken by countries using their own resources to prepare NEAs. Thailand is one of the most recent countries to prepare its NEA in 2014 covering the years of 2008-10 using the methodology of national health accounts. This project was funded by quality learning foundation, a public organization under the Prime Minister's office that was supervised by a group of researchers from Thammasat University and the University of Thai Chamber of Commerce.

TABLE I.1: COUNTRIES WITH EDUCATION SATELLITE ACCOUNT

Country	Years Covered
Côte d'Ivoire	2006-15
Guinée	2006-15
Lao PDR	2009-14
Nepal	2009-15
Senegal	2009-14
Uganda	2008-14
Vietnam	2009-13
Zimbabwe	2012-14
Thailand	2008-13
France*	1974-2013
Turkey	2001-02
Benin	1993-96
Philippines	1991-98
Morocco	2003-04
Kenya	2006-10
Madagascar	1990-95
Mauritania	1995-99
Dominican Republic	1996-2005
El Salvador	2006-09
Nigeria (Regional/State Level NEA)	
Kano	School year 2005-06
Zamfara	School year 2006-07
Bauchi	School year 2010-11 to 2011-12
Sokoto	School year 2010-11 to 2011-12

Source: NCAER compilation

Philippines used the methodology of National education expenditure accounts (NEXA) in 2001 to cover the years from 1991-98. This initiative was taken by the National Statistical Cooperation Board, now part of the Philippines Statistics Authority, for preparing detailed information on education financing in the Philippines.

Morocco, Nigeria and El Salvador took assistance from the United States Agency for International Development, RTI International and other creative associations to prepare their NEAs. The exercise of setting up an NEA has not been renewed in the featured countries except France where NEAs are institutionalized. NEAs preparation is a technically complex process and it is difficult to reproduce it without external support. The expertise available at international and national levels is limited to a small number of institutions, and one objective of this methodology is to disseminate the methods on a larger scale. The difficulty of mobilizing a large amount of information from a wide range of sources represents an important factor in the development of NEAs. Limited data coverage due to lack of well-defined and common methodologies makes it very difficult to mobilize data on households, private providers and external funding, as well as on income and expenditures at school level.

I.5. Experience of other countries

Vietnam began its NEA exercise in 2013 partnering with UNESCO institute of statistics covering the years 2009-13. It based its NEAs by considering only two out of three sources of education funding namely government and households. Vietnam's main study was focused on household expenditure and it used actual expenditure data to prepare its NEAs. Although Vietnam did not produce a complete set of NEAs but followed the classifications and framework of NEAs thus leaving scope for preparation of a complete NEA. Vietnam's NEA used only accessible sources of finance thus it could not cover external contribution to education financing due to inconsistent data sources, limited data coverage and availability of sources in different formats and classifications.

Vietnam's NEA report covered expenditure from public and private providers of education; expenditure from all ministries and departments funding education; expenditure for all levels of education ranging from preprimary to higher education including vocational education; and expenditure on education and training by central and local governments.

The key findings suggest that Vietnam is one of the countries that spend considerably on education and the government expenditure on education has been rising nominally especially after 2012 when it showcased a massive rise in education expenditure. Vietnam education sector follows a decentralized pattern thus most of the expenditure on preprimary, primary and upper secondary levels of education are allocated by the local governments making them the highest contributor to education in Vietnam.

Uganda was one of the countries of the GPE project that partnered with UIS, IIEP and IIEP Pôle de Dakar to prepare a comprehensive NEA that includes all sources of finance covering the years

2008-14. Uganda NEAs was based on the same methodology as Vietnam using internationally accepted system of accounts, classifications and definitions. Government expenditure in Uganda has been steadily increasing since 2009-10. Households emerged as the largest contributors to education financing in Uganda providing more than half of the total education expenditure.

The Ugandan government is unique from different countries in its effort to spend a higher proportion (7%) on technical and vocational education and training (TVET) and its public institutions receive a vast majority of funding for TVET. Preprimary education funding in Uganda is entirely through private sources.

Nepal was one of the two partner countries of the GPE project that partnered with UIS, IIEP and IIEP Pôle de Dakar to prepare a comprehensive NEA that includes all sources of finance covering the years 2009-15. Nepalese education account had three main sources of financing namely government, households and external sources. Households contributed half of the education expenditure in Nepal and combined with the government covered 90 per cent of education expenditure. Unlike Vietnam and Uganda which follow a decentralized funding pattern, most of the government funding is financed by the ministry of education along with local and provincial governments. The government spending contributes to the basic primary level of education and the share of government spending declines with an increase in the level of education. Private institutions and households bear most of the expenses at higher and tertiary levels of education.

Lao PDR prepared its NEA report with IIEP covering the years 2009-14 focusing its study on public and external sources of finance while acknowledging the presence of community and faith-based organizations, households and private organizations. Public sources of finance constituted more than two-thirds of total education expenditure along with some internally generated sources of funding. The annual public expenditure has been increasing consistently reflecting Lao's increasing commitment to education. LAO PDR similar to Uganda and Vietnam decentralized its funding to the Provincial Education and Sports Service (PESS) that contributed to almost 82 per cent of education expenditure while the education and sports ministry were responsible for the formulation and implementation of the national budget. Primary education remained the top priority for the country and received the lion's share of government expenditure while non-formal education received the least funding along with vocational, tertiary and preprimary educational levels.

Turkey in association with World Bank conducted its NEA exercise in 2004-05 covering the year 2001-02, closely following the methodology of national health accounts(NHA). Turkey spends almost 7 per cent of its GDP on education mostly financed by government through its ministry of national education (MONE), which formed a part of the central government, followed closely by private sources dominated by households.

In the present study, the education account for the state of Uttarakhand is prepared on similar lines as done in the countries listed above, following the UNESCO's "Methodology of national education accounts", to the best possible extent.

I.6. Objectives of the study

The broad objectives of the study are twofold.

- To prepare the ESA for Uttarakhand for the year 2017-18.
- To develop the capacity of the DES officials for preparation of ESA of the state.

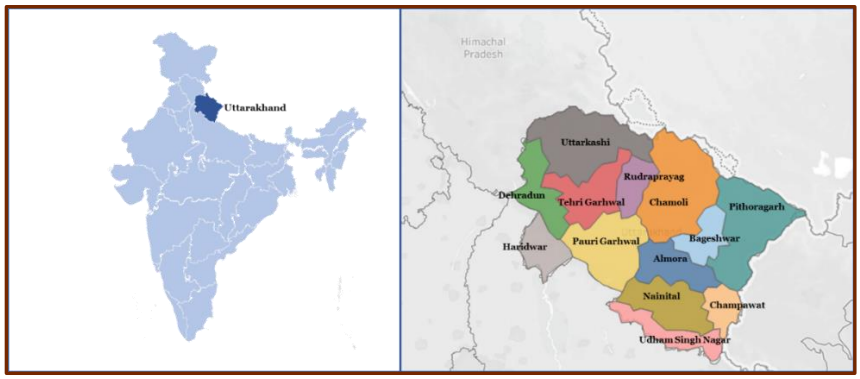
I.7. Structure of the Report

The report is structured as follows. This chapter presented the context of the study, brief note on ESA, its relevance to the policy makers, literature review and broad objectives of the study. Chapter 2 provides the demographic, economic and infrastructural profile of the state. Chapter 3 gives the state education profile covering the basic educational characteristics and also the physical educational infrastructure in the state. Chapter 4 provides the methodological details of ESA, along with some key findings from the primary as well as secondary data sources. Chapter 5 presents the ESA tables and accounts in detail. The concluding chapter summarises the key results of the ESA, including the contribution of education to the economy.

II. Devabhumi: The State at a Glance

Uttarakhand, formerly Uttaranchal, is a state in the northern part of India. It is often referred to as the "Land of the Gods" due to the many holy Hindu temples and pilgrimage centres found throughout the state. Known for its natural beauty of the Himalayas, the Bhabhar and the Terai, the state was carved out of the Himalayan and adjoining northwestern districts of Uttar Pradesh on 9 November 2000, becoming the 27th state of the Republic of India. It borders the Tibet Autonomous Region on the north; the Mahakali Zone of the Far-Western Region, Nepal on the east; and the Indian states of Uttar Pradesh to the south and Himachal Pradesh to the northwest. The state is divided into two divisions, Kumaon and Garhwal, with a total of 13 districts. The provisional capital of Uttarakhand is Dehradun, which is also a railhead and the largest city in the region. The high court of the state is in Nainital.

Figure II. 1: Map of Uttarakhand



***Source**: NCAER's depiction using tableau*

II.1. Geography

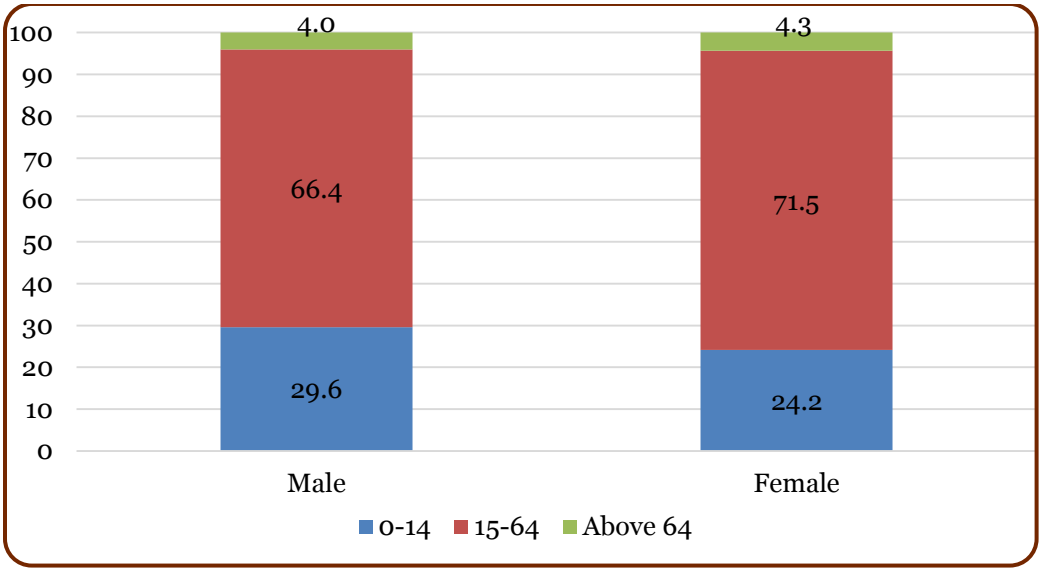
The state covers a total area of 53,483 square kilometres (km²) of which 46035 km² are hills. Due to its varied geography, the state has been divided into two, namely Garhwal (western half) and Kumaon (eastern half). The Garhwal division consists of seven districts and the Kumaon division has six districts. The state is characterized by glaciers at the highest elevations and sub-tropical forests at the lowest elevations.

II.2. Demographic Profile

As per Census 2011, the total population of Uttarakhand was 100.86 lakhs. Out of the total population, about 70 per cent resided in rural areas and the remaining in urban areas. The sex ratio stood at 963 females per 1000 males, higher than the national average of 943 females per 1000 males. The decadal growth rate of population in Uttarakhand was 18.81 per cent. The population density of the state was estimated at 189 persons per sq. km which is lower than the national average of 368 persons per sq. km. The literacy rate was 79.6 per cent in the state.

More recent data on demographical details may be obtained from the survey conducted by National Sample Survey Office (NSSO) during 2017-18 on "Household Social Consumption: Education and Health". Fig. II.2 shows the distribution of population by broad age group and gender, for the year 2017-18. The proportion of young children in the age group of 0-14 years for males and females is estimated at 29.6 per cent and 24.2 per cent respectively. About 66.4 per cent of the total population is found to be in the age group of 15-64 years, whereas only 4 per cent fall in the age group of above 64 years of age. In the age group of 15-64, the female population is about 5 percentage points more than the male counterpart.

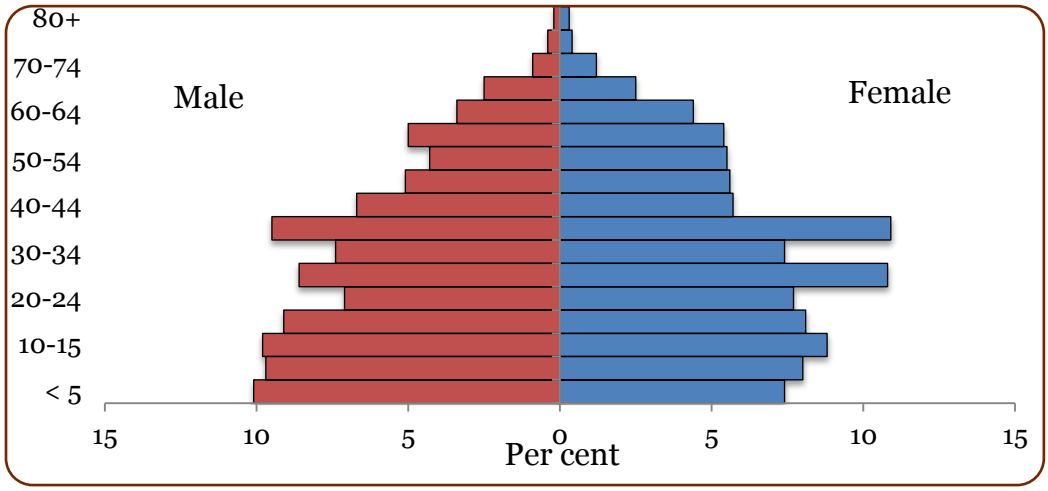
Figure II. 2: Distribution of Population by broad Age category and Gender (%)



***Source**: "Household Social Consumption: Education and health", NSSO, 2017-18.*

Figure II.3 shows the age structure of the state population presented in the form of population pyramid for the year 2017-18. An examination of this population pyramid reveals a noticeable larger young male population (0-24 years) as compared to female population of the same age group. On the other hand, looking at the older population (45 years and above), the female population is found to be larger when compared to the male population of the same age group.

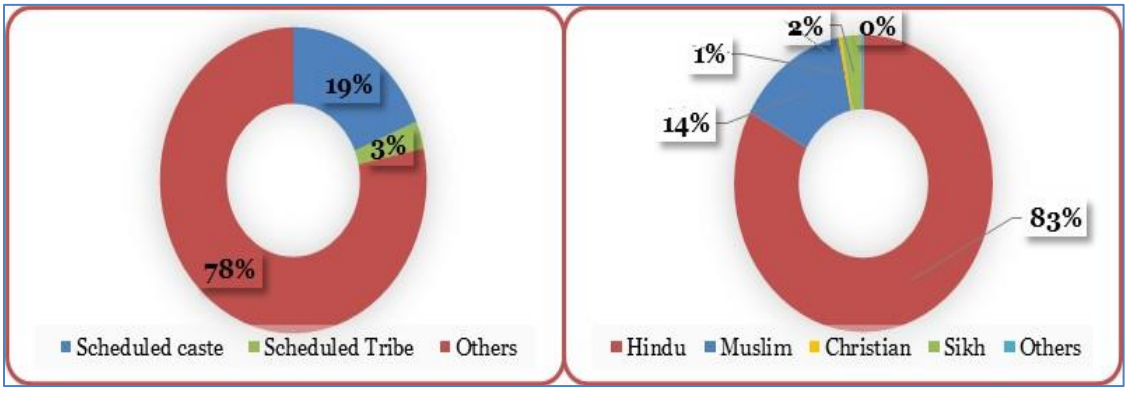
Figure II. 3: Population pyramid (%)



***Source**: "Household Social Consumption: Education and Health", NSSO, 2017-18.*

Figure II.4 shows percentage distribution of population by social group and religion. As per census 2011, the scheduled tribe and scheduled caste constitute 2.89 and 18.76 per cent of population in the state. Looking at the religion wise population distribution, Hindu religion accounts for 83 per cent of the population, followed by Muslims, which account for 13.9 per cent, and the rest of other religions sum up around 3 per cent of the total population.

Figure II. 4: Distribution of Population by broad Social Group and Religion (%)



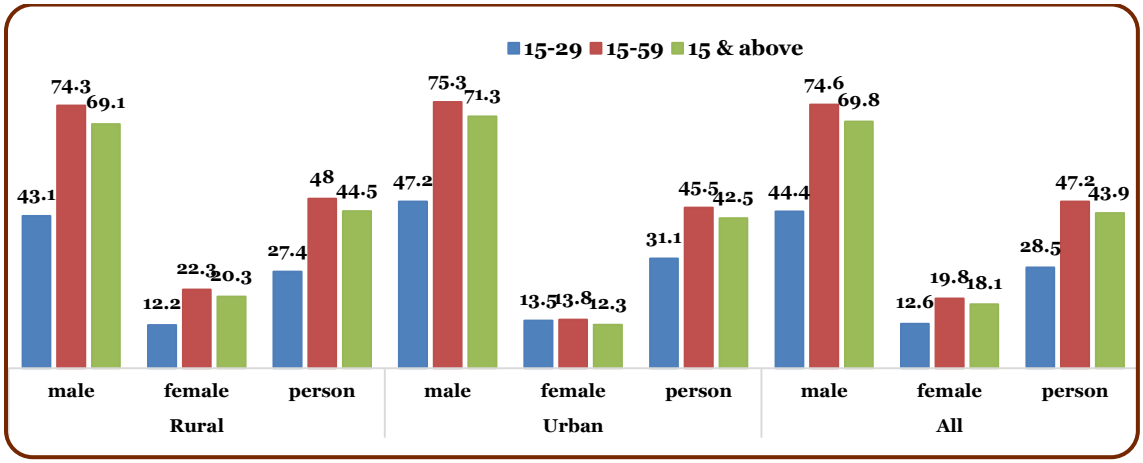
***Source**: "Household Social Consumption: Education and health", NSSO, 2017-18.*

II.3. Employment

Figure II.5 shows the labour force participation rate by broad age categories, gender and regions for the period of 2017-18. According to the latest annual employment-unemployment survey, "Periodic Labour Force Survey (PLFS)", conducted by National Sample Survey Office, during

2018-19, in rural areas was 27.4 per cent, 48.0 per cent and 44.5 per cent of the total population belonging to the age group of 15-29 years, 15-59 years and for 15 years and above respectively were either currently employed or seeking employment. The same was estimated to be 31.1 per cent, 45.5 per cent and 42.5 per cent for the respective age group mentioned above in the case of urban areas. The labour force participation rate for age 15 years and above was found to be 69.1 per cent for males and 20.3 per cent for females in the rural areas. The same is estimated at 71.3 per cent for males and 12.3 per cent for females in the urban areas.

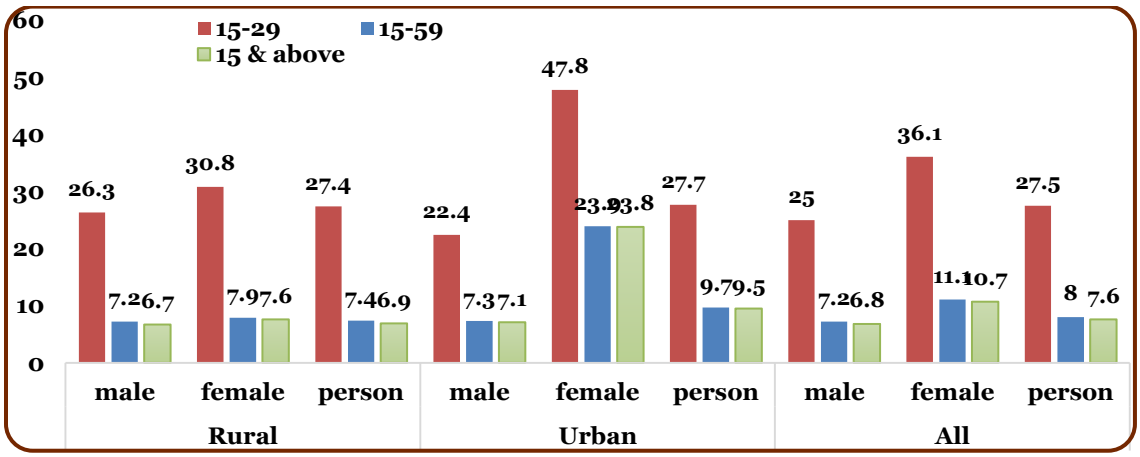
Figure II. 5: Labour force participation rate (LFPR) by Region and Gender



***Source**: "Periodic Labour Force Survey", NSSO, 2018-19.*

The unemployment rate in the state was found to be around 7.6 per cent for 15 years and above age group, for 2018-19. The unemployment rate for men was 6.8 and for women the same is reported as 10.7 per cent in the state. In the age group of 15 and above the proportion was 6.9 and 9.5 per cent for rural and urban areas in the state. The unemployment rate among the population within the age group of 15-29 years was found to be higher as compared to other age groups (Figure II.6).

Figure II. 6: Unemployment Rate (UR) by Region and Gender



***Source**: "Periodic Labour Force Survey", NSSO, 2018-19.*

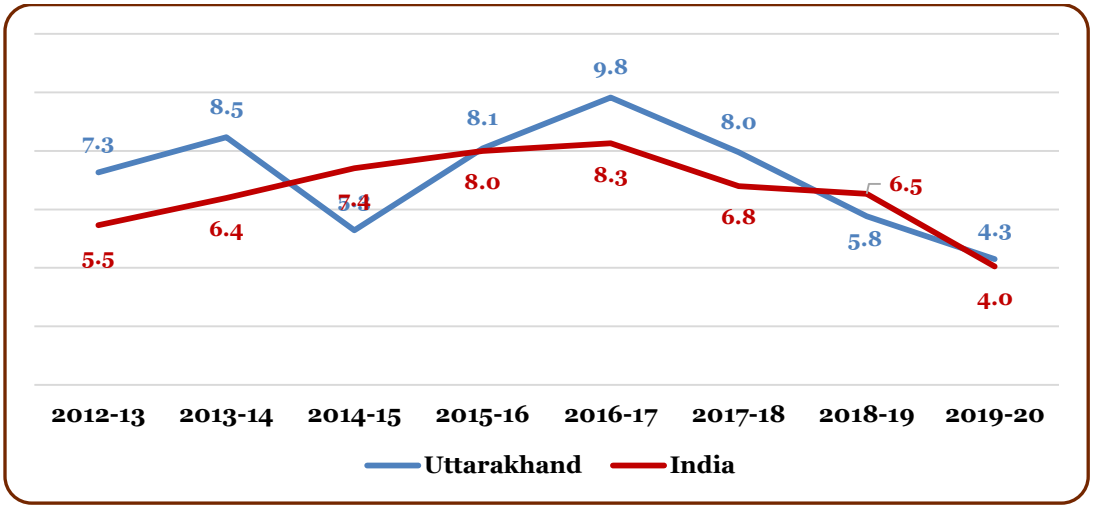
II.4. Economic Profile

Uttarakhand is a Himalayan State and has vast forest and water resources. The primary sectors in the State include fruits and medicinal products, whereas the other main crops grown in the State are rice, soya, oilseeds, and pulses. There is a huge and rapidly growing food processing industry in the State. Owing to its huge forest cover, minor forest produce is also a source of livelihood for people in the State. Since it is located in the Himalayan ranges, the State is also known for its diverse flora and fauna. It is also a major producer of sports equipment and gears due to the availability of high-quality timber while hydroelectric generation accounts for the other major industry in the State.

The State's economic growth, in terms of the year-on-year growth in its Gross State Domestic Product (GSDP) was recorded at 4.3 per cent for 2019-20, which is a deceleration from the growth of 8.0 per cent and 5.8 per cent achieved in 2017-18 and 2018-19, respectively. However, this is in tandem with the national level decelerated growth of 4.0 percent in 2019-20, as compared with 6.8 percent and 6.5 percent in 2017-18 and 2018-19 respectively.

Of the three major sectors, industry accounted for about 45.3 per cent of the GSDP in 2019-20, remaining at about the same share value since the base year of 2011-12. Another 46.9 per cent growth was witnessed in the services sector while the remaining 7.8 per cent was contributed by the agriculture and allied sector. The share of agriculture in the total GSDP declined from 12.3 per cent in 2011-12 to 7.8 per cent in 2019-20, which translates to an equivalent gain in the share of the services sector.

Figure II. 7: Growth in Gross State Domestic Product (Constant Prices)



***Source**: Central Statistics Office.*

II.5. Infrastructure profile

Given the topography of Uttarakhand, roads are crucial for the people living in hills as they depend on plains for their livelihood needs. The total road length of the state is 69,777 km, of which surfaced road length is 52,140 km. Despite a tough terrain and natural disasters, the state has connectivity to all the major places in the state. The state also has railway connectivity to all the major parts of the state. The state had 345 km of rail routes in 2013-14 and is focusing on increasing the share of railways in cargo and passenger transport. Initiatives have been undertaken to start monorails at Dehradun, Haridwar and Rishikesh on the inter-city linkage routes. The main railway stations in the state are Dehradun, Haridwar, Roorkee, Kotdwar, Kashipur, Udham Singh Nagar, Haldwani, Ramnagar and Kathgodam. As over 86 per cent of Uttarakhand's terrain consists of hills, railway services are very limited in the state and are largely confined to the plains. Rail, being the cheapest mode of transport, is most popular.

Uttarakhand has two domestic airports. One at Jolly Grant in Dehradun district and another at Pant Nagar in Udham Singh Nagar district. In 2013-14, the passenger traffic of Jolly Grant airport was 3,06,832, whereas the traffic for Pant Nagar airport was 114. In 2014-15, Jolly Grant airport recorded passenger traffic of 3,78,646 passengers, whereas, the aircraft movement and cargo handled by the airport was 4,810 and 43 tonnes respectively.

There are three other smaller airfields in Uttarakhand which are either not operational as yet or operational but not open for common flights. These are Gauchar airport on Badrinath highway in Chamoli district, which is operational but not open for common flights. Bharkot airport lies on the way of Uttarkashi-Tehri road and is not currently open for domestic flights. The third, Naini

Saini Airport is situated in Pithoragarh. This airport is currently operated by the state government but it is proposed to be upgraded to facilitate operations of ATR-42 type of aircraft.

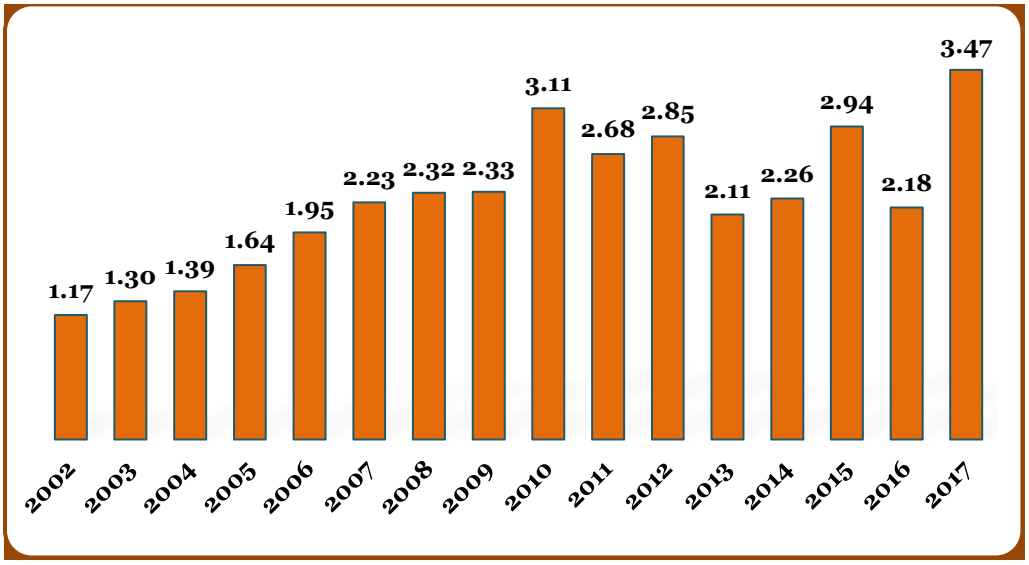
II.6. Tourism Profile

The state of Uttarakhand is naturally blessed with scenic locations, pleasant climatic conditions, lakes, snow-capped mountain peaks, glaciers and origins of rivers, all of which are ideal as tourist destinations. Besides, the state is famous for pilgrimage and religious places, which is why it is also called Devabhumi. The four dhams get their sacred waters as four streams - Yamuna (in Yamunotri), Bhagirathi (Gangotri), Mandakini (in Kedarnath) and Alaknanda (in Badrinath).

With respect to its economic aspect, Uttarakhand's tourism sector plays a vital role in the state's overall economic growth as well as in achieving its development goals. According to the latest estimates of number of tourists in tourist destinations, there were a total of about 3.7 crore domestic tourist arrivals in the state in 2018. This is almost three times the number of arrivals in 2002, which stood at 1.2 crore. Effectively, the domestic tourist arrivals have grown at a cumulative annual growth rate (CAGR) of 7.5 per cent in the last decade and a half. The tourist inflow in Uttarakhand is expected to reach about 6.7 crore by 2026.

Meanwhile, foreign tourist arrivals stood at 1.5 lakh in 2018. Figure II.8 presents the time series of total domestic tourist arrivals in the state over the years.

Figure II. 8: Total Domestic Tourist Arrivals (in crore)



***Source**: Uttarakhand Economic Survey, 2018-19.*

The state plans to expand the tourism sector by adding some niche themes, like water sports, eco-tourism, heli-skiing, spiritual yoga tourism, etc., as envisaged in the new Tourism Policy 2018.

The economic value of the tourism sector is also realized through the estimation of its contribution to state's GDP and employment. According to the latest Tourism Satellite Account for the state, recently prepared for 2018-19, the direct shares of tourism in GDP and employment are estimated at 2.96 per cent and 11.77 per cent respectively. On taking indirect contribution also into account, which arises due to the linkages of tourism sectors with a number of other sectors of the economy, these shares go up to 6.59 per cent and 26.87 per cent respectively.

III. State Education Profile

Uttarakhand is home to some of India's best schools and training institutes. Uttarakhand's educational parameters have been better than the national averages since its inception. This chapter discusses the education profile of the state of Uttarakhand and also of its 13 districts.

III.1. Literacy Rate

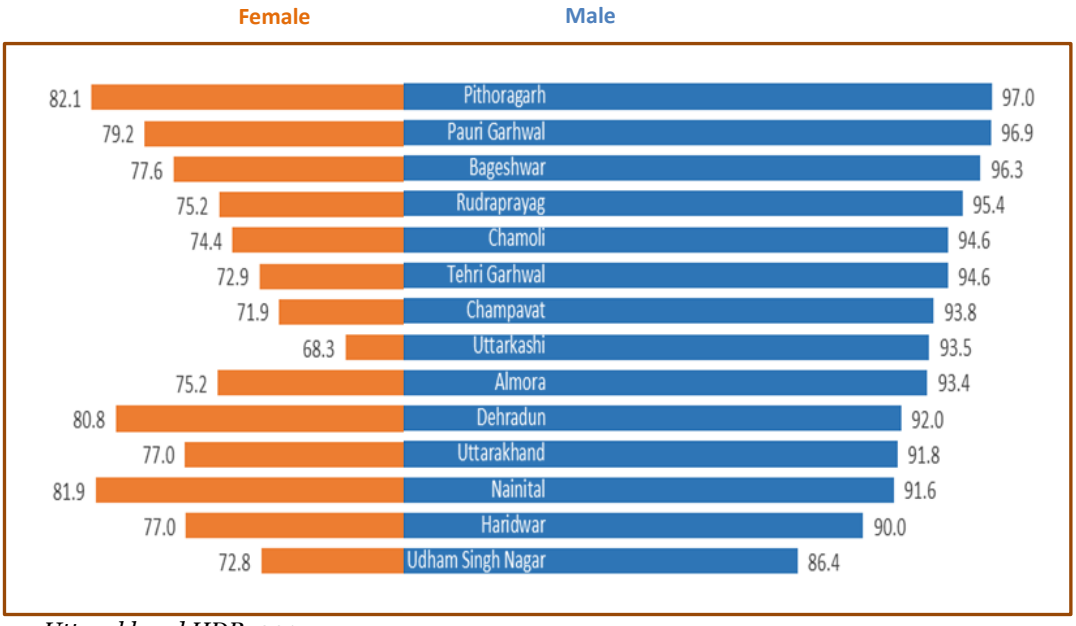
Literacy is critical to economic development as well as individual and community well-being. It enhances the ability of an individual to learn and acquire new skills. Literacy is the first step towards freedom, towards liberation from social and economic constraints. It is the prerequisite for development, both individual and collective. It reduces poverty and inequality, creates wealth and helps to eradicate problems of nutrition and public health (Audrey Azoulay, Director General UNESCO).

According to Census 2011, the literacy rate in Uttarakhand was 78.8 per cent which is 4.8 percentage points higher than the national average at 74.0 per cent. These rates were 87.4 per cent for men and 70.0 per cent for women in the state. These are significant improvement from the Census 2001 rates, which were 83.3 per cent for men, 59.6 per cent for women and 71.6 per cent overall.

The more recent numbers are provided in the state's first Human Development Report (HDR), commissioned by DES, Uttarakhand. The report estimates the state's overall literacy rate to improve to 87.4 per cent in 2017. Similarly, male literacy rate increased to 93.2 per cent and female rate to 81.7 per cent, with the gender gap reducing from 23.7 percentage points in 2001 to 17.4 in 2011 and 11.5 in 2017.

The HDR 2017 also presents the adult literacy rate for the state and for its 13 districts (Fig. III.1). The overall state adult literacy rate was estimated at 84.6 per cent with 91.8 per cent for men and 77.0 per cent for women. Among the districts, this is the highest at 89.5 per cent for the hill district of Pithoragarh, which occupies the top position with respect to both male and female adult literacy rates as well. Udham Singh Nagar recorded the lowest male literacy rate, at 86.4 per cent while Uttarkashi has the lowest female literacy rate, at 68.3 per cent. The gender gap is the least for Nainital and the highest for Uttarkashi. Amongst the plain districts, Dehradun has the highest adult literacy rate and minimum gender gap.

Figure III. 1: Adult Literacy Rates across districts (%)



***qSource**: Uttarakhand HDR, 2017.*

Notably, the youth literacy rate (for population belonging to 15 to 25 years age group) for the state is as high as 98.9 per cent. Among the districts, it is the highest for the hill district of Bageshwar (99.9 per cent) with complete youth literacy among men. This is followed by Pithoragarh with an average youth literacy rate of 99.8 per cent and 100 per cent for women.

For most of the other key educational parameters, unit level data of the survey conducted by NSSO has been analysed. This survey, called "Household Social Consumption: Education", was conducted during 2017-18, as part of the 75th round of NSS surveys.

III.2. Enrolment and Attendance

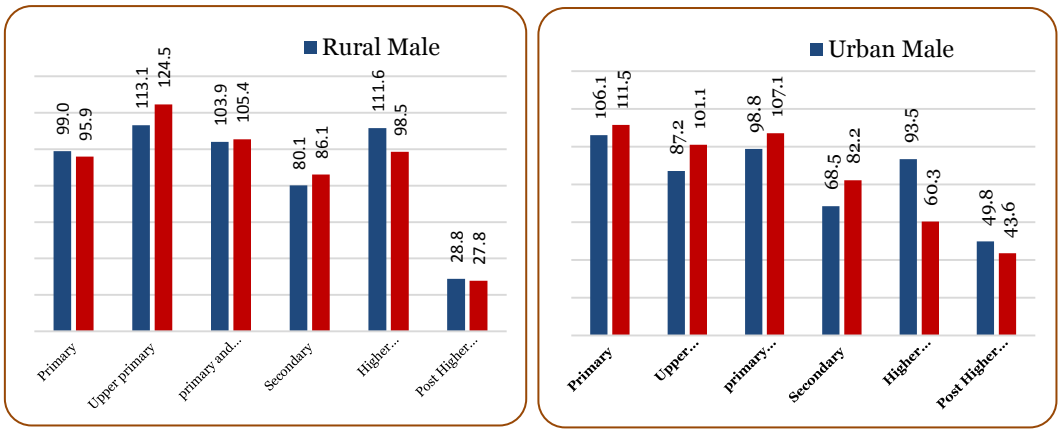
While the data on enrolment are also available from the Unified District Information System for Education (U-DISE) for school education and All India Survey of Higher Education (AISHE) and these sources have been extensively used in the preparation of this report, but this section presents the status of current attendance, reasons for not attending educational institution, etc. apart from enrolment. The data for this section has been sourced from the NSS 75th round survey.

The NSS data suggests that the Gross Attendance Ratio (GAR) for the state is the highest for "upper primary" in the case of rural sector and for "primary" in urban sector, both

reflecting the attainment of required universal access (Fig. III.2). GAR is the ratio of the number of persons attending in the level of education, regardless of age, to the number persons in the corresponding official age group. It, therefore, indicates the extent of attendance, whether the students belong to the official age group or not.

As suggests, the GAR value exceeds 100 per cent for some levels of education, which means that the state's education system is able to accommodate all of its school-age population but there is some extent of over-age or under-age attendance for that level of education.

Figure III. 2: Gross Attendance Ratios (%)

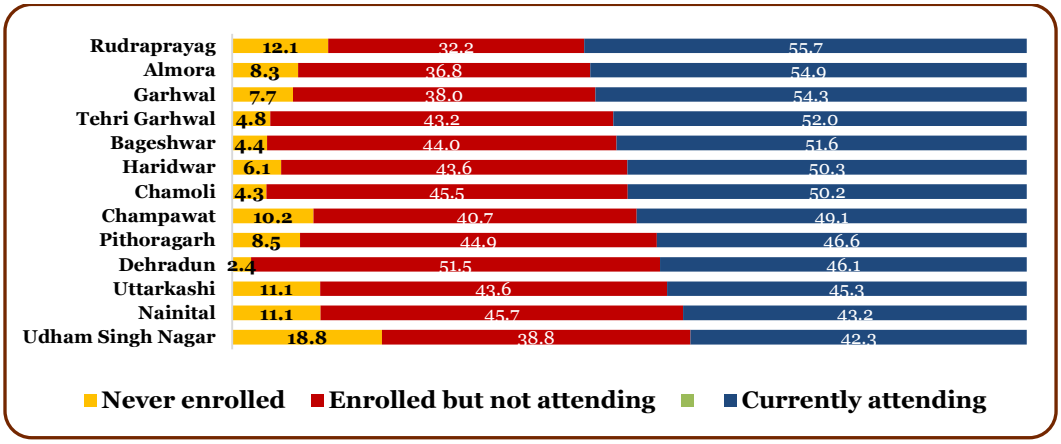


***Source**: "Household Social Consumption: Education", NSSO, 2017-18.*

Of the total 4.95 million persons, in Uttarakhand, in the age-group 3 to 35 years, 91.3 percent enrolled in an educational institution. Of these enrolled, about half were not attending the institution during the reference year. This means that only 48 per cent of the population of age group 3 to 35 years, were "currently attending" the institution they had enrolled in.

Among the districts, the highest proportion of population in the specified age group, who are currently attending an educational institution, is in Rudraprayag while the lowest proportion is reported in Udham Singh Nagar. Dehradun reported the highest proportion of enrolled persons, but this is coupled with the highest proportion of non-attendance too (Figure III.3).

Figure III. 3: Enrolment and Current attendance (%)

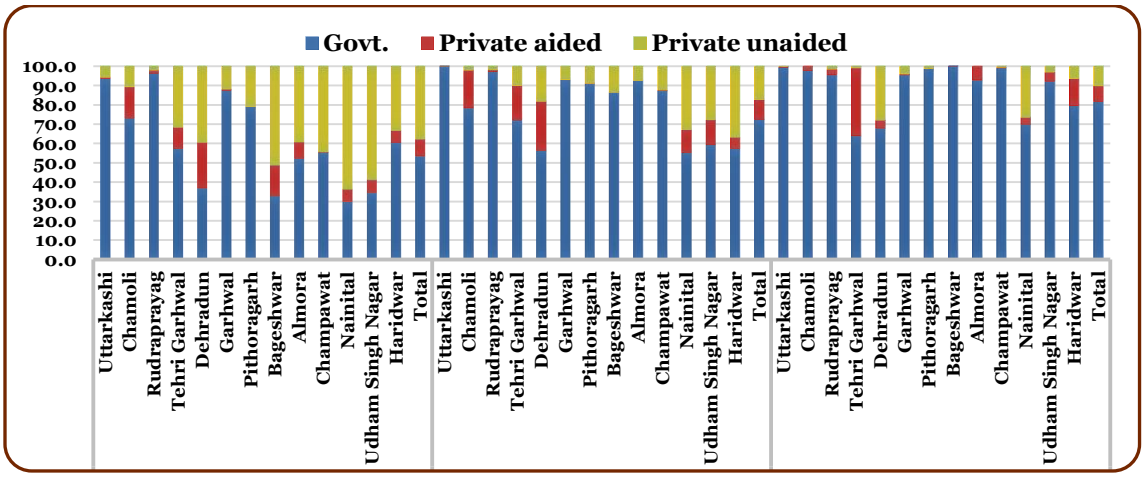


***Source**: "Household Social Consumption: Education", NSSO, 2017-18*

Out of the total 2.38 million persons currently attending an educational institution, about two-third belonged to the level of education till the upper-primary, with 4.5 per cent attending pre-primary, 36.2 per cent attending primary and 22.3 per cent attending upper-primary. This combined proportion is the highest for Bageshwar district (82.4 per cent) and the lowest for Almora (50.5 per cent). Almora, on the other hand, reported the highest proportion of persons attending level of education of graduation and above.

For details on status of current attendance, refer to Appendix Table A.5.
Further, a majority of students attended the government institution across all levels of education, except pre-primary, which is mostly provided by private unaided institution. The percent distribution of students across broad levels of education by type of institution attended is presented in Figure III.4. The details are presented in Appendix Table A6.

Figure III. 4: Per cent distribution of students enrolled by type of educational institutes



***Source**: "Household Social Consumption: Education", NSSO, 2017-18*

The key findings are as follows.

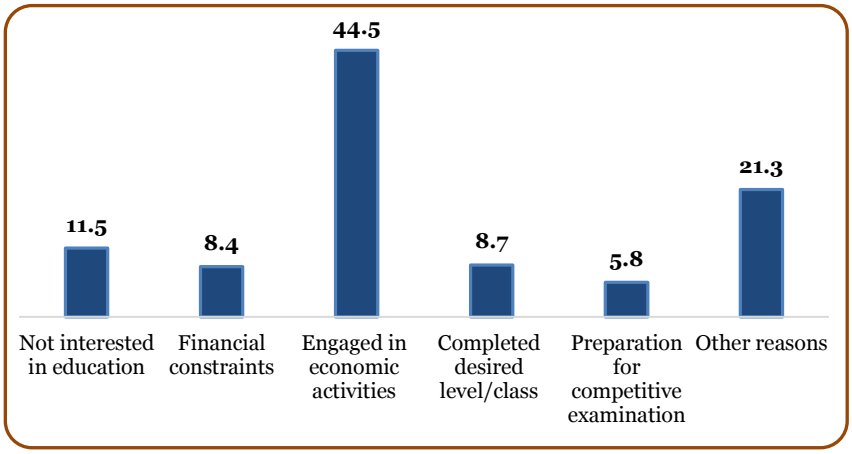
For the state, as a whole, persons pursuing primary level of education attended either government-run (49.1 per cent) or private unaided (42.6 per cent) institutions. However, in Rudraprayag, almost entire primary level students attended government institutions whereas in Nainital and Bageshwar, this proportion is only 23.8 per cent and 28.7 per cent respectively. For "graduate" level of education, more than 80 per cent of students attended government institutions in all the districts.

Similar is the case with "postgraduate and above" level of education, where more than 90 percent attended government institutions. However, a few exceptions include Uttarkashi where 40.5 per cent attended government and the rest attended private unaided institutions; Dehradun where 66.4 per cent attended government, 25.7 per cent attended private unaided institutions and the remaining 7.9 per cent attended private aided institutions; and Haridwar where 67.4 per cent attended government, 15.1 per cent attended private unaided and 17.5 per cent attended private aided institutions.

III.3. Reasons for not attending the educational institution

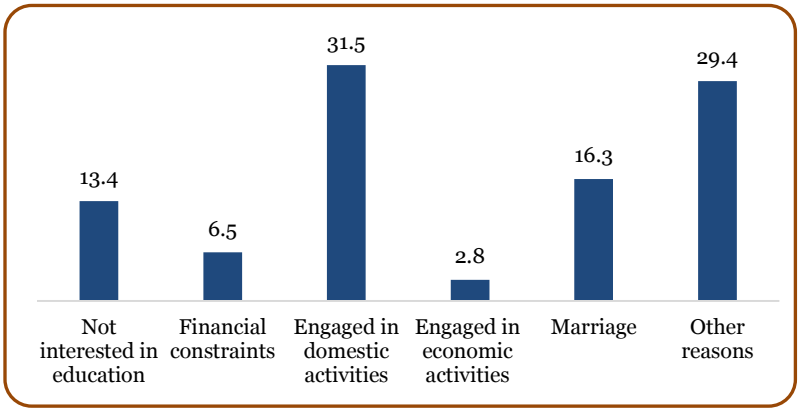
The data also reports the reasons for not attending the educational institutions. These reasons vary across gender. It is found that most of the males, who had ever enrolled or had never enrolled, were currently not attending because of their engagement in economic activities (Fig. III.5). The share of such males is 44.5 per cent. Another 11.5 per cent were not interested in education and 21.3 per cent reported other reasons which were not specified.

Figure III. 5: Reasons for not attending (Males)



***Source**: "Household Social Consumption: Education", NSSO, 2017-18.*

Figure III. 6: Reasons for not attending (Females)



***Source**: "Household Social Consumption: Education", NSSO, 2017-18*

On the other hand, of the total females not attending the educational institution, 31.5 per cent did not attend as they were engaged in domestic duties and another 16.3 per cent reported getting married as the major reason (Fig. III.6). A significant 29.4 per cent also reported other reasons, which were not specified.

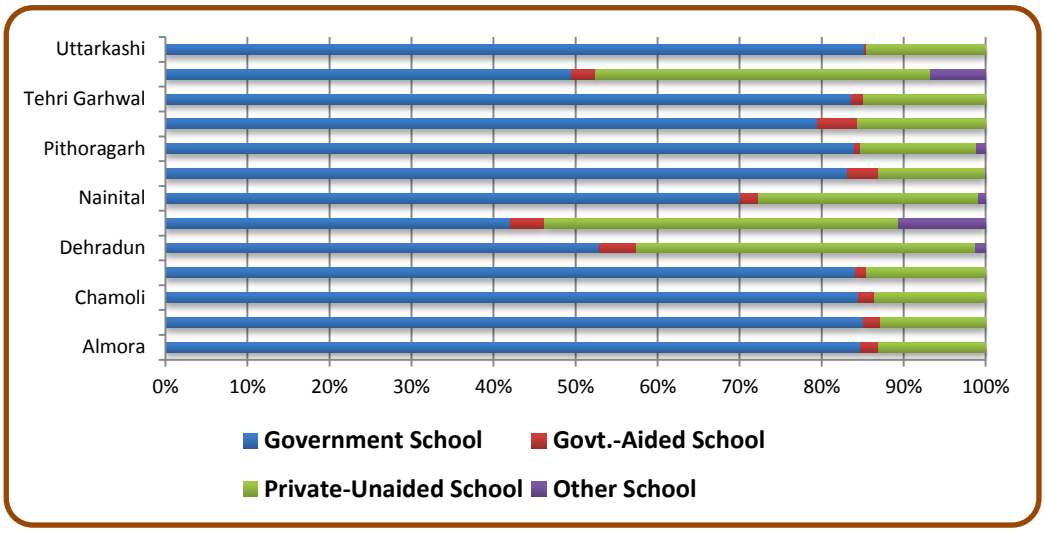
III.4. Educational Infrastructure

Schools

In Uttarakhand, Department of Education has a unified structure covering basic education, secondary education and state council of education research and training. Uttarakhand board of school education and exams fall under the umbrella of Directorate of School Education. Education has a solid foundation in the state right from the time of its inception. The language of instruction in the schools is mainly English or Hindi. Uttarakhand school education is primarily divided into government and private schools/institutes. These include primary schools, high schools, inter-college, degree colleges and technical institutions. The schools are mainly affiliated to CBSE, CISCE or the government syllabus recommended by the Department of Education of the Uttarakhand Government. Beside government schools, there are private schools which are aided by government but run by its own management. These are known as government-aided schools or also referred as private-aided schools.

Overall, out of 23,295 schools in Uttarakhand, as per U-DISE data for 2019-20, 16,741 schools (or 71.8 per cent) are government schools, another 617 are private-aided schools and the remaining 5467 are private-unaided schools. Figure III.7 presents the district-wise per cent distribution of schools by types of schools.

Figure III. 7: District-wise Per cent distribution of schools by types of schools



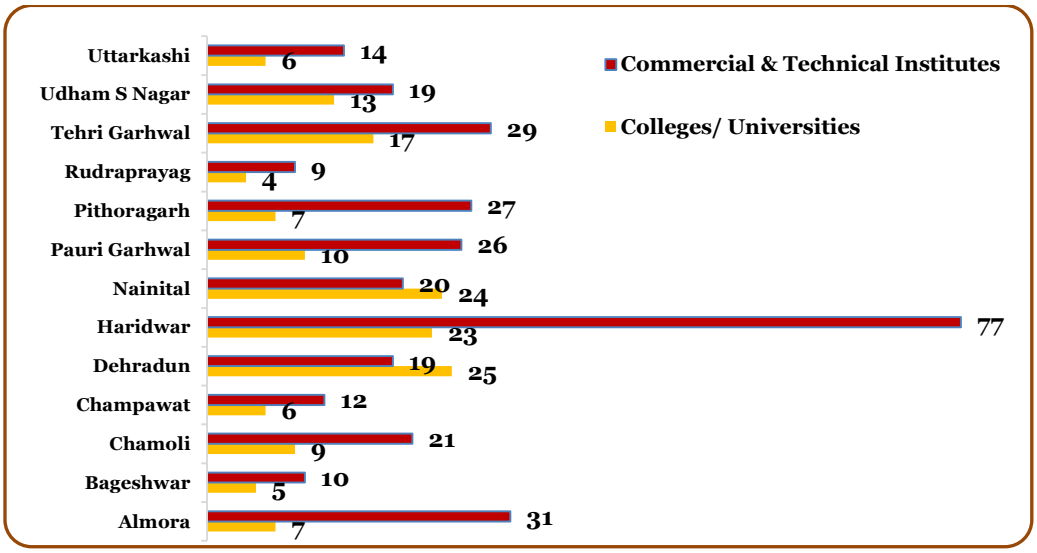
***Source**: U-DISE, 2019-20.*

Figure III.7 suggests that government schools account for the majority of schools in most of the districts. Private-aided schools are the lowest in number in all the districts. The few districts with reasonable proportion of private unaided schools are Nainital, with 26.8 per cent of total schools; and Hardwar, Udham Singh Nagar and Dehradun, with more than 40 per cent of schools being private unaided.

Uttarakhand is emerging as an education hub. In addition to schools, the state has many universities, including one Central University (Hemvati Nandan Bahuguna Garhwal University); seven Institutes of National Importance (Indian Institute of Technology, Roorkee; National Institute of Technology, Uttarakhand; Indian Institute of Management, Kashipur; All India Institute of Medical Sciences, Rishikesh; Forest Research Institute, Dehradun; Indira Gandhi National Forest Academy, Dehradun; Indian Military Academy, Dehradun); and a number of state public and private Universities.

According to the District Profile Reports, Dehradun had the highest number of centers of higher education colleges/universities, followed by Nainital and Haridwar in 2017-18 (Fig. III.8). In addition to regular degree colleges, the state also owns 314 commercial and technical institutes including, industrial training institutes, polytechnics, low learning institutes and district learning institutes. Among all, Haridwar has maximum number of commercial and technical institutes (77). It has sound infrastructure on IT and engineering institutes/ colleges. This is followed by Almora, Tehri Garhwal and Pithoragarh with 31, 29 and 27 institutes respectively. For Uttarakhand educational profile refer to Appendix Table A1.

Figure III. 8: District-wise Number of Higher Educational Institutions

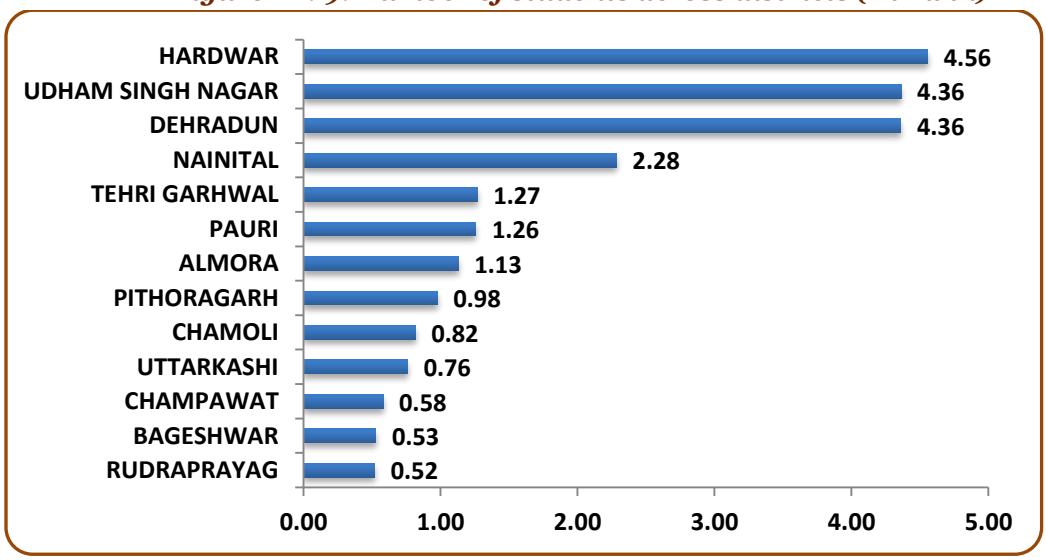


***Source**: District Profile Reports for latest available years from Uttarakhand Education District Portal, GOI*

Students

As per 2019-20, there were a total of 23.4 lakh students in the state. Of these, 45.4 per cent studied in primary schools and 25.3 per cent in middle school. The districts, which accounted for more than half the students were Hardwar, Udham Singh Nagar and Dehradun. Figure III.9 presents the number of students across districts.

Figure III. 9: Number of students across districts (In Lakh)



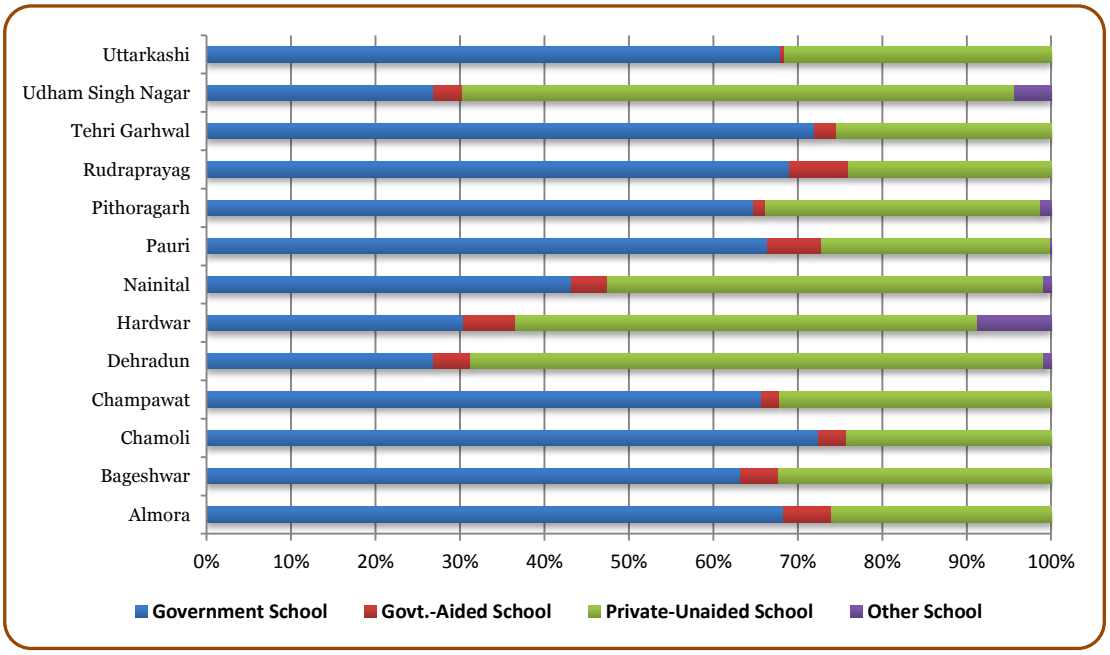
***Source**: U-DISE, 2019-20*

Teachers

The total numbers of teachers in Uttarakhand schools were 1,22,182 in 2019-20 with 43.13 percent taught in primary level of education, 19.33 percent in middle level and 14.72 percent in secondary level of education. About 15770 teachers were teaching in higher educational colleges/universities (AISHE-2017-18). Refer Annexure Table A3 for district-wise details.

Figure III.10 presents the district-wise percent distribution of teachers teaching in government, private-aided and private unaided schools.

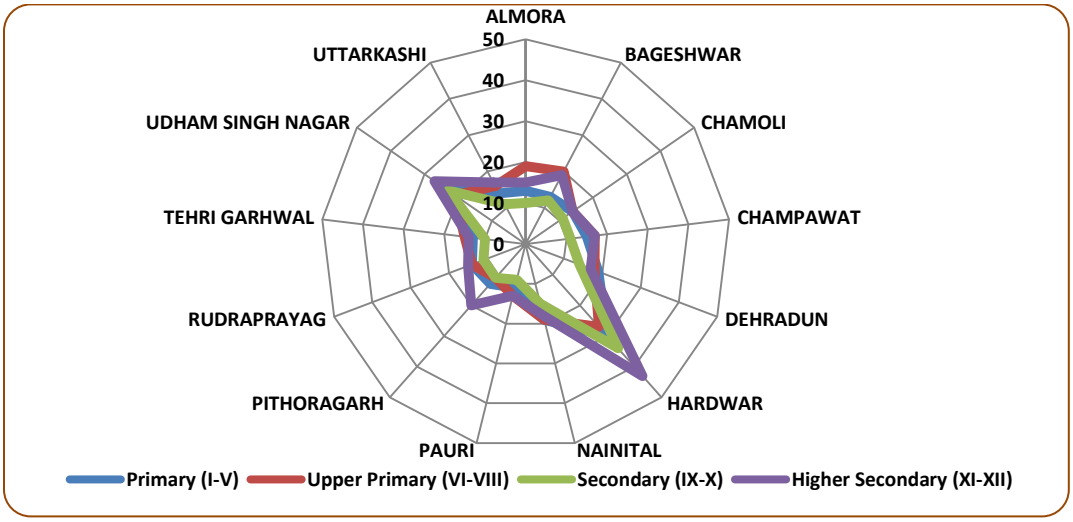
Figure III. 10: District-wise Per cent distribution of teachers by types of schools



***Source**: U-DISE, 2019-20.*

The average pupil-teacher ratio at primary school level is 19 and 14 at secondary/senior secondary level. When seen across the types of schools, the highest pupil-teacher ratio is recorded in the case of government aided secondary/senior secondary schools, at 57.62. The district with the highest ratio is Hardwar, at 30 and 43 at primary and higher secondary level respectively (Figure III.11).

Figure III. 11: District-wise Pupil Teacher Ratio in Schools



***Source**: U-DISE – 2019-20*

III.5. State achievement on SDG Targets

The Sustainable Development Goals (SDG) are the ambitious development goals adopted by 193 countries of the United Nations General Assembly. The SDGs are a list of 17 goals and 169 related targets to be achieved by 2030. India is indisputably making a good progress towards achieving these goals, with the collective efforts of her states. State and local governments play a pivotal role in implementing development programmes by almost spending 70 per cent more than the central governments. State governments are, therefore, essential stakeholders if the SDGs are to be realised in India, as well as globally[11].

The SDG Goal 4 is the Education Goal. It aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"[12]. This goal is made up of seven outcome targets and three means of implementation. These are broadly listed as follows.

Outcome Targets

1. Universal primary and secondary education
2. Early childhood development and universal pre-primary education
3. Equal success to technical/vocational and higher education
4. Relevant skills for decent work
5. Gender equality and inclusion
6. Universal Youth Literacy
7. Education for sustainable development and global citizenship

Means of Implementation

8. Effective learning environments

[11] *SDG India, Index and Dashboard 2019-20, NITI Aayog.*
[12] *https://sdg4education2030.org/the-goal*

9. Expansion of Scholarships
10. Sufficient Supply of Teachers and educators

In the context of India and its states, the indicators for some of these targets are still under development. These are targets 7 and 9. This section presents the overall progress that the state of Uttarakhand has made towards achieving rest of the targets.

Universal primary and secondary education

This target requires ensuring that, by 2030, all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. This means that there is a provision of 12 years of free, publicly-funded, inclusive, equitable, quality primary and secondary education, of which at least nine years are compulsory, leading to relevant learning outcomes, ensured for all, without discrimination.

The performance on this target is measured by the Gross Enrolment Ratio (GER) at elementary and secondary education levels. GER is the number of students enrolled in a level of education, regardless of age, as per cent to children eligible for that level of education. According to the latest data, as per Unified District Information System for Education (U-DISE), 2019-20, the state's GER for elementary education is 108.5 per cent and for secondary education is 91.4 per cent. The Net Enrolment Ratio (NER), a better indicator of education outcome as it is the age-specific enrolment ratio, stands at 97.3 for elementary level and 55.3 per cent for secondary level. The NER in elementary education for boys is 96.3 per cent and for girls is higher at 98.3 per cent. Similarly, NER in secondary education for boys is 54.5 per cent and for girls is 56.3 per cent.

Early childhood development and universal pre-primary education

This requires ensuring that, by 2030, all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education. This implies that there is a provision of at least one year of free and compulsory quality pre-primary education, to be delivered by well-trained educators, as well as that of early childhood development and care.

The U-DISE data does not provide data on GER in pre-primary level of education. Hence, this estimate is sourced from the 75th Round of National Sample Survey on "Household Social Consumption on Education". This data reveals that the state is far way to go in achieving this target as only 6.9 per cent of boys, eligible for pre-primary education, are enrolled in this level and a tad higher (12.8 per cent) proportion of girls attend pre-primary level of education. In all, GER for pre-primary level of education stands at 9.7 per cent.

Equal success to technical/ vocational and higher education

By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including higher education. This also means that it is imperative to reduce barriers to skills development and technical and vocational education and training (TVET), starting from the secondary level, as well as to tertiary education, including university, and to provide lifelong learning opportunities for youth and adults. The provision of tertiary education should be made progressively free, in line with existing international agreements.

As per the All India Survey on Higher Education, AISHE – 2017-18 of the Ministry of Human Resource Development, Department of Higher Education, GER for higher education among the youth of age-group 18-23 years in Uttarakhand is low at 36.3 per cent. However, this is notably higher than the all-India average of 25.8 per cent.

Relevant skills for decent work

This target requires to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship, by 2030.

For Uttarakhand, the GER in technical or professional education, as per NSS 75th round survey is 11.8 per cent. Besides, of the total youth population of age group 18 to 23 years, only 3.4 per cent have either received or are receiving vocational training. This proportion, among the adult population belonging to 24 to 59 years of age-group, is lower at 1.3 per cent.

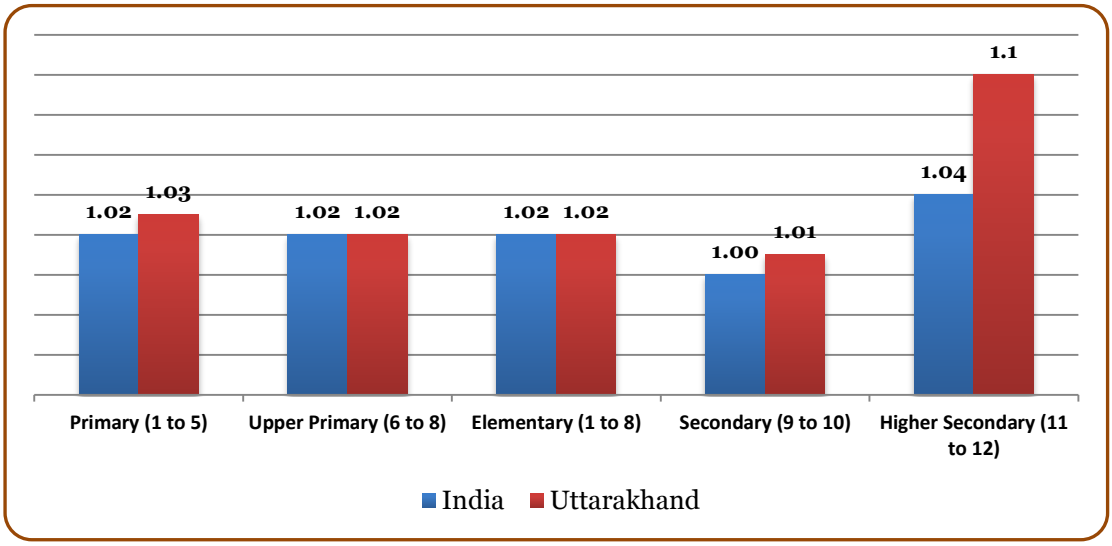
Gender equality and inclusion

By 2030, gender disparities in education should be eliminated and equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous people and children in vulnerable situations should be ensured.

The progress on achieving this target is measured through the Gender Parity Index (GPI). This is a socio-economic index to measure the relative access to education of males and females. It is the ratio of number of females enrolled in a given level of education to number of males enrolled in that level of education. The GPI less than one indicates gender parity in favour of males whereas that equal to one signifies equality between males and females.

The state performs well on gender parity at senior secondary and higher education as compared to primary level. However, the GPI is higher than national-level GPI for primary and higher secondary level of education (Fig. III.12). At higher secondary level the state's GPI is fairly higher that national lever GPI , at 1.10.

Figure III. 12: Gender Parity Index - Uttarakhand and India



***Source**: U-DISE – 2019-20*

Universal Youth Literacy

By 2030, all youth and a substantial proportion of adults, both men and women, should achieve literacy and numeracy. The progress on this goal is measured through the overall literacy rate and that of youth in the age-group of 15 to 24 years. The youth literacy rate for Uttarakhand is impressive at 98.9 per cent while the overall literacy rate (for age 7 years and above) is 87.6 per cent. Male overall literacy rate is higher at 94.3 per cent whereas female literacy rate is 80.7 per cent.

Effective learning environments

This is one of the means of implementation of SDG goals. This relates to building and upgrading education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

The U-DISE data provides information on a number of indicators which indicate the facilities provided by the schools. Some of these are as follows.

TABLE III.1: PER CENT OF SCHOOLS HAVING REQUISITE FACILITIES

	Uttarakhand				India			
Facility	Primary	Upper Primary	Secondary	Higher Secondary	Primary	Upper Primary	Secondary	Higher Secondary
Building Available	60.17	23.38	5.71	10.73	51.64	29.49	9.98	8.89
Boundary Wall Available	60.55	25.91	4.65	8.89	43.62	32.35	11.92	12.11
Electricity Available	56.20	24.98	6.32	12.50	46.78	30.89	11.65	10.68
Functional Girls Toilet	58.89	24.26	5.81	11.04	50.73	29.96	10.18	9.13
Functional Toilet Facility	59.39	23.82	5.75	11.05	50.85	29.82	10.15	9.18
Functional Toilet and Urinal	42.20	27.82	8.82	21.16	48.66	29.37	11.24	10.73
Drinking Water	59.71	23.54	5.78	10.97	51.07	29.68	10.18	9.06
Water Purifier	42.45	24.88	9.30	23.37	35.10	31.13	16.68	17.08
Hand Wash Facility	59.92	23.65	5.68	10.74	50.86	29.50	10.27	9.36
Complete Medical Check Up	56.62	23.51	7.43	12.44	49.82	31.20	10.32	8.66
With Ramp	69.74	19.23	4.05	6.98	52.58	29.43	9.21	8.78
With three WASH (Water, sanitation, healthcare) facilities	58.97	24.05	5.72	11.26	50.11	29.81	10.41	9.67

***Source**: U-DISE – 2019-20*

Sufficient Supply of Teachers and educators

This implementation target is meant to ensure that, by 2030, there will be a substantial increase in the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small-island developing states.

According to the U-DISE data 2019-20, of the total teachers teaching in elementary and secondary levels of education in Uttarakhand, 87 per cent and 96.1 per cent have professional qualifications, respectively. Both of these correspond with the national averages of 81.5 per cent and 86.8 per cent respectively.

Table III.2. Comparative assessment of Uttarakhand and all-India on SDG indicators

	Uttarakhand	India
GER - Pre-primary - Boys	6.9	10.2
GER - Pre-primary - Girls	12.8	9.5
GER - Pre-primary - Total	9.7	9.9
GER - Elementary - Boys	92.3	91.4
GER - Elementary - Girls	93.2	95.9
GER - Elementary - Total	92.7	93.5
GER - Secondary - Boys	83.9	78.5
GER - Secondary - Girls	84.9	80.3
GER - Secondary - Total	84.4	79.3
GER - Higher Education	36.3	25.8
GER - Technical Education	11.8	8.9
Literacy rate among youth	98.9	94.3
Male Literacy rate	94.3	84.7
Female Literacy Rate	80.7	70.3
% Teachers with professional qualification - Elem. Edu	87.0	81.5
% schools with requisite number of teachers- Elem. Edu	81.6	65.6
% Teachers with professional qualification - Sec. Edu	96.1	86.8

***Source**: U-DISE – 2019-20*

IV. Concepts and Definitions

This chapter presents the concepts and definitions of terminology used in the preparation of Education Satellite Account for the state of Uttarakhand. These concepts are based on the guidelines prepared by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), Institute for Statistics (UIS) and the UNESCO International Institute for Educational Planning (IIPE) in the "Methodology of National Education Accounts".

The education account presents the financial flows of education through various dimensions. The education domain is defined through two dimensions, namely, education levels and activities. The institutional units, comprising organizations, agencies and individuals, are presented through two other dimensions, that is, producing units and the financing units. The fifth dimension is related to the nature of the economic transactions between producing units and financing units across the education levels and different activities involved.

These five dimensions are described in the sections below.

IV.1. Levels of education

The International Standard Classification of Education (ISCED) has defined a framework to group educational programmes with respect to the knowledge and skills that each programme has been designed to impart. The levels of education are constructed into an ordered set of categories which broadly represent the steps towards advancing education in terms of the intricacy of educational content. ISCED 2011 classification has following six major levels.

Codes	Description
ISCED 0	Early Childhood Education
ISCED 1	Primary Education
ISCED 2	Lower-Secondary Education
ISCED 3	Upper-Secondary Education
ISCED 4	Post-Secondary Non-Tertiary Education
ISCED 5-8	Tertiary Education

Each level of formal education under the national system can be easily linked to the ISCED level for international comparability.

IV.2. Educational Activities

The production process for which the education accounts are aimed at is "education" therefore, it is important to define what can or cannot be included in the sphere of education as a product. However, it is essential to classify and describe the education accounts in a way that it is comparable between countries.

The International Standard Classification of Education (ISCED) has defined education programme as:

"a coherent set or sequence of educational activities or communication designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period. Objectives encompass improving knowledge, skills and competencies within any personal, civic, social and/or employment related context. Learning objectives are typically linked to the purpose of preparing for more advanced studies and/or for an occupation, trade, or class of occupations or trades but may be related to personal development or leisure. A common characteristic of an education programme is that, upon fulfilment of learning objectives or educational tasks, successful completion is certified (UIS, 2012)"[13]

On elaborating the definition,

- *Educational Activities* – activities comprising some type of communication aimed at enhancing/bringing about learning.
- *Learning* – acquiring informational knowledge and understanding values and skills through instructions, study and practice.
- Both educational activities and learning are sustained and organized in nature. The definition mostly comprises classroom instructions, training courses and distance learning.
- Observational learning, self-learning, participation in isolated seminars or conferences, or non-organized training carried out during work time, are not considered as education. The economic equivalent of the time spent by parents on informal training of their children is also not included in educational account.
- Some activities may comply with the definition but cannot be considered as a part of expenditure on education. All such activities are therefore excluded from the education accounts.
    i. Training provided by driving schools or pilot schools, unless it forms part of a school training programme.
    ii. Education essentially corresponding to sporting or leisure activities.
    iii. Military service, equivalent national service, or training sessions organized for defence purposes. Only military colleges and academies which are delivering initial

[13] *Methodology on National Education Accounts*

or continuing training to army staff are considered to be part of the education domain.

Characteristic Activities/Products

Educational activities are not limited to the production of teaching activities. The definition also comprises the following.

- Administration activities of the educational institution is considered to be a part of the teaching activities.
- Ancillary services such as school meals/canteens, boarding facilities, transportation between home and educational institution, health care facilities provided at the educational institution which are aimed at supporting school attendance.
- Research carried out at higher education institutions because academic staff can be both lecturers as well as researchers.
- General administration and supervision of the educational system such as inspection, curriculum designing, examinations, educational statistics, educational policy development, etc. which is carried out by the administrative departments at regional or national level are considered as a part of the educational activities under a separate producing unit.
- Activities of the specific bodies intended at providing support to the educational institutions are identified as separate producing units for those specific characteristic educational activities.

Connected Activities/Products

The goods and services that are produced outside the educational institutions but are linked to the economy of education system are considered as connected products/activities.

- Textbooks, uniforms and other school supplies purchased from the market place.
- School transportation, if it is provided by the local authorities rather than the educational institution.
- Private tuitions or coaching.

IV.3. Producing Units

The institutional units that form the basis of educational accounts are the producing units such as –

- **Public Educational Institutions** – they provide core educational activities such as teaching and ancillary activities. They include schools, colleges, universities, etc.

controlled and managed directly by a public educational institution or a government body council. The members of such government committees are usually appointed by a public authority.

- **Private Educational Institutions** - they provide core educational activities such as teaching and ancillary activities. They include schools, colleges, universities, etc. controlled and managed by a private organization such as a church, a business enterprise or a governing board which consists of members who have not been appointed by a public authority. The management and not the funding of the institution determines its public or private nature. An institution may be fully funded by the government but still be private because it is entirely managed by non-public members.
- **Other Educational Institutions –** the schools such as those that are controlled by international agencies or set up by community without being managed formally by a government authority.
- **Other Producing Units -** Ministries of education, regional or district education offices, etc. are producers of peripheral education goods and services, such as supervision, policy orientation, statistics, research and overall administrative support. These non-teaching activities may also be produced by non-government bodies such as an NGO. Autonomous bodies carrying out only activities classified as ancillary services, such as accommodation for students or school meals, are also categorised as producing units.

IV.4. Financing Units

The institutional units which grant financial resources to the producing units are called the financial units. Financial units do not directly provide the core educational services.

As a part of the government budget the Ministry of Education provides financial resources to the producing units such as schools, colleges etc. and the administrative department of the ministry on the other hand performs characteristic educational activities by policy making, curriculum development, inspection, etc. In this case, the Ministry of Education is a financing unit while its administration department is categorized under general administration activities and hence, a producing unit.

The financing units in any country are generally categorized into three sectors compatible with the System of National Accounts (SNA) and must encompass all possible sources of funding for education.

i. **General government sector** consists of the institutional units whose primary activity is to perform the functions of the government. To be considered a government sector at any of the national, regional or local levels, an institution must have their own funds that they have received through tax revenues or transfers from other government units. Expenditure data, both budgeted and non-budgeted, must be separated between the levels of the government – central government, state government and local government.

ii. **Private sector** mainly comprises households, corporations and non-profit institutions.
iii. **Rest of the world** includes the non-domestic financing units such as the international development partners of the government, international private foundations or international NGOs.

IV.5. Economic Transactions

Compensation to Employees

- Compensation of employees has two main components.
  i. **Wages and Salaries** – This includes basic salaries of the employees within the education system. It also includes bonuses and travel allowances. The compensation may be in the form of cash or kind.
  ii. **Social Security Schemes** - This includes the actual or imputed expenditure by employers to finance the retirement benefits for the present education employees. It does not include the contributions made by employees themselves. It also includes social insurance for the employees, such as health insurance, disability insurance, etc.

- It is important to note the difference between the compensation to the teaching staff and the non-teaching staff of an educational institution.
  i. **Compensation to teaching staff** includes wages and retirement benefits paid to the education employees who are directly involved in teaching (or research) activities irrespective of their training, qualifications and mode of teaching (face-to-face or distance mode).
  ii. **Compensation to the non-teaching staff** includes the compensation in cash or in kind to the education staff who are mainly involved in administrative tasks irrespective of whether they have teaching qualification or not. It generally includes principals, counsellors, librarians, school health personnel, education administrators at local, regional and national level, maintenance staff, catering staff, security personnel, etc.

- Compensation of employees does not include remuneration for contractors, consultants, and other workers who are not employees of the institution. Any such amounts should be recorded under 'goods and services'. Similarly, reimbursement of travel or travel allowances for employees who need to move within the country or abroad to carry out their duties should be classified under goods and services rather than compensation of employees.

Purchase of goods and services

- The expenditure on goods and services consumed within the current year is categorized as the purchase of goods and services. This can also be referred to as the recurrent expenditure because the goods and services purchased in the current year may have to be renewed in the following year.
- Expenses on teaching materials such as the textbooks, notebooks, pens, rulers and other pedagogical materials used by the students are counted as goods and services.
- Rents paid for school building, expenditure on - fuel, electricity, telecommunication, water, sanitation, insurance, regular maintenance of the building, administrative costs are all recurrent expenditures.

Gross Capital Formation

- As defined under SNA, gross capital formation is the value of acquiring non-financial assets minus the disposal of assets. Non-financial assets include fixed assets, inventories and valuables. For education expenditure, capital formation is mainly concerned with fixed assets (that can be used continuously for more than a year).
- It is 'gross' because the entire value of the asset is included in the year in which it is listed and not estimated year by year of utilization. For example, if a school building costs INR 10 crores was constructed in 2010, the full amount of INR 10 crore will be included as gross capital formation for 2010 even if the building will be used for over 30 years.
- Construction of buildings and their cost of major renovation (including construction of school canteens, hostels, administrative offices), computer hardware and software, durable teaching materials such as desks, chalkboards, acquisition of land, intellectual property products are all categorized under gross capital formation.

V. Methodology and Key Findings

The Education Satellite Account (ESA) typically presents the financial flows within the education domain, which is organized into a set of activities and products, across the levels of education. The ESA also identifies two types of economic agents which undergo the economic transactions in this domain. These agents are financing units and producing units. The ESA brings out the flow of money from (or between) the financing units to the producing units, flowing further to the activities carried out by the producing units through the various levels of education. The ultimate beneficiary of the education system is the student.

Every expenditure by a financing unit is considered as a payment to the producing unit, barring the case of education connected products when the payment is done to agents outside the educational institution, which are related to education domain in some way or the other.

This chapter presents this flow of money in the education domain. For this, it is of utmost importance to classify the different dimensions according to the prevailing system in the economy of reference, which here is the state of Uttarakhand. The classification which has been followed for the preparation of ESA for Uttarakhand is presented in Table V.1.

TABLE V. 1: CLASSIFICATION OF DIMENSIONS OF EDUCATION DOMAIN

Financing Units	Levels of Education and Producing Units	Activities and Economic Transactions
General Government **Private Sector** • Households • Private units	**Up to Primary education** Public schools Private-aided schools Private-unaided Schools **Middle education** Public schools Private-aided schools Private-unaided Schools **Secondary education** Public schools Private-aided schools Private-unaided schools **Senior Secondary education** Public schools Private-aided schools Private-unaided Schools **Tertiary education** Public institutes Private-aided institutes Private-unaided institutes **Vocational/Technical** Public institutes Private-aided institutes Private-unaided institutes **Others** Public institutes Private-aided institutes Private-unaided institutes	**Direct Financing of educational institutions** Staff Remuneration • Teaching staff salaries ○ Basic salaries, allowances, pensions • Non-teaching staff salaries ○ Basic salaries, allowances, pensions Goods and services • Textbooks and other teaching material • Other recurrent expenditure (grants and subventions, water, electricity, office supplies etc) Capital expenditure Ancillary services (boarding, meals, transport) **Payment outside educational institution** • Goods and services required for attendance ○ Books, stationery and uniform ○ Transport not organized by school ○ Others ○ Private tuition

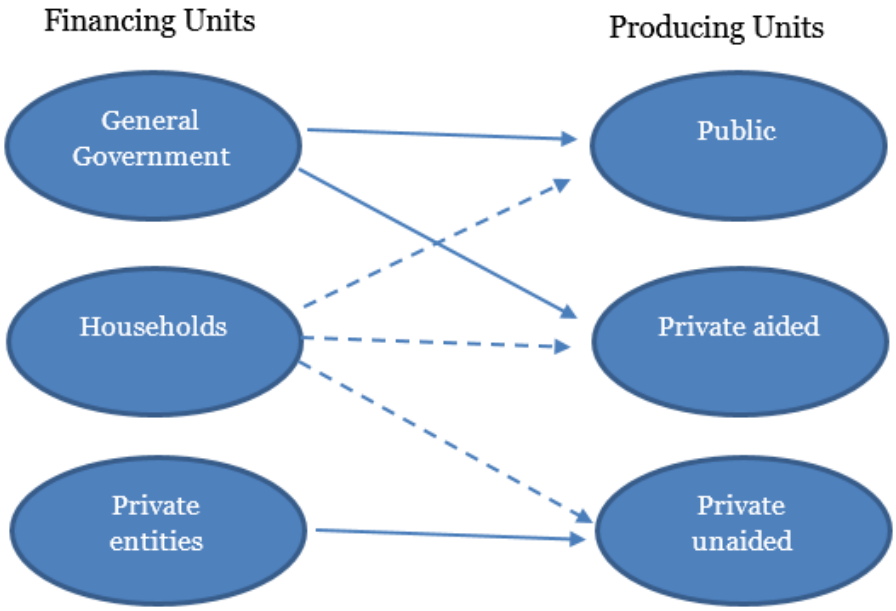
***Source**: NCAER Research*

The total expenditure on education covers expenditure by all financing units, for all levels of education and in all types of producing units, categorized into public, private-aided and private unaided.

*The **public units** are totally funded by the government – central, state or local. **Private-aided and private unaided units** differ in their modes of operation, with private aided educational units having little or no autonomy in deciding the fee structure or making recruitments. These units receive grant or assistance from the government, primarily to pay salaries to teaching staff. In contrast, private unaided units are autonomous in the sense that the fee structure is decided by private managements which appoint their own teachers and pay them salary scales determined internally.*

The transfers from financing units to producing units may be described as follows (Fig. V.1).

Figure V. 1: Schematic structure of transfers between financing and producing units



Hence, there may be two approaches to determine the total expenditure incurred on education, that is, either through transfers paid by financing units or through payments received by producing units. While data on transfers paid by general government and households to different producing units are available through budget documents and household surveys (as described in sections below), but transfers paid by private entities are not available and are also difficult to collect as these entities may be of various types, like private corporates, private-funded NGOs, donor agencies or philanthropic individuals. Hence, the data on payments received are collected from the producing units to which these transfers are made, that is, private-unaided institutions. These data are collected through a primary survey, described in Section V.3.

Each of the categories of expenditure and their data sources are discussed in the sections below.

V.1. General Government Expenditure

The majority of government financing of education in the state originates from the state Department of Education. The expenditure incurred by Department of Education is not just expenditure on elementary or secondary or technical education, but also on the schools as a whole or for school administration or capital formation.

It may also be noted that till 2013-14, the state budget documents did not include the union government and state government's shares in implementing the centrally sponsored schemes on education as the funds flowed from union government directly to implementing agencies. But 2014-15 onwards, the fund flow mechanism changed and the state budgets report expenditure on these schemes[14].

Besides, there are other sources which incur substantial expenditure on education domain. These are departments of other Ministries in the state, Urban Local Bodies in the state, Central sector schemes[15], NGOs which are funded by the central government. There are many other NGOs which work on education domain but, for this study, we have not taken those into account.

The key sources of education expenditure incurred during 2017-18 are.

- Department of Education, Detailed Demand for Grants (DDG), Head-wise details, 2019-20, Volume 5, Part 2.
- Other departments' Education and Training expenses, DDG, Head-wise details, 2019-20, Volume 5, Parts 1, 2, 3, 4. These departments include Land Revenue, Other Administrative Services, Relief on account of Natural Calamities, Secretariat – General Services and so on.
- Pensions to Employees of State-Aided Educational Institutions, Department of Finance, Taxes, Planning, Secretariat and General Services, DDG, Head-wise details, 2019-20, Volume 5, Part 1.
- Compensation to employees and Capital Formation, Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2017-18, Directorate of Economics & Statistics Department of Planning Government of Uttarakhand.
- Central Sector Schemes:
    - Jan Shikshan Sansthan, Ministry of Human Resource Development.

[14] *Public Financing of School Education in India: A Fact Sheet, 2016, Centre for Budget and Governance Accountability (CBGA) and Child Rights and You (CRY).*

[15] *Central sector schemes are 100 per cent funded by the Union government and implemented by the Central Government. The Central Ministries implement these schemes directly in States/UTs and resources under these Schemes are not generally transferred to States. Hence, the expenditure incurred through Central Sector schemes are not reflected in state budget documents.*

- UGC Grant to Hemvati Nandan Bahuguna Garhwal University, the only Central University in Uttarakhand. The UGC grant includes salary, recurrent and capital grant.

Jan Shikshan Sansthans (JSS) are conceived as institutes for conducting skill upgradation programme in the rural and urban slums of a district while also providing academic and technical support to its target group. The scheme aims to provide vocational education and skill development programmes to non-literates, neo-literates and the person having rudimentary level of education belonging to disadvantaged sections of the society up to 12th class drop outs in the age group of 15- 45 years. The JSS function under the NGOs, registered under the Societies Registration Act, 1860 with annual recurring grant from the Government of India. The details of grant amount sanctioned by the Ministry of Human Resource Development or Ministry of Education to the six JSS located in Uttarakhand are obtained from the Ministry's DDG.

A DDG for a financial year presents the total provisions required for a service, including revenue and capital expenditure, grants and loans relating to that service. The DDG for a particular year gives item-wise details of government expenditure for three consecutive years, that is, Budget estimates (BE) for that year, Revised Estimates (RE) for the previous year and Actual Expenditure for year before previous year. Hence, for this study, DDG for 2019-20 has been referred to, which provides actual expenses for 2017-18, the reference year of ESA.

Each DDG is divided into sectors (Education, Health, Finance, etc.), which may in some cases be further divided into sub- sectors (Education, Sports, Culture under Education; Medical and Family Welfare under Health, etc.). The main unit of classification in accounts is the major head, which is further divided into sub-major head, each of which is then divided into minor heads, each of which has a number of sub-ordinate heads, generally known as sub-heads. The sub-heads are further divided into detailed heads and object heads. Major heads generally correspond to 'Functions' of Government while minor heads identify the programme undertaken to achieve the objectives of the function represented by the major head.

For the purpose of ESA, expenditure under the Grant Name of "Education, Sports, Art and Culture" has been taken into account. But not all major heads under this grant name falls in the domain of education, as per the UNESCO ESA methodology. The coverage of ESA is given as follows (Table V.2):

TABLE V. 2: BUDGET HEADS COVERED IN ESA

Grant Name	Major Head (Code and Name)		Covered in ESA
Education, Sports, Art and Culture	2202	General Education	Yes
	2203	Technical Education	Yes
	2204	Sports and Youth Services	No
	2205	Art and Culture	No
	4202	Capital Outlay on:	
		- 01 - General Education	Yes
		- 02 - Technical Education	Yes
		- 03 – Sports and Youth Services	No
		- 04 – Art and Culture	No
Other Departments		Training Expenses	Yes
Finance, Taxes, Planning, Secretariat and General Services		Pensions to Employees of State Aided Educational Institutions	Yes
Compensation to employees and Capital Formation		Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2017-18, Directorate of Economics & Statistics Department of Planning, Government of Uttarakhand	Yes
JSS receiving recurring grants from Govt of India		Ministry of Education, Govt of India.	Yes
Grant to Hemvati Nandan Bahuguna Garhwal University		University Grants Commission	Yes

***Source**: NCAER Compilation*

The total expenditure incurred by Department of Education for 2017-18 works out to be Rs 6317 crore of which Rs 6173 crore is on revenue account and Rs 144 crore is the capital outlay of the department. Of the total expenditure, Rs 6148 crore was spent on general education and Rs 170 crore on technical education.

It may be noted that apart from the recurrent expenditure, the revenue expenditure in the budget also includes expenses on items, which are classified as capital expenditure in the ESA. These include items like furniture and equipment, computer hardware and software, etc. However, the budget allocation towards capital outlay, which includes creation of capital assets, new construction of institutions and other major works, is kept separately in the ESA table and is referred as capital account.

Besides these, as mentioned in Table V.2, the following values of expenditures incurred by state government and directly by central government are also taken into account (Table V.3).

TABLE V. 3: COVERAGE OF EDUCATION EXPENDITURE BY GENERAL GOVERNMENT IN THE STATE

Coverage of Education Expenditure in the state	Values (in Rs crore)
Department of Education	6317.37
Other government departments' expenditure on training of their employees	7.42
Department of Finance, Taxes, Planning, Secretariat and General Services expenditure - pension/gratuity to employees of state-aided educational institutions.	1406.50
Expenditure incurred by Urban Local Bodies on Education	13.84
Expenditure incurred by Central Govt, as grant to JSS	668.03
Grant from University Grants Commission (UGC) to Central University - Hemvati Nandan Bahuguna Garhwal University	80.36

***Source**: Detailed Demand for Grants, 2019-20, Annual Report, UGC, 2017-18, Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2017-18.*

Hence, a total of Rs 8493.5 crore was spent on education domain by the state government in 2017-18. Their breakup into revenue and capital accounts is provided in Table V.4.

TABLE V. 4: REVENUE AND CAPITAL ACCOUNT OF EDUCATION EXPENDITURE

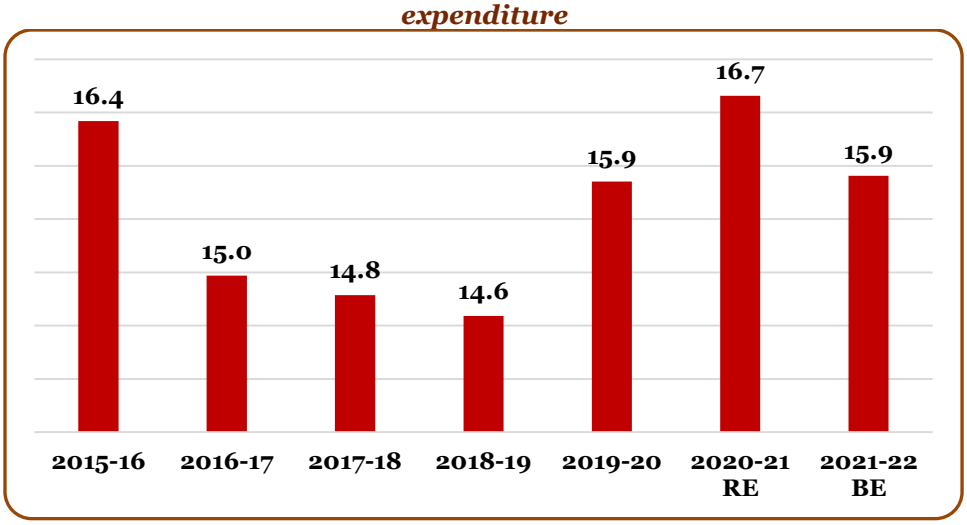
(Rs crore)

	Revenue	Capital	Total
1. General	6014.50	133.18	6147.68
2. Technical	158.99	10.70	169.69
3. Total – Department of Education (1+2)	6173.50	143.88	6317.37
4. Training Expenses by Other Departments	7.42	-	7.42
5. Pensions to employees of state-aided higher secondary schools	1406.50	-	1406.50
6. Urban Local Bodies	10.71	3.13	13.84
7. Central Government grant to NGO (JSS)	668.03	-	668.03
8. UGC grant	75.36	5.00	80.36
Grand Total (3+4+5+6+7)	8341.53	152.01	8493.54

***Source**: Detailed Demand for Grants, 2019-20, Annual Report, UGC, 2017-18, Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2017-18.*

At Rs 6317.37 crore, Department of Education spent 14.8 per cent of the state's total government expenditure in 2017-18. In the previous two years, this share was higher at 16.4 per cent and 15.0 per cent (Fig. V.2). With the release of more recent data on Expenditure Budget, it is evident that the Department's share in total expenditure is on a gradual increase. Figure V.2 presents the time series of this share till the budget estimates of 2021-22. The share is notable for 2020-21 (revised estimate), at 16.7 per cent.

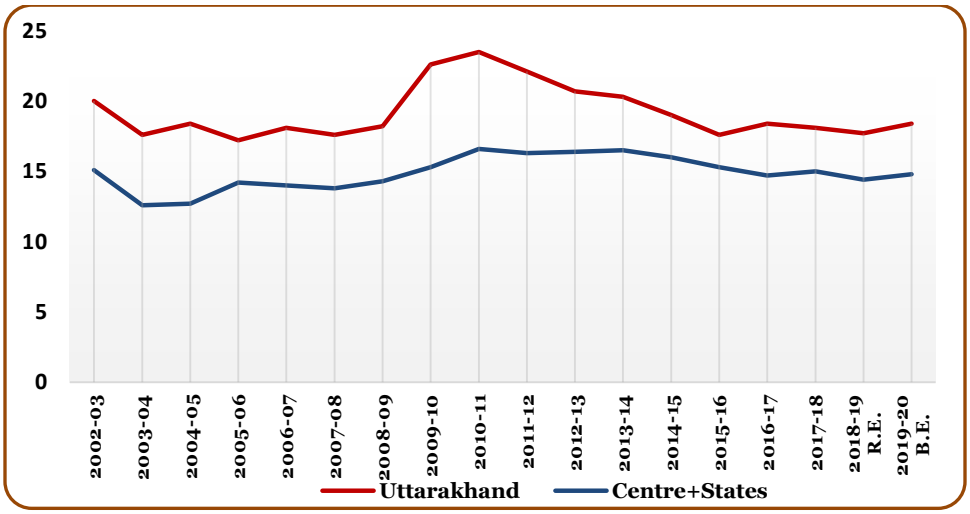
Figure V. 2: Share of expenditure incurred by Department of Education in total state expenditure



***Source**: Detailed Demand for Grants, Uttarakhand, various years.*

As stated earlier, in addition to the expenditure incurred by Department of Education, this study has taken into account the expenditure incurred by other departments and that under central sector schemes as well. This total education expenditure, amounting to Rs 8493.54 crore, works out to be 19.9 per cent of total state government expenditure. This is above the national-level proportion of 15.0 per cent (Union and State Government combined). In fact, Uttarakhand public expenditure on education has always been higher than the national average since the inception of the state in 2000 (Fig. V.3).

Figure V. 3: Expenditure on Education as per cent to total government expenditure



***Source**: RBI State Finances - A Study of Budget - 2019-20*

- **Government Expenditure by levels of education**

There are five sub-major heads under general education. Their mapping with the ESA levels of education is given in Table V.5.

TABLE V. 5: BUDGET HEADS AND LEVELS OF EDUCATION

Sub-major heads and codes	Levels of Education
2202- General Education	
01- Elementary Education	Up to Primary
	Middle
02- Secondary Education	Secondary
	Senior Secondary
03- University and Higher Education	Tertiary
05- Language Development	Tertiary
80- General (Teacher's training)	Others
2203- Technical	Technical

***Source**: NCAER Compilation*

The technical education, according to the All India Council for Technical Education (AICTE), includes post-graduation, under-graduation and diploma in the whole spectrum of education covering engineering/technology, pharmacy, architecture, hotel management and catering technology, management studies, computer applications and applied arts and crafts.

Table V.6 presents the general government expenditure on different levels of education by revenue and capital accounts. Also presented is the number of students enrolled in different levels of education. The number of students enrolled in only public and private-aided institutes is taken into account as private un-aided institutes do not get any funding from the government. The data on number of students enrolled in public and private-aided institutes are obtained from the Unified District Information System for Education (U-DISE), 2017-18 (recently released), for school enrolment and All India Survey for Higher Education, AISHE, 2017-18, for enrolment in tertiary and technical institutions.

Table V. 6: General Government Expenditure by Revenue and Capital Accounts

(Rs crore)

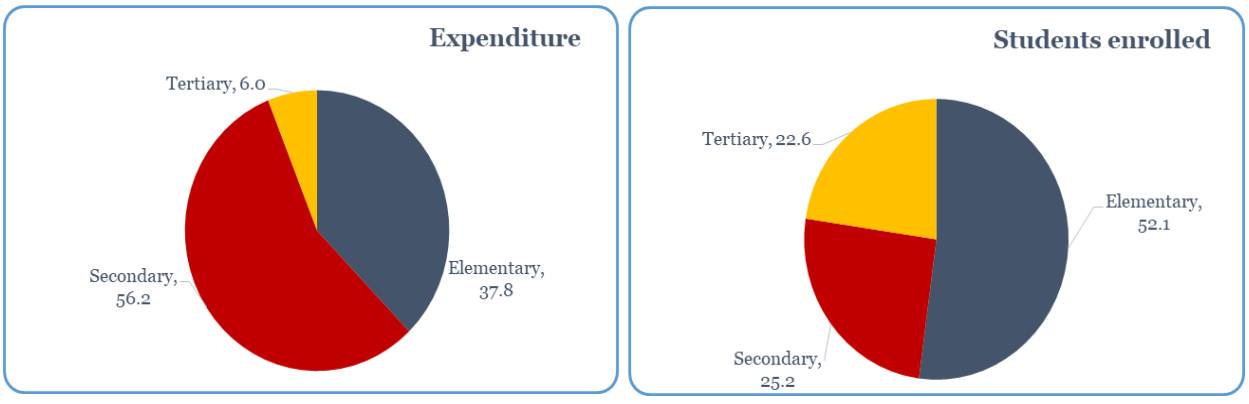
	Revenue	Capital	Total Expenditure	Number of students enrolled
Elementary	2,804.21	64.32	2,868.53	9,33,236
Secondary	4,218.77	52.10	4,270.87	4,52,160
Tertiary	434.36	24.89	459.25	4,05,491
Technical	834.45	10.70	845.15	19,186
Others	49.74	-	49.74	-
Total	8,341.53	152.01	8,493.54	18,10,073

***Source**: NCAER Compilation using DDG accounts, U-DISE and AISHE data, 2017-18.*

The percentage distribution of total general education expenditure (taking revenue and capital together) and of students enrolled, both by levels of education are presented in the chart below (Fig. V.4).

It may be noted that for Technical education, number of students enrolled in technical courses is obtained from the AISHE report for 2018-19 but the expenditure on technical education also includes training expenses to the employees of various government departments. Hence, to that extent, number of students enrolled for technical courses is an underestimation. Also, number of persons enrolled for teacher's training or "Others" is not available. Hence the percentage distribution of expenditure incurred on only elementary, secondary and tertiary levels of education is compared with that of number of students enrolled in these levels.

Figure V. 4: Government Expenditure on "General Education" by levels of education (% distribution)



***Source**: NCAER computation*

Key Highlights

i. The state's total expenditure on education (taking both revenue and capital accounts), at Rs 8493.5 crore, is 19.9 per cent of total state government exchequer. In terms of per cent to State Gross Domestic Product (SGDP), the education expenditure works out to be 3.8 per cent for 2017-18. The value of state's total government expenditure, as per Annual Financial Statement, Government of Uttarakhand, is Rs 42,725.51 crore for 2017-18. For the same year, SGDP of the state is Rs 2,22,836.04 crore.

ii. The Department of Education is the key financing unit for public education expenditure. But other departments, local bodies and grants from central government are also significant contributors, accounting for 35.1 per cent in the total revenue expenditure for education and 5.7 per cent in its capital expenditure. In all, 34.4 per cent of public expenditure on education in the state is on account of these sources.

iii. The share of revenue or recurring expenditure in total education expenditure is very high at 98.2 per cent. This is over 95 per cent across all levels of education. A minimal share of capital expenditure shows the little requirement for new schools and other institutions as the state is well endowed with a number of institutes due to which the state has been developed as an education hub.

iv. Table V.7 presents state wise number of recognized schools per lakh population. Uttarakhand's rank among all the states of India, is impressive at 4th in the case of primary schools and 7th in the case of middle schools, bringing state to 7th position in case of all Elementary schools (primary and middle), taken together[16]. With respect to number of secondary and senior secondary schools per lakh population, the state's rank is 12th. However, given the sparse population density of Uttarakhand (being a hill state), it may be worthwhile comparing its school density, or number of schools per lakh population, with that of similar state of Himachal Pradesh. As compared to Uttarakhand, Himachal Pradesh performs better in case of primary, secondary, senior secondary and college level education. Whereas, Uttarakhand performs better in middle and technical level of education.

[16] *State-wise number of recognised educational institutes are taken from Economic Survey, 2019-20, Volume 2, Government of India. State-wise population is estimated using NSS, 75th round data.*

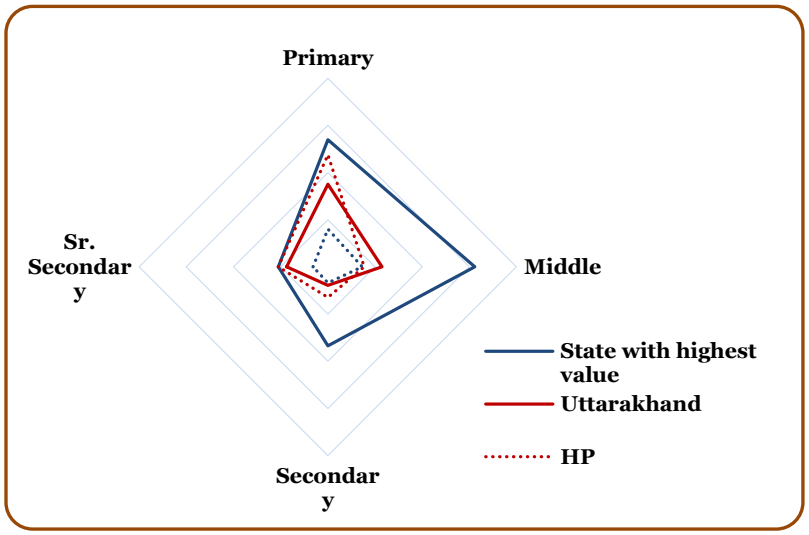
TABLE V.7: STATE-WISE INSTITUTES PER LAKH POPULATION

States/UTs	Primary Schools	Middle Schools	Secondary Schools	Sr. Sec. Schools	Colleges	Technical
Andhra Pradesh	1176	410	775	154	49	15
Arunachal Pradesh	1683	1879	459	307	23	7
Assam	1702	837	688	233	15	2
Bihar	353	621	89	163	7	1
Chhattisgarh	1316	1103	243	435	24	2
Gujarat	303	1101	245	415	31	4
Haryana	481	384	338	472	33	7
Himachal Pradesh	2377	770	645	1050	47	11
Jammu & Kashmir	1554	2139	983	302	23	8
Jharkhand	768	936	293	144	8	2
Karnataka	613	1300	825	352	53	18
Kerala	426	279	171	312	45	15
Madhya Pradesh	1313	1283	284	341	24	4
Maharashtra	679	685	488	277	33	17
Manipur	823	744	958	310	28	6
Meghalaya	2693	1846	1075	284	19	6
Mizoram	1652	3113	1671	505	25	12
Nagaland	744	813	789	376	28	7
Odisha	1056	1031	686	125	23	8
Punjab	680	431	541	691	34	13
Rajasthan	588	920	386	696	35	5
Sikkim	2060	1011	628	430	25	9
Tamil Nadu	800	305	250	364	35	13
Telangana	680	405	1026	254	50	13
Tripura	907	655	413	352	12	2
Uttar Pradesh	742	680	129	224	28	4
Uttarakhand	1752	1148	390	872	37	13
West Bengal	1136	211	101	244	13	4
A & N Islands	808	546	654	722	16	0
Chandigarh	23	96	185	221	13	4
D & N Haveli	605	552	114	151	12	2
Daman & Diu	459	513	563	640	16	3
Delhi	237	146	70	333	8	5
Goa	1040	192	1111	511	31	6
Lakshadweep	318	570	51	896	0	0
Puducherry	298	132	546	450	46	8
All India	803	730	338	313	28	7

***Source**: NCAER compilation using Union Economic Survey 2019-20, AISHE-2018-19, NSS 75th Round- 2017-18*

Figure V.5 presents the school density by levels of education for Uttarakhand, Himachal Pradesh, state with the highest value of school density and all-India average. Figure V.5 shows that while the state's performance is better than all-India average for all the four types of schools – primary, middle, secondary and senior secondary – but there is a scope for improvement in the case of middle schools and secondary schools, when compared with the best performing state for these types. However, with regard to middle schools, the state performs better than its neighbouring state but needs to catch up with it with regard to all the other three categories of schools.

Figure V. 5: Schools per lakh population



***Source**: NCAER computation using Economic Survey, 2019-20, Volume 2, Government of India and NSS, 75th round data*

v. On number of higher (or tertiary) educational institutes and technical institutes per lakh population too, the state lies among top 10 states, its rank being 7th in the case of colleges per lakh population and 5th in the case of technical institutes per lakh population.

vi. Further, the compilation of the government expenditure on "general education" from different sources suggests that the maximum expenditure is incurred on secondary education. With its share of 25.2 per cent in number of students enrolled in all general education categories, the share of expenditure allocated to this level of education is more than twice at 56.2 per cent (Fig. V.3).

vii. On the other hand, number of students enrolled in elementary education is 52.1 per cent of total general education categories whereas it accounts for a much lower share of 37.8 per cent in expenditure. With the Gross Enrolment Ratio (GER) exceeding 100 per cent[17] (as per U-DISE data, 2017-18) and the Net Enrolment ratio (NER) more than 95 per cent for both boys and girls, in the case of elementary education, the state has almost achieved the required universal elementary education, as envisaged in the National Policy of Education, 1986 and also reiterated in the modified policy in 1992. On the other hand, GER of 85.7 per cent for boys and 87.5 per cent for girls in the case of secondary education and NER at just 52.9 per

[17] *GER is number of students enrolled in a given level of education, regardless of age, as per cent to population of age corresponding to that level, whereas NER is the age-specific enrolment rate.*

cent for both girls and boys clearly calls for the focus of state government on promoting secondary education. According to the SDG-4, universal primary and secondary education is to be achieved by 2030.

viii. Of the total expenditure on education, taking "general" and "technical" together, the share of expenditure incurred on technical education is 10.0 per cent, at Rs 845.1 crore. This also includes expenditure incurred on training programmes for officials of government departments and central government's grant to Jan Shikshan Sansthan.

- **Government Expenditure by producing units**

The producing units under each level of education have been categorized into public, private-aided and private-unaided, in this study. However, government expenditure is incurred only on public and private-aided units. Private un-aided are self-financed units. While most of expenditure incurred by General Government is on public producing units (or government-run institutions), but part of the government expenditure is also allocated to the non-government institutions, in the form of assistance, because of which these are also termed as private-aided units. Also included in the private producing units are NGOs (Jan Shikshan Sansthan) working in the area of imparting vocational training but receiving grant from the central government.

Table V.8 presents the values of government expenditure on public and private-aided producing units, across all levels of education. Also presented is the number of students enrolled in these producing units. As mentioned earlier, for technical education, total number of persons enrolled is difficult to obtain, as this also includes government officials attending training programmes. Hence, the table splits the technical education into total expenditure and expenditure incurred on students enrolled in technical institutes (as obtained from AISHE, 2017-18).

TABLE V.8/ GENERAL GOVERNMENT EXPENDITURE ON PRODUCING UNITS

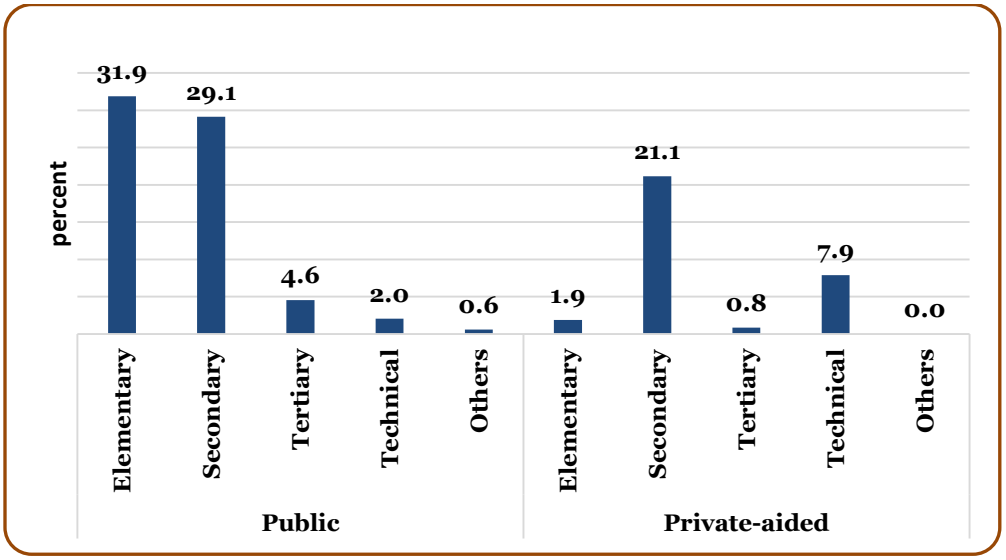
	Expenditure (Rs crore)		Number of students enrolled	
	Public	Private-aided	Public	Private-aided
Elementary	2,707.3	161.2	7,64,378	1,68,858
Secondary	2475.0	1795.9	3,44,215	1,07,945
Tertiary	388.0	71.2		
Technical (total)	174.0	671.1	16,814	2,372
Of which: Technical education for students enrolled in Technical Institutes)	166.6	3.1	16,814	2,372
Others	49.7	-		
Total	5794.1	2699.5		

***Source**: NCAER computation*

Of the total government expenditure of Rs 8493.5 crore, 68.2 per cent is spent on public sector units and the remaining 31.8 per cent is allocated for private-aided units as grants or assistance. Figure V.6 presents the per cent distribution of government expenditure on all types of producing units. Figure V.7 presents the per student expenditure incurred by general government across different levels of education.

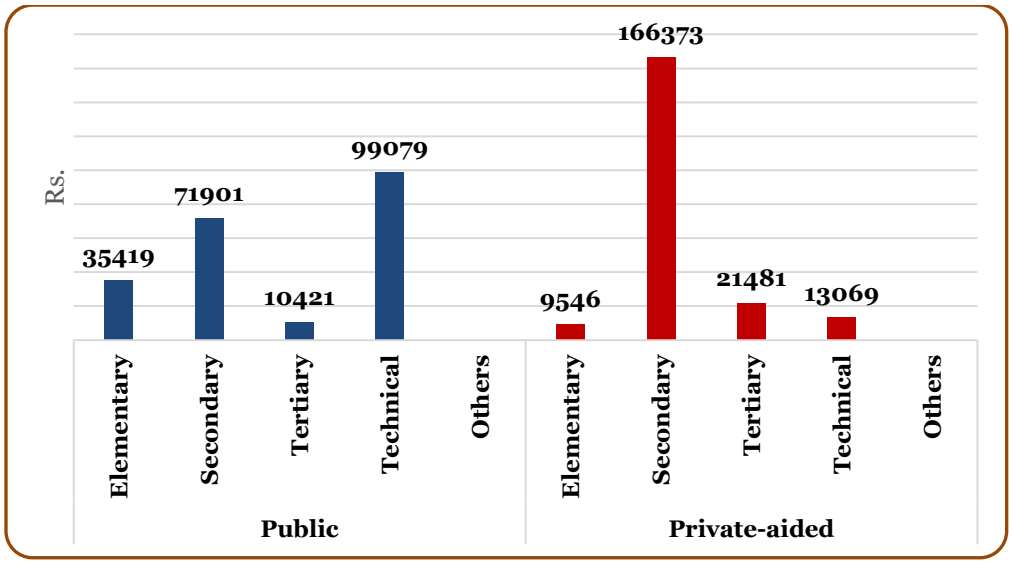
It may be noted that to derive the per-student expenditure, the expenditure incurred by general government (centre, state and local) on each level of education is taken as a ratio to the number of students enrolled in corresponding level. In the case of technical education, the number of students enrolled are those who are enrolled in technical institutes, like colleges/universities with courses on technical education, polytechnics, Industrial Training Institutes, etc. Hence, in this case, the government's expenditure on technical education, as per the DDG of Department of Education has only been taken into account and the expenditure on imparting training to their employees and central government's grant to various JSS have been excluded.

Figure V. 6: Government Expenditure incurred on types of producing units (% distribution by levels)



***Source**: NCAER computation*

Figure V. 7: Per-student Government Expenditure by types of producing units and levels of education (in Rs)



***Source**: NCAER computation*

Key Highlights

i. Of the total revenue expenditure, as much as 31.8 per cent was spent on providing assistance to the private-aided institutions in the state, either for salaries or for goods and services (Table V.8).

ii. The percentage distribution of total expenditure by all types of producing units and levels of education reveal that the highest share of government expenditure (31.9 per cent) is towards those public sector units which impart elementary education (Fig. V.6).

iii. The secondary education, in both public and private-aided producing units, is the other major component of government expenditure, indicating the special focus on secondary education (Fig. V.6). The per-student expenditure is also the highest in the case of secondary education (Fig. V.7).

iv. A very high proportion of total education expenditure, at 21.1 per cent, on private-aided secondary education is on account of pensions to employees of non-government (or private-aided) higher secondary schools, as given in the DDG of Department of Finance, Taxes, Planning, Secretariat and General Services. This amount is recorded as Rs 1406.50 crore for 2017-18.

v. For the same reason, per-student expenditure for private-aided secondary education is high, at Rs 1.66 lakh (Fig. V.7).

vi. While the expenditure incurred on public technical education is only 2.0 per cent of total government expenditure on education, but due to low enrolment rate in this level, the per-student expenditure works out to be significant at Rs 99,079. This includes expenditure on Polytechnique institutes, accounting for a share of 55.4 per cent; Engineering or Technical colleges and institutes, accounting for another 24.5 per cent; and the remaining 20 per cent on account of other expenditure[18].

- **Government Expenditure by activities**

The activities on which the revenue expenditure is spent are categorized as follows.

- Staff Cost
- Teaching related Goods and services
  - Textbooks and other teaching material
  - Other recurrent (grants and subventions, water, electricity, office supplies, etc.)
- Capital goods, comprising office furniture and equipment, purchase of staff car, machine and accessories, computer hardware and software, for teaching related activities.
- Ancillary services, comprising boarding, meals, school health and transport.
- General Administration
  - Staff cost
  - General administration related Goods and services
  - Capital goods, comprising Office furniture and equipment, purchase of staff car, machine and accessories, computer hardware and software, for general administration related activities.
- Scholarships and stipend

The expenditure against these activities are obtained from the object codes of the budget statements. The key activity which accounts for the largest share of revenue expenditure on education is the staff cost which includes remuneration to both teaching and non-teaching staff. Taking all the levels of education together, staff cost accounted for as much as 91.9 per cent of the total revenue expenditure.

Table V.9 presents the revenue expenditure on different activities for all the levels of education.

[18] *As per the disaggregated categories of Technical Education, given in DDG, Department of Education.*

TABLE V.9: GENERAL GOVERNMENT EXPENDITURE ON ACTIVITIES

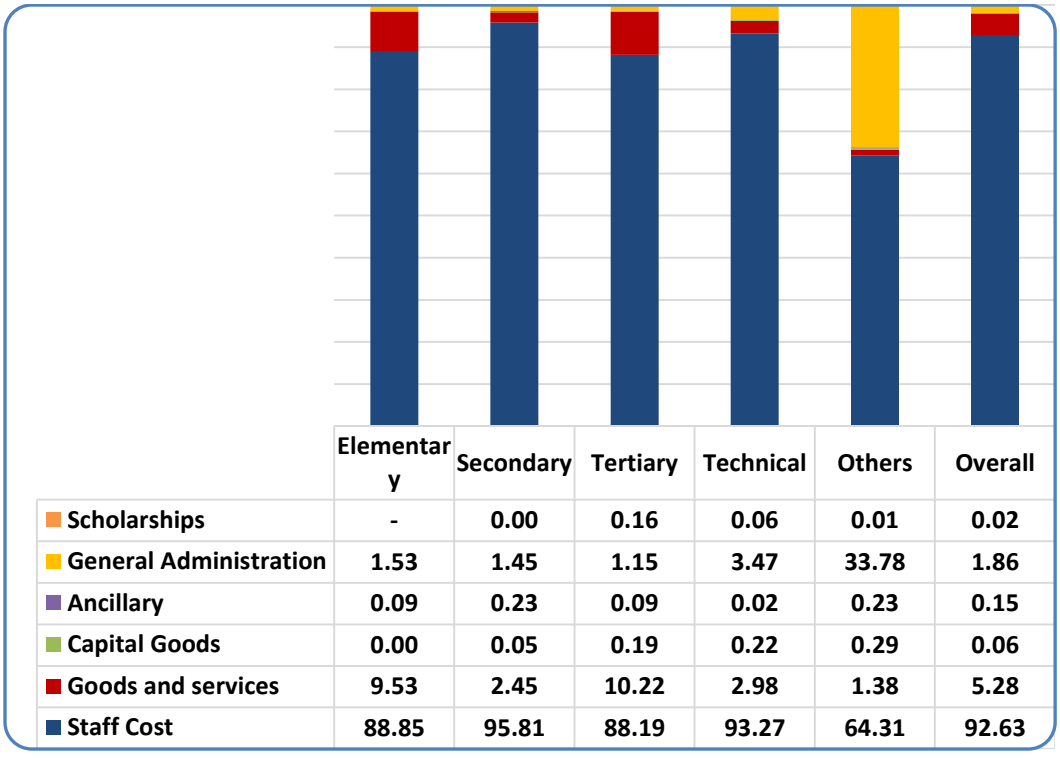
(Rs crore)

	Staff Cost	Goods and services	Capital Goods	Ancillary	General Administration	Scholarships	Total
Elementary	2,491.5	267.1	0.1	2.5	43.0	-	2,804.2
Secondary	4,042.2	103.4	2.2	9.6	61.2	0.2	4,218.8
Tertiary	383.1	44.4	0.8	0.4	5.0	0.7	434.4
Technical	778.3	24.8	1.8	0.1	29.0	0.5	834.5
Others	32.0	0.7	0.1	0.1	16.8	0.0	49.7
	7,727.0	440.5	5.0	12.7	154.9	1.4	8,341.5

***Source**: NCAER computation*

Figure V.8 presents the per cent distribution of expenditures by activities across all levels of education.

Figure V. 8: General Government Expenditure by activities (% distribution)



	Elementary	Secondary	Tertiary	Technical	Others	Overall
Scholarships	-	0.00	0.16	0.06	0.01	0.02
General Administration	1.53	1.45	1.15	3.47	33.78	1.86
Ancillary	0.09	0.23	0.09	0.02	0.23	0.15
Capital Goods	0.00	0.05	0.19	0.22	0.29	0.06
Goods and services	9.53	2.45	10.22	2.98	1.38	5.28
Staff Cost	88.85	95.81	88.19	93.27	64.31	92.63

***Source**: NCAER computation*

Key Highlights

i. At an aggregate level, staff cost accounts for 92.6 per cent of total expenditure. Goods and services or the recurrent expenditure accounts for another 5.3 per cent (Fig. V.8). The recurrent expenditure includes expenses on teaching material, utility services, training programmes, taxes, phone charges, minor repair and maintenance, etc. Just about 2 per cent of the total expenditure is on account of general administration.

ii. The share of staff cost is the highest (95.8 per cent) in the case of secondary education. While share of staff remuneration is the highest in total revenue expenditure among all levels of education, it stands at only 64.3 per cent in the case of "Others", or teacher's training. In this case, another 33.8 per cent is on account of general administration.

iii. Goods and services, which includes teaching material and other recurrent expenditure, is around 10 per cent in the case of both elementary and tertiary education.

iv. The distribution of expenditure separately for public and private-aided units reveal that of the total government expenditure on public units, 90.2 per cent was incurred on staff cost, 6.8 per cent on recurrent items and 2.8 per cent on general administration. For private-aided units too, maximum assistance was provided for pay and allowance, to the extent of 97.8 per cent. The remaining 2.2 per cent was spent on recurrent items.

The detailed ESA table on Government Expenditure on education is provided in Chapter VI. The ESA format requires staff cost to be disaggregated into teaching and non-teaching categories. But the government budget data does not provide the remuneration by teaching and non-teaching staff. Hence, the disaggregation into these categories has been done using the distribution as observed in the primary survey on Educational Units, conducted in the state (Details of survey to be discussed in Section V.3).

Also, in order to present data by all levels of education, the major head of "Elementary Education" has been disaggregated to "Up to Primary" and "Middle" using the disaggregation ratios obtained from the primary survey conducted on Educational Units in the state. Similarly, major head of "Secondary Education" is split into "Secondary" and "Senior Secondary". The training expenditure by other departments is clubbed with the recurrent expenditure for "Technical education" and "Pensions to employees of state-aided higher secondary schools" is clubbed with the staff cost for "secondary education".

V.2. Private Expenditure by Households

For all types of producing units – public, private-aided and private unaided – payments from households, as course fee and all other types of fees, are the significant source of revenue. This

section presents the expenditure incurred by households on education provided by all the three types of producing units. The data source for estimating the household expenditure on education is the survey conducted by National Sample Survey Office in its 75th round of survey titled "Social Consumption on Education in India" during 2017-18. The unit level data of the survey has been analysed to derive the expenditures by levels of education and by types of producing units.

The survey collected data on expenditure incurred by households on different items related to attainment of education of the household members. The survey also collected data on expenditure incurred by households on their erstwhile members, who were attending education during the survey period. All of these have been taken into account.

The following aspects on coverage of household expenditure have been taken into account.

- The total number of students enrolled, as per NSS survey, is estimated at 23.71 lakh. However, as per official statistics[19], this number stands at 28.20 lakh for 2017-18. There is a variation between NSS estimates of enrolment and corresponding official estimates across all levels of education. Hence, per-student estimated expenditure for each level of education, as derived from the survey, is multiplied by the official number of students enrolled in the corresponding level of education, to adjust for the variation in number of students enrolled.

- The household surveys are generally subject to under-reporting, mostly due to recall errors. This is also evident from the fact that the overall household consumption expenditure is grossly under-estimated when compared with the Private Final Consumption Expenditure (PFCE), as provided in National Accounts Statistics. The all-India household expenditure on Education, as provided by the survey, was compared with the corresponding PFCE on Education, as given in the latest NAS-2019, for 2017-18. It is found that the All-India consumption expenditure, as per NSS estimates, is just about 69.3 per cent of the PFCE. Assuming that the extent of underreporting at state-level is the same as that at all-India level. The consumption expenditure on Education, for Uttarakhand, is adjusted using the correction factor of 1.44.

- **Household Expenditure by levels of education**

The survey collected expenditure details for the general and technical education by various levels of education. The general education also includes non-formal education, which is kept out of the scope of ESA. The mapping of NSS levels of education with those of ESA is presented in Table V.10.

[19] *Unified District Information System for Education, U-DISE, latest available for 2017-18, for school enrolment and All India Survey for Higher Education, AISHE, 2017-18, for enrolment in tertiary and technical institutions*

TABLE V. 10: MAPPING BETWEEN NSS AND ESA LEVELS OF EDUCATION

NSS	ESA
General Education	
- *Non-formal*	Not covered
• literate without any schooling	
• literate without formal schooling	
- *Formal*	Covered
• Below primary	Up-to primary
• Primary	
• upper primary/middle	Middle
• secondary	Secondary
• higher secondary	Senior Secondary
• diploma /certificate course (up to secondary	Secondary
• diploma/certificate course(higher secondary)	Senior Secondary
• diploma/certificate course(graduation & above)	Tertiary
• graduate	Tertiary
• post graduate and above	Tertiary
Technical Education	Technical

***Source**: NCAER compilation*

In all, households spent an estimated value of Rs 5004.8 crore on education attainment in 2017-18. Table V.11 presents the household expenditure across different levels of education. Figure V.9 presents the percentage distribution of expenditure and students enrolled across the levels of education.

TABLE V. 11: HOUSEHOLD EXPENDITURE AND STUDENTS ENROLLED BY LEVELS OF EDUCATION

	Total expenditure (Rs crore)	Total students enrolled (number)
Pre-primary	159.5	120076
Primary	1,177.2	956800
Middle	951.1	600412
Secondary	678.2	373633
Senior Secondary	845.9	307193
Tertiary	1,069.8	437150
Vocational/Technical	123.0	24907
TOTAL	5,004.8	2820171

***Source**: NCAER computation*

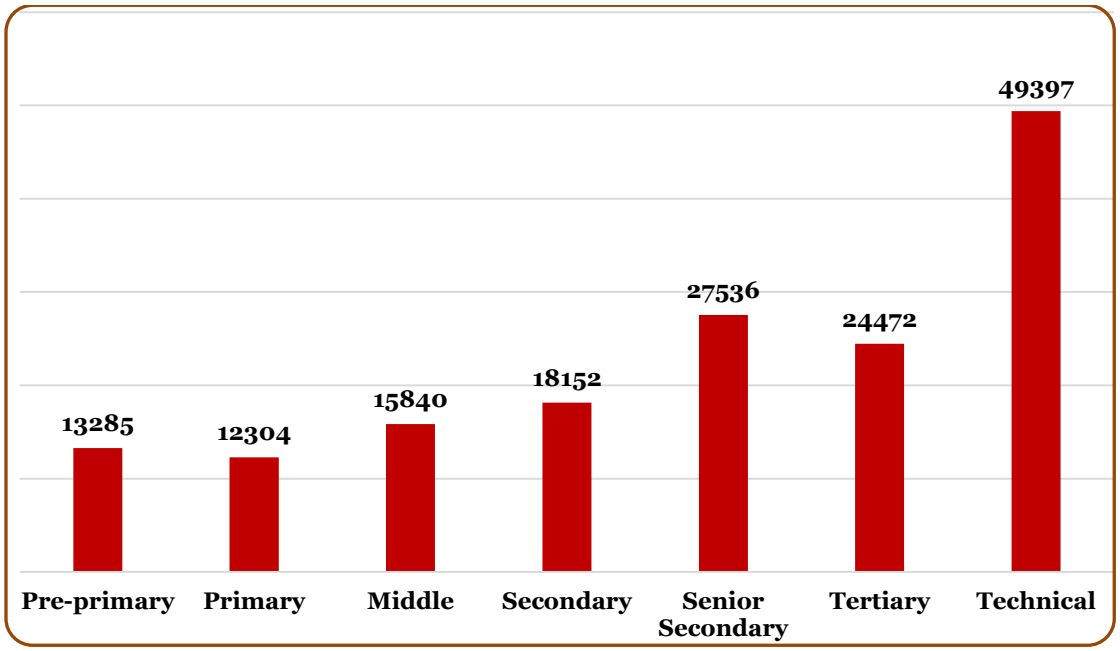
Key Highlights

i. The households' expenditure on education is estimated at Rs 5004.8 crore, after correcting for underestimation, as discussed above. Total state household annual consumption expenditure is estimated at Rs 80629.6 crore. Hence households spent 6.2 per cent of their total expenditure on education in 2017-18.

ii. For lower levels of education, the proportion of students enrolled is higher than proportion of expenditure incurred therein. For levels of education beyond "secondary", the proportion of students enrolled is much less than the proportion of expenditure incurred.

iii. This shows that the cost of education attainment increases by increase in level of education. From Rs 13,285 for pre-primary education (Fig. V.9), the per-student per-annum expenditure increases more than two-fold for senior secondary education and 1.8 times for tertiary education. The cost of education surges about 4 times for technical education, which includes post-graduation, under-graduation and diploma in the whole spectrum of education covering engineering/technology, pharmacy, architecture, hotel management and catering technology, management studies, computer applications and applied arts and crafts. On an average, the per-student per-annum cost of education attainment in the state is estimated at Rs 17,746.

Figure V.9: Per-student household expenditure on education (Rs)



***Source**: NCAER computation*

iv. The increasing cost of education partly explains the decreasing Gross Enrolment Ratios (GER). The GER for primary level of education stands at 111.7 per cent (Source: U-DISE), which decreases to 68.5 per cent for senior secondary level (U-DISE) and to 36.3 per cent for higher education (Source: AISHE).

- **Household Expenditure by producing units**

The NSS survey also collected the expenditure on education by types of institution, classified into:

- government
- private aided
- private unaided
- not known

For the purpose of preparing ESA, these types of institutions are categorized into:

- public (government),
- private-aided and
- private unaided (including "not known")

Table V.12 presents the values of household expenditure on these types of producing units, across all levels of education. Also presented is the number of students enrolled in these producing units.

TABLE V. 12: HOUSEHOLD EXPENDITURE ON PRODUCING UNITS AND STUDENTS ENROLLED

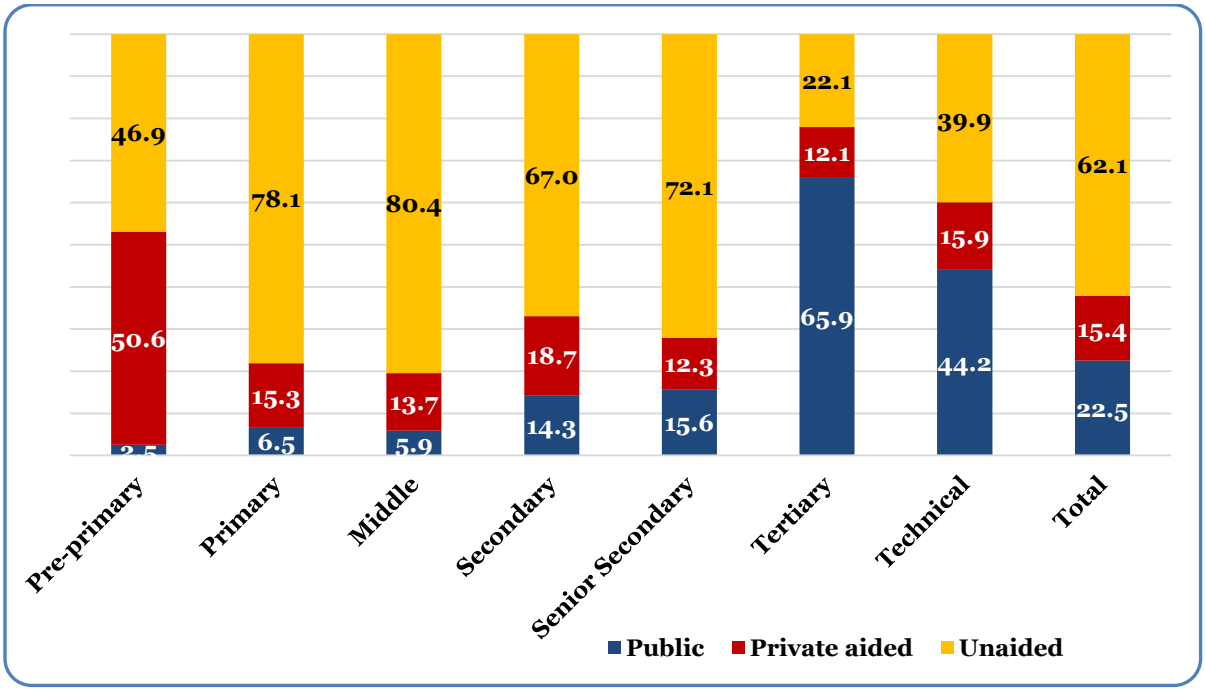
	Expenditure (Rs crore)			Number of students enrolled		
	Public	Private-	Private-	Public	Private-	Private-
Pre-primary	4.0	80.7	74.8	29816	27539	62720
Primary	76.9	180.5	919.8	469783	75809	411208
Middle	56.1	130.1	764.8	264779	65509	270124
Secondary	97.3	126.7	454.2	189878	55941	127814
Senior Secondary	131.7	104.2	610.0	154337	52004	100852
Tertiary	704.7	129.1	236.0	372331	33160	31659
Technical	54.4	19.6	49.1	16814	2372	5721
Total	1,125.3	770.9	3,108.6	1497738	312335	1010098

***Source**: NCAER computation*

Of the total household expenditure of Rs 5004.8 crore, only 22.5 per cent is spent on public institutes, 15.4 per cent on private-aided and a significant 62.1 per cent is spent on purely private or private-unaided ones. Figure V.10 presents the per cent distribution of

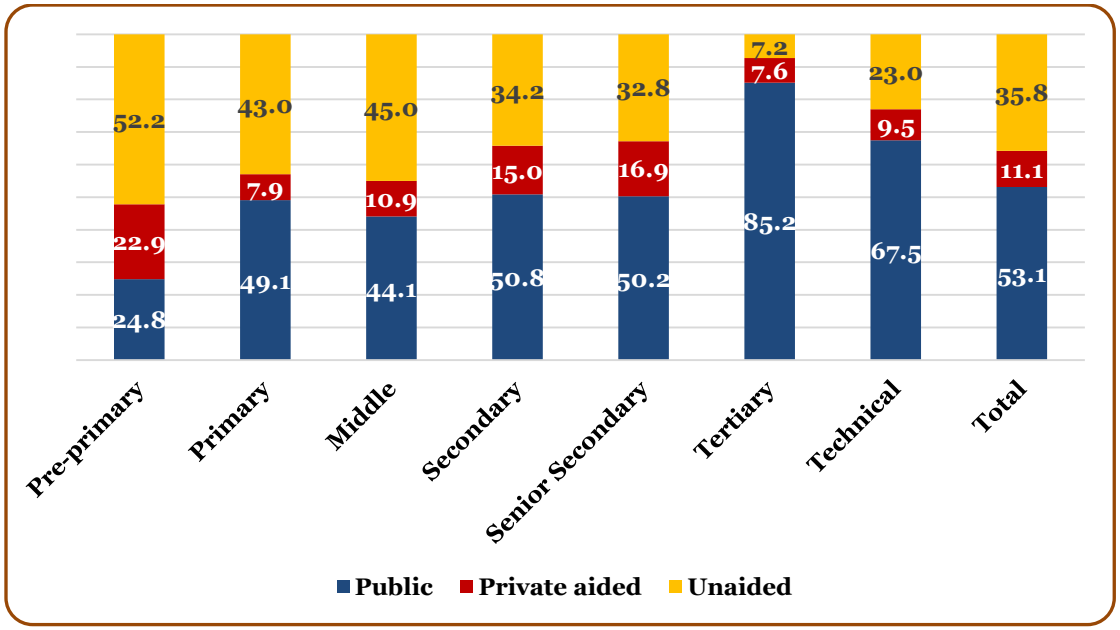
household expenditure by public, private-aided and private unaided producing units across all levels of education and Figure V.11 presents the per cent distribution of students enrolled in these producing units and levels of education.

Figure V.10: Household Expenditure by types of producing units (% distribution)



Source: *NCAER computation*

Figure V.11: Students enrolled by types of producing units (% distribution)



***Source**: NCAER computation*

Key Highlights

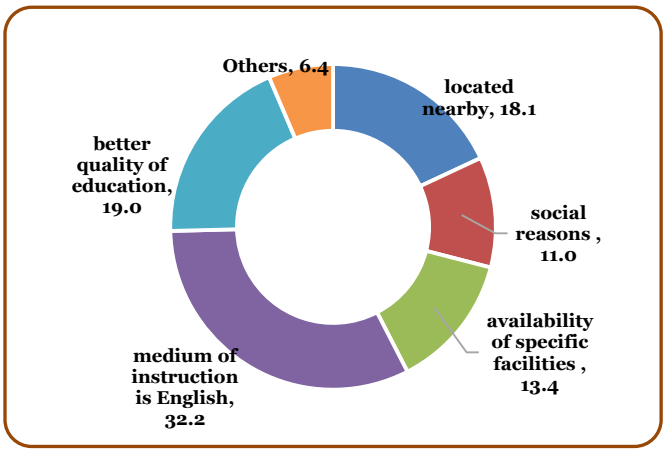
i. At pre-primary level, there are not many public schools, hence the enrolment in public schools is only 24.8 per cent of the total students enrolled in this level of education (Fig. V.11). The share of total household expenditure incurred on pre-primary education is also very low in the case of public units (Fig. V.10).

ii. The share of students enrolled in public units goes up to 49.1 per cent in the case of primary education and a little low at 44.1 per cent in the case of middle education. But these shares are also significant for private units (especially unaided), despite the fact that elementary level of education (up-to primary and middle taken together) is incentivized by the government under its initiative of universalization of elementary education. About 80 per cent of households' expenditure incurred in attaining these levels of education is spent in private unaided schools (Fig. V.10).

iii. The shares of students enrolled in public units keeps declining and that in private un-aided units keeps increasing as we go up the level of education, at school level. This shows the growing preference for private schools for higher levels of school education.

iv. Among the reasons given by the households for opting private institution, the majority (32.2 per cent) report the medium of instruction being English as the biggest reason. This is followed by better quality of education, reported by 19.0 per cent and proximity, reported by 18.1 per cent (Fig. V.12).

Figure V.12: Distribution of reasons for attending private institution (%)



***Source**: NCAER computation using NSS, 75th round survey data.*

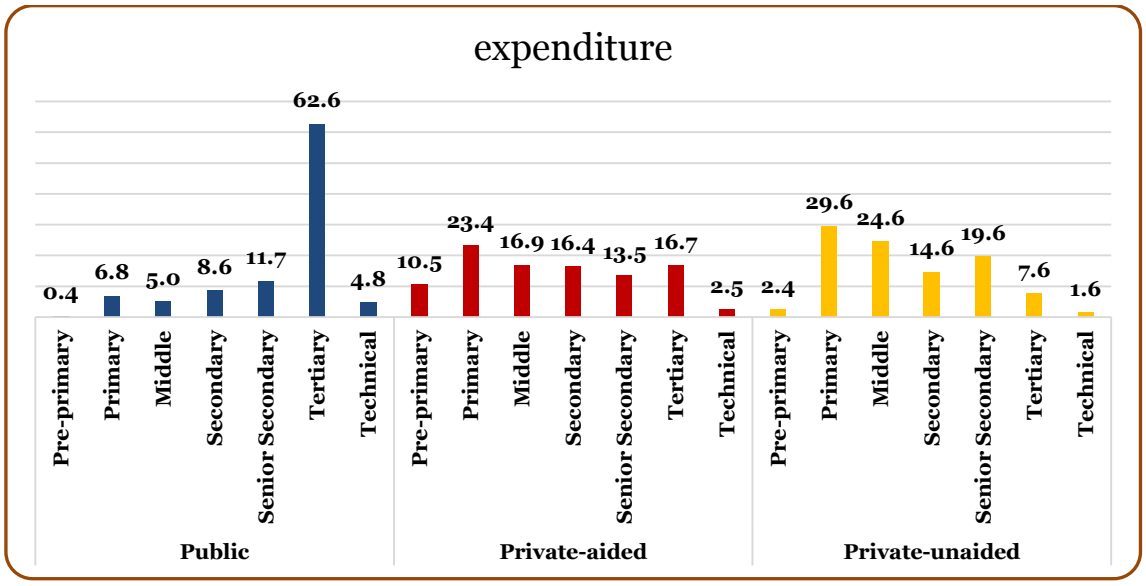
v. At tertiary and technical levels of education, the proportion of students enrolled in public units is significantly high at 85.2 and 67.5 per cent respectively.

vi. Expenditure incurred is also high in public units, at tertiary level (65.9 per cent).

vii. Figure V.13 presents the distribution of households' expenditure within each of the three types of producing units by levels of education. The findings reveal that of the total households' expenditure incurred on education in public units, maximum is incurred on the attainment of tertiary education. This proportion stands at 62.6 per cent, while students enrolled in tertiary education is only 24.9 per cent of total enrolled in public units (Fig. V.14).

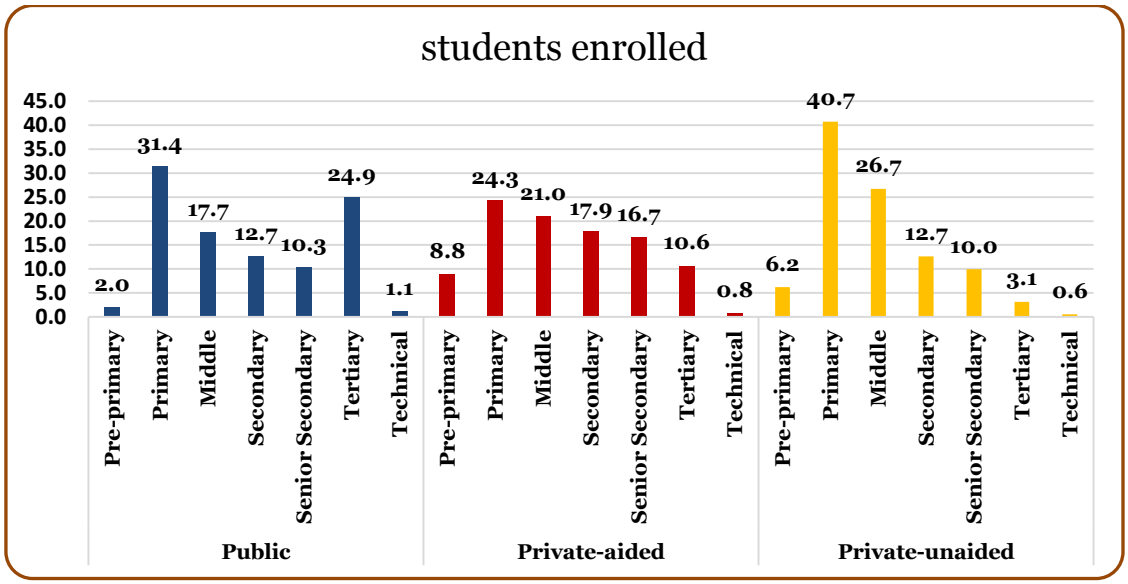
viii. Among private unaided units, most of the household expenditure is incurred in the attainment of school-level education. The households clearly prefer private unaided units for school education and public or public-aided units for higher education, that is, tertiary and technical (Fig. V.13).

Figure V.13: Per cent distribution of Household's expenditure by levels of education within each type of producing unit



***Source**: NCAER computation*

Figure V.14: Per cent distribution of students enrolled by levels of education within each type of producing unit



***Source**: NCAER computation*

ix. With respect to an average per-student expenditure, at an aggregate level, the expenditure incurred in attaining education from private-aided units (Rs. 24,680.36) is 3.3 times the expenditure incurred in public units (Rs. 7513.08). Further, average expenditure incurred in private-unaided units (Rs. 30775.67) is 4.1 times the expenditure incurred in public units.

x. This variation is huge across levels of education. Public schools, as expected, cost just Rs 1350 and Rs 1637 only per student, for pre-primary and primary education respectively (Fig. V.15). It turns out that for these levels of education, private-unaided schools are little less expensive than private-aided. The per-student per annum cost of attaining pre-primary and primary education is estimated at Rs 29,296 and Rs 23,810 respectively, from a private-aided school and Rs 11,928 and Rs 22,368 from a private unaided school.

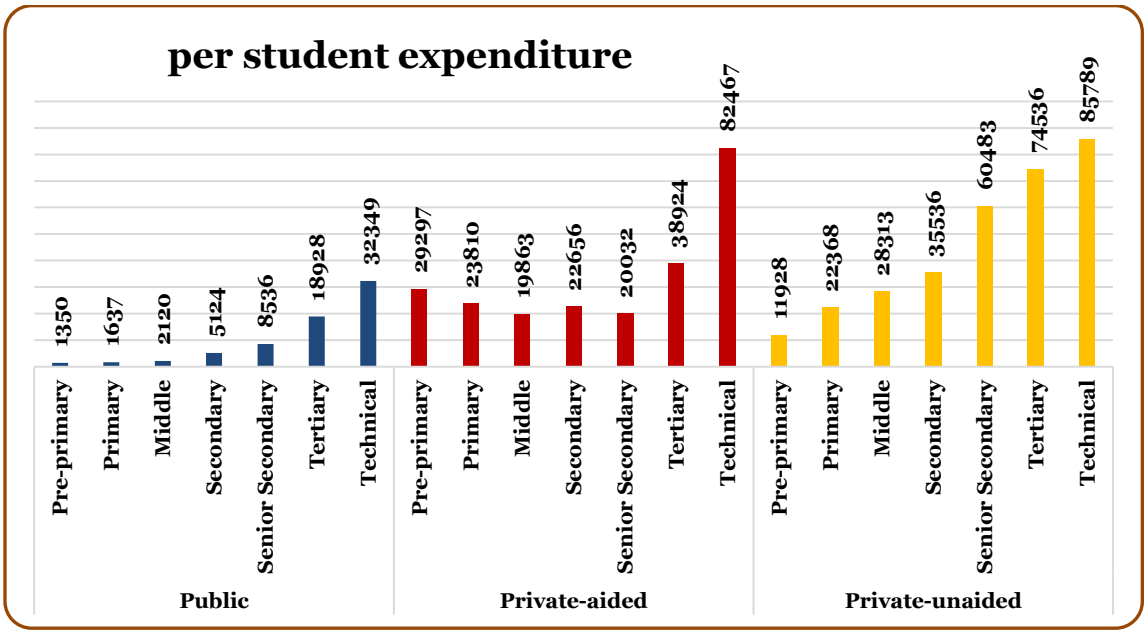
xi. The notable interpretation of these findings is that primary education from a private-aided school is 14 times more than the same from a public school. Private-unaided school is also about 13.7 times more expensive for the same level.

xii. Both secondary and senior secondary education from private-unaided schools is about 7 times costlier than from public counterparts.

xiii. At an average of Rs 38,924 per student per annum, tertiary education from private-aided institute is twice as expensive as that from public institute (Rs 18,928). Private unaided, however, is four times more expensive (Rs 74,536).

xiv. Technical education is the most expensive level of education across all types of producing units. On an average, a public institute costs Rs 32349 per student per annum, private-aided costs 2.5 times more, at Rs 82,467 while private unaided costs the highest at Rs 85,789.

Figure V. 15: Per Student Household Expenditure by types of producing units and levels of education (in Rs.)



***Source**: NCAER computation*

- **Household Expenditure by activities**

The items on which households spend, also referred as activities in ESA, are the following.

- Course fee
- Books, stationery and uniform
- Transport
- Private coaching
- Other expenditure
- Expenditure on course other than basic course
- Expenditure on preparation for higher studies

Of these items, course fee, which includes tuition fee, examination fee, development fee and other compulsory payments, is the payment to the institute. In some cases, transport is also provided by the institute. Rest of the items are education connected products and services which are purchased from outside educational institutions. Hence, for ESA purpose, course fee and transport fee (if transportation is provided by the institute) are put under the recurrent expenditure on goods and services (payment to the institute), while others are put under payments outside educational institutions.

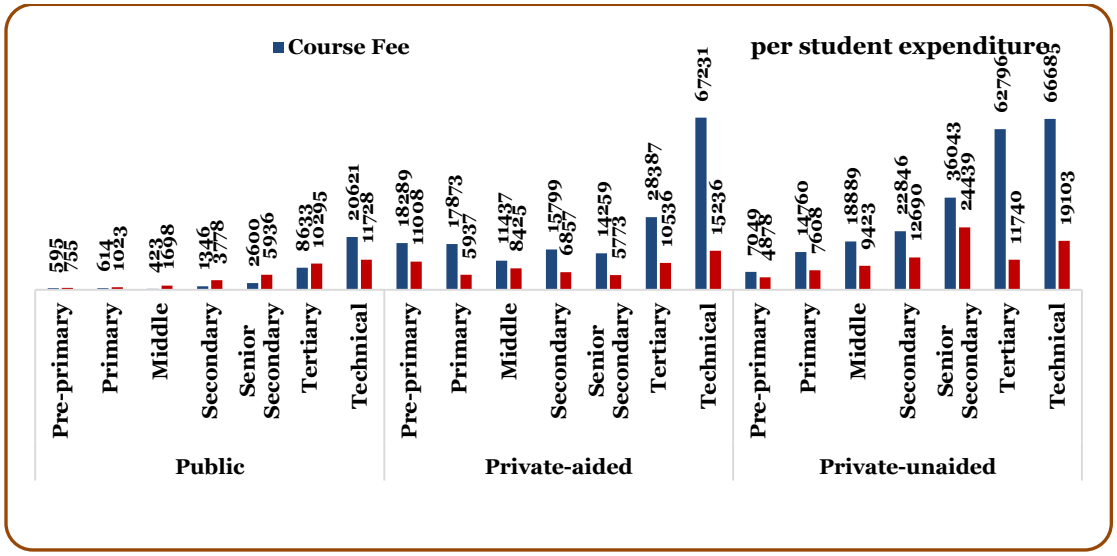
This section presents the analysis of household expenditure on all the items. Table V.13 presents the values of expenditure incurred by households on different activities, when enrolled in public institutes, private-aided and private unaided institutes. Figure V.16 presents the per-student expenditure incurred by households on course fee or payments to the institute and payments outside the institute, to support attendance. Figure V.17 presents the percentage distribution of household expenditure by course fee and payments outside institution, across all levels of education.

TABLE V. 13: HOUSEHOLDS EXPENDITURE ON ACTIVITIES (RS CRORE)

		Course Fee	Books, stationery and uniform	Transport not organized by school	Others (snacks, etc.)	Private Tuition
Public	Pre-primary	1.8	1.3	0.5	0.5	-
	Primary	28.8	30.8	0.4	9.7	7.1
	Middle	11.2	26.3	1.6	9.8	7.4
	Secondary	25.6	41.7	7.0	8.7	14.4
	Senior	40.1	42.8	11.9	8.6	28.3
	Tertiary	321.4	125.4	153.8	46.1	58.0
	Technical	34.7	9.0	7.2	3.1	0.4
Private-aided	Pre-primary	50.4	11.1	16.8	1.8	0.6
	Primary	135.5	26.2	2.2	6.9	9.7
	Middle	74.9	26.7	1.4	5.6	21.5
	Secondary	88.4	21.2	0.2	3.9	13.0
	Senior	74.2	16.2	2.5	6.0	5.4
	Tertiary	94.1	15.9	11.4	3.7	3.9
	Technical	15.9	1.7	1.2	0.6	0.1
Private-unaided	Pre-primary	44.2	19.1	5.5	3.0	2.9
	Primary	607.0	228.8	18.5	37.4	28.2
	Middle	510.2	154.0	20.5	23.4	56.6
	Secondary	292.0	85.1	9.1	20.2	47.8
	Senior	363.5	86.2	18.4	18.7	123.1
	Tertiary	198.8	22.3	3.8	10.6	0.4
	Technical	38.2	5.5	3.6	1.6	0.3
Total	Public	463.6	277.2	182.4	86.4	115.5
	Private-aided	533.4	119.1	35.7	28.5	54.2
	Private unaided	2,053.9	601.1	79.4	115.0	259.3
	TOTAL	3,050.9	997.4	297.5	230.0	429.1

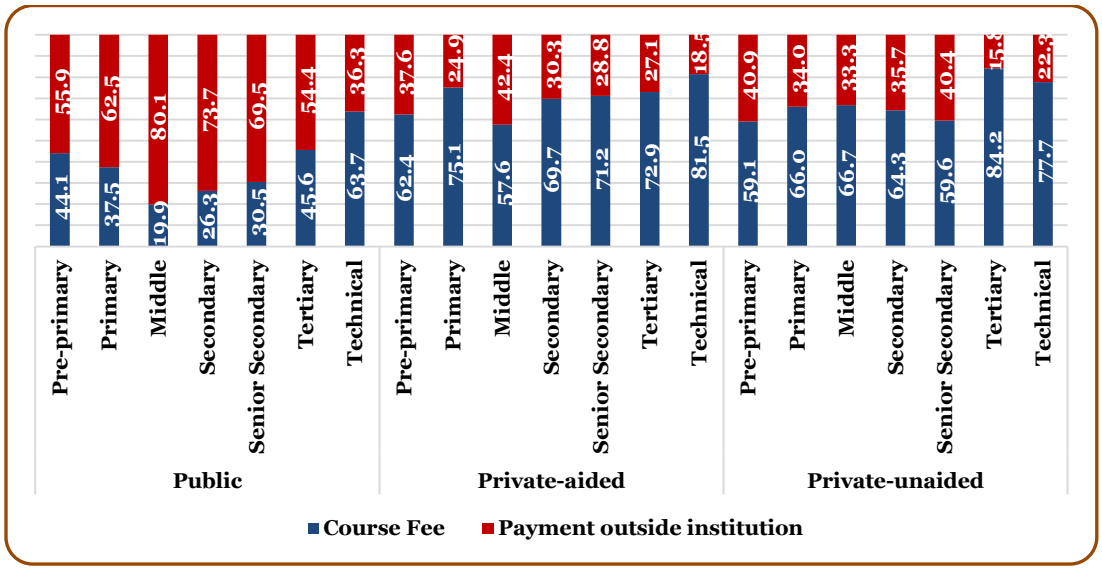
***Source**: NCAER computation*

Figure V.16: Per-student expenditure on course fee and payments outside institute (Rs)



***Source**: NCAER computation*

Figure V.17: Per cent distribution of household expenditure by course fee and payment outside institute



***Source**: NCAER computation*

Key Highlights

i. With Rs 2053.9 crore spent on course fee for attaining education from a private unaided institute (Table V.13), private education industry demands as much as 4.4 times more money from households than does the government-run education system. This is despite the fact that the total students enrolled, across all levels of education taken together, in private unaided institutes are only 10.10 lakh, which is over 32 per cent less than those enrolled in public institutes (14.98 lakh).

ii. In the case of enrolment in public schools (for school levels of education), the course fee is only about 30 per cent of the total expenditure and the remaining substantial 70 per cent is spent on purchasing books, uniform, stationery, etc. from outside the school.

iii. On the other hand, in the case of enrolment in private schools, both aided and unaided, the reverse pattern is observed. The maximum expenditure is incurred on course fee, its share ranging from 60 to 75 per cent (Fig. V.17).

iv. Across all types of producing units, the additional expenditure incurred on purchasing books, stationery, uniform, transportation, etc. which are payments outside the institution of enrolment, is significant at the school level but its share decreases considerably in the case of higher education.

v. For higher education, course fee is significant in all the three types of producing units, the highest being in the case of private unaided institutes, where share of course fee is as much as 84 per cent for tertiary education and 77.7 per cent for technical education.

V.3. Other Private Expenditure

Private entities are the third type of financing units. As mentioned earlier, transfers paid by private entities are not available and are also difficult to collect as these entities may be of various types, like private corporates, private-funded NGOs, donor agencies or philanthropic individuals. Hence, the data on payments received are collected from the producing units to which these transfers are made, that is, private-unaided institutions. For the sake of simplicity in the collection of data, total expenses of producing units are collected in the survey as total revenue of an institute equal to its total expense.

For these private-unaided units, while household payments are the significant source of revenue, there are other sources like donations from philanthropists, assistance from NGOs or their self-

raised finances through, say, commission on sale of products to parents[20]. To capture the total revenue generated and expenditure incurred by the private-unaided institutes, a primary survey of these institutes was conducted in the four districts of Uttarakhand. It may be noted that since the receivables from households (as fee, etc.) are also captured in the survey, the household expenditure on private unaided institutes should not be taken into account in the derivation of total education expenditure in the state, to avoid double-counting.

While for ESA purpose, the expenditures of only private-unaided institutes are required[21], the primary survey was conducted on all the three types of producing units, that is, public, private-aided and private unaided. This section presents the expenditure of these producing units by different levels of education and activities.

The broad objectives of the survey were to collect information about the following.

- Ownership status of the institute.
- Number of employees – teaching and non-teaching; contractual and regular; by gender and by different job-roles.
- Details of expenditure incurred by the institutes on different activities, including compensation to staff; ancillary items; utility charges; regular maintenance charges; capital expenditures, etc.
- Values of financial support and grants received from different sources, including households.

Most of these were obtained across different levels of education.

The survey was conducted in two districts each of both Garhwal and Kumaon regions, which are the two administrative regions of the state. Of the total 13 districts in the state, seven are the part of the Garhwal region and the other six fall in Kumaon region. The districts covered in the survey were Dehradun, Haridwar, Nainital and Pithoragarh.

The selection of educational units, from these selected districts, was done based on the census (2011) data on number of educational institutions located in these districts. For the purpose of the study, the sample was required to be representative of all levels of education, as classified in the census data. These levels of education and their concordance with the ESA levels of education are the following (Table V.14).

[20] *Commissions on sale of products to parents (e.g., text books and uniforms) can constitute close to 20% of an Affordable Private Schools' net earnings. Source: https://www.fsg.org/sites/default/files/Understanding%20the%20Affordable%20Private%20School%20Market%20in%20India.pdf*

[21] *This is because payments received by public and private-aided institutes are the combination of transfers made from general government and households, both of which have already been collected and discussed in previous sections.*

TABLE V.14: LEVELS OF EDUCATION SELECTED FOR SURVEY AND THEIR CONCORDANCE WITH ESA LEVELS

Survey Levels of Education	ESA Levels of Education
Pre Primary	Up to Primary
Primary	Up to Primary
Middle	Middle
Secondary	Secondary
Senior Secondary	Senior Secondary
Degree OR PG College – Arts/Science/Commerce/Law	Tertiary education
Medical College	Tertiary education
Engineering College	Technical education
University	Tertiary education
Management Institute	Technical education
Polytechnic	Vocational/Polytechnic
Distance Learning	Others
Teacher Training	Others
Vocational Education OR Industrial Train	Technical education
Coaching Institute	Others
Non–formal Education	Non-formal
Special School for Disabled	Others
Shorthand, Typewriting, MS Office, Desk	Others
Others (Please Specify)	Others

***Source**: NCAER computation*

The sample size for each district was so selected that the following points were taken care of.

- For each level of education, sample was selected from both rural and urban areas.
- The sample from both these areas was representative of both government and private units.
- A minimum of two and a maximum of three units were selected from these government and private categories in both rural and urban areas, for each level of education.
- For some of these levels, there was no unit in districts, due to which no sample units was allocated to that category.

Taking all these into account, the target sample size for each district worked out to be 146, making a total sample size of 584 units. However, final usable data could be obtained from 511 educational institutions/units from all the four sample districts[1], 223 from rural areas of the sample districts

[1] *The field investigators found it difficult to obtain the authentic financial data from some of the institutions. This called for thorough back-checking and further attempts to get the data, either by re-visits or through phone calls.*

while 288 come from the urban areas. The target sample of 148 educational institutions could be achieved in Nainital with 66 units from rural areas and 82 from urban Nainital.

In all, 511 educational institutes were canvassed for face-to-face interviews. Unfortunately, the reduced sample size was primarily because of the insufficient representation of tertiary and technical education. Hence, the findings of this survey will be used for only school levels of education. For tertiary and technical levels of education, household payments on these levels of education will be considered, although this may lead to an underestimation as payments from other private entities are missed out.

The methodology to derive the total expenditure in the state using the sample data is based on the recommended methodology in the UNESCO's "Methodology of National Education Accounts" that *"a sample survey of private institutions is recommended if their audited financial statements are not centralized or easily available. The methodology also suggests that the processing of primary survey data leads to figures on average financing and spending per student and the global estimates, that is, estimates for the population can be derived using enrolment numbers."*

Hence, the estimates of expenditure were obtained by multiplying the sample per-student expenditure for a level of education with the total number of students enrolled in that level of education, as obtained from U-DISE data. Based on this estimation procedure, the expenditure incurred by producing units is presented as follows.

- **Other Private Expenditure by levels of education**

As mentioned before, the survey could reasonably capture the expenditure of only school level education, that is, primary, middle, secondary and senior secondary.

The total expenditure incurred by the producing units (school levels of education), all three types put together, is estimated at Rs 5328.0 crore for levels of education covering primary to senior secondary. This value stands at Rs 1384 crore for public units and Rs 905 crore for private-aided units. These public and private-aided producing units are financed by general government and households, both of which have been covered in the previous sections in which expenditures on these producing units are presented through the transfers made by the financing units.

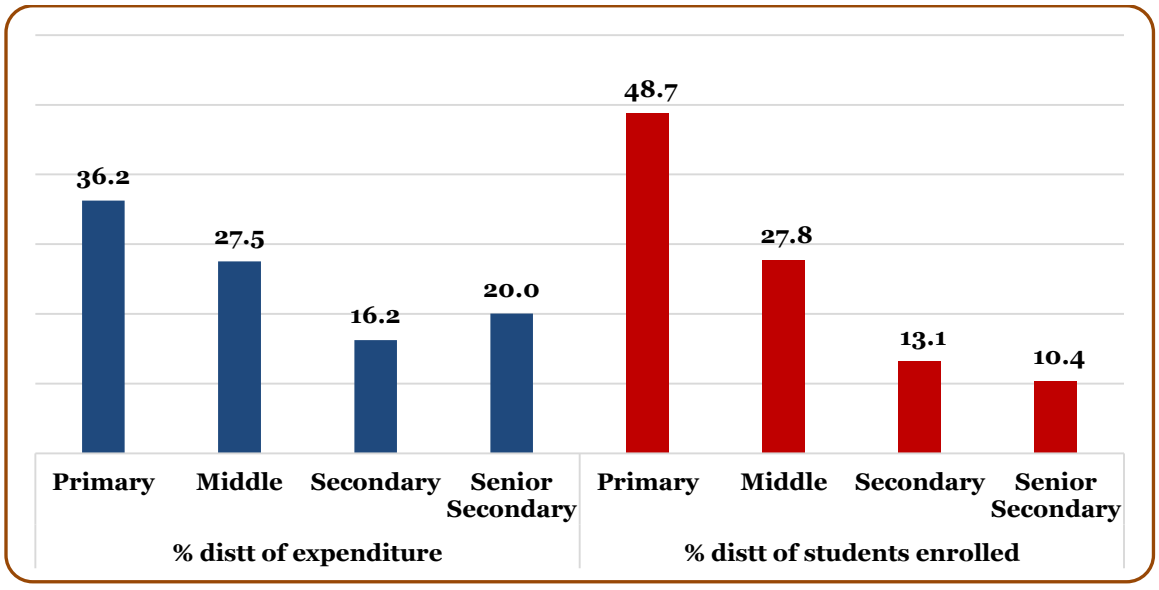
The expenditure incurred by private unaided units is estimated at Rs 3040 crore. While households are the significant source of finance for these types of producing units but they are not the only source. This is evident from the fact that households' payments to private unaided units (primary to senior secondary), which includes only course fee to the institutes, at Rs 1817 crore

This exercise could not be completed and the survey had to be stalled due to lockdown following the Covid-19 pandemic.

(Table V.13, Section V.2), is only about 64 per cent of total expenditure incurred by private unaided units (it should be noted that total expenditure equals the total revenue from all sources). Hence the remaining 36 per cent may be attributed to other sources of finance like donations, self-finance, commission from sale of merchandise or interest income from term deposits. Besides, under the Right to Education Act 2009, private schools get a per-student reimbursement from government on giving 25 per cent of their seats to disadvantaged children.

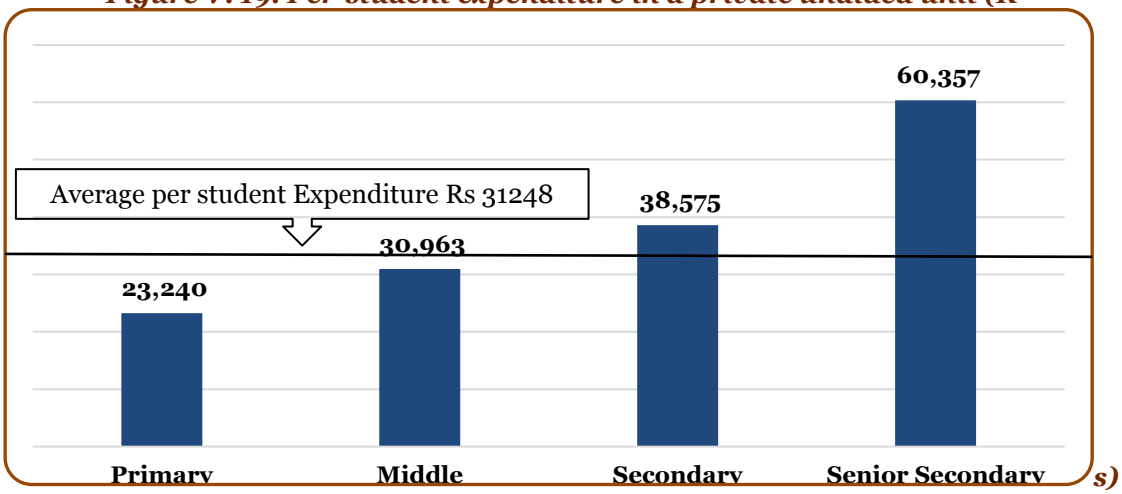
The following graph (Fig. V.18) presents the percentage distribution of expenditure incurred by private unaided units by levels of education. Also presented is the percentage distribution of students enrolled in these levels of education. Figure V.19 presents the level-wise average annual per-student expenditure.

Figure V. 18: Per cent distribution of expenditure and students enrolled by levels of education (for private-unaided units)



***Source**: NCAER computation*

Figure V. 19: Per-student expenditure in a private unaided unit (R



***Source**: NCAER computation*

Key Highlights

i. The expenditure incurred by private unaided producing units, which also represents the expenditure incurred by private financing units (households and others), is estimated at Rs 3040 crore. This is 1.7 times the household payments to these units as course fee and other payments to the institutes.

ii. The private unaided schools spend 36.2 per cent on their primary level of education while the students enrolled in this level constitute 48.7 per cent of total enrolled in schools (Fig. V.18).

iii. For middle and secondary levels of education, this variation is very little but the values are in reverse order in the case of senior secondary. For senior secondary level of education, the schools spend 20.0 per cent of their total expenditure while students enrolled are only 10.4 per cent. The greater allocation to higher levels of school education owes to greater expenses on items like lab equipment, computers, special tutorials, etc.

iv. In terms of average annual per-student expenditure, the school expenses increase from Rs 23,240 for primary level to Rs 60,357 for senior secondary level, showing an increase equivalent to 2.6 times (Figure V.19).

v. The average per-student expenditure, taking all levels together, is estimated at Rs 31,248.

- **Other Private Expenditure by activities**

The survey collected data on expenditure incurred by schools on all items of expenditure. The most significant item is the remuneration to teachers, followed by that to non-teachers. The details of remuneration included wages and salary, social security contribution, bonus and allowances and other payments. These were collected for both permanent and non-permanent

staff. Non-teaching staff included administrative staff, library staff, medical staff and other personnel like housekeeping staff, guards, drivers, conductors, etc.

Various other details of expenditure were also collected. The items of expenditure are mapped with the ESA categories of activities as presented in Table V.15.

TABLE V.15: MAPPING OF SURVEY ITEMS OF EXPENDITURE WITH ESA ACTIVITIES

ESA set of activities			Items of expenditure – primary survey
Teaching activities	Staff Cost	Teaching	Permanent
			Non permanent
		Non-teaching	Administrative Staff
			Library Staff
			Medical Staff
			Other personnel
	Goods and Services	Textbooks and other teaching material	Textbooks and Stationery
		Other recurrent (grants and subventions, water, electricity, office supplies, etc)	Electricity Charges
			Building Rent
			Telecommunication and internet charges
			Water and Sanitation Expenses
			Regular Maintenance
			Fee Waivers for Economically Weaker Section (EWS)
			Taxes paid by the institution
	Capital (equipment)		Furniture *(Desk, chairs, chalk boards, white boards)*
			Smart Boards and related equipment
			Computers and related software
			Other infrastructural equipment
Ancillary services			Laboratory
			Transportation provided by institution***
			Medical Facilities
			Legal and professional charges/Consultancy Charges/ Audit expenses/Guest Faculty/ Visiting Faculty, etc.
			Annual Festivals
			Depreciation
Scholarship			Scholarships
Capital Outlay (new construction, major works)			R&D/ Intellectual Property Rights*
			Cost of new construction
			Cost of major renovation
			Acquisition of land

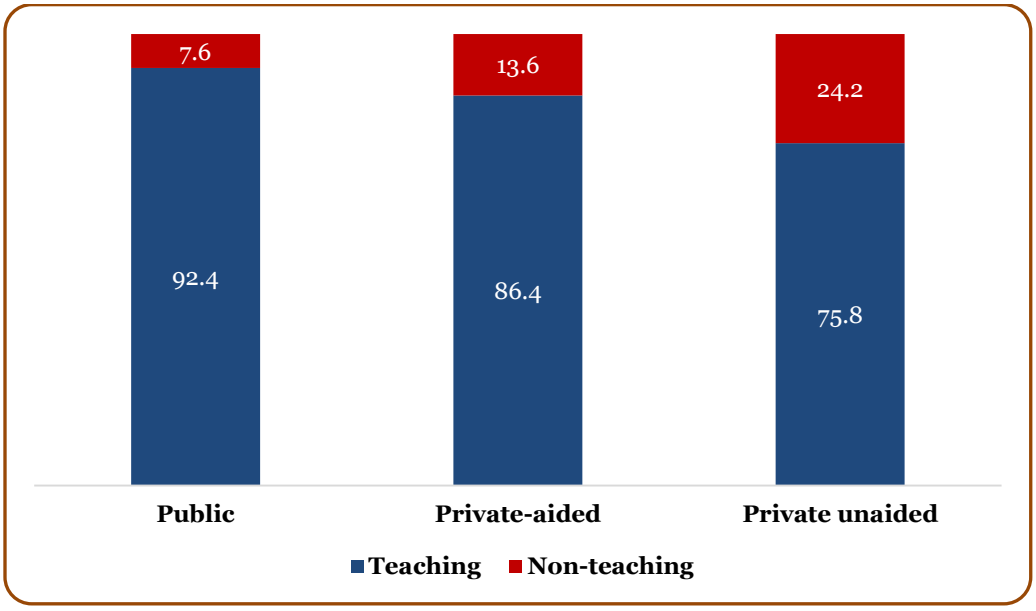
***Source**: NCAER computation*

For ESA purpose, data on ESA set of activities are required but some of the other key findings are reported below.

Key Highlights

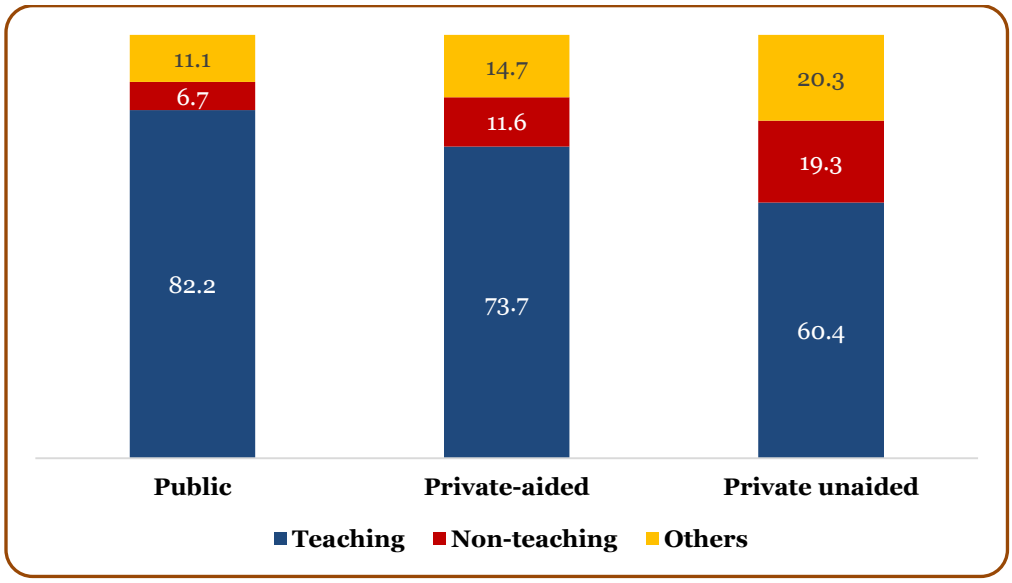
i. The breakup of staff cost into teaching and non-teaching categories could be captured only through the survey as government budget data does not distinguish between compensation to teaching and non-teaching staff. Since the survey was conducted in all the three types of producing units, the breakup is available for all the types, across the school levels of education. Figure V.20 presents the per cent breakup of staff cost into teaching and non-teaching for all of the categories of producing units. Further, Figure V.21 provides the per cent distribution of expenditure by salaries (teaching and non-teaching) and other expenditure on goods and services.

Figure V.20: Breakup of staff cost into teaching and non-teaching (%)



***Source**: NCAER computation*

Figure V.21: Per cent distribution of total expenditure by remuneration and other goods and services



***Source**: NCAER computation*

ii. As expected, the total remuneration to teaching staff is way higher than that of non-teaching staff in all the categories of producing units (Fig. V.20). The schools clearly spend the most on the salaries of teaching staff. However, its proportion is lesser in the case of private unaided schools, as compared with that in public and private-aided schools. This also conforms to the widely known fact that the teachers in private unaided schools are paid much lesser than those in government and private-aided schools, both of which are governed by the government.

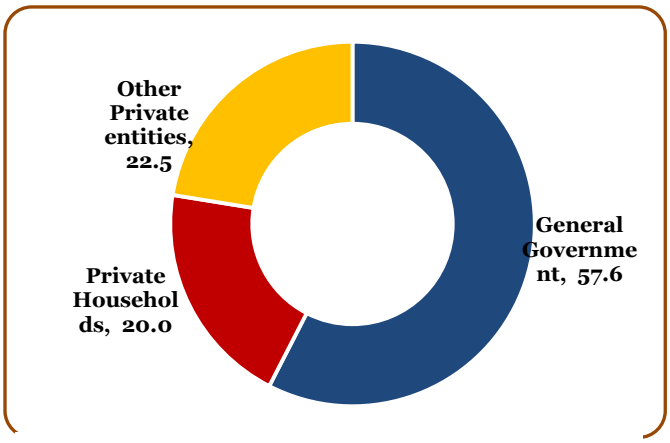
iii. In contrast, private unaided units are autonomous in the sense that the fee structure is decided by private managements which appoint their own teachers and pay them the salary scales determined internally. Also, with no assistance from government sources and to maintain better infrastructure to attract parents, private unaided schools spend a higher proportion of their revenue on other goods and services (Fig. V.21).

V.4. Total Education Expenditure

The sum total of general government expenditure, private expenditure by households and other private expenditure on education domain is estimated at Rs 14,758 crore. This total expenditure on education works out to be 6.6 per cent of the state GDP. However, as per the National Education Policy - 2020, public sector spending alone is targeted to be 6 per cent of GDP, at national level.

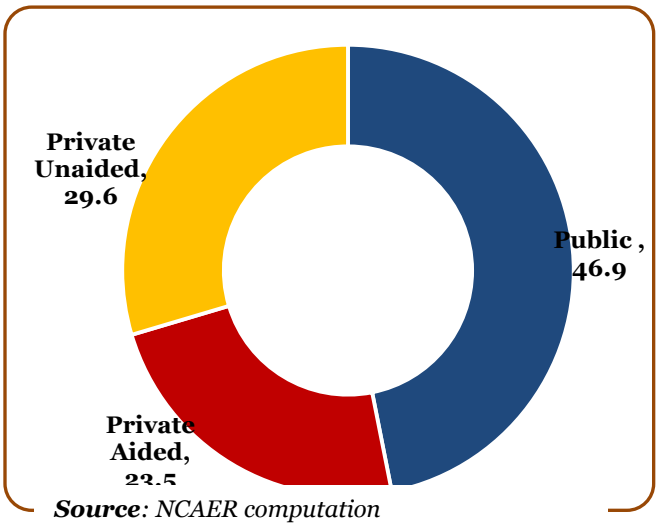
The distribution by financing units reveals that the majority, at 57.6 per cent, is on account of general government expenditure; private households contribute another 20.0 per cent; and the other private entities account for the remaining 22.5 per cent.

Figure V.22: Total Education Expenditure by Financing Units (% distt.)



***Source**: NCAER computation*

***Figure V.23: Total Education Expenditure by Producing Units* (% distt)**

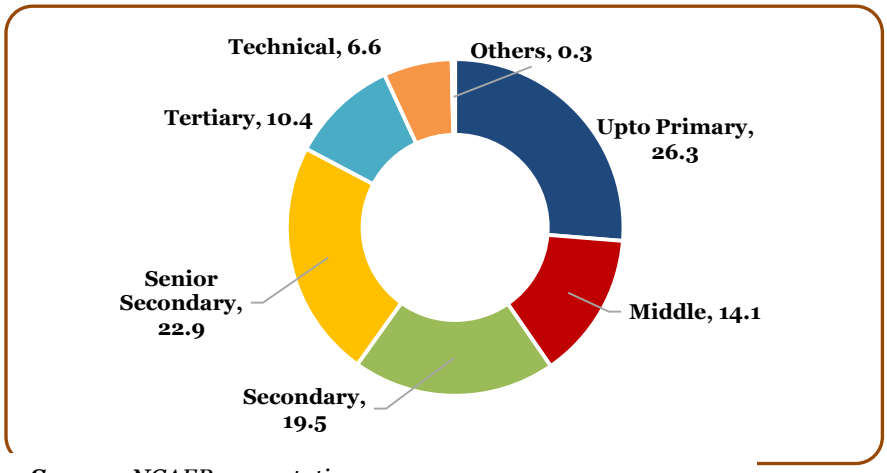


***Source**: NCAER computation*

The distribution by producing units show that maximum expenditure by all financing units, put together, is incurred on public units or the government-run institutes. This is because of highest expenditure incurred by general government, 68 per cent of which is spent on the functioning of public units. Private unaided units account for the second highest share of 29.6 per cent. Expenditure on these units is incurred by private households and other private entities.

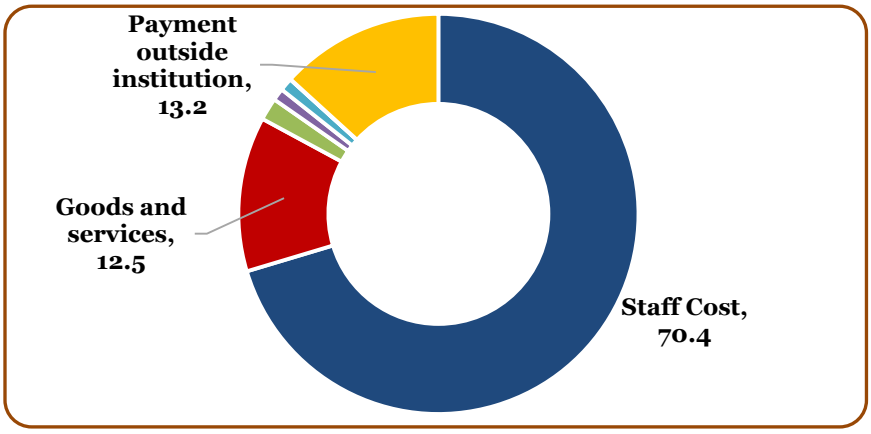
The distribution of total education expenditure by levels of education is presented in Figure V.24. The school levels of education receive a total of 82.3 per cent of total expenditure from all the financing units, put together. Higher education, that is, tertiary and technical, accounts for 16.6 per cent of the total expenditure.

Figure V. 24: Total Education Expenditure by levels of education



***Source**: NCAER computation*

Figure V. 25: Total Education Expenditure by activities (% distt)



***Source**: NCAER computation*

Further, the distribution by activities shows that staff remuneration (both teaching and non-teaching taken together) accounts for a significant 70 per cent of total education expenditure. The payments made outside the educational institution, but related to education, accounts for another 13.2 per cent. This expenditure is incurred entirely by the households whose members are enrolled in an educational institution. About 12.5 per cent of the total expenditure is incurred on goods and services, which are recurrent expenditure on utility services, textbook and teaching material provided by institute, other office supplies, etc. The remaining miniscule share of 3.9 per cent of total expenditure is spent on capital goods, ancillary goods and services, general administration and scholarships. The detailed tables are provided in the Appendix.

VI. ESA Tables

TABLE VI. 1: FINANCING OF ACTIVITIES – EXPENDITURE BY GENERAL GOVERNMENT

(Rs crore)

	Payment in the Education Institutions												Payments outside of Education Institutions				
	Teaching Activities					Ancillary services	General Administration			Scholarship and stipend	Revenue Total	Capital Outlay	Goods and Services Required for School Attendance			Private Tuition	Total Financing
	Staff Cost		Goods and services		Capital (equipment etc)		Staff Cost	Goods and services	Capital				Books, stationery and uniform	Transport not organized by school	Others (snacks etc)		
	Teaching	Non-teaching	Teaching material	Other recurrent													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Up to Primary	1,718	103	3	213	0	2	30	1	0	-	2,072	18	-	-	-	-	2,090
Public	1,657	90	0	177	0	2	30	1	0	-	1,957	18	-	-	-	-	1,975
Private Aided	62	13	3	37	-	-	-	-	-	-	115	-	-	-	-	-	115
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	632	38	2	49	0	1	11	0	0	-	732	47	-	-	-	-	779
Public	609	32	0	33	0	1	11	0	0	-	686	47	-	-	-	-	733
Private Aided	23	5	2	16	-	-	-	-	-	-	46	-	-	-	-	-	46
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	1,761	188	2	9	1	7	24	0	0	0	1,993	-	-	-	-	-	1,993
Public	871	111	2	9	1	7	24	0	0	0	1,026	-	-	-	-	-	1,026
Private Aided	890	77	-	0	-	-	-	-	-	-	968	-	-	-	-	-	968
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Senior Secondary	1,930	163	2	90	1	2	31	5	0	0	2,226	52	-	-	-	-	2,278
Public	1,167	98	2	90	1	2	31	5	0	0	1,397	52	-	-	-	-	1,449
Private Aided	763	65	-	0	-	-	-	-	-	-	828	-	-	-	-	-	828
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tertiary	313	70	0	44	1	0	4	1	0	1	434	25	-	-	-	-	459
Public	247	66	0	43	1	0	4	1	0	1	363	25	-	-	-	-	388
Private Aided	66	4	-	1	-	-	-	-	-	-	71	-	-	-	-	-	71
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Technical	548	230	0	25	2	0	3	26	0	0	834	11	-	-	-	-	845
Public	86	21	0	24	2	0	3	26	0	0	163	11	-	-	-	-	174
Private Aided	462	209	-	0	-	-	-	-	-	-	671	-	-	-	-	-	671
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	27	5	0	1	0	0	11	5	0	0	50	-	-	-	-	-	50
Public	27	5	0	1	0	0	11	5	0	0	50	-	-	-	-	-	50
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	6,929	798	10	431	5	13	115	38	1	1	8,342	152	-	-	-	-	8,494
Public	4,663	424	5	376	5	13	115	38	1	1	5,642	152	-	-	-	-	5,794
Private Aided	2,266	374	5	54	-	-	-	-	-	-	2,699	-	-	-	-	-	2,699
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE VI. 2: FINANCING OF ACTIVITIES – EXPENDITURE BY PRIVATE HOUSEHOLDS

(Rs crore)

Expenditure of Private Households																	
	Payment in the Education Institutions											Capital Outlay	Payments outside of Education Institutions				Total Financing
	Teaching Activities					Ancillary services	General Administration			Scholarship and stipend	Revenue Total		Goods and Services Required for School Attendance			Private Tuition	
	Staff Cost		Goods and services														
	Teaching	Non-teaching	Teaching material	Other recurrent	Capital (equipment etc)		Staff Cost	Goods and services	Capital				Books, stationery and uniform	Transport not organized by school	Others (snacks etc)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Up to Primary	-	-	-	216	-	-	-	-	-	-	216	-	317	44	59	49	686
Public	-	-	-	31	-	-	-	-	-	-	31	-	32	1	10	7	81
Private Aided	-	-	-	186	-	-	-	-	-	-	186	-	37	19	9	10	261
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	248	24	40	31	343
Middle	-	-	-	86	-	-	-	-	-	-	86	-	207	24	39	85	441
Public	-	-	-	11	-	-	-	-	-	-	11	-	26	2	10	7	56
Private Aided	-	-	-	75	-	-	-	-	-	-	75	-	27	1	6	21	130
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	154	21	23	57	255
Secondary	-	-	-	114	-	-	-	-	-	-	114	-	148	16	33	75	386
Public	-	-	-	26	-	-	-	-	-	-	26	-	42	7	9	14	97
Private Aided	-	-	-	88	-	-	-	-	-	-	88	-	21	0	4	13	127
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	85	9	20	48	162
Senior Secondary	-	-	-	114	-	-	-	-	-	-	114	-	145	33	33	157	482
Public	-	-	-	40	-	-	-	-	-	-	40	-	43	12	9	28	132
Private Aided	-	-	-	74	-	-	-	-	-	-	74	-	16	2	6	5	104
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	86	18	19	123	246
Tertiary	-	-	-	416	-	-	-	-	-	-	416	-	164	169	60	62	871
Public	-	-	-	321	-	-	-	-	-	-	321	-	125	154	46	58	705
Private Aided	-	-	-	94	-	-	-	-	-	-	94	-	16	11	4	4	129
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	22	4	11	0	37
Technical	-	-	-	51	-	-	-	-	-	-	51	-	16	12	5	1	85
Public	-	-	-	35	-	-	-	-	-	-	35	-	9	7	3	0	54
Private Aided	-	-	-	16	-	-	-	-	-	-	16	-	2	1	1	0	20
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	5	4	2	0	11
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	997	-	-	-	-	-	-	997	-	997	297	230	429	2,951
Public	-	-	-	464	-	-	-	-	-	-	464	-	277	182	86	116	1,125
Private Aided	-	-	-	533	-	-	-	-	-	-	533	-	119	36	29	54	771
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	601	79	115	259	1,055

TABLE VI. 3: FINANCING OF ACTIVITIES – OTHER PRIVATE EXPENDITURE

(Rs crore)

Other Private Expenditure																	
	Payment in the Education Institutions												Payments outside of Education Institutions				
	Teaching Activities						General Administration						Goods and Services Required for School Attendance				
	Staff Cost		Goods and services														
	Teaching	Non-teaching	Teaching materia	Other recurrent	Capital (equipment etc	Ancillary services	Staff Cost	Goods and services	Capital	Scholarship and stipend	Revenue Total	Capital Outlay	Books, stationery and uniform	Transport not organized school	Others (snacks etc)	Private Tuition	Total Financing Excluding all transfers
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Up to Primary	663	186	21	178	27	26	-	-	-	1	1,101	1	-	-	-	-	1,103
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	663	186	21	178	27	26	-	-	-	1	1,101	1	-	-	-	-	1,103
Middle	524	120	21	91	31	49	-	-	-	1	836	28	-	-	-	-	864
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	524	120	21	91	31	49	-	-	-	1	836	28	-	-	-	-	864
Secondary	258	155	5	46	8	20	-	-	-	1	493	1	-	-	-	-	494
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	258	155	5	46	8	20	-	-	-	1	493	1	-	-	-	-	494
Senior Secondary	392	126	4	40	8	38	-	-	-	0	609	7	-	-	-	-	615
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	392	126	4	40	8	38	-	-	-	0	609	7	-	-	-	-	615
Tertiary	184	12	-	3	-	-	-	-	-	-	199	-	-	-	-	-	199
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	184	12	-	3	-	-	-	-	-	-	199	-	-	-	-	-	199
Technical	26	12	-	0	-	-	-	-	-	-	38	-	-	-	-	-	38
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	26	12	-	0	-	-	-	-	-	-	38	-	-	-	-	-	38
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2,047	610	52	358	73	133	-	-	-	3	3,277	37	-	-	-	-	3,313
Public	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	2,047	610	52	358	73	133	-	-	-	3	3,277	37	-	-	-	-	3,313

TABLE VI. 4: TOTAL EDUCATION EXPENDITURE – ALL FINANCING UNITS

(Rs crore)

Total Expenditure on Education																	
	Payment in the Education Institutions											Capital Outlay	Payments outside of Education Institutions				Total Financing Excluding all transfers
	Teaching Activities					Ancillary services	General Administration			Scholarship and stipend	Revenue Total		Goods and Services Required for School Attendance			Private Tuition	
	Staff Cost		Goods and services		Capital (equipment etc)		Staff Cost	Goods and services	Capital				Books, stationery and uniform	Transport not organize by school	Others (snacks etc)		
	Teaching	Non-teaching	Teaching material	Other recurrent													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Up to Primary	2,382	289	24	608	27	27	30	1	0	1	3,390	19	317	44	59	49	3,878
Public	1,657	90	0	207	0	2	30	1	0	-	1,988	18	32	1	10	7	2,056
Private Aided	62	13	3	223	-	-	-	-	-	-	301	-	37	19	9	10	376
Private Unaided	663	186	21	178	27	26	-	-	-	1	1,101	1	248	24	40	31	1,446
Middle	1,156	158	23	226	31	49	11	0	0	1	1,655	74	207	24	39	85	2,084
Public	609	32	0	44	0	1	11	0	0	-	697	47	26	2	10	7	789
Private Aided	23	5	2	91	-	-	-	-	-	-	121	-	27	1	6	21	176
Private Unaided	524	120	21	91	31	49	-	-	-	1	836	28	154	21	23	57	1,119
Secondary	2,018	343	7	169	9	28	24	0	0	1	2,600	1	148	16	33	75	2,874
Public	871	111	2	35	1	7	24	0	0	0	1,051	-	42	7	9	14	1,123
Private Aided	890	77	-	89	-	-	-	-	-	-	1,056	-	21	0	4	13	1,094
Private Unaided	258	155	5	46	8	20	-	-	-	1	493	1	85	9	20	48	657
Senior Secondary	2,322	290	7	245	9	41	31	5	0	0	2,949	59	145	33	33	157	3,376
Public	1,167	98	2	130	1	2	31	5	0	0	1,437	52	43	12	9	28	1,581
Private Aided	763	65	-	74	-	-	-	-	-	-	902	-	16	2	6	5	932
Private Unaided	392	126	4	40	8	38	-	-	-	0	609	7	86	18	19	123	862
Tertiary	497	82	0	462	1	0	4	1	0	1	1,049	25	164	169	60	62	1,529
Public	247	66	0	364	1	0	4	1	0	1	685	25	125	154	46	58	1,093
Private Aided	66	4	-	95	-	-	-	-	-	-	165	-	16	11	4	4	200
Private Unaided	184	12	-	3	-	-	-	-	-	-	199	-	22	4	11	0	236
Technical	574	242	0	75	2	0	3	26	0	0	923	11	16	12	5	1	968
Public	86	21	0	59	2	0	3	26	0	0	198	11	9	7	3	0	228
Private Aided	462	209	-	16	-	-	-	-	-	-	687	-	2	1	1	0	691
Private Unaided	26	12	-	0	-	-	-	-	-	-	38	-	5	4	2	0	49
Others	27	5	0	1	0	0	11	5	0	0	50	-	-	-	-	-	50
Public	27	5	0	1	0	0	11	5	0	0	50	-	-	-	-	-	50
Private Aided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Unaided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8,976	1,409	61	1,786	78	146	115	38	1	4	12,615	189	997	297	230	429	14,758
Public	4,663	424	5	840	5	13	115	38	1	1	6,106	152	277	182	86	116	6,919
Private Aided	2,266	374	5	588	-	-	-	-	-	-	3,233	-	119	36	29	54	3,470
Private Unaided	2,047	610	52	358	73	133	-	-	-	3	3,277	37	601	79	115	259	4,368

Appendix Tables

TABLE A1: NUMBER OF SCHOOLS – DISTRICT-WISE (IN NUMBERS) – 2017-18

	Government School	Govt-aided School	Private-unaided School	Total
Almora	2075	87	341	2503
Bageshwar	915	34	142	1091
Chamoli	1587	43	227	1857
Champawat	826	17	152	995
Dehradun	1576	186	1268	3030
Haridwar	1036	322	1057	2415
Nainital	1616	78	633	2327
Pauri Garhwal	2555	170	375	3100
Pithoragarh	1870	22	309	2201
Rudraprayag	915	64	172	1151
Tehri Garhwal	2269	49	373	2691
Udham Singh Nagar	1273	230	1048	2551
Uttarkashi	1244	6	264	1514
	19757	1308	6361	27426

Source: U-DISE 2017-18.

TABLE A2: NUMBER OF STUDENTS IN SCHOOLS – DISTRICT-WISE (IN NUMBERS) – 2017-18

	Primary	Middle	Secondary	Sr Sec	Total Students
Almora	47100	32715	25890	22010	127715
Bageshwar	22502	14909	10268	9119	56798
Chamoli	34791	22062	15998	13916	86767
Champawat	25362	16556	11081	8550	61549
Dehradun	190364	107884	63555	54300	416103
Haridwar	235127	106218	54815	40429	436589
Nainital	100055	58671	36099	30295	225120
Pauri Garhwal	51611	35869	26484	24278	138242
Pithoragarh	40972	26855	19076	16585	103488
Rudraprayag	22787	14488	10361	9301	56937
Tehri Garhwal	53937	36142	25216	20950	136245
Udham Singh Nagar	216826	107535	61463	46682	432506
Uttarkashi	35442	20508	13327	10778	80055
Total	1076876	600412	373633	307193	2358114

Source: U-DISE 2017-18.

TABLE A3: NUMBER OF SCHOOL TEACHERS – DISTRICT-WISE (IN NUMBERS) – 2017-18

	Government School	Govt-aided School	Private-unaided School	Total
Almora	8112	847	2160	11119
Bageshwar	3112	261	1081	4454
Chamoli	6615	248	1650	8513
Champawat	3418	87	975	4480
Dehradun	8051	1914	16170	26135
Haridwar	4887	1720	6321	12928
Nainital	7586	926	6429	14941
Pauri Garhwal	10507	1199	3219	14925
Pithoragarh	8321	168	2692	11181
Rudraprayag	3879	342	1069	5290
Tehri Garhwal	9813	335	2532	12680
Udham Singh Nagar	6648	1971	13348	21967
Uttarkashi	4665	51	1978	6694
	85614	10069	59624	155307

Source: U-DISE 2017-18.

TABLE A4: PUPIL-TEACHER RATIO – DISTRICT-WISE (IN NUMBERS) – 2017-18

	All		Govt-aided		Govt		Private-unaided	
	Primary/ Middle	Secondary/ Sr Sec	Primary/ Middle	Secondary/ Sr Sec	Primary/ Middle	Secondary/ Sr Sec	Primary/ Middle	Secondary/ Sr Sec
Almora	10	12	6	12	9	11	16	17
Bageshwar	11	14	8	19	11	12	13	21
Chamoli	9	11	4	13	8	10	12	20
Champawat	12	14	12	23	10	12	19	23
Dehradun	14	15	12	17	13	13	16	16
Haridwar	29	48	33	87	24	18	31	93
Nainital	14	16	11	25	12	12	16	26
Pauri Garhwal	8	10	6	11	6	8	13	21
Pithoragarh	8	9	5	8	6	7	12	22
Rudraprayag	9	11	8	10	8	11	12	18
Tehri Garhwal	9	11	8	17	8	10	13	25
Udham Singh Nagar	18	23	17	31	21	21	16	23
Uttarkashi	10	12	3	8	9	11	14	21

***Source**:* U-DISE 2017-18.

TABLE A5: PER CENT DISTRIBUTION OF PERSONS "CURRENTLY ATTENDING" BY LEVELS OF EDUCATION

	Currently attending										
	Pre-Primary	Primary	Upper primary	Secondary	Higher Secondary	Diploma (up to secondary)	Diploma (higher secondary)	Diploma (graduation and above)	Graduate	Post graduate and above	Total
Uttarkashi	0.9	22.7	35.4	16.6	13.4	1.6	1.7	0.0	7.7	0.0	100.0
Chamoli	1.7	22.5	31.4	18.3	14.3	1.8	0.6	0.3	8.9	0.2	100.0
Rudraprayag	0.4	35.9	26.2	15.2	17.8	0.5	0.8	0.2	2.5	0.5	100.0
Tehri Garhwal	2.2	30.6	23.7	17.6	13.7	0.0	0.2	1.7	10.0	0.4	100.0
Dehradun	5.9	29.3	20.6	10.3	12.2	0.4	2.2	2.7	15.8	0.6	100.0
Garhwal	0.8	22.8	35.8	12.7	19.1	4.5	0.4	0.2	3.7	0.0	100.0
Pithoragarh	3.6	48.7	13.8	6.3	15.5	0.3	1.3	0.1	9.3	1.1	100.0
Bageshwar	0.4	76.0	6.0	0.4	3.0	0.0	0.2	2.4	11.5	0.0	100.0
Almora	6.1	26.5	18.0	9.8	16.1	0.0	0.2	0.2	19.7	3.4	100.0
Champawat	1.4	47.9	8.1	9.2	13.5	0.0	0.3	0.1	19.1	0.4	100.0
Nainital	3.1	54.2	16.3	9.3	7.5	0.2	0.8	0.9	7.1	0.6	100.0
Udham Singh Nagar	8.3	48.6	17.2	9.3	5.2	0.1	1.0	3.2	5.4	1.7	100.0
Haridwar	6.5	31.3	26.4	11.9	10.9	0.1	0.6	0.7	10.8	0.8	100.0
Total	4.5	36.2	22.3	11.4	11.6	0.6	0.9	1.3	10.1	0.8	100.0

Source: NSO Round 75 for Education

TABLE A6: CURRENTLY ATTENDING PERSONS IN ALL LEVELS OF EDUCATION BY TYPE OF INSTITUTION

	Pre-Primary			Primary				Upper Primary			
	Govt.	Private aided	Private unaided	Govt.	Private aided	Private unaided	Not Known	Govt.	Private aided	Private unaided	Not Known
Uttarkashi	0.0	44.8	55.2	89.8	0.0	10.2	0.0	98.1	0.0	1.9	0.0
Chamoli	0.0	100.0	0.0	54.8	28.5	3.5	13.2	89.9	2.9	5.0	2.2
Rudraprayag	0.0	77.7	22.3	97.1	1.1	1.8	0.0	96.5	1.0	2.5	0.0
Tehri Garhwal	0.0	0.0	100.0	57.1	7.4	35.5	0.0	62.7	16.7	20.6	0.0
Dehradun	0.5	80.5	19.0	39.5	17.9	42.7	0.0	43.5	15.7	40.8	0.0
Garhwal	0.0	0.0	100.0	78.3	1.7	19.9	0.0	94.9	0.0	5.1	0.0
Pithoragarh	0.0	0.0	100.0	81.7	0.0	18.3	0.0	90.3	0.0	9.7	0.0
Bageshwar	0.0	0.0	100.0	28.7	16.9	54.3	0.0	86.0	5.5	8.5	0.0
Almora	62.3	0.0	37.7	53.8	0.0	46.2	0.0	46.3	23.9	29.9	0.0
Champawat	0.0	0.0	100.0	52.1	0.0	47.9	0.0	84.0	1.6	14.4	0.0
Nainital	31.8	27.2	41.0	23.8	2.6	73.6	0.0	50.0	15.6	34.3	0.0
Udham Singh Nagar	26.5	9.2	64.3	37.7	7.6	54.6	0.0	29.3	3.7	66.9	0.0
Haridwar	39.9	1.7	58.4	56.4	9.4	34.3	0.0	70.0	3.8	26.1	0.0
Total	24.8	22.9	52.2	49.1	7.9	42.6	0.4	66.3	7.3	26.2	0.2

Source: NSO Round 75 for Education

Contd...

	Secondary			Higher Secondary				Diploma (up to secondary)			
	Govt.	Private aided	Private unaided	Govt.	Private aided	Private unaided	Not Known	Govt.	Private aided	Private unaided	Not Known
Uttarkashi	99.9	0.1	0.1	99.9	0.1	0.0	0.0	100.0	0.0	0.0	0.0
Chamoli	77.0	23.0	0.0	77.4	17.5	5.2	0.0	100.0	0.0	0.0	0.0
Rudraprayag	96.9	1.8	1.3	96.8	0.6	2.6	0.0	100.0	0.0	0.0	0.0
Tehri Garhwal	63.2	18.6	18.3	84.0	16.0	0.0	0.0	100.0	0.0	0.0	0.0
Dehradun	78.7	0.2	21.1	34.2	48.6	17.2	0.0	41.7	56.2	2.1	0.0
Garhwal	96.9	0.0	3.1	89.2	0.0	10.8	0.0	96.6	0.0	0.0	3.4
Pithoragarh	84.2	0.0	15.8	92.7	0.1	7.2	0.0	100.0	0.0	0.0	0.0
Bageshwar	23.0	0.0	77.0	94.2	0.0	5.8	0.0	100.0	0.0	0.0	0.0
Almora	80.8	0.0	19.2	99.7	0.0	0.3	0.0	100.0	0.0	0.0	0.0
Champawat	85.3	0.0	14.7	88.3	0.5	11.2	0.0	0.0	0.0	0.0	0.0
Nainital	46.7	17.7	35.6	63.2	5.2	31.6	0.0	72.5	16.6	11.0	0.0
Udham Singh Nagar	51.3	17.0	31.8	70.2	7.5	22.4	0.0	100.0	0.0	0.0	0.0
Haridwar	55.6	2.8	41.6	60.3	8.5	31.2	0.0	63.8	0.0	36.2	0.0
Total	70.2	8.0	21.8	73.1	12.7	14.1	0.0	90.7	5.8	1.7	1.8

Contd...

	Diploma (higher secondary)			Diploma (graduation and above)				Graduate		
	Govt.	Private aided	Private unaided	Govt.	Private aided	Private unaided	Not Known	Govt.	Private aided	Private unaided
Uttarkashi	100.0	0.0	0.0	73.2	26.8	0.0	0.0	99.8	0.2	0.0
Chamoli	77.1	22.9	0.0	12.8	87.2	0.0	0.0	100.0	0.0	0.0
Rudraprayag	99.1	0.0	0.9	86.6	0.0	13.4	0.0	96.1	3.9	0.0
Tehri Garhwal	21.1	78.9	0.0	43.7	49.3	7.1	0.0	66.2	33.8	0.0
Dehradun	74.7	11.4	13.9	0.2	16.7	83.1	0.0	79.3	2.0	18.7
Garhwal	100.0	0.0	0.0	11.3	0.0	88.7	0.0	100.0	0.0	0.0
Pithoragarh	100.0	0.0	0.0	100.0	0.0	0.0	0.0	98.4	0.0	1.6
Bageshwar	100.0	0.0	0.0	99.5	0.5	0.0	0.0	100.0	0.0	0.0
Almora	88.8	0.0	11.2	100.0	0.0	0.0	0.0	91.4	8.6	0.0
Champawat	100.0	0.0	0.0	27.5	0.0	72.5	0.0	99.5	0.3	0.2
Nainital	73.0	4.9	22.1	6.0	13.7	80.4	0.0	76.1	2.7	21.2
Udham Singh Nagar	74.3	4.3	21.4	93.8	0.5	5.7	0.0	89.8	8.5	1.6
Haridwar	33.2	20.7	46.0	79.3	7.5	13.2	0.0	80.2	14.3	5.5
Total	73.5	10.1	16.4	51.6	12.6	35.7	0.0	85.0	7.9	7.2

Contd...

	Post graduate and above			Total			
	Govt.	Private aided	Private unaided	Govt.	Private aided	Private unaided	Not Known
Uttarkashi	40.5	0.0	59.5	96.1	0.4	3.5	0.0
Chamoli	100.0	0.0	0.0	77.2	16.1	3.1	3.7
Rudraprayag	95.4	0.0	4.6	96.4	1.4	2.1	0.0
Tehri Garhwal	93.9	6.1	0.0	62.7	16.1	21.2	0.0
Dehradun	66.4	7.9	25.7	47.6	20.4	31.9	0.0
Garhwal	0.0	100.0	0.0	89.6	0.4	9.8	0.1
Pithoragarh	100.0	0.0	0.0	83.8	0.0	16.1	0.0
Bageshwar	100.0	0.0	0.0	44.1	13.2	42.7	0.0
Almora	100.0	0.0	0.0	72.2	6.0	21.8	0.0
Champawat	100.0	0.0	0.0	71.3	0.3	28.5	0.0
Nainital	92.3	0.0	7.7	37.8	7.2	54.9	0.0
Udham Singh Nagar	95.5	1.4	3.0	44.3	7.6	48.1	0.0
Haridwar	67.4	17.5	15.1	61.9	7.2	30.9	0.0
Total	88.6	4.6	6.8	61.5	9.1	29.2	0.2

Source: NSO Round 75 for education.

TABLE A7: STATE-WISE INSTITUTES PER LAKH POPULATION

States/UTs	Primary Schools	Middle Schools	Secondary Schools	Sr. Sec. Schools	Colleges	Technical
Andhra Pradesh	1176	410	775	154	49	15
Arunachal Pradesh	1683	1879	459	307	23	7
Assam	1702	837	688	233	15	2
Bihar	353	621	89	163	7	1
Chhattisgarh	1316	1103	243	435	24	2
Gujarat	303	1101	245	415	31	4
Haryana	481	384	338	472	33	7
Himachal Pradesh	2377	770	645	1050	47	11
Jammu & Kashmir	1554	2139	983	302	23	8
Jharkhand	768	936	293	144	8	2
Karnataka	613	1300	825	352	53	18
Kerala	426	279	171	312	45	15
Madhya Pradesh	1313	1283	284	341	24	4
Maharashtra	679	685	488	277	33	17
Manipur	823	744	958	310	28	6
Meghalaya	2693	1846	1075	284	19	6
Mizoram	1652	3113	1671	505	25	12
Nagaland	744	813	789	376	28	7
Odisha	1056	1031	686	125	23	8
Punjab	680	431	541	691	34	13
Rajasthan	588	920	386	696	35	5
Sikkim	2060	1011	628	430	25	9
Tamil Nadu	800	305	250	364	35	13
Telangana	680	405	1026	254	50	13
Tripura	907	655	413	352	12	2
Uttar Pradesh	742	680	129	224	28	4
Uttarakhand	1752	1148	390	872	37	13
West Bengal	1136	211	101	244	13	4
A & N Islands	808	546	654	722	16	0
Chandigarh	23	96	185	221	13	4
D & N Haveli	605	552	114	151	12	2
Daman & Diu	459	513	563	640	16	3
Delhi	237	146	70	333	8	5
Goa	1040	192	1111	511	31	6
Lakshadweep	318	570	51	896	0	0
Puducherry	298	132	546	450	46	8
All India	803	730	338	313	28	7

***Source**: NCAER computation using Union Economic Survey 2019-20, AISHE-2018-19, NSS 75th Round- 2017-18*

TABLE A8: STATES' RANKING ON INSTITUTES PER LAKH POPULATION

States/UTs	Primary Schools	Middle Schools	Secondary Schools	Sr. Sec Schools	Colleges	Technical
Andhra Pradesh	11	27	9	33	3	3
Arunachal Pradesh	6	3	19	23	22	15
Assam	5	14	10	29	28	31
Bihar	31	21	34	32	35	34
Chhattisgarh	9	8	28	12	21	29
Gujarat	33	9	27	14	14	23
Haryana	28	29	23	10	12	16
Himachal Pradesh	2	16	13	1	4	10
Jammu & Kashmir	8	2	5	24	24	14
Jharkhand	19	12	24	35	33	32
Karnataka	25	5	7	18	1	1
Kerala	30	31	30	21	6	4
Madhya Pradesh	10	6	25	19	20	25
Maharashtra	24	18	18	26	11	2
Manipur	16	17	6	22	16	18
Meghalaya	1	4	3	25	25	19
Mizoram	7	1	1	9	18	9
Nagaland	20	15	8	15	17	17
Odisha	13	10	11	36	23	13
Punjab	22	26	17	6	10	8
Rajasthan	27	13	22	5	9	21
Sikkim	3	11	14	13	19	11
Tamil Nadu	18	30	26	16	8	6
Telangana	23	28	4	27	2	7
Tripura	15	20	20	17	32	30
Uttar Pradesh	21	19	31	30	15	26
Uttarakhand	4	7	21	3	7	5
West Bengal	12	32	33	28	30	24
A & N Islands	17	24	12	4	27	35
Chandigarh	36	36	29	31	29	27
D & N Haveli	26	23	32	34	31	33
Daman & Diu	29	25	15	7	26	28
Delhi	35	34	35	20	34	22
Goa	14	33	2	8	13	20
Lakshadweep	32	22	36	2	36	35
Puducherry	34	35	16	11	5	12

***Source**: NCAER computation using Table A7*

TABLE A9: COMPARATIVE ASSESSMENT OF COVERAGE OF VARIOUS DATA SOURCES FOR DISTRICT LEVEL INFORMATION

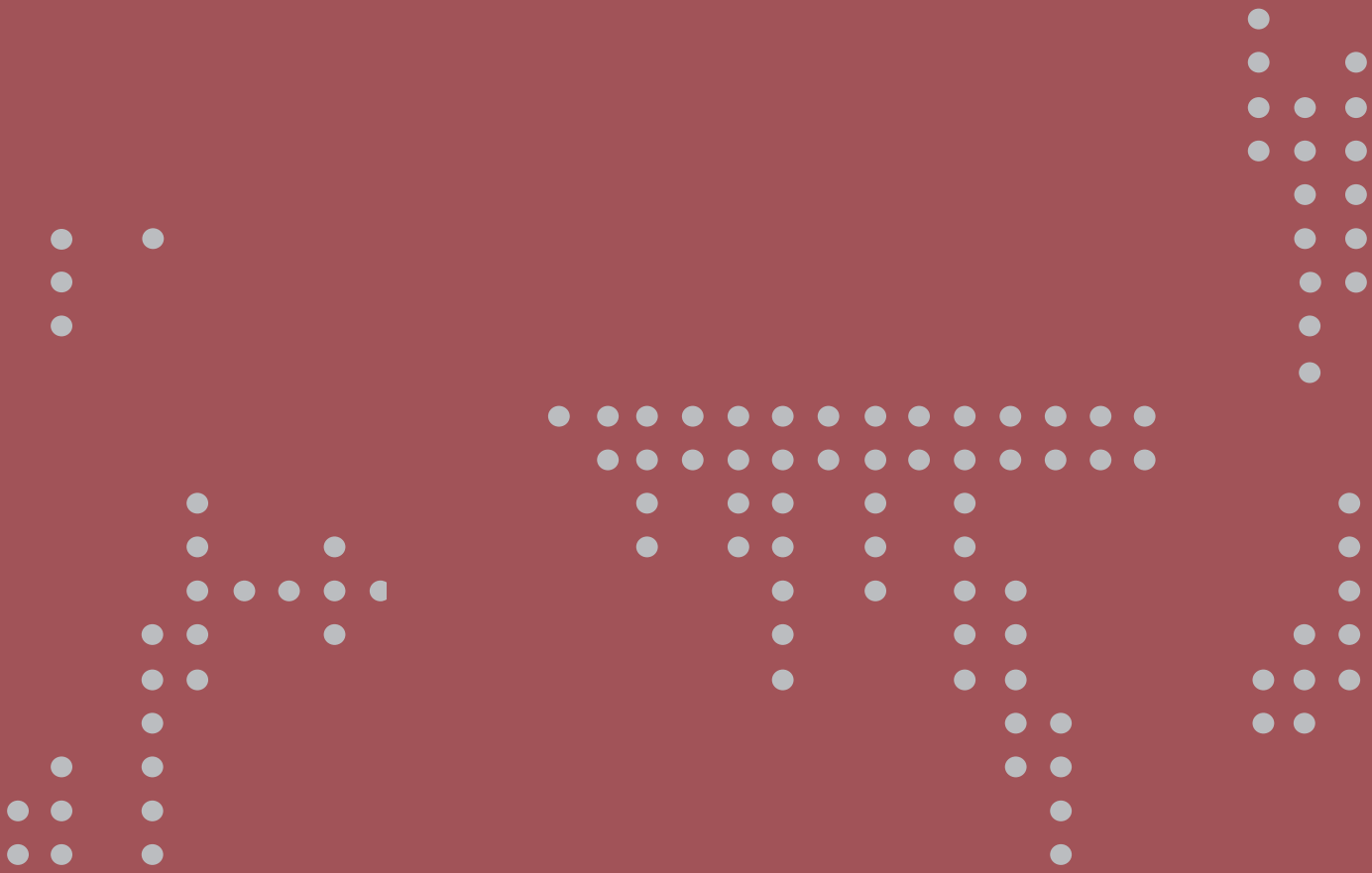
S. No	Data Source	Coverage
1	Census of India 2011	Provides data on Educational Institutions district-wise, state-wise and All India by: ✓ Rural/Urban ✓ Govt./Private management ✓ Levels of education from Pre-school to higher education including degree courses, technical courses, vocational and polytechnic. ✓ Pre-schools are mentioned only in case of rural areas for private schools, while in urban areas it is not given × The information on enrolments, number of teaching/ non-teaching staff and number of coaching institutes is not given.
2	District at a Glance Reports, Uttarakhand State website, GOI	These are available separately for each district, downloadable in PDF formats in Hindi language. The report cards provides information on following indicators: ✓ Number of Educational Institutions covering primary, Junior High School, Higher Secondary and Intermediate, college/universities and Commercial & Technical Institutes. ✓ Number of students in educational institutions ✓ Number of teacher in educational institutions ✓ This information is available for different years for different districts ranging from 2015-16 to 2017-18 (latest available has been considered) × The number of teachers were not available for commercial & technical Institutes. × The data was not further bifurcated by Rural/Urban or Govt. /Pvt. Management or by Male/Female. × Data on coaching institutes not available.
3	DISE 2016-17 (District-wise report cards on raw data)	District-wise data is given in the form of elementary report cards and secondary report cards for the latest year 2016-17. This data is available for: ✓ Number of schools and student enrolment for all levels of school education by Rural/Urban, Gender and Govt/Pvt Management. ✓ The data on number of teachers is also available for various levels of education by Rural/Urban, gender, caste, Govt/Pvt schools, educational qualification, professional training, type of tenure. ✓ Apart from this, data on other school performance indicators is also given. × Data on number of institutions is not available management–wise for secondary levels of school education. × For secondary level, enrolment data is not available by gender and management-wise. × Teachers data is not available for secondary schools by Govt/Pvt schools and type of tenure. × Data on coaching institutes not available.

4	NSS Education Survey Round 75, 2017-18	For NSS - Education Rounds Data 2017-18 is available for all levels of education for: ✓ Enrolments, attendance, mode of education, currently attending status and household expenditure pattern on education is all given. × Data on number of educational institutions not available. × Data on number of coaching institutes not given, although number of students availing this facility and household expenditure on private coaching is given.
5	NSS Enterprise Survey	Data is available for: ✓ Coaching Institutes ✓ Number of educational units ✓ Expenditure pattern

Note: The table is prepared considering the availability of the specific indicators required at district-level for preparation the report. The other indicators which were not required for our analysis but are there in all of these data sets are not mentioned here.

Sources:

1. District at a Glance Reports for latest available years from Uttarakhand Education District Portal, GOI.
2. Census Data 2011, Office of Registrar General, India.
3. U-DISE district report cards for elementary and secondary education 2016-17.
4. Unit level data NSS 75th Round for July 2017 -June 2018, Social Consumption: Education, MOSPI, GOI.
5. NSS Survey on Unincorporated Non- Agricultural Enterprises (Excluding Construction) July-June 2010-11.



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