Report

of the

Project on

Status of Quality of Higher Education in Uttarakhand (Kumaun Division)

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Preface

The state of Uttarakhand was formed with the vision and with people's aspirations to converge and synergize efforts to carry forward our development initiatives in an integrated and inclusive mode which would include health, education, livelihood, skill development and management/conservation of the environment. There has been progress in terms of industrialization, resulting in growth rates higher than the national figures. However, the aspirations which lead to the creation of the state have not yet been completely met and criticisms regarding the inadequacies in sphere of human resource development have emerged.

This study stems from the necessity felt for assessing the status of higher education as an important component of human resource development not only in quantitative terms but also in terms of qualitative parameters and in terms of aspirations of the people from diverse backgrounds and different economic and social milieu of this mountain state.

The three central pillars of the Indian government's plans for education reflect these realities: expansion, equity and excellence. Over the next five years, every aspect of higher education is being re-organised and re-modeled: funding, leadership and management, quality assurance, accountability, relationships with industry, international collaboration and the way teaching and research are conducted. In arguably the biggest reform in the governance and funding of state universities, an ambitious programme is underway to devolve authority and budgets for higher education from federal government to the state governments. The private sector, which currently accounts for 59% of all tertiary enrolment, continues to grow rapidly, providing most of the professional courses, particularly engineering and management. Many more providers are waiting for legislation which would allow them to enter the market. The private sector is expected to play a significant role in the future expansion of higher education in India.

The major findings of this study point to the central fact that incremental changes are not sufficient to achieve inclusive growth in higher education and meet peoples' aspirations in the Kumaun region of Uttarakhand. A dynamic and comprehensive blue print for higher education in Uttarakhand is needed which is specifically responsive to its unique geographical and ecological setting. Emphasis will have to be placed on strengthening existing institutions in the region.

Acknowledgements

The extensive study conducted for the purpose of this report included interaction with students, teachers, citizens and representatives from various walks of life through workshops, interviews and other modes of communication in Kumaun Division. The authors would like to sincerely thank them for their time and inputs. We would like to thank administration of various educational institutions in Kumaun region for their support in putting together this Report. Several senior colleagues from these institutions participated actively to provide inputs for the report which helped enhance its qualitative aspects. And last but not the least the Department of Economics and Statistics, Government of Uttarakhand, Dehradun not only inspired us to take on this task but also provided financial support.

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List of Abbreviations

AICTE	All India Council for Technical Education
AISHE	All India Survey on Higher Education
ARWU	Academic Ranking of World Universities
ASHE	Annual Status of Higher Education
CABE	Central Advisory Board of Education
FDI	Foreign Direct Investment
FEIs	Foreign Educational Institutions
FEP	Foreign Education Provider
FICCI	Federation of Indian Chambers of Commerce and Industry
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GOI	Government of India
HEI	Higher Educational Institution
I-CGPA	Institutional Cumulative Grade Point Average
IIT	Indian Institute of Technology
IQAC	Internal Quality Assurance Cell
IT	Information Technology
MDC	Modal Degree College
MHRD	Ministry of Human Resource Development
MMER	Management Monitoring Research and Evaluation
NAAC	National Assessment and Accreditation
NBA	National Board of Accreditation
NQRI	National Quality Renaissance Initiative
QS	Quacquarelli Symonds
RUSA	Rashtriya Uchchatar Shiksha Abhiyan
SCHE	State Councils for Higher Education
SHEC	State Higher Education Committees
THE	Times Higher Education
UGC	University Grants Commission
UTs	Union Territories
PTR	Pupil Teacher Ratio

Chapter 1

Introduction

The Indian higher education system is facing an unprecedented transformation in the coming decade. This transformation is being driven by economic and demographic change: by 2020, India will be the world's third largest economy, with a correspondingly rapid growth in the size of its middle classes. Currently, over 50% of India's population is under 25 years old; by 2020 India will outpace China as the country with the largest tertiary-age population.

Despite significant progress over the last ten years, Indian higher education is faced with four broad challenges:

- **The supply-demand gap:** India has a low rate of enrolment in higher education, at only 18%, compared with 26% in China and 36% in Brazil. There is enormous unmet demand for higher education. By 2020, the Indian government aims to achieve 30% gross enrolment, which will mean providing 40 million university places, an increase of 14 million in six years.
- **The low quality of teaching and learning:** The system is beset by issues of quality in many of its institutions: a chronic shortage of faculty, poor quality teaching, outdated and rigid curricula and pedagogy, lack of accountability and quality assurance and separation of research and teaching.
- **Constraints on research capacity and innovation:** With a very low level of Ph. D enrolment, India does not have enough high quality researchers; there are few opportunities for interdisciplinary and multidisciplinary working, lack of early stage research experience; a weak ecosystem for innovation, and low levels of industry engagement.
- **Uneven growth and access to opportunity:** Socially, India remains highly divided; access to higher education is uneven with multidimensional inequalities in enrolment across population groups and geographies.

India's higher education system, originally designed to serve the elite, is marked by the trend that traditional Indian student mobility patterns have changed and it now

has to serve a new clientele. Innovation and change are required and understanding that change will be essential especially in mountain areas like Uttarakhand.

1.1 Context of the study

The study is aimed at providing a holistic picture of the Uttarakhand state higher education systems especially in context of the Kumaun division. It aims at making the intricacies of the state's higher education system more lucid, more comprehensible and more responsive to the needs of a region in transition.

India's higher education sector, third largest in the world, has experienced unprecedented growth and increased investor focus over the past two decades. Yet, as it stands at the threshold of continued transformation, the sector needs to shift gears and evolve with the changing times. Despite its size and scope, the Gross Enrolment Ratio (GER) in Indian higher education continues to be far below the global average. The rapid growth witnessed in the higher education sector has generated numerous challenges with the key ones being maintaining quality, improving equity and providing access to each and every student based in any part of the country. In terms of global exposure and achieving internationalization, our country has a long way to go.

Gauging the need to catapult this sector to the next level, the governments in the recent past have conceptualized a number of reforms specifically addressed to iron out some of the pressing issues and also prepare our academic institutions to embrace the future. Unfortunately, many of these reforms are yet to see the light of the day.

While India has made important strides towards improving its higher education system, which is amongst the largest in the world, there remain significant challenges to be addressed. Access to higher education has increased over the years, but enrolment rates are still well short of developed countries. Shortage of faculty is a key issue, which is more acutely felt with the rapid growth in the number of higher education institutes. Several institutes suffer from a lack of adequate infrastructure and equipment, while there are quality related concerns with inadequate focus on research in higher education, low employability and skills of students and low level of industry-academia interactions oft cited as key issues facing the higher education system in the country.

These issues have been reflected in the performance of Indian higher education institutes in international rankings. For example, only four institutions from the country making it to the top 400 and none to the top 200 in the Times Higher Education (THE) World University Ranking for 2014-15. Additionally, no Indian institutions featured in the top 200 in the Quacquarelli Symonds (QS) World University Rankings. While there have been arguments questioning the applicability of some of the rating criteria and parameters to Indian institutes, these figures do highlight the quality related challenges facing higher education in India, and illustrate the requirement for improving performance at an institutional level.

Policy Perspectives

From a policy perspective, this also gives rise to the question of how to incentivize institutions to improve performance. Improving quality had been prioritized in the country's 12th Five Year Plan, which also called for an increase in funding for quality related initiatives to align funding with the new priorities for quality improvement. Also, in view of the changed planning infrastructure, with the think tank Niti Ayog at its helm and an increased role for states with greater decentralization as a stated aim; it is time to rethink our state level vision and road map.

Improving Quality, Access and Equity in higher education— is a vision that the Government of India overall, and the Ministry of Human Resource Development (MHRD) in particular, has been trying to achieve since Independence. However, in recent times, with the rapid growth and technical revolution the education in the country has witnessed, the benchmark has been raised higher than ever before. The general education mainly consists of higher education courses in arts, commerce and science, the technical education on the other hand comprises of programmes of education, research and training in engineering technology, architecture, town planning, management, pharmacy and applied arts and crafts. Professional education includes courses in medical education, law and other specialized fields

It cannot be denied that the Ministry of Human Resource Development (MHRD) and the Uttarakhand State Government have been engaged in the task of nation and state building through various initiatives and schemes aimed at improving equity, access and excellence in higher education. In keeping with the objectives of the 12th Five Year

Plan of making the Indian higher education system globally competitive and strong by focusing on state higher education system, the ministry launched the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) as a centrally sponsored scheme in October 2013. With this the ministry has completed the journey which started with Sarva Shiksha Abhiyan for universal elementary education and graduated to Rashtriya Madhyamik Shiksha Abhiyan for universal secondary education. States have received preparatory grants as also the grants for management, monitoring, research and evaluation (MMER), totaling approximately ` 268 crore. This is a good start and substantial progress is expected in the coming few years. Since funding under RUSA is linked to academic, administrative and governance reforms in state higher education systems, qualitative assessment of progress made in each state is essential at regular intervals.

1.2 Conceptual Framework & Methodology (Used for Assessing Quality in India)

Defining institutional performance

Higher educational institutions typically have a wide range of objectives ranging from contributing to the knowledge-base in the country, equipping students with employable skills, undertaking research and development, promoting social values, etc. As a result, defining and measuring quality and performance at an institutional level is a complex task.

According to Ronald Barnett, emeritus Professor of Higher Education at the Institute of Education, University of London, there are four key concepts of higher education. Higher education as the production of qualified human resources, as a training for research career, as the efficient management of teaching provision and as a matter of extending life chances i.e. opportunity to participate in the development process of individuals. Quality of education to ensure the above therefore becomes a basis for a strong society and country. Ronald also posits that this quality in education depends on four core activities namely Teaching and Learning, Student assessment, Staff Development and Curriculum/Courses design which contribute to the overall student development and experience. To ensure the above, there is usually a regulatory framework under which the higher education system operates. In addition, rankings and

accreditations are often used to measure or denote quality of education at a university or institutional level.

A common approach is through the use of a set of indicators or parameters for performance, which may vary across institutions. These would typically include a combination of input and output based indicators that seek to measure the performance of the institute in alignment to its goals and objectives.

For the purpose of comparison of performance across institutes, institutional rankings have become a common feature, which include a number of performance indicators, accreditation and other qualitative assessments of institutional quality. On a global scale, several world rankings of higher education institutes are published on an annual basis that serve as a proxy for assessing institutional performance. Some of the parameters that they consider in their evaluation methodologies can hence serve as a useful benchmark for defining institutional performance. The Times Higher Education rankings rank universities based on 13 parameters in four key segments—industry income, teaching-learning environment, research, and international outlook. The Quacquarelli Symonds (QS) World University Rankings rate universities on four broad areas of research, teaching, employability and internationalization.

In India, the Government of India plans to develop its own national ranking framework which, in addition to considering some of these parameters, also reflect some of the objectives and considerations for higher education institutes from an Indian context and perspective.

Methodology for Toning up quality of higher education

NAAC

In addition to rankings, one of the most common forms of quality assessment for an institution is through the process of accreditation, which typically consists of a self-evaluation by the institution, a study visit by a team of evaluators, and an examination by an accreditation committee. The value framework of India's National Assessment and Accreditation Council (NAAC) identifies five core values for institutions of higher education, as goals of their activities - Contributing to National Development; Fostering Global Competencies among Students; Inculcating a Value System in Students and

Promoting the Use of Technology and; Quest for Excellence. NAAC rates institutes on parameters aligned to these goals using an Institutional Cumulative Grade Point Average (I-CGPA) system on a four point scale resulting in grades ranging from “A” (Very Good–Accredited) to “D” (failure to receive accreditation).

The NAAC points out

"Periodic checkups help the healthy to maintain good health and the ailing to get diagnosis and treatment. Both strong and weak programmes stand to benefit from assessment. The specific and special achievements of an institution/programme would be highlighted and the analysis of the factors contributing to them would ensure maintenance of standers within the institution and guide other institutions/programmes to pursue excellence. Likewise pinpointing and analysis weakness would help the institutions correct them and contribute to raising standers".

NBA

There is currently another such agency, namely the National Board of Accreditation (NBA) functioning under the aegis of the All India Council for Technical Education (AICTE) but this is looking after only engineering, pharmacy, architecture and management institutions.

In addition, the National Accreditation Regulatory Authority (NARA) for higher educational institutions bill 2010 introduced in the 15th Lok Sabha also proposed the establishment of NARA to register and monitor accreditation agencies. The Bill aimed at making accreditation and rating of all higher education institutions mandatory in India. Central and state universities, deemed universities, colleges and polytechnics fell under the purview of the Bill. However the bill has lapsed with the dissolution of the 15th Lok Sabha. It remains to be seen whether the bill will be re-introduced in the current Lok Sabha. This also poses an opportunity to address some of the key lacunae that were present in the earlier bill as mentioned below.

Under the bill, an accreditation agency had to be a non-profit organization, controlled by the central or state government and did not allow private players to register as accreditation agencies. This dilutes the creation of healthy competition for quality

accreditation. Many countries such as US and UK allow both government and private entities to accredit institutions. In Germany, accreditation agencies are private non-profit entities monitored by an Accreditation Council.

There are only 2 government accreditation agencies present currently in the country with limited capacity which constrains the capability, access and scale required for a large country such as India. *(Note:* Indian Centre for Assessment and Accreditation (ICAA) is the first private accreditation agency which was set up in 2013. However there are no regulatory bodies to ensure quality and functioning of these private bodies).

The bill also allows a Higher Educational Institution (HEI) to appeal to NARA for modification of rating provided by an accreditation agency which would result in NARA playing the role of an accreditation agency for assessing the validity of rating provided to an institution for which it may not have the relevant competence.

To fulfill the UGC stipulation of mandatory accreditation and in line with national objectives of access, equity and excellence envisaged under RUSA, a proposal on National Quality Renaissance Initiative (NQRI) was submitted by NAAC which was approved by RUSA project approval board in November 2013. The total estimated cost of the proposal is ` 17 crores. The key proposals in the plan include popularization and promotion of Quality Assurance-Mentoring Higher Education Institutions (` 8 cr), Building Collegiums of Assessors (` 4 cr), setting up of Internal Quality Assurance Cell (IQAC) (`4 cr) and Material Development (` 1 cr).This is a positive move towards enhancing quality in higher education through enhancement of capacity of NAAC, putting in place strong quality control systems at the institution level through establishment of internal quality control cells and mentoring initiative.

Performance Indicators under RUSA:

Table 1.1: Norms defining performance parameters for institutes and States under RUSA

Norm	Weightage
Governance Quality Index	16.0%
Academic Excellence Index	21.5%
Equity Initiative Index	12.5%
Research and Innovation Index	24.0%
Student Facilities Index	15.0%
Infrastructure and others Index	11.0%

(Source: RUSA, National Higher Education Mission, Sept. 2013)

This study stems from the necessity felt for assessing the status of higher education as an important component of human resource development not only in quantitative terms but also in terms of qualitative parameters and in terms of aspirations of the people from diverse backgrounds and different economic and social milieu of this mountain state.

Chapter 2

Higher Education in Uttarakhand: Background and Present Status

2.1 General Features

Education, under the Constitution of India, falls under the “concurrent list” making it both a centre and a state subject. The primary policy makers for higher education in the central/state government are MHRD, Central Advisory Board of Education (CABE) and the State Councils for Higher Education. The MHRD lays down the National Policy on Education, while the CABE is responsible for coordination and cooperation between the Union and the States with respect to education. In addition, the State Councils for Higher Education coordinates the roles of the government, universities and apex regulatory agencies in higher education at the state level.

The higher education sector in India is broadly classified into two segments—regulated and unregulated. Higher education falls under the regulated segment and includes degree universities and colleges. These are governed by multiple regulatory bodies. There are multiple agencies which regulate higher education at the central level in addition to agencies which regulate at the state level. The regulated segment comprises formal degree-granting universities and their affiliated colleges, institutions of national importance and other institutions offering formal degrees or technical programmes and is regulated by the UGC, AICTE and other regulating and accrediting authorities. The unregulated segment include activities such as professional skill enhancement, test preparation, tutorials and coaching centres, text books and content, other services. These services though primarily provided by for-profit enterprises to higher education institutions, yet they fall outside the purview of the regulators.

India's higher education system is the third largest in the world after United States of America and China. There are over 789 universities across the country with around 37204 colleges, and 11443 stand-alone institutions in India, as per the statistics available from the web site of UGC and India's HRDC Ministry (2017). The total enrolment of students in regular mode in higher education institutes in India is around 257.6 lakhs (25.76 mn).

Table 2.1: Total Universities in India (2014)

Universities	Total
State universities	322 (47%)
Deemed to be universities	128 (19%)
Central universities	45 (6%)
Private universities	192 (28%)

(Source: UGC, http://www.ugc.ac.in/oldpdf/alluniversity.pdf, as on 22nd Oct 2014)

2.2 Statistical Indicators

Background: Quality in Higher Education Institutions in India

As the third largest education system in the world, in terms of enrolment, and the largest by total number of academic institutions the India higher education sector is considered by many as a 'sunrise sector' for investment. Indeed, the country has taken significant strides over the years in higher education. In Financial Year 2014, the size of this market has been estimated well above `3.83 trillion (US$62.34 billion) with over 38,000 formal degree/diploma granting higher education institutes. Higher education in India is seen as a high-potential growth hub. This sector is considered to be amongst the largest of its kind in the world by the sheer number of institutions which currently operating across the country. Currently, about 687 universities and 37,204 colleges constitute the country's higher education sector. The state universities constitute the largest chunk followed by private universities.

More than 50% of India's population is under 25 years of age. As a result of this favourable demographic, India's appetite for quality education is on the rise leading to establishment of a large number of private academic institutions. Other drivers of growth in this sector are widening demand-supply gap; increasing dominance and public trust on private sector institutions; fast growing IT services sector leading to demand for skilled talent pool; rising FDI in the manufacturing and affiliated sectors and the recent thrust provided by the government on online education.

Gauging the pivotal role of education in India's progress, the Government of India has laid considerable emphasis on reforming and strengthening the sector in the recent

past. Policy makers, academic professionals and thought leaders have recognized the urgent need to facilitate growth rapidly to meet the increasing demand for quality higher education whilst simultaneously raising the quality bar and striving for equitable access.

As highlighted by the Yashpal Committee Report submitted in 2009, lack of coordination and communication among the statutory authorities, along with the existence of multiple regulators in the sector, has been identified as one of the primary challenges for the higher education sector. The complexity of overlapping mandates has further been compounded by archaic regulations that have little or no relevance in the dynamic business environment prevailing today.

A number of initiatives have already been taken for achieving this objective. This includes roll out of a focused higher education program called RUSA for improving the current infrastructure and establishment of new government universities/colleges, clustering of model colleges into universities and increasing collaboration with other countries for exchange of faculty, students and knowledge resources. It is important to highlight that the Indian private sector has played a vital role in transforming the higher education landscape in the country.

With just 1% of the GDP being spent on higher education currently, the government recognizes that it needs private sector to play an active role going forward. The National Knowledge Commission has predicted that India needs an investment of about US$ 190 bn to achieve the GER target of 30% by 2020. The Government certainly needs to join hands with the private sector to achieve this daunting task.

Foreign investment in this sector, although permitted up to 100%, has been extremely disappointing. Education sector attracted an insignificant 0.42% of the total FDI inflow between April 2000 and July 2014. On the contrary, the telecom, pharmaceuticals and automobile sectors have drawn investments in the range of 7.2%, 5.5% and 4.4%, respectively of the total FDI inflow during the same period. As per the latest available figures, FDI of just ` 4,961.8 crores (US$960 million) has been infused in the education sector between April 2000 to July 2014, which for a large country such as India is grossly insignificant. This investment has been primarily in the unregulated segment of the sector.

The higher education system in India is in the throes of rapid growth and expansion. This has been made possible through opening up of private universities, expansion and government investments into institutions of national importance, increased autonomy through deemed universities and many new programme introductions in higher education which has led to improved access. This has also resulted in increasing concerns with respect to relevance and quality of institutions as well as that of education imparted by them.

Key foreign investors in the education sector in India

- Pearson Plc
- Gems Education
- Skill soft Limited
- Granite Hill Capital Partners
- Laureate

When the government announced the Foreign Educational Institutions (Regulation of Entry and Operations) Bill in 2010, it generated tremendous excitement, especially amongst foreign institutions that have been keen to establish their physical presence in the country. If passed, the legislation would have allowed access to quality higher education at affordable costs and transformed the entire landscape of higher education system in the country. Intended to regulate the entry and operations of foreign education providers, this bill was expected to make a significant impact on the higher education landscape of the country. It was also anticipated that foreign institutions would introduce best practices for teaching, curriculum, research and others to improve the current state of education. With none of the Indian higher education institutions figuring in the Top 200 list, academicians were hoping that this move could prove to be a game changer.

The legislation would have enabled foreign universities to set up their own campuses and offer their host degrees to students in India. The bill had placed certain conditions such as a minimum corpus of ` 500 million and restriction on ploughing back of profits on foreign universities planning to set up a campus in India.

Last year, in a bid to avoid the Parliamentary approval route, the MHRD promulgated a separate regulation to regulate entry and operation of foreign universities in the country under the aegis of UGC. This regulation sought to achieve the same

objective as defined in the foreign education bill through an executive order. As per the press release issued by MHRD, Foreign Educational Institutions (FEIs) were permitted to set up campuses in India once the FEIs have been notified as foreign education provider (FEPs) by the UGC. Additional eligibility conditions issued for FEIs were:

Ranking of FEIs to be among the top 400 universities of the world as per the ranking published by Times Higher Education, Quacquarelli Symonds (QS) or the Academic Ranking of World Universities (ARWU); FEIs to establish campus through an association to be registered as a company under section 25 (now section 8) of the Companies Act, 1956 (now Companies Act, 2013); FEIs need to be not-for-profit legal entities, with existence for at least twenty years; FEIs to maintain a corpus of not less than Rupees twenty five crores.

With education experts voicing their opinion both in favour of and against allowing foreign universities campuses in India, this may be the opportune time for the government to consider bringing in a consensus on this subject. Many foreign universities at present are operating in India either through partnerships with local universities or through local representative offices promoting their universities in the country. At this stage, it has become important for the government 20 Annual Status of Higher Education in States and UTs 2014 to clear its stand on the entry of foreign universities i.e., rolling-out an unambiguous comprehensive policy to set campus in India.

The ASHE report released in 2014 revealed the following data regarding the past few years of growth in various states uptill2014 especially under RUSA.

Till date, 28 states had set up their State Higher Education Committees (SHECs) across the country. The states of West Bengal, Karnataka, Tamil Nadu, Andhra Pradesh, Kerala, Maharashtra and Uttar Pradesh have their respective SHECs already in place. These SHECs were established through an act of the state legislature prior to the official launch of the RUSA. 11 Annual Status of Higher Education in States and UTs 2014 .Gujarat had set up the Gujarat Knowledge Consortia (instead of SHEC) through an executive order.

After the launch of RUSA, the states of Arunachal Pradesh, Manipur, Assam, Odisha, Chhattisgarh, Punjab, Himachal Pradesh, Jammu and Kashmir, Andaman and Nicobar, Goa, Mizoram, Nagaland, Bihar, Haryana, Tripura, Jharkhand, Sikkim, Madhya

Pradesh, Uttarakhand and Telangana have formed their respective SHECs via an executive order.

In the twelfth plan period, funds amounting to approximately ` 197.8 crores for 68 MDCs have been released till August 2014.

Of the 60 MDCs approved in the twelfth plan, funds amounting to ` 177.1 crores for 45 MDCs have been released in the first installment.

In the second installment, funds equivalent to ` 20.7 crores for 23 MDC proposals have been released.

Amongst all the states and UTs, the majority of the funding under the MDC category has been received by Uttar Pradesh amounting to approximately ` 101.4 crores for 26 MDCs followed by Odisha, Andhra Pradesh and Tripura.

Table 2.2.1: Key Indicators– Uttarakhand

Indicators	Total	Male	Female
Total State Population (Lakhs)	100.9	51.4	49.5
Literacy Rate	78.8	87.4	67.1
Population in 18-23 age group (Lakhs) Share to total state pop. (%)	12.5 (12.4%)	6.4 (12.4%)	6.1 (12.3%)
Share of state 18-23 age group population of All-India 18-23 age group population	0.9%	0.9%	0.9%
Gross Enrolment Ratio	31.1	30.1	32.3
Share of Graduates & above in total state population	9	9.4	8.6

(Source: Census 2011; All India Survey of Higher Education, MHRD 2011-12; State of Education & Vocational Training in India, NSSO 66th Round, 2010)

Table 2.2.2: Key Indicators– Uttarakhand

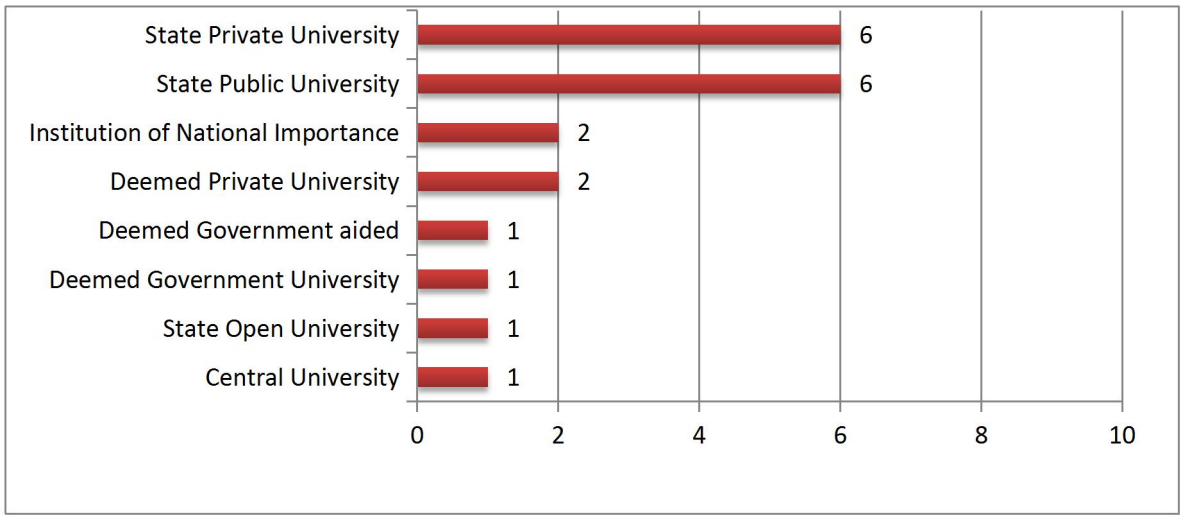
Indicator	Values
State GDP (2014)	Rs 1,32,969 Cr
State HDI Ranking	14 (All India Level)
Sex Ratio (2011)	693
HE Expenditure as a % of GSDP	0.14%
Per Capita Expenditure on HE	Rs 2937

(Source: Census 2011; RUSA, National Higher Education Mission, Sept. 2013; India Human Development Report 2011).

Education Infrastructure

The break-up of number of universities in the state on the basis of type of university is shown below. Uttarakhand ranks twelfth among all states in India with 20 total of number of universities. The state also ranks eighteenth, on number of State Public Universities with 6 universities. Uttarakhand has 3.1% of all universities in the country.

Figure 2.1: Uttarakhand Universities by Type and Key Institutions



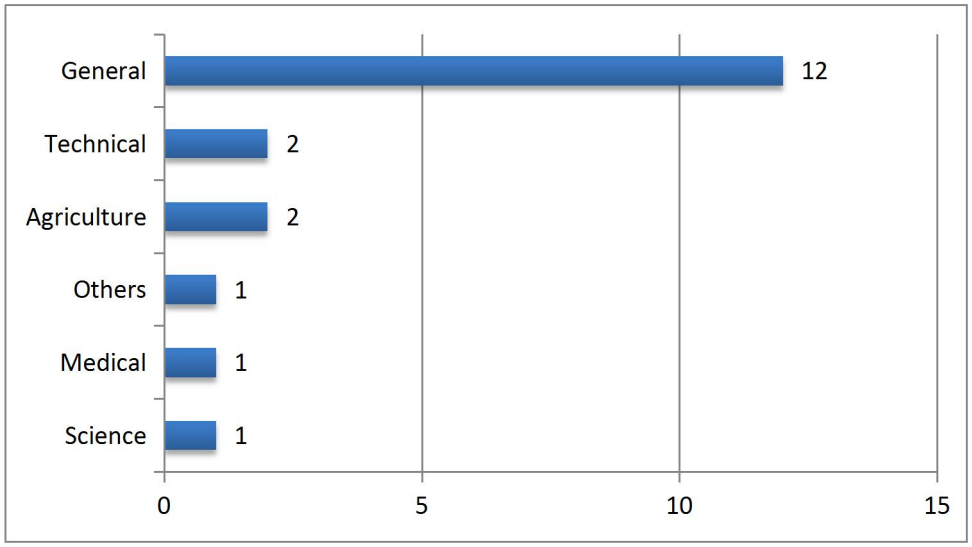
(**Source**: AISHE Report 2014-15)

Table 2.2.3: Key Institutions in the State– Uttarakhand

1.	Garhwal University
2.	NIT, Uttarakhand
3.	IIT, Roorkee
4.	IIM, Kashipur

(**Source**: AISHE Report 2014-15)

Figure 2.2: Uttarakhand Universities by Specialization



(**Source**: AISHE Report 2014-15)

The bar graph alongside reflects the break-up of number of universities in Uttarakhand on the basis of specialization. The number of Degree granting institutions in Uttarakhand is 23.

Table 2.2.4: College & Institution Indicators– Uttarakhand

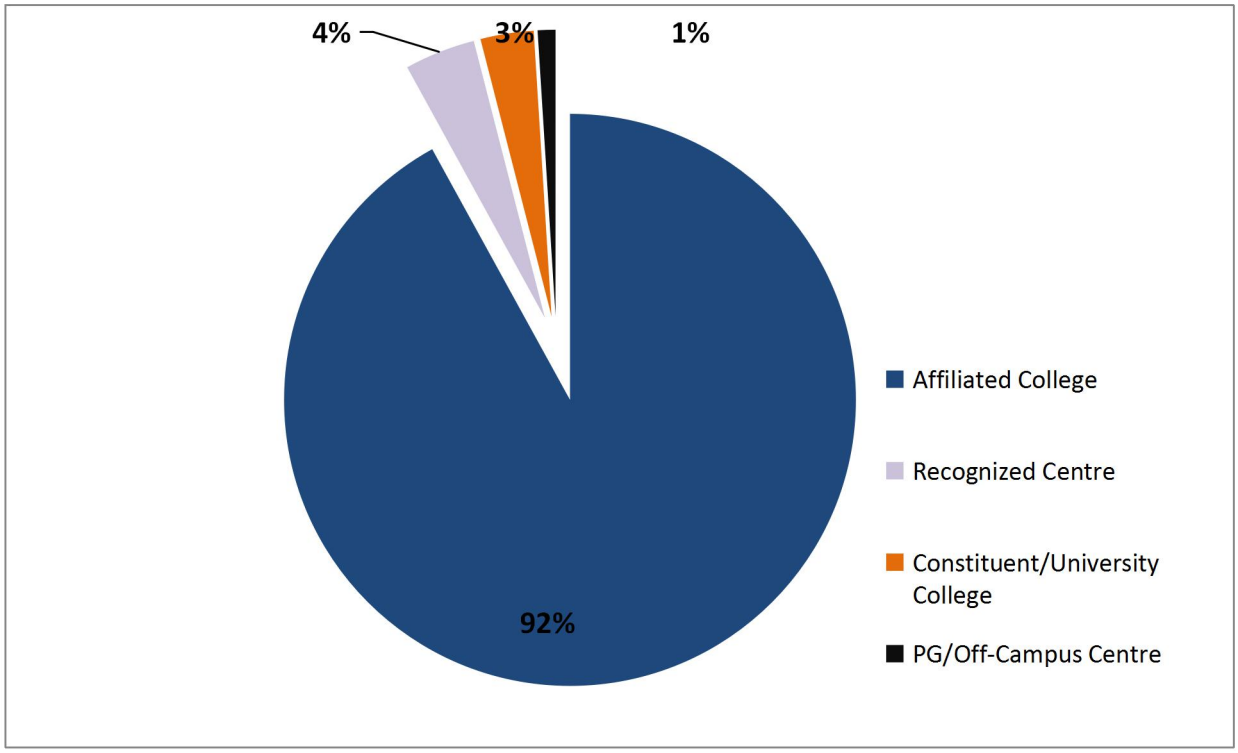
Indicator	**Colleges**	**Stand-alone Institutions**
Total No. of colleges/ institutions	395	100
Colleges per lakh population (18-23 yrs)	32	-
Average enrolment per college/ institution	1061	265
Total estimated enrolment (Lakhs)	3.68	0.27

(**Source**: AISHE Report 2014-15)

Uttarakhand with 395 colleges has a share of 1.13% of all colleges in India and **ranks #17 on total number of colleges in any state in India**. In terms of access, Uttarakhand has 32 colleges per lakh population as compared to the all India average of 25 colleges per lakh population. In terms of average enrolment per college, Uttarakhand (1061) is **higher than all India average of 703**. Total enrolment of students in regular mode in higher education institutes in Uttarakhand is around 3.68 lakhs.

Out of the total colleges in the state, 92% are affiliated to universities, and the remaining is constituent/university colleges, PG/off campus or recognized centres by the universities. In terms of management, Uttarakhand colleges are dominated by private unaided colleges, forming 48.8%, followed by 43% of government institutions, and 8.2% of private aided colleges.

Figure 2.3: Types of Colleges in Uttarakhand



(**Source**: AISHE Report 2014-15)

Table 2.2.5: Management of Colleges – Uttarakhand

Type of Management	Share of Colleges	Share of Enrolments	Average Enrolment/College
Private Unaided	48.8%	19.4%	422
Private Aided	8.2%	27.8%	3594
Government	43%	52.8%	1303

(**Source**: AISHE Report 2014-15)

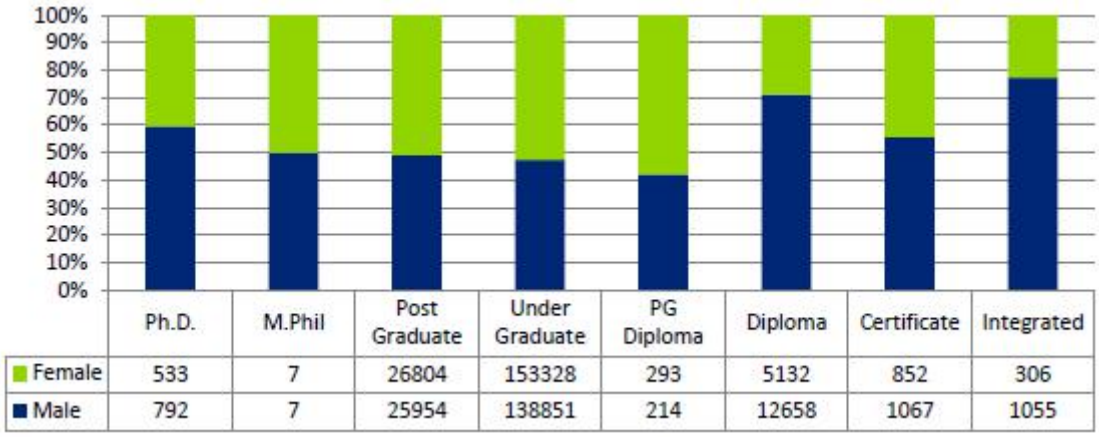
Stand-alone Institutions are those that are outside the purview of the university and college and they require recognition from one or other statutory bodies. These include Polytechnics, PGDM, Nursing, Teacher Training, CA, CS etc. In Uttarakhand, there are 100 such stand-alone institutions and the total enrolment in these is estimated to be around 0.27 lakhs.

Student Enrolment

By Level

The state-wise Enrolment through Regular Mode at various levels is 3.68 lakhs. Break-up across various levels and split by gender is given in the figure / table below. As can be inferred, the highest share of enrolment (79.4%) is at under-graduate level, followed by post graduate (14.3%) and diploma (4.8%), with all other levels forming only 1.5%.

Figure 2.4: State-wise Enrolment through Regular Mode at various levels - Uttarakhand



	Ph.D.	M.Phil	Post Graduate	Under Graduate	PG Diploma	Diploma	Certificate	Integrated
Female	533	7	26804	153328	293	5132	852	306
Male	792	7	25954	138851	214	12658	1067	1055

(**Source**: AISHE Report 2014-15)

As can be seen from table above, maximum enrolment share (52.8%) is in government colleges in the state.

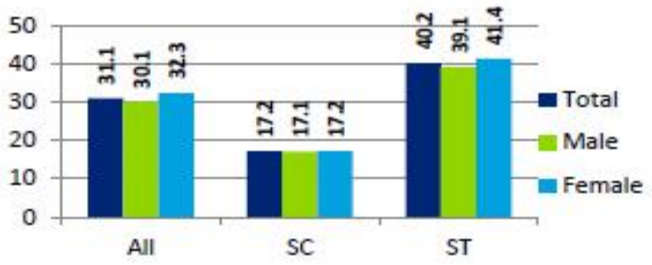
By Gender

In terms of gender, enrolment is skewed as 49.3% comprises males, while 50.7% of the enrolment is females. The GER for females (32.3) is higher than GER for males (31.1), resulting in a gender parity index of 1.07 (which is higher compared to 0.88 at all-India level). **In terms of overall GER, Uttarakhand ranks 7th** among all states in India.

By Social Group

The GER of SCs is 17.2 and STs is 40.2. Further, there is disparity within the social groups between male and female GER. The gender parity index for SC is 1.01, which is almost the same in case of STs (1.06). As can be seen from table below on Gender and Social representation, the share of student enrolment across all backward groups, except ST's is lesser than their proportionate share in population.

Figure 2.5: GER for All, SC & ST – Uttarakhand



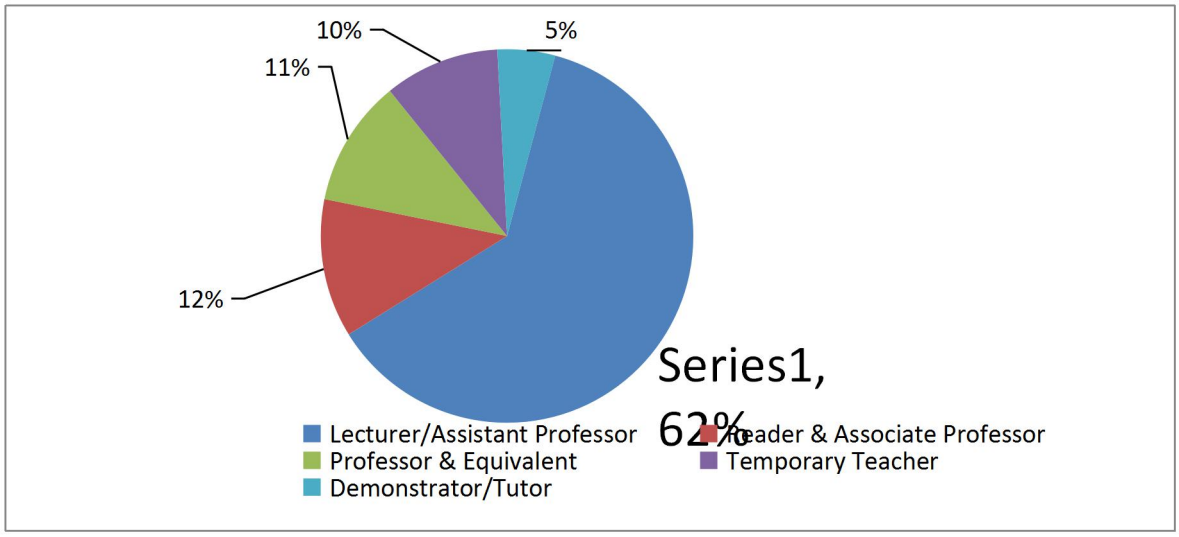
(**Source**: AISHE Report 2014-15)

Table 2.2.6: Key Faculty & Staff Indicators – Uttarakhand

Key Indicators	UKT	India
Pupil Teacher Ratio (PTR)	17.7	13.1
Teachers per College	60.1	53.8
Non-teaching Staff per College	53.7	34.5

(**Source**: AISHE Report 2014-15)

Figure 2.6: Post-wise share of teaching staff – Uttarakhand



(**Source**: AISHE Report 2014-15)

The PTR of colleges in Uttarakhand at 17.7 students per teacher slightly lags behind than the all India average of 13.1. Total number of teaching staff and non-teaching staff in all colleges in Uttarakhand is estimated to be 0.24 lakhs and 0.21 lakhs respectively (extrapolating data available for 52.4% colleges in state). However, given the

large number of colleges in the state, the number of teachers per college (60.1) and non-teaching staff per college (34.5).

In terms of the post-wise share of teaching staff, the figure alongside provides the break-up in the state. 62% of the teaching posts are at level of Lecturer/Assistant professor. There are about 12% of Readers/ Associate Professors and Professors. Around 10% of the staff is temporary and 5% Demonstrator/tutor.

In terms of representation of various social groups and gender in the teaching and non-teaching staff, the table below provides the relative comparison with the state population. It reveals that females are significantly under-represented among the faculty and staff in higher education institutes as compared to males. In case of social groups also, all the groups shown in the table show a deficit in terms of representation in both faculty and staff in higher educational institutions as compared to their share of population in the state. When compared to all-India levels of representation, Uttarakhand has fared lags behind in terms of ST, women, SC, OBC and other minority representation among faculty and non-teaching staff.

Table 2.2.7: Student, Faculty and Staff - Gender and Social representation – UTK

Indicator	Male	Female	SC	ST	OBC	Muslim	Other Minority
Share of Population	50.9%	49.1%	20.7%	2.5%	22.4%	18.8%	1.5%
Share of Enrolment	49.3%	50.7%	10.4%	4.1%	9.4%	2.0%	49.3%
Share of teaching staff	65.7%	34.3%	5.0%	0.9%	5.6%	1.4%	0.3%
Share of non-teaching staff	83.9%	16.1%	10.8%	0.7%	5.9%	0.5%	0.2%

(**Source**: AISHE Report 2014-15)

2.3 Enablers, Drivers & Constraints to Growth in Uttarakhand

It is important to note that the performance of the education sector remains bound to several key factors emergent from the socio-economic conditions prevalent at a

given time in the region. In this section an attempt has been made to throw light on some such factors such as the demographic profile of the state.

Demographic Status

The state has got very low population density and growth rate of population is less than national average. The promising demographic feature of the state is high literacy rate, especially among females:

Table2.3: Demographic Indicators of Uttarakhand, India

Total Population (in Lakhs)	**84.89 10,287.46**
Male	43.26 5322.32
Female	41.63 4965.14
Population Growth Rate	1.93 **2.13**
Population Density	**159 325**
Sex Ratio	962 933
Crude Birth Rate	20.9 23.8
Crude Death Rate	7.4 7.6
Literacy Rate Total	**71.6 64.8**
Male	83.3 75.3
Female	59.6 53.7

(Source: 2011 Census of India)

Table 2.3.1: Demographic Indicators of Kumaun Division

Indicators	**Total**	**Male**	**Female**
Population in Kumaun Division	4,228,998	2,138,287	2,090,711
Literacy Rate	79.92	90.20	70.17
Proportion of Uttarakhand Population	41.92		

(Source: 2011 Census of India)

Status of Infrastructure

Difficult terrain has proved to be a major constraint to creation of adequate infrastructural facilities, especially in ensuring connectivity by road. In hill districts, large number of villages does not have electricity.

Table 2.4: Road Infrastructure in Uttarakhand

Items	Year/Period	Unit	Statistics
(A) Motor Roads Maintained by PWD			
(i) National Highways	2015-16	Km	2471.30
(ii) State Highways	2015-16	Km	4521.07
(iii) Major District Roads	2015-16	Km	2151.81
(iv) Other District Roads	2015-16	Km	2651.40
(v) Rural Roads	2015-16	Km	19537.38
(vi) L.V. Roads	2015-16	Km	732.21
(B) Motor Roads Maintained by BRTF (i) Total Length of roads	2015-16	Km	1281.32
(C) Motor Roads Maintained by Local Bodies			
(i) District Panchayats	2015-16	Km	992.95
(ii) Urban Local Bodies & others	2015-16	Km	2428.27
(D) Roads Maintained by other Departments			
(i) Irrigation	2015-16	Km	741
(ii) Cane Development	2015-16	Km	883.04
(iii) Forest	2014-15	Km	3270
(iv) U.K.U.V.B.	2015-16	Km	950.94

(Source: Directorate of Economics and Statistics, Department of Planning, Dehradun, Uttarakhand at Glance 2015-16)

Economic Indicators

In spite of more than 75 % of the population dependent on agriculture, its share in the economy is marginal. The percentage share of different sectors in SGDP of the state is given in the table below:

Table 2.5: Status of Domestic Products in Uttarakhand

S. No.	Items	Year/Period	Unit	Statistics
(A)	Gross State Domestic Product (Advance			
1.	At current Prices	2015-16	` Lakh	18409132
	(i) Primary Sector	2015-16	` Lakh	2013226
	(ii) Secondary Sector	2015-16	` Lakh	8506850
	(iii) Tertiary Sector	2015-16	` Lakh	6539951
	(iv) Product Tax	2015-16	` Lakh	1704821
	(v) Product Subsidies	2015-16	` Lakh	355716
2.	Per Capita GSDP	2015-16	` Lakh	171663
B.	**Net State Domestic Product (Advance)** At Current Prices	2015-16	` Lakh	16216758
	(i) Primary Sector	2015-16	` Lakh	1693318
	(ii) Secondary Sector	2015-16	` Lakh	7496194
	(iii) Tertiary Sector	2015-16	` Lakh	5678141
	(iv) Product Tax	2015-16	` Lakh	1704821
	(v) Product Subsidies	2015-16	` Lakh	355716
2.	Per Capita NSDP	2015-16	` Lakh	151219
C.	**Gross State Domestic Product at Constant prices (2004-05)**	2013-14 (Provisional	` Lakh	13408874
	(Quick)	2014-15	`Lakh	14079052
	(Advance)	2015-16	` Lakh	15304143
D.	Annual Growth Rate	2013-14 (Provisional	Percentag	8.23
	(Quick)	2014-15	Percentag	5.00
	(Advance)	2014-15	Percentag	8.70

(Source: Directorate of Economics and Statistics, Department of Planning, Dehradun, Uttarakhand at Glance 2015-16

Table 2.6: Status of Electricity and Water Supply in Uttarakhand

S. No. Items	Year/Period	Unit	Statistics
(A) Installation Capacity	2015-16	MW	1290.10
(B) Electricity Generated (Gross)	2015-16	MU	4942.328
(C) Length of Lines			
(i) 400 KV	2015-16	Km	388
(ii) 220 KV	2015-16	Km	807
(iii) 132 KV	2015-16	Km	1825
(iv) 33 KV	2015-16	Km	4601.95
(v) 11 KV	2015-16	Km	38210.29
(vi) LT (Revised by Department)	2015-16	Km	55097.35
(D) Electricity Consumption			
(i) Domestic	2015-16	M.U. Watt	2391.152
(ii) Commercial	2015-16	M.U. Watt	1637.196
(iii) Industrial	2015-16	M.U. Watt	5719.583
(iv) Street Lighting	2015-16	M.U. Watt	45.372
(v) Agriculture	2015-16	M.U. Watt	141.033
(vii) Water Works/Waste Disposal	2015-16	M.U. Watt	347.037
(E) Rural Electrification			
1. Electrified Inhabited Revenue Villages			
(i) Uttarakhand Power Corporation	2015-16	No.	15254
(ii) UREDA	2015-16	No.	317
2. Energised Pump Sets/Tube Wells	2015-16	No.	28936
3. Kuteer Jyoti Connections	2015-16	No.	334420
(F) Drinking Water Supply			
1. Inhabited Revenue Villages Covered	2015-16	No.	15426
2. Population Covered	2015-16	No. Lakh	72.01
(i) Fully covered	2015-16	No. Lakh	39.63
(ii) Partially Covered	2015-16	No. Lakh	32.38
3. Scarcity Villages	2015-16	No.	2
4. Fully Covered/Partially Covered			
(i) Fully Covered	2015-16	No.	21345
(ii) Partially Covered (P.C.)	2015-16	No.	17864
5. Hand Pump Installed by			
(i) Jal Nigam	2015-16	No.	35105
(ii) Jal Sansthan	2015-16	No.	9521
6. "Uttarakhand Koop" installed by Jal Sansthan	2015-16	No.	1672

(Source: Directorate of Economics and Statistics, Department of Planning, Dehradun, Uttarakhand at Glance 2015-16)

Summary of Enablers, Drivers & Constraints to Growth

A few major enablers, drivers and also constraints to growth surfaced during the envisioning process and are listed below:

Enablers & Drivers

- High literacy rate
- Potential for hydropower generation
- Potential for adventure, rural and religious tourism
- Rich cultural heritage
- Rich source of biodiversity
- Presence of centres of excellence like IIT Roorkee, GBPUAT, FRI etc. and excellent network of schools in Dehradun and Nainital
- Enabling policies for industrial development and attracting investment
- Harmonious and peaceful social and industrial environment.

Constraints

- High unemployment and low per capita income
- Absence of avenues for employment and livelihood options
- Migration of men from hills to other states for employment
- Poor infrastructure
- Scattered population- over 80% villages have a population <500
- Inter district variations in terms of access to health and other services, economic development and income
- Drudgery of women in hill districts

Aspirations for Education & Skill Development
Vision Elements

- Free, compulsory and quality primary education to all children
- Ensuring access to job oriented skill based vocational education
- Setting up of institutions of higher learning geared towards research in solving local problems

Goals

- Access to good quality primary education to all children
- Increasing the intake capacity of the higher education institutions and vocational training institutions by 5 times

Action Points

- 60% of the villages are without primary school. For ensuring 100% access to primary education, action to be taken to ensure that there should be atleast at least 1 primary school in each village.
- Access to schools to even those who have no capacity to pay by framing appropriate policies
- 23% of primary schools have just one teacher. The teacher–student ratio needs to be 1:30 for ensuring quality education.
- Increasing access to vocational training facilities by opening new institutions in collaboration with industry
- Integration of ICT into the system by introducing different ICT tools in classrooms and other educational settings

Chapter 3

Findings of the Study

The findings of the study are summarised in this chapter. The methodology adopted consisted of a combination of quantitative and qualitative methods. The primary qualitative method was a survey in selected sites using questionnaires as tools. The quantitative data is supplemented by qualitative observations, focus group discussions, qualitative unstructured interviews and a major workshop on the theme.

3.1 Objectives of the Study and Methodology

The primary objective of the study is to document the status of quality of higher education in Kumaun Division of Uttarakhand. The objective may be further elaborated as follows-

1. To document the general status of education in relation to socio-economic parameters in the Uttarakhand Region.
2. To study empirically the quality of education being imparted in the following types of institutions: traditional/agricultural/medical/ technical/legal/distance.
3. In addition to the above to study general indicators affecting quality of education for all stakeholders.

Study Area

The universe of study was conducted in the Kumaun division of Uttarakhand State. Kumaun division has 06 Universities, 102 Degree Colleges, 01 Medical College, 01 Engineering College. The study was conducted in 03 districts (i.e. Nainital, Almora and Udham Singh Nagar) out of 06 districts of Kumaun division of Uttarakhand.

In District Nainital the oldest institution DSB Campus of Kumaun University, Government Degree College, Dosapani a comparatively newly established Degree College situated in backward block of Nainital District were chosen. One Medical College of Kumaun Dr. Sushila Tewari Government Medical College, Haldwani District Nainital was selected. For distance education the Uttarakhand Open University, Haldwani District Nainital was studied. From Almora District only one government Engineering College in

the Region, Bipin Tripathi Kumaun Engineering College, Dwarahat and one old and established Degree College from Ranikhet was selected. Faculty of Law, Kumaun University, SSJ Campus, Almora was also assessed for legal education. In Udham Singh Nagar District one Agriculture University of the division G.B. Pant University of Agriculture and Technology and one Government P.G. Degree College, Rudrapur which is feeding students from the Tarai Region was selected.

The following Table 3.1 illustrates the size and nature of the sample obtained for survey under the study. It may be noted that survey on parents was only conducted in traditional institutions.

Table 3.1: Details of the sample obtained for survey

District	**Institution**	**Students**				**Faculty**	**Parents**	**Adm. Staff**	**TOTAL**
		UG	PG	PH. D	Total Student				
Nainital District	DSB Campus, Nainital	80	80	40	200	40	60	5	**305**
	Government Degree College, Dosapani	50	00	00	50	10	10	5	**75**
	Dr. Sushila Tewari Government Medical College, Haldwani	30	20	00	50	10	00	5	**65**
	Uttarakhand-Open University Haldwani	10	15	00	25	10	00	5	**40**
Almora District	Bipin Tripathi Kumaun Engineering College, Dwarahat	40	35	00	75	10	00	5	**90**
	Govt. Degree College, Ranikhet	55	40	05	100	10	10	5	**125**
	Faculty of Law, Kumaun University, SSJ Campus, Almora	30	20	10	60	10	10	5	**85**
Udham Singh Nagar District	G.B. Pant University of Agriculture & Technology, Pantnagar	40	40	20	100	10	00	5	**115**
	Government P.G. Degree College, Rudrapur	55	40	05	100	10	10	5	**125**
		390	**290**	**80**	**750**	**120**	**100**	**45**	**1025**

(Source: Result of the survey)

Sample Size

The total sample size was 1025 persons as shown above.

Period of Survey

The survey was conducted between 14 August 2016 to 6 January 2017.

The survey was carried out by the appointed two Research Assistants who visited the chosen institutions and directly administered the questionnaire to sample members. In addition to this random unstructured qualitative interviews of persons in the study area were conducted with the help of a check-list and focus group discussions were held at all places on the emergent issues. The P.I. and Co-P.I. also conducted these qualitative interviews and group discussions. A total of 9 focus group discussions were conducted.

Thus the primary tool used was questionnaire, and four types of questionnaires were prepared to obtain data from sample groups (Annexure 1). Besides this a check list to cover all possible areas of concern was used by research assistants as and when needed in the field.

Workshop

In addition to focus group discussions at the various study sites a major workshop was organized on 12 November 2016 at UGC-HRDC Kumaun University, Nainital to help in data collection and analysis, apart from eliciting expert opinion. (Annexure II). A total of 10 papers and concept notes were presented at the workshop. Around 100 delegates participated in the discussion. Selected papers presented at the workshop are also included in the report as a source of information and opinion (Annexure III)

Literature review

Extensive literature survey was conducted on the quality of Higher Education, and the infrastructure of the institutions through internet searches/ websites of institutions.

Data Analysis

The findings of the study are summarized in tables 3.3- 3.9. Each table includes quality indicators and the score, scale and status against each indicator. The process of obtaining the indicator, score, scale and status are explained below:

(i) Indicators

The information obtained from each of the four types of questionnaires and from literature surveyed was merged into a consolidated scale of indicators/parameter of quality of Higher Education.

(ii) **Score**

A total of 10 indicators were created for each institution studied (to be seen in tables 3.3- 3.9). The indicators were created using responses to questions in the questionnaire used. For each indicator certain questions were selected. The responses to these specific questions were calculated as percentile and then an average was calculated. This average figure was taken as the aggregate score for the given indicator and is presented in the tables.

(iii) **Scaling**

The scale was subjectively divided into a 4 points index. 1 point for insufficient (less than 25 score), 2 for average (26-50 score), 3 for good (51-75 score), and 4 for very good (more than 75 score). The scores obtained by quantitative survey were moderated according to findings of qualitative survey.

The scaling was done for 6 categories of institutions i.e. Traditional Campus/Colleges of higher education, G.B Pant University of Agriculture and Technology, Pant Nagar, Bipin Tripathi, Kumaon Institute of Technology, Dwarahat, Government Medical College, Haldwani, Uttarakhand Open University, Haldwani and Faculty of Law, SSJ Campus, Kumaun University Almora.

0.

(iv) Determination of Status

The status of quality as per each indicator was determined using the above scores, scales as well as the qualitative non-participant observation, unstructured interviewed and focus group discussions findings.

Limitation of the Study

Although the study has reached its aims, there are some unavoidable limitations. First because of the time limit this study was conducted only in Kumaun Division of Uttarakhand State and covered some of higher education institutions of Kumaun Division. Time was big constraint so more time could not be devoted to all the institutions in Kumaun Division. Secondly due to unwillingness of providing proper information, the respondents filled the questionnaire accordingly which might have affected the analysis.

Findings of the Study

The table indicates broadly a status of the expansion of major educational institutions present in the region.

Table 3.2: Expansion of Educational Institutions in Uttarakhand

	2000	2016-17
Universities in Kumaun Division	1. G.B. Pant University of Agriculture and Technology, Pant Nagar, 1960 2. Kumaun University, Nainital, 1973	1. G.B. Pant University of Agriculture and Technology, Pant Nagar, 1960 2. Kumaun University, Nainital, 1973 3. Uttarakhand Open University, Haldwani, 2005 4. National Law University, Bhowali (Act 2011 passed by Uttarakhand Government Legislative Assembly but University is not in existence) 5. Graphic Era Hill University, Bhimtal & Dehradun, 2011 6. Almora Residential University, 2016
Institution of National Importance in Kumaun Division	1. ARIES, 1954 2. G.B. Pant National Institute of Himalayan Environment and Sustainable Development, 1988 3. Vivekananda Parvatiya Krishi Anusandhan Sansthan, 1962 4. Indian Veterinary Research Institute, Mukteshwar, 1913 5. National Research Centre on Coldwater Fisheries Research, 1987 6. National Bureau of Plant Genetic Resources (NBPGR), 1977	1. ARIES, 1954 2. G.B. Pant National Institute of Himalayan Environment and Sustainable Development, 1988 3. Vivekananda Parvatiya Krishi Anusandhan Sansthan, 1962 4. Indian Veterinary Research Institute, Mukteshwar, 1913 5. National Research Centre on Coldwater Fisheries Research, 1987 6. National Bureau of Plant Genetic Resources (NBPGR), 1977 7. Indian Institute of Management (IIM) Kashipur, 2011
Govt. Colleges in Kumaun Division	27	102
Engineering Colleges in Kumaun Division	1. Bipin Tripathi Kumaon Institute of Technology, Dwarahat, 1991	1. Bipin Tripathi Kumaon Institute of Technology, Dwarahat, 1991
Medical Colleges in Kumaun Division	1. Government Medical College, Haldwani, 1997	1. Government Medical College, Haldwani, 1997

(**Source:** Result of the study)

3.2 Traditional Education

The Survey conducted to gauge the quality of traditional education in Kumaun area reveals the following trends. Institution Surveyed: DSB Campus Kumaun University, Nainital, Government College, Dosapani, Rudrapur and Ranikhet.

Table 3.3: Findings of Survey Regarding Traditional Education

S.No	Indicators	Score	Regarding to Scale	Status
1.	Quality of Infrastructure	41	2	Average
2.	Quality of Library	43	2	Average
3.	Quality of Education	60	3	Good
4.	Status of information regarding various components of Higher Education	58	3	Good
5.	Standard of Teaching/ Mentoring	51	3	Good
6.	Quality of Academic/Welfare Administration	40	2	Average
7.	Quality of Accommodation in Hostels	35	2	Average
8.	Co-Curricular Activities	47	2	Average
9.	Level of use of ICT (Including presence of smart class-rooms)	24	1	Insufficient
10.	Efficacy of placement/counselling cell	22	1	Insufficient

(**Source:** Result of the study)

i) **Infrastructure:** Major shortcomings in both the quantity and the suitability of the infrastructure provided especially in remote centers. There is severe shortfall of basic amenities to match number of enrolments.

ii) The infrastructure in existence does not match requirements of the students especially the special needs of people with disabilities (such as ramps), and of female students (such as proper toilets).

iii) **Adequacy of staff:** Both teaching faculty and administrative staff are insufficient in the study area. Existing staff is overburdened and unable to perform duties effectively.

iv) Shortage of traditional library material and lack of access to online library facilities, often in absence of regular internet connectivity in rural centers. Also, lack of information regarding the availability of and ways of accessing online open resources.

v) The budget for furniture, equipment and library books is so meager that even purchase of blackboards, chalk pieces and dusters is constrained.

vi) Attitudinal problems arising from societal apathy mars initiatives for expansion of ambit to include traditionally marginalized, especially women and dalits.

However, the quality of higher education at DSB Campus, Kumaun University, Nainital is comparatively better than the Traditional Colleges Studied.

3.3 Agricultural Education

Institution Surveyed: G. B. Pant University of Agriculture and Technology, Pant Nagar

Table 3.4: Findings of Survey Regarding Agricultural Education

S.No	Indicators	Scores	Regarding to Scale	Status
1.	Quality of Infrastructure	85	4	Very good
2.	Quality of Library	87	4	Very good
3.	Quality of Education	80	4	Very Good
4.	Status of information regarding various components of Higher Education	74	3	Good
5.	Standard of Teaching/ Mentoring	79	4	Very Good
6.	Quality of Academic/Welfare Administration	70	3	Good
7.	Quality of Accommodation in Hostels	58	3	Good
8.	Co-Curricular Activities	68	3	Good
9.	Level of use of ICT (Including presence of smart class-rooms)	40	2	Average
10.	Efficacy of placement/counselling cell	52	3	Good

(**Source:** Result of the study)

The survey revealed the following areas of concern:

a) Continues to carry on momentum of initial reputation of an effective institution based on an American model of university since establishment on 1960s. Relative autonomy and seclusion from mainstream has helped generate a rich legacy of research and teaching in specialized scientific fields.

b) Plagued by problems of internal factionalism and accusations of corruption it retains a high level of academic administrative efficacy.

3.4 Medical Education

Institution Surveyed: Government Medical College, Haldwani

Table 3.5: Findings of Survey Regarding Medical Education

S.No	Indicators	Scores	Regarding to Scale	Status
1.	Quality of Infrastructure	80	4	Very good
2.	Quality of Library	78	4	Very good
3.	Quality of Education	78	4	Very good
4.	Status of information regarding various components of Higher Education	82	4	Very good
5.	Standard of Teaching/ Mentoring	78	4	Very good
6.	Quality of Academic/Welfare Administration	77	4	Very good
7.	Quality of Accommodation in Hostels	70	3	Good
8.	Co-Curricular Activities	58	3	Good
9.	Level of use of ICT (Including presence of smart class-rooms)	45	2	Average
10.	Efficacy of placement/counselling cell	55	3	Good

(**Source:** Result of the study)

The survey revealed the following areas of concern:

(a) Exhibits a high degree of satisfaction from students and guardians, though faculty express dissatisfaction with facilities and time for research.

(b) Research levels remain low though teaching is found to be satisfactory.

3.5 Technical Education

Institution Surveyed: Bipin Tripathi Kumaon Institute of Technology, Dwarahat.

Table 3.6: Findings of Survey Regarding Technical Education

S.No	Indicators	Score	Regarding to Scale	Status
1.	Quality of Infrastructure	80	4	Very good
2.	Quality of Library	76	4	Very good
3.	Quality of Education	78	4	Very good
4.	Status of information regarding various components of Higher Education	70	3	Good
5.	Standard of Teaching/ Mentoring	70	3	Good
6.	Quality of Academic/Welfare Administration	74	3	Good
7.	Quality of Accommodation in Hostels	65	3	Good
8.	Co-Curricular Activities	74	3	Good
9.	Level of use of ICT (Including presence of smart class-rooms)	53	3	Good
10.	Efficacy of placement/counselling cell	64	3	Good

(**Source:** Result of the study)

The survey revealed the following areas of concern:

a) Levels of teaching were found to be adequate.

b) Faculty had complaints about opportunities for research.

c) Employability of graduates remains area of concern.

3.6 Legal Education

Institution Surveyed: SSJ Campus, Kumaun University, Almora

Table 3.7: Findings of Survey Regarding Legal Education

S.No	Indicators	Score	Regarding to Scale	Status
1.	Quality of Infrastructure	62	3	Good
2.	Quality of Library	55	3	Good
3.	Quality of Education	76	4	Very good
4.	Status of information regarding various components of Higher Education	70	3	Good
5.	Standard of Teaching/ Mentoring	76	4	Very good
6.	Quality of Academic/Welfare Administration	69	3	Good
7.	Quality of Accommodation in Hostels	52	3	Good
8.	Co-Curricular Activities	62	3	Good
9.	Level of use of ICT (Including presence of smart class-rooms)	10	1	Insufficient
10.	Efficacy of placement/counselling cell	22	1	Insufficient

(**Source:** Result of the study)

The survey revealed the following areas of concern:

a) Very similar to traditional institutions.

b) Issues of infrastructure shortage, library inadequacy and of employability/legal practice of graduates plagues the department/institutions.

3.7 Distance Education

Institution Surveyed: Uttarakhand Open University, Haldwani

Table 3.8: Findings of Survey Regarding Distance Education

S.No	Indicators	Score	Regarding to Scale	Status
1.	Quality of Infrastructure	48	2	Average
2.	Quality of Library	52	3	Good
3.	Quality of Education/material provided	60	3	Good
4.	Status of information regarding various components of Higher Education	25	1	Insufficient
5.	Standard of Teaching/Mentoring	22	1	Insufficient
6.	Quality of Academic/Welfare Administration	50	2	Average
7.	Quality of Accommodation in Hostels/ Guest House	0	-	-
8.	Co-Curricular Activities	20	1	Insufficient
9.	Level of use of ICT (Including presence of smart class-rooms)	NA	-	-
10.	Efficacy of placement/counselling cell	NA	-	-

(**Source:** Result of the study)

The survey revealed the following areas of concern:

a) Though dissimilar and not amenable to comparison on some counts.

b) It reveals that students are dissatisfied with their interactions and with study resources created and given.

Table 3.9: Other general indicators obtained from all institutions studied- Average Score from Kumaun

S.No	Indicators	Score	Regarding to Scale	Status
1.	Job satisfaction level of Teachers	42	2	Average
2.	Job satisfaction level of non-teaching staff	36	2	Average
3.	Satisfaction level of guardians	53	3	Good
4.	Satisfaction level of community	48	2	Average
5.	Level of Disaster Management preparedness and role	32	2	Average
6.	Level of Medical/First Aid available to all stakeholders	24	1	Insufficient
7.	Level of gender sensitisation and female security in institutions	72	3	Good
8.	Level of satisfaction of persons with disabilities (differently abled persons)	18	1	Insufficient
9.	Level of Pro-activity of student Union in institutions	62	3	Good
10.	Role Of NSS/NCC/Other Voluntary Groups	68	3	Good

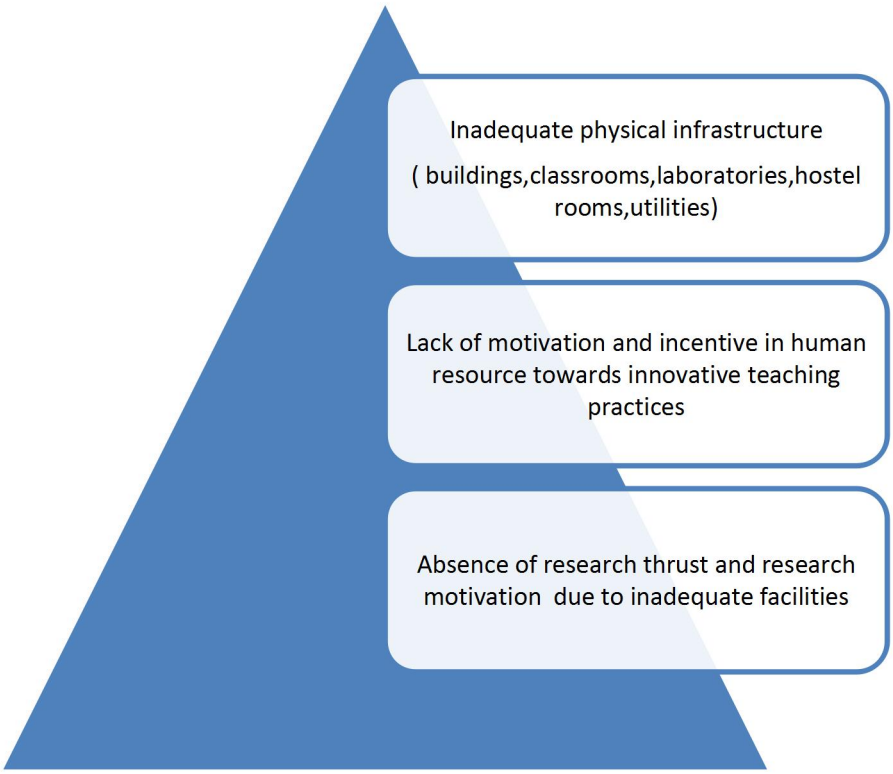
(**Source:** Result of the study)

Conclusions

Analysis of the above findings indicates:

I. **Common problem areas: cutting across all categories we can discern areas of weakness and concern**

Figure 3.1: Common concerns regarding higher education in Uttarakhand



a) **Mushrooming of educational institutions** (both governmental and private) to meet the enrolment needs of growing younger population has caused compromises in quality of basic infrastructure. This is more marked in traditional education colleges opened by government in rural areas and in private Law and B. Ed colleges which are in popular demand due to public perception that the courses offered by them guarantee employability.

b) **The specialized medical and technical education institutions also have infrastructural shortages and inadequacies.** Though they compare better than other categories within the region but they compare very poorly to institutions in their type outside the region /nationally/internationally

c) There is almost complete lack of responsiveness to needs of special categories such as people with disabilities.

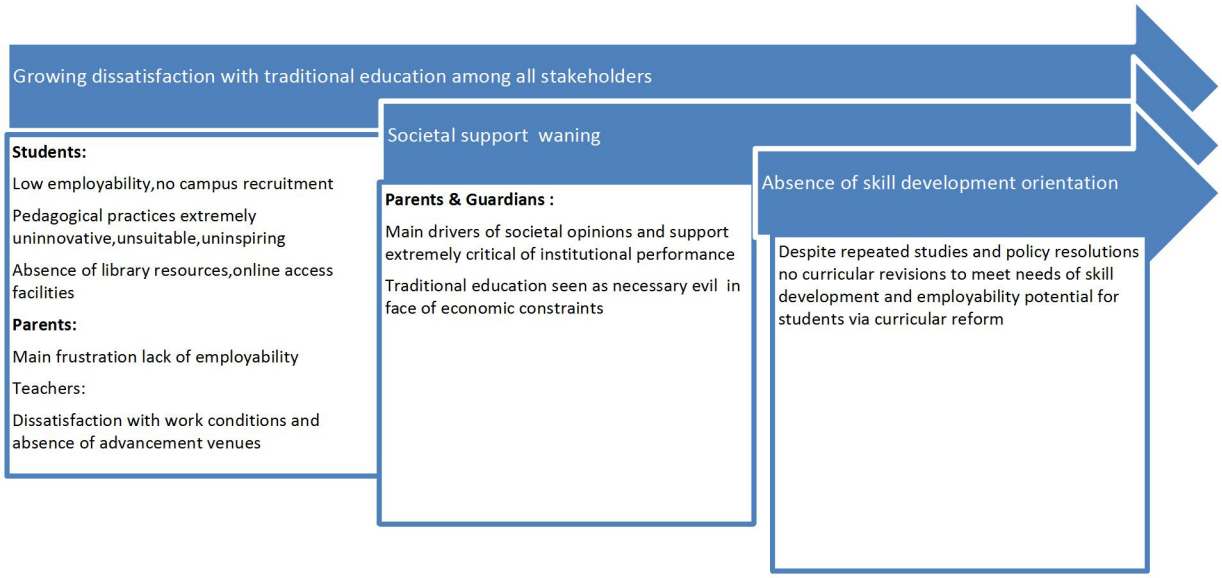
d) **Needs of female students** for special facilities to ensure their greater and more regular participation in all activities of institutions especially in rural areas is missing. Private/Public Transport to and from the colleges is irregular and low frequency leads to very poor attendance.

e) **Limited functioning of counseling and career guidance** across all institutions. Especially handicaps students in remote rural areas. It is also found that Equal Opportunity Cell, IQAC, Grievances Cell are established but their effectiveness limited to some extent.

f)) Worth special note here is the harsh truth that out of the total number of colleges in the Uttarakhand most are government colleges. These cater to students coming from poor families and socially backward classes, as they cannot afford other options and are relatively immobile.

Inter web of causes due to which traditional education is losing both its relevance and its appeal in these mountain areas.

Figure 3.2: Dissatisfaction Factors regarding Traditional education in Uttarakhand

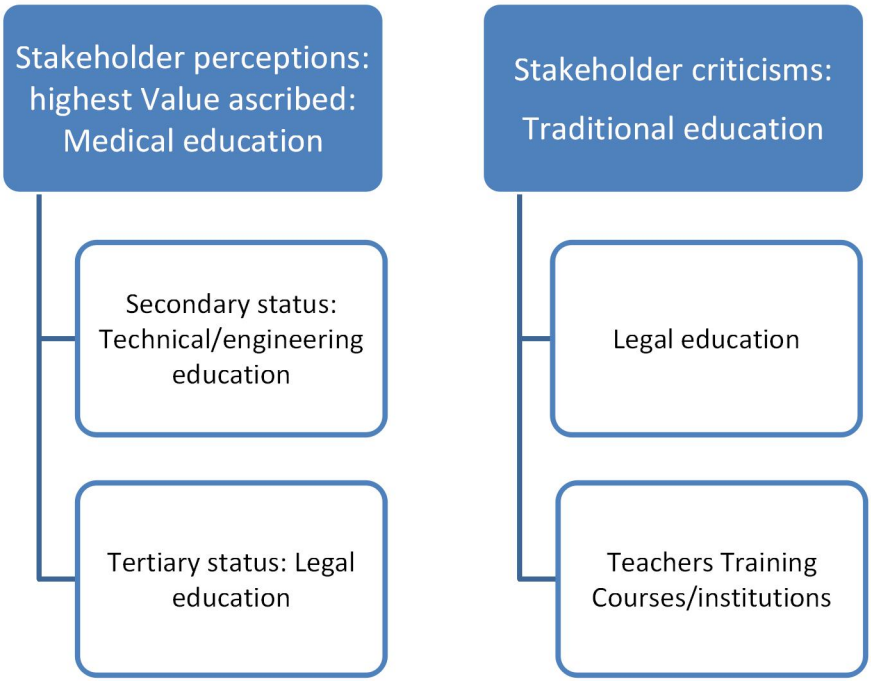


a) What emerges as a most striking point across Kumaun is that public opinion is strongly critical of the performance of traditional institutional education like Government Degree Colleges. Perceived as inefficient and irrelevant as they provide no further employment opportunities.

b) For lower economic classes' especially rural poor traditional institutions due to financial and mobility constraints are the only option available but public remains highly critical of their performance and role.

High premium to professional/technical education

Figure 3.3: Stakeholder Opinions regarding Educational Priorities in Uttarakhand



a) Medical education is perceived as having highest relevance and utility, also highest value in terms of employment opportunities. Efficiency of institutions is questioned only rarely.

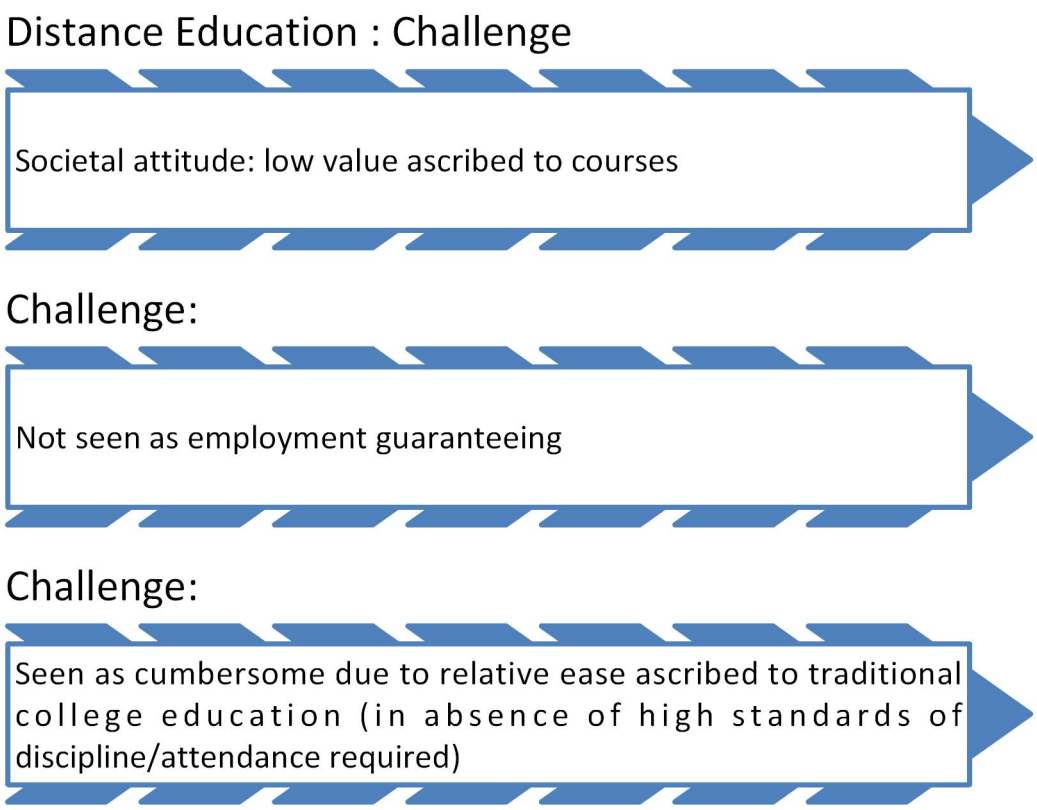
b) Technical/engineering education is given relatively low premium and employability of students from regional institutions is questioned.

c) Legal education is seen as stagnant and ineffective. Employability is considered low.

d) Teachers training (B. Ed. courses and institutions) are seen with high degree of skepticism even though these courses are in high demand as they ensure more employability than any other traditional course.

(II) **Distance education** is gaining both momentum and popularity during past decade but is not perceived as employment guaranteeing.

Figure 3.4: Challenges to Distance Education in Uttarakhand

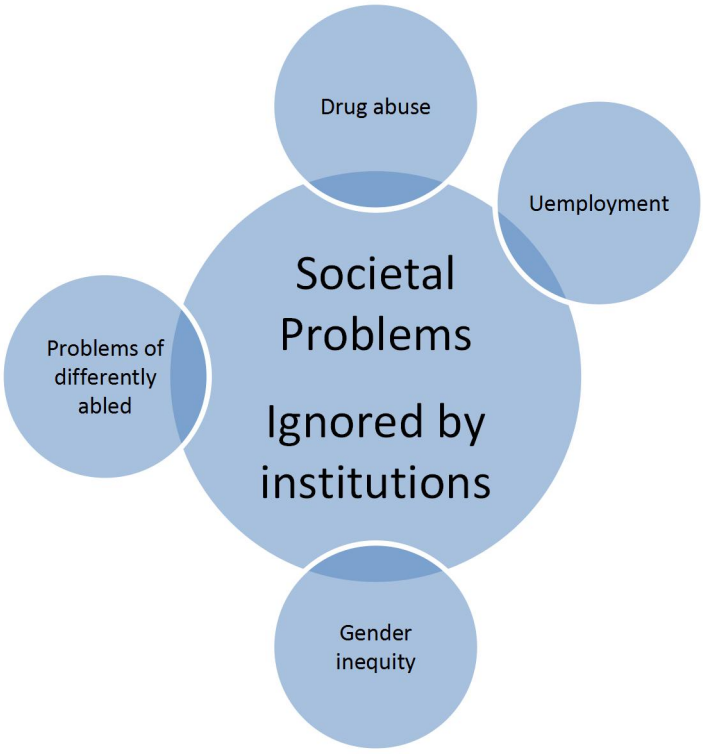


(V) Lack of responsiveness and sensitivity to societal issues, problems and demands

The institutions in all categories show poor responsiveness to social reality and demands. They are unresponsive to problems and issues of students: glaring example is drug menace in Kumaun. Growing each year the problem of drug and substance abuse is being ignored by these institutions.

The issue of unemployment is not being perceived as a problem by the institutions/the administrations/planners linked to their habitus.

Figure 3.5: Areas of Societal Concern for Higher Education in Uttarakhand


Drug abuse
Uemployment
Societal Problems
Ignored by institutions
Problems of differently abled
Gender inequity

Chapter 4

Future Vision: Recommendations and the Way Forward

In formulating recommendations for the region's educational infrastructure we must begin by summarising that the general constraint reported in this study is the lack of accountability. This overall lack of accountability and its surrounding mechanisms hamper efficiency standards.

4.1 Recommendations

1. The urgent need to introduce performance incentives :

Performance incentives for institutes can be in the nature of funding based and non-funding based incentives, though in practice they are often linked to financial incentives. Funding linked incentives have proved to be an effective approach in several international contexts and is considered an important mechanism to incentivize performance from institutions. A key aspect of this approach is the accountability that is placed on institutes to meet the criteria for receiving funds. It also encourages institutes to be innovative in the pursuit of quality improvement.

Another major reason for the poor performance of government colleges is the lack of commitment among the teachers. The teachers are the main pillars of the education system. If they are enthusiastic, motivated and dedicated to their work, even bad infrastructure will not deter their commitment to work.

Some of the methods for linking quality and performance with funding are listed in the following table, along with international examples and some key challenges with the respective approaches.

Table 4.1: Suggested Performance-linked funding approaches

Method	Description	International examples	Challenges
Performance-based budgeting	Institutes to be provided information on performance and required to develop budgets toward improving performance	Several states in the US have experimented with performance based budgeting	May not act as an incentive for institutes to improve performance
Performance contracts	Directly link funding to performance based on a variety of metrics on a case-to-case basis with institutions	France, Austria, Spain, and Chile provide additional funding to institutes for fulfilling national objectives	Less transparent and can be difficult to administer in large education systems
Formula-based funding	Allocating funds on a per capita (or per student) basis, with variations by subject, mode of delivery, grade, etc. The formula may considers inputs as well as outcomes to allocate funds	In Holland, 50% of teaching allocation based on degrees awarded. In Norway, 25% of funds related to student credits completed, number of graduates, etc	May exclude key elements of quality, providing little incentive to ensure quality in these areas
Performance-based funding	A form of formula-based funding, where funds are explicitly linked to meeting performance targets/ objectives	Has been found to be effective in Norway, several other European countries and U.S. states	Often met with internal resistance and can result in instability of funding to institutes
Competitive grants	Set amounts of money for which institutions compete. Funds are allocated through peer review of proposals, and eligibility requirements can ensure that institutions meet minimum standards in order to qualify	Governments in Chile, Vietnam, Africa and US have used competitive grants to encourage innovation	Excessive competition for a limited number of small grants can act as a disincentive
Tied financial aid	Requirement of meeting minimal quality standards through licensing and/or accreditation for institutions to receive additional funding	Over 60 countries have requirements of meeting minimum quality standards for providing additional funding	The funding levels or quality benchmarks have often not been of the required level to incentivize sufficient quality improvement

(Source : Building the links between funding and quality in higher education: India's Challenge- Lindsay Daugherty, Trey Miller, Rafiq Dossani, Megan Clifford, (Rand Corporation)

2. To stop indiscriminate opening /proliferation of traditional colleges

Most of the decision to open new institutions by the government or grant of permission to private institutions seems to be quite arbitrary and shows no evidence of being based on an analysis of need or sustainability. More often than not the decision to start new colleges and their location is guided by political considerations and is not based on an analysis of factors that should be taken into account while arriving at such a decision viz., the need and justification for the institution, area to be served, numbers of post- secondary students likely to be available, infrastructure and financial needs, feasibility of alternatives to starting a new college (e.g. scholarships and hostels in existing institutions). The result is a proliferation of colleges lacking in basic facilities like buildings, libraries, laboratories etc., low enrolment, and shortage of teachers. The non-teaching staff in government colleges is also inadequate.

3. To attract private funding:

The geography and climatic conditions of the region are very suitable for establishment of quality educational infrastructure. There is a need to attract private sector investment and also FDI in education. This will ensure that the shortcomings regarding physical infrastructure quality and design are removed.

Linkage of educational institutions with new private investments or public-private partnerships will ensure employability of youth in private sector ventures across the country.

4. Popularisation of distance education

Mainstreaming distance education at rural community level is essential as it will do away with poor quality traditional education. There is need to create linkages of distance education with employment guarantees so that community level apathy to it can be ameliorated.

5. Curricular reform

Oriented at skill development courses which lead to employment guarantees. Especially for rural and semi-rural youth

Few more recommendations are as follows

1. Sensitisation of governance bodies to special needs of differently abled persons.
2. Sensitization of governance bodies to gender needs.
3. Introducing career guidance and psychological counseling.
4. Take measures to integrate traditional knowledge and indigenous knowledge base into research and development programmes.
5. There should be provision of uniformity and standardization of infrastructure in government colleges in the next phase of RUSA. There should be a standard format of Computer/Chemistry/Physics/ Botany/Zoology lab and this should be established by centralized purchasing process so that standard and updated labs could be established for the betterment of higher education.
6. Large scale drives to educate stakeholders regarding open access resources and learning platforms.
7. A common learning e-resources could be developed, and purchased or subscribed for the Uttarakhand State and these e-resources can be shared by various institutions specially designed for hill state. This will enable teachers and students of remote area of the hilly state to attain world class teaching-learning material from which they deprived presently. These e-resources will open new avenues of the students of the state especially far flung areas.
8. There is an urgent need of more professional courses. There should be provision of one professional paper in each subject or as separate subject. Institutions are required including at least one paper focusing on professional part of subject to cater/open prospects for job opportunity in present market scenario. For example in subject History one paper may be included as heritage studies/musicology so that after completing graduation student can seek opportunity in tourism/ heritage/ museums or can open museums at private as in western countries. As GIS in Geography, translation in Hindi and English subjects, Social Work in Sociology, Waste Management in Chemistry, etc.
9. A research grant should be initiated at state level to promote research activities. As there are limited grants at national level so that many teachers from state higher education especially from remote Government Colleges are deprived of research

grants. A state level research grant could be provide college and subject wise in rotation so that maximum teachers of state higher education are covered under research grants and it will promote quality research activities.

4.2 Vision Elements

Indian Context

Making higher education inclusive, enhancing the quality of education, making education accessible to all— these are some of the fundamental pillars that can strengthen India's higher education sector in the long term. For any nation today, a robust higher education culture is integral to the creation of a globally relevant workforce. Talent, human capital and a thriving services sector— India has all the qualities and resources to fulfill its aspiration of becoming a global knowledge hub.

Attracting foreign capital has become an important component of economic development globally. Being the second most populous country in the world with over 50% of its population less than 25 years of age, the challenge to provide quality education to the masses is extremely daunting. With its limited access to funds, the government has begun to actively scout for private capital. Even though 100% FDI is permitted in this sector, foreign investment in this sector is yet to take off.

India has tremendous potential & capacity to absorb large tracts of FDI in this sector to meet the ever increasing demand supply gap. Creating an investor-friendly environment in education sector would not only help India to establish itself as a favoured destination for foreign institutions & students but also trigger a domino effect across sectors. Getting rid of regulatory anomalies and paving way for foreign universities will not only allow the Indian higher education system to realise its full potential but will also lead to exchange of newer research ideas and knowledge resources. Therefore, it has become imperative for the government to clarify its stand on participation of foreign universities in India in order to avoid sending conflicting signals.

Regional context

Higher Education in agriculture, engineering and medical which is imparted in English language has not benefited vast masses of people in the region. Even after Independence the higher education scene has not qualitatively changed for the better. The legacy of colonial higher education still influences universities, for, the standard of education today is not sufficiently designed to meet the development needs of the region. There is a clear bias towards courses/ sectors which cater to the traditional westernized perceptions of high-income-groups while crucial sector of development such as rural health and rural technology and indigenous knowledge and technology are not sufficiently catered to.

Higher education is expected to generate a climate in the region's society which is conducive to the development of the attitudes, values and skills of the human resource. There is a need to foster this social engineering thrust while advancing partnerships of academia with other professional sectors.

The fact that India today has the third largest scientific manpower in the world is entirely due to the expansion of higher education since Independence. In India more than 40 premier research institutions have been set up under the Indian Council of Agriculture Research (ICAR) which has given a tremendous impetus to scientific and technological research in the country. One of the drawbacks is that the best products of the university system in the region are tempted to leave the universities and join these well-equipped research institutions outside the country.

The region's universities have a crucial role to play in shaping social criticism in this Himalayan region. In a region like Himalayan mountain tracts of India where it is only natural that the university which comprises both teachers and students is to be the primary 'catalysts' for social change. What is important today is the need for better understanding of and planning for the attainment of regional development objectives.

Quality of education at higher levels is more important than mere qualitative expansion. It is often said that quality of higher education in the state of Uttarakhand is deteriorating with quantitative expansion. One of the evidences cited by critics is that those who are passing out of colleges and universities are not able to express themselves

clearly and correctly either in their own mother tongue or in English. The decline of linguistic and communication skills is alarming.

Determination or measuring of quality of higher education or for that matter education at any stage is beset with a number of problems. The quality of products produced in a factory can be decided. Quality of Consumer goods and capital goods can be measured as per standards laid down by those who are vested with the authority to decide the quality of those products. But quality of education imparted or received cannot be easily measured because determining the quality of an inanimate object.

Higher education is considered the apex stage of formal education. It includes greater specialisation necessitated by rapid socio-economic and industrial development. It also includes formalism which again is necessitated by the institutionalized system of education. Research is another major component of higher education in which the combined intelligence of a group finds the solution to various social problems. There is need to tap into indigenous and traditional knowledge bank and integrate the relevant aspects into research in the region.

The quality of education in colleges and universities depend to a great extent on three factors- the quality of teaching, the infrastructural facilities available and the manner in which examinations are conducted. If the quality of teaching is good, the academic standards of students are bound to be high. Ineffective teaching and high standards of students do not go together. As the Kothari Commission rightly observed of all the factors which influence the quality of education, 'the quality, competence and character of teachers are the most significant.

The question of accountability of teachers was never a serious issue in the past. Teachers were highly responsible persons of unquestionable integrity. Besides they were dedicated to the profession, they choose it out of interest and it was not very difficult for them to settle down in better remunerative and administrative jobs. But in the present circumstances people land in teaching professions out of accident or compulsion as doors to employment in other professions are closed on most of them. As a result, persons having no aptitude for teaching have taken up the profession and many of them are not able to measure up to requirements and some obligations. There has been a sharp deterioration in the academic performance of students. The examination scores have lost

their validity as they were considered by many to no more be the indicators of the real proficiency in the subject.

The positive impacts of a well-educated youth on the economy of a region are well understood. Indeed, the development of human resources through education remains a primary focus for all economies seeking to make the transition from being dominated by the primary or secondary sectors to the tertiary.

There is a need to integrate the concept of knowledge direction, which may be seen as 'the act of channeling and redirecting knowledge in all forms, whether technical, experimental, practical, or academic, to the right people in order to achieve a desired outcome'. In the case of Uttarakhand, such knowledge direction would form the link between education and the economy. Improper knowledge direction would therefore be the reason why educational improvements may not be adequately translating into economic improvements.

The need is to link firmly the community, education and development forays. Education needs to be rendered as an instrument for good conduct of human affairs, only then if can prepare people for their present and future without any shock. Nobel Laureate Dr. Amartya Sen rightly said "What is needed today is a radical shift in our approach to education; we have to reject all old policies which spring from a failure of leadership which gives all to the vocal and none to the mute." The plea continues to be unexceptionably relevant.

Thus, there is further need for a study to assess the region's education systems using a varied, all-encompassing range of indicators. The knowledge direction levels of different categories need to be assessed. The results must be compared, in order to examine how economic development can be fine tuned with educational targets.

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Annexure I

Survey on Higher Education
Strictly Confidential
(FOR STUDENTS)

उच्च शिक्षा पर सर्वेक्षण
अत्यन्त गोपनीय
(विद्यार्थियों के लिए)

नाम:/Name		विषय :/ Subject:
पता:/ Add:		

क्र.सं. S.no.	प्रश्न Questions	हाँ/ Yes	नहीं No	पता नहीं don't know
1.	क्या आपके संस्थान/विभाग में कक्षाओं हेतु पर्याप्त फर्नीचर है? Does your institution/department have Classrooms with sufficient furniture?			
2.	क्या आपके संस्थान/विभाग में रसायन/वनस्पति/जन्तु/भौतिक विज्ञान की पूर्ण सुसज्जित प्रयोगशाला है? Does your institution/department have fully equipped laboratory of Chemistry/Botany/Zoology/Physics?			
3.	क्या आपके संस्थान/विभाग में पूर्ण रूप से सुसज्जित और क्रियाशील कम्प्यूटर प्रयोगशाला है? Does your institution/department have fully equipped and functional laboratory of Computers?			
4.	क्या आपके संस्थान/विभाग में पर्याप्त साहित्य–सहित पुस्तकालय है? Does your institution/dept. have library with sufficient literature and books?			
5.	वैश्वीकरण के इस दौर में क्या आपका पाठ्यक्रम प्रतिस्पर्धा हेतु ठीक है ? Do you find curriculum is up-to the mark to compete in a globalized era?			
6.	क्या आपके संस्थान में छात्र शिकायत प्रकोष्ठ है? Does your institution have student grievances Cell?			
7.	क्या आपके संस्थान में नियुक्ति और परामर्श प्रकोष्ठ है? Does your institution have placement and counselling Cell?			
8.	क्या आपके संस्थान में सह–पाठ्यक्रम गतिविधियों को नियमित रूप से आयोजित किया जाता है? Are co-curricular activities conducted in your institution regularly?			
9.	क्या यहॉ पर पर्याप्त मात्रा में खुली जगह है? Is there enough open space?			
10.	क्या आपके संस्थान में छात्रों के लिए कोई परामर्श कार्यक्रम किया जाता है ? Does your institution have any counselling programme for students?			
11.	क्या आपका इस संस्थान में अध्ययन का उद्देश्य पूरा हुआ है? Does your purpose of studying is fulfilled in the institution?			
12.	क्या सीबीसीएस को आपकी संस्था में कार्यान्वित किया गया है? Is CBCS implemented in your institution?			
13.	क्या आपके संस्थान में सूचना व संचार प्रोद्योगिकी (आईसीटी) आधारित शिक्षा दी जाती है ? यदि हां, तो कृपया आईसीटी उपकरणों का उल्लेख करें? Is there any opportunity for ICT enabled learning in your institution? If yes, please mention which ICT tools are used?			

श्रव्य/दृश्य Audio/ Video	स्मार्ट क्लास Smart class	एलसीडी LCD	इंटरेक्टिव बोर्ड Interactive Board	पीपीटी PPT	मोबाइल आधारित शिक्षण Mobile learning

14.	क्या आपके संस्थान में सामान्य प्रशासन यथा प्रवेश, परीक्षा, पुस्तक, आदि से सम्बन्धित कार्य में किसी परेशानी का सामना करना पड़ता हैं? Do you face any problem/problems in your institution regarding admission, exams, books, etc.?			

	यदि हां तो कृपया उल्लेख करें। If yes, please mention.						
15.	पाठ्यक्रम के दौरान कितने शिक्षण अधिगम सत्र एक वर्ष के लिए या दो सेमेस्टर की अवधि के लिए आयोजित किये जाते है? कृपया उल्लेख करें। How many teaching learning sessions/periods are conducted during the course for a year or for two semesters? Please mention below						
1-60		60-100		100-150		150-180	
16.	आपके अध्ययन का उद्देश्य क्या है? What is the objective of your study?						
	रोजगार प्राप्त करना Employability	योग्यता पूर्ति करना Qualification fulfilment		ज्ञान अर्जित करना Knowledge		पता नहीं Don't Know	
17.	आपके अनुसार आपकी संस्था की मुख्य सामर्थ्य क्या हैं? What is the main strength of your institution?						
18.	क्या आप अपनी संस्था में दूसरों को अध्ययन करने हेतु सलाह देना चाहेंगे? Will you advice others to attend a study course at your institution?						
19.	आपके द्वारा कक्षा में उठाये गये प्रश्न/शंका का समाधान आपके शिक्षक किस प्रकार करते हैं? How does the teacher respond to the doubts raised in the class??	प्रोत्साहित करते हैं Encourages		नजरअंदाज करते हैं Ignores		हतोत्साहित Discourages	
20.	धीमी गति से सीखने वालों के प्रति अध्यापक का दृष्टिकोण क्या है? What is the teacher's attitude to slow learners?	सहायता करते हैं Helps		नजरअंदाज करते हैं Ignores		हतोत्साहित Discourages	
21.	क्या षिक्षक सिखाने की प्रक्रिया को सुविधापूर्ण बनाने के लिए अनुकूल वातावरण बनाते हैं? Does the teachers create congenial climate to facilitate the learning process?			हां Yes	नहीं No	कह नहीं सकते Can't say	
22.	षिक्षक का व्याख्यान के समय आवाज का स्तर कैसा है? How is teacher's lecture's audibility?			सुनने योग्य Audible	सुनाई न देने वाला Inaudible		
23.	विद्यार्थियों को पढ़ाए गए भाग में विद्यार्थियों के ज्ञान के स्तर को जानने के लिए षिक्षक कितनी बार विद्यार्थियों की परीक्षा लेते हैं? How often does the teacher conduct tests to find out the students' grasp of the portions covered?			अक्सर Often	कभी–कभी Sometime	कभी नहीं Never	
24.	आप अपनी संस्था में और क्या सुधार देखना चाहते हैं? What improved you like see in your institution?						

Survey on Higher Education
Strictly Confidential

For Parents/guardian

Name:		**Occupation:**
Residence:		
Relationship to student(s)		

1. **Income per month (Thousands)**

   (A) 10-20 (B) 20-30 (C) 30-40 (D) 40-50 (E) Above 50

2. **Student degree registration, Specify**

   _____

3. **Contact/feedback with administration during a Semester Specify**

   _____

4. **Would you recommend this course an institution to any other parents/guardians?**

   _____

5. **Rating of institution in your opinion**

   1) Very Bad (2) Bad (3) Neutral (4) Good (5) Very Good (6) Don't know

Strength and weaknesses in your opinion	**Very Bad**	**Bad**	**Neutral**	**Good**	**Very Good**	**Don't Know**
University Administration						
Teacher						
Class Rooms						
Laboratories						
Sports Facilities						
Hostel Accommodation						
Cost of Education						

Survey on Higher Education
Strictly Confidential
(FOR FACULTY MEMBERS)

Name:		**Department:**
Address:		

S.N.	**Questions**	Yes	No	Don't Know
1.	Does your institution/department have Classrooms with sufficient furniture?			
2.	Does your institution/department have fully equipped laboratory of Chemistry/Botany/Zoology/Physics?			
3.	Does your institution/department have fully equipped and functional laboratory of Computer?			
4.	Does your institution/department have library with sufficient literature and books?			
5.	Do you find curriculum is up-to the mark to compete in a globalized era?			
6.	Does your institution have student grievances cell?			
7.	Does your institution have Research Ethics Committee?			
8.	Does your institution established IQAC Cell?			
9.	Does your institution have any Alumni Cell?			
10.	Does your institution have placement and counselling Cell?			
11.	Does your institution covered under RUSA?			
12.	Is CBCS implemented in your institution/faculty?			
13.	Does your Institution have achieved grade from NAAC Accreditation.			
14.	Are co-curricular activity conducted by the institution regularly?			
15.	Do you get promotion timely?			
16.	Does your institution upload data in AISHE portal regularly?			
17.	Is any innovation/creative activity conducted in your institution/department?			
	if yes, please mention			
18.	Does your institution/department perform any best practices			

if yes, please mention	Capacity Building	Leadership	Environmental Awareness	Communication Skills

19.	Does your institution/department promote online courses?						
	If yes, please specify						
20.	Are you aware of MOOCS?						
	If yes, which platform you are using?						
21.	Is there any opportunity for ICT enabled learning in your institution/department? If yes, please mention which ICT tools are used?						
22.	Audio/ Video	Smart Class	LCD	Interactive Board	PPT	Mobile Learning	OER
23.	Does your institution/department conduct/ promote any job oriented programme for students?						
	If yes, please mention						
24.	Is your institution/department running any community outreach programme?						
	If yes, please mention						
25.	Is/Are there any problem/problems in the running/functioning of the administration?						
	If yes, please mention						
26.	No. of IPR/Copyright/Licence obtained by the department / institution						
27.	How many teaching learning sessions/periods are conducted during the course for a year or for two semesters? Please mention below						
	1-60	60-100	100-150	150-180			
28.	Does your institution has any collaboration	Within faculty		Inter faculty			
		Yes	No	Yes	No		

Survey on Higher Education
Strictly Confidential
(FOR ADMINISTRATORS ONLY)

Name:		**Department:**
Address:		

S.N.	**Questions**	Yes	No	Don't Know
1.	Does your institution/department have Classrooms with sufficient furniture?			
2.	Does your institution/department have fully equipped laboratory of Chemistry/Botany/Zoology/Physics?			
3.	Does your institution/department have fully equipped and functional laboratory of Computer?			
4.	Does your institution/department have library with sufficient literature and books?			
5.	Do you find curriculum is up-to the mark to compete in a globalized era?			
6.	Does your institution have student grievances cell?			
7.	Does your institution have Research Ethics Committee?			
8.	Does your institution establish IQAC Cell?			
9.	Does your institution have any Alumni Cell?			
10.	Does your institution have placement and counselling Cell?			
11.	Does your institution covered under RUSA?			
12.	Is CBCS implemented in your institution?			
13.	Does your Institution have achieved grade from NAAC Accreditation?			
14.	Are co-curricular activity conducted by the institution regularly?			
15.	Do you get promotion timely?			
16.	Does your institution upload data in AISHE portal regularly?			
17.	Is any innovation/creative activity conducted in your institution/department?			
	If yes, please mention			
18.	Does your institution/department perform any best practices?			

If yes, please mention	Capacity Building	Leadership	Environmental Awareness	Communication Skills

19.	Does your institution/department promote online courses?						
	If yes, please specify						
20.	Are you aware of MOOCS?						
	If yes, which platform you are using?						
21.	Is there any opportunity for ICT enabled learning in your institution/department? If yes, please mention which ICT tools are used?						
22.	Audio/ Video	Smart Class	LCD	Interactive Board	PPT	Mobile Learning	OER
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	If yes, please mention.						
24.	Is your institution/department running any community outreach programme?						
	If yes, please mention.						
25.	Is/Are there any problem/problems in the running/functioning of the administration?						
	If yes, please mention.						
26.	No. of IPR/Copyright/Licence obtained by the department / institution						
27.	How many teaching learning sessions/periods are conducted during the course for a year or for two semesters? Please mention below						
	1-60	60-100	100-150	150-180			
28.	Does your institution have MOU with other institution? If yes, please mention:						

Annexure II

Workshop Report

WORKSHOP

on

Status of Quality of Higher Education in Uttarakhand

(Kumaun Division)

ORGANISED BY:

UGC-Human Resource Development Centre
Kumaun University, Nainital, Uttarakhand

SPONSORED BY:

Directorate of Economics & Statistics, Planning Department, Government of Uttarakhand, Dehradun

12 November, 2016

REPORT

A one-day workshop on "Status of Quality of Higher Education in Uttarakhand (Kumaun Region)" was organized by University Grants Commission-Human Resource Development Centre, Kumaun University, Nainital on November 12, 2016. Four resource persons were invited to deliver their presented on the theme of the workshop. The workshop was started by the welcome note by Dr. Reetesh Sah, Assistant Director, UGC-HRDC, he welcomed resource persons of the workshop and all the delegates present. He presented a brief note about the vision and objective of workshop In his address Prof. B. L. Sah, Director, UGC-HRDC highlighted the educational Information and Communication Technologies (ICT) tools. Defining a clear-cut IT strategy, he said that teachers might take initiative to showcase the excellent models for globalization. He concluded with the present condition of higher education in Uttarakhand and its associated challenges.

Inaugural Session of the workshop

The workshop was continued by the lecture of Dr. C. D. Suntha, Principal of Government Degree College, Ganaigangoli. Being associated with All India Survey on Higher Education (AISHE) since last six years, Dr. Suntha presented the statistics of higher education, i.e. Gross Enrolment Ratio (GER), Gender Parity Index (GPI), and Number of Teachers and Pupil Teacher Ratio (PTR) in Uttarakhand as well as at National level. Statistical data cleared that GER of Uttarakhand is 23 % which is better than National GER, which is only 20%. GPI and PTR are 1.09 and 26 respectively. In addition, a statistical figure of number of students, government and aided colleges, and universities in both hill and plain regions was also sketched by him. From his data it was clear that more than 50% of universities and colleges are in plain region of Uttarakhand. With reference to the old National Policy on Education (1968), he also stressed on the need of newer strategies for the fulfillment of quality gap(s) in higher education. Given the lack of good governance and crowdedness in the colleges, he concluded that if we will not improve the quality in higher education, the private universities will take over the entire education system in near future.

Dr. C.D. Suntha addressing the workshop

In the second session, Dr, R. K. Gupta, Principal of Government Degree College, Banbasa shaded light on indigenous traditional education policy and compared it with England with references to T. B. Macaulay's 1780 pages report on the status of education in India, which was presented in the house of Parliament on February 2, 1835. He said it was mention in the report that there was 'no illiteracy, no unemployment, no beggar and no dependents'. It was also mentioned that there was 100% literacy rate in India on the other hand only 17% in England. He further added that there were 732000 Revenue Villages and in every village there was a Gurukul in every village. Biggest Gurukul had 20000 students and smallest Gurukul had 200 students. They were run on Monitorial Education System. In the context of quality education, he suggested to learn to our ancient India's 'Gurukula system', prominent subjects like mathematics and metallurgy, practical-based examination patterns, and also about civil engineering department. For the sake of betterment in higher education, he concluded that the education should be knowledge-based, not the degree-based, and it can only be realized if we could incorporate our "mother tongue" in each & every stage of our education, similar to those of other countries such as China, Russia, and Japan. He emphasized on Indianlization of education, scientific attitude and practical based examination pattern and no classroom examination (*Vomiting only*).He suggested that the socially relevant and useful education should be given in Mother Tongue. Teacher Training must be a regular and annual feature and urgent requirement in the Examination Reformation are required.

Dr. R.K. Gupta addressing the workshop

In the next interactive lecture on 'Aspect of Higher Education in Uttarakhand', Dr. J. N. Sinha, Associate Professor, History of Science, University of Delhi, discussed about the brain drain problem from hill to plain areas, with disastrous consequences especially for rural India. He said, education in India is undergoing one of the worst phases of its history. He further added the institutions of education have swelled in the number in the recent decades, but their management and quality are a matter of concern. Apart from affecting the quality of education, this is generating frustration, disinterest, and anger against the system. The policy of reservation based on caste has further complicated the situation. He suggested the social aspects of education and added that now-a-days western sciences are looking at permanent solutions, which are rooted in our old yet evergreen fountain of medical secrets, 'Ayurveda'. He pointed out the urgent need for the improvements and maintenance of the quality in higher education, in the present scenario. For instance, promoting the interdisciplinary research, scrutinizing the alarming intake in PhD's as well as ensuring a satisfactory job for all PhD holders. He added Govt. should reward for excellence for motivation of students. According to him there is a need to improve whole system from school level to college level.

Dr. J.N. Sinha in his address at the workshop

The next session was started by excellent presentation of Dr. Sanjay Kumar, Associate Professor of Chemistry, Ramnagar, on “Reinventing my learning lab”. Prior to his lecture, Dr. Kumar mentioned about his achievements as a teacher, in the higher education. He told that in the past several years, 19 students from Pithoragarh and 26 students from Ramnagar have qualified NET examination under his guidance. Presenting himself as an example, Dr. Kumar told that how can one devote him/her self for the welfare of students even at adverse conditions. He nicely pointed out the difference between an educator and teacher as well as the education system of America and India. He continued that the higher education, as it stands, today, must ensure research-based teaching techniques. He gave many examples to attract the students for their studies like group study, academic ventilation, encouraging students to ensure books on the shelves, critical thinking and creativity. Given the increasing number of registered people for Coursera & Udacity, the massive open online courses (MOOCs), Dr. Kumar concluded that government should further promote e-learning programmes such as Open Course Ware (OCW), You tube-Edu, and i-tuneU.

Dr. Sanjay Kumar during his presentation

In the last interactive open discussion session, Dr. T.C. Pandey, Assistant Professor, LSMPG College, Pithoragarh, delivered his conceptual note on ‘B.Ed and Education Quality in Uttarakhand’. Next to this, Problems of Higher Education were discussed by Dr. Dharmendra Kumar and Dr. Kavita Kala discussed on Prospective of Higher Education in India. Dr. Shankar Lalshared his views on Status and Challenges of Higher Education in Uttarakhand, Dr. Anchalesh Kumar discussed on Imbricated Cultural Space and the Dilemma of Quality Control in the Colleges of Uttarakhand, Dr. L.P. Naithani and Dr. Dilip

Singh presented their views on Challenges of Higher Education and Dr. H. S. Bhakuni also presented their conceptual notes on 'Higher Education in Uttarakhand State

After churning of thoughts whole day on the workshop on Status of Higher Education in Uttarakhand come to an end with positive discussions and deliberations by the delegates. It was an interactive workshop and, Dr. Reetesh Sah proposed vote of thanks to the chair person, resource persons, and all the audience at the end of the workshop.

Delegates of the workshop

List of Resource Persons

S.No.	Name	Title
1.	Dr. C.D. Suntha	Status of quality in higher education in Kumaun Region of Uttarakhand
2.	Dr. R.K. Gupta	Quality of Higher Education in Uttarakhand
3.	Dr. J.N. Sinha	Aspects of Higher Education with reference to Uttarakhand
4.	Dr. Sanjay Kumar	Reinventing my Learning Lab

List of Paper Presenters

S.No.	Name	Title
1.	Dr. H.S. Bhakuni	Higher Education in Uttarakhand State
2.	Dr. Dharmendra Kumar & Kavita Kala	Prospective of Higher Education in India
3.	Dr. Shankar Lal	Status and Challenges of Higher Education in Uttarakhand
4.	Dr. N.P. Naithani & Dr. Dalip Singh	उत्तराखण्ड में उच्च शिक्षा : एक गम्भीर चुनौती
5.	Dr. Anchalesh Kumar	Imbricated Cultural Space and the Dilemma of Quality Control in the Colleges of Uttarakhand
6.	Dr. T.C. Pandey	उत्तराखण्ड राज्य में शिक्षक शिक्षा की स्थिति

INAUGURAL SESSION-I/ Time -10.15 AM - 11.30 AM

10.15 AM – 01.30PM	Welcome Address	Dr. Reetesh Sah Assistant Director UGC-HRDC, Kumaun University, Nainital
	Introductory note	Prof. B.L. Sah Director UGC-HRDC, Kumaun University, Nainital
	Status of quality in higher education in Kumaun Region of Uttarakhand	Dr. C.D. Suntha Principal Government Degree College Ganai Gangoli (Pithoragarh)
Venue: Auditorium, UGC-HRDC Nainital	Quality in Higher Education	Dr. R.K. Gupta Principal Government Degree College Banbasa (Uttarakhand)
	Aspects of Higher Education with reference to Uttarakhand	Dr. J.N. Sinha Department of Modern History Rajdhani College University of Delhi, New Delhi
	Tea	11.30-11.45 AM
	Reinventing my Learning Lab	Dr. Sanjay Kumar Government PG Degree College Ramnagar
	Interactive Open Session with concept notes	
01.30-02.15 pm	LUNCH	
02.15 onwards	Interactive Open Session and pane discussions and Valedictory Session	

Annexure- III : Selected Papers Presented at Workshop

Higher Education in Uttarakhand State

Dr. H. S. Bhakuni, Department of History
M.B. Govt. P.G. College, Haldwani, Nainital.

Background : Uttarakhand is 27th state of India Republic with two administrative divisions, viz, Kumaon & Garhwal consisted of 13 Districts out of which 6 located in Kumaon and 7 in Garhwal Division with 78 Tehsils,95 Blocks &15,620 revenue villages. The State has 1,01,16,752 lakh population with large Geographical extent. The State was created on 9th November 2000 A.D. by an act of parliament known as State re-organization act. The natives of the state had very high expectations and raised many questions before the government which are still unanswered. Uttarakhand is 16 years old and if we compare this with the government of Shersah Suri a visionary ruler of medieval India, who ruled only for a period of 5 years and laid the foundation of many innovative things in such a primitive age of technology projects many learning points & far ahead of his time in terms of good- governance, is still crawling.

Even thinking about Himalayas is a pilgrimage, located in central Himalayas, this is the most beautiful state of India because of its charming geographical ecosystem, large fertile plains, green lofty youngest mountains, holy rivers, green hilly terrain, spiritual fragrance, land of royal community, saints, philosophers, valour, seat of **Vedic King Bhagiratha** an ardent worshiper of holy river Ganga, **(king and sage Bhagiratha's penance is illustrative of tremendous effort and tenacious will power. He performed severe austerities to bring the Vedic river Ganga on earth i.e., Tehri & Haridwar so that his ancestors, the sons of Sagara, could be redeemed. His act has also benefited humanity as the sacred Ganga purifies us of sins. The term "Bhagiratha Prayatna" is used to show the magnitude of the of task, the will and hard work needed for its accomplishment and indicator of an ideal son and king, historically Bandar Poonch mountain range was the holy workstation of King Bhagiratha, it proves that Vedic civilization touched the land of Uttarakhand also, as a matter of fact a prey will**

not enter a sleeping lion's mouth.), niche of rich biodiversity & supplier of best soldiers to Indian Army make it unique. Even in the annals of World History no state of the world has such a fine natural combination of international boundaries connected from two sides (China & Nepal) deep and noble sense of patriotism like Uttarakhand.

Present Scenario : The purpose of this task is to evaluate the existing system, to find out gap between service providers and beneficiaries & to explore the new areas for future generations. In this status paper the main focus has been given to assess the sector. The State Government has **59** Departments in total and the Department of Higher education has been placed at **17th** position. Although the Department of Education is largest departments of the state with huge investment, the department is divided into basic, secondary, higher education, technical education, medical, vocational education and agriculture education respectively. The vision of higher education is to transfer the learning of Higher quality academic achievements in Science, Arts and Culture to its community and further creation of individual specific jobs, job specific, need based skill development through training, coaching, counseling, interface meeting and orientation events which eventually will eliminate poverty and unemployment. It will help as a catalyst in integrated development of state through research and development technology and up gradation of scientific and technical skill among student community in a disciplinary manner. No state can progress without high order of discipline among its youth.

Stimulating mission statement, after completion 10+2 educations to provide need based and demand driven opportunities of higher education to its youth population and equip with high professionalism and prepare the intellectual resources for government and private sector more over to design employment based state curriculum with traditional education and quality centered higher education to face the global knowledge. Similarly the mission is also aimed to develop the state as a centre of knowledge power and reservoir of job specific skill for state and national market.

The Goals of Higher Education :

1. In Context to ensure the constitutional rights of citizen to provide and facilitate the opportunities of higher learning to every needy youth.
2. To create the demand of higher education for community.

3. To provide on job training to its personnel to meet out the requirements of the organization and to explore the areas of job for educated unemployed youth.
4. To make efforts for knowledge based economy of the state and to fulfill the need of skilled trained intellectual resources in public & Private sector.
5. Finally to attract the private organizations from national and international level for the development of high quality research development, consultancy and extension centers for quality input.
6. To create a quest for excellence& to generate the ideas.

Government Colleges : On the eve of creation of state there were **34** government graduates postgraduates colleges, **02** state universities, **01** agricultural university, 02 Engineering colleges, 01 Private Medical Colleges and 16 polytechnics. Gradually the above figures gone up very high with course of time as far as the numerical strength of institutes is concerned after July 2001 A.D. to till date. Noted **D.S.B. College, Nainital** is oldest government college in the state established in **1951** A.D. At present there are **70** government graduate and post graduate colleges in the entire state with 05 university campuses, 01 government law colleges. Out of this figure 36 colleges located in Kumaon Division and remaining in Garhwal Division. 28 Government colleges are covered by **2(f) /12 (b)** of UGC Act, 25 government and private colleges have been assessed and accredited by NAAC an autonomous body under the administrative control of university grant commission. Elevation wise 56 colleges are situated in hills and 14 in plains, 12 college of the state are covered under distant education council New Delhi sponsored convergence scheme aiming access, quality and gender focused equity.

Private Colleges : There are 16 Private colleges, 15 Aided colleges, 06 self financed colleges and 13 colleges are covered by **2(f) /12 (b) of UGC act** and only 10 colleges have been accredited by NAAC so far.

B.Ed. Colleges : Govt. has 24 colleges including self financed B.Ed. course with 3170 seats including 02 campus colleges in the state. 45 Private self finance B.Ed. colleges are existing with 100 seats in each.

Law College : 01 Govt. Law college, 02 Private colleges and 01 campus college.

Medical College : 04

Polytechnics : 37

Government Engineering Colleges : 04

M.B.A. : Nil

Private Engineering College : 12

University :	Central University	-	01
	State University	-	05
	Private University	-	05
	Deemed University	-	04
	Agricultural & Technology University	-	01
	I.I.T. University	-	01
	Ayurveda University	-	01
	Ayush University	-	01
	Sanskrit University	-	01
	Medical University	-	03
	Academic Staff College	-	01

Besides above, the Directorate of Higher Education is located at Haldwani with 01 camp office at Dehradun including NAAC and quality assurance cell at its head quarter equipped with 65 manpower. 33 government colleges are providing degree and diploma certificate in various specifications on self financed basis. The numerical strength of enrolled student of the state is 178256.

Gross Enrolment Ratio is 9.4, quantitative growth of enrolment is not everything.

Infrastructure :

1. Govt. Colleges having building - 38.
2. Govt. Colleges having building under construction work - 04
3. Colleges not having own building - 25
4. Colleges having own land - 11
5. Colleges having no land - 14

Staff : Principal : Total Sanctioned Post - 63, Working - 60

Faculty : Total Post - 1253, Working - 568, Gap of 363 position, very little opportunities of promotion.

Non Teaching Staff : Total Post - 1119, Working - 716

Need : Training on I.T., Office Management, Financial Administration, wider use of e-learning.

Selection : For Faculty through open market which has to be changed as per the need of the organizations. Knowledge of Kumaoni & Garhawali language should be compulsory. Paper qualification should not be only yard stick. Faculty is required specialized knowledge and skill – motivating skill, coordination skill, crowd management, analytical skill is the need of the hour should be burning issue. Qualification for each subjects should be separate because every subject has special knowledge and skill. As a matter of fact knowledge, skill and experience is gamut of issues.

Secretarial Staff: By the Directorate of higher education and College administration as per need time to time. Right sizing of Directorate, co-relationship with work-load and job-chart should be assessed. Proper job chart with responsibility should be defined.

Budget : Rs. 1751 Lakh annually, a gap of Rs. 505 Lakh.

Source of Income : Fee / Govt. grant.

Investment : 56.2% on Salary head & remaining on developmental work.

Opportunities : More opportunities before young and energetic population of the state as 60% population of the state comprises of youth between the age group of 14 to 30 years.**102** departments of govt. of India, **59** Departments of government of Uttarakhand, thousands of industrial & Private sectors and many global organization are in search of best skilled human resource available in the market to meet out their organizational requirements. The track is open only the best athlete can win the race as a matter of fact winner don't do different things they do things differently, after the coming up of Right To Education Act around one million teachers are required for different schools and colleges around the country. Can Uttarakhand as a potential

state fulfill this demand, just we have to think, plan and execute, around ten thousands sports personnel are required throughout the country. The State has large number of educated unskilled youth. There is a need to develop them by training, and utilizing their potential through sharpening skill and channelize the stored energy. Uttarakhand is a land of opportunity only the need of the hour is how to cultivate it, a debatable point, degree alone would not fulfill student's expectations.

Challenges : Global knowledge has also pressurized in intellectual resources of the state. In this war spirit world the market is looking for the best innovator, creative, productive, strong, determined and adaptive human resource. Are we ready to face this threat and future challenges. Uttarakhand has to be knowledge power house, we need a proud work force to stay competitive. Whether our youth can face this global battle on the philosophy of **sweat in peace to save blood in war**. The Target group (student) of higher education is not capable to fight higher competitions at state and national level due to lack of preparedness and vast gap between demand and supply. This is biggest challenge before the state. There is an urgent need to examine in teaching methodology, designing of curriculum, entry behaviour of student, admission, examination process, educational administration, shape and size of fee, subsidy in higher education, service delivery to client, co-ordination between service provider **(college)** and beneficiaries **(student community),** challenges to maintain existing centre of knowledge and to develop recent one, more over the condition of library, use of information technology is not upto satisfactory level. In India second 5 year plan first time noticed towards education under the leadership of the union education minister **Dr. K. L. Srimali in 1960.** The Current eleven 5 year plan is **Educational Plan,** it has to be decided by educational leadership that what and how state presents the scenario of higher education by displaying & marketing the unique ideas before the planning commission to get maximum benefit. State has ample jobs but not trained/skilled personal. Human wealth is not created in such fragile centers by lowering the bench marks of higher education, where qualitative indicators are not at centre stage and quantitative indicators are moving fast in a laziness thought. One should not enjoy past glory only, making it unique through ensuring quality is key issue.

Organization can't function without good people, when people come together they bring their personal skill and emotions also to work, widening gap between education and job is a big question. The student's of the state are not able to get admission in J.N.U., Delhi University., I.I.M. & other prestigious institutions, even the students are not excellent in writing, communication & linguistic skill. There is urgent need to create desire among students through educational movement.

Strategy :

1. **Stake Holders :** The stake holders of Higher education are parents, students, faculty, educational administrators, Government and Community. Why and How higher education? **Cafeteria Approach**/ student centered through informed choice to its clients should be applied.
2. Need of base line survey and gap finding analysis exercise annually& formulation of a great team.
3. Assessment and accreditation – Developing the capability for assessing and examining with respect to the requirements of accreditation standard of services to ensure the quality of services & application of motivational tools.
4. Facilitating organization to self assessment process to periodically and effectively asses compliance to the accreditation standard in the state.
5. Need to provide educational services that enhance the satisfaction level of all stake holders. Workshop on importance of teacher's role in the task of national reconstruction.
6. To establish a system for improved performance and self development methodology of work station, need to be more precise, specific/ consistent in class room.
7. To make efforts for holistic development of students, know how and do how technique of various statutory and regulatory requirements for institute applicable at operational area for better coordination & academic networking.
8. All the **ITIs (Industrial Training Institute)** should be affiliated with University and creation of vocational training centers.

9. Base line survey of workstations & market on annual basis to find out the probability of placement / plan accordingly& earn while learn philosophy should at centre stage.
10. Monthly parent – teacher meetings may bring good results for sustainable quality management. Skill development workshop, re-examine the blue print of existing state university system. Universities have their own culture, practices & organizational arrangement- requires academic leaders with skills in finance, accounting, management, special training program for higher education administration with leadership skill, it germinates ideas- innovations, creates future for the country& university is unique in many ways.
11. Majority of students do not attend the class why ? A detailed & intensive in house exercise is urgently needed to make the sector attractive& productive, Credit transfer for enhancing student mobility is an optimistic tool.
12. Wide publicity of higher education to attract the student from abroad. Distribution of Glimpses of higher education in a folder to different embassies& brain storming workshop on this point.
13. Politics- Student should be familiarize with political activities of the state in a democratic manner, but campuses should not be the centers of political exercise/ political nursery. They should be trained in how to become a good parliamentarian. Colleges/ universities are the centers of knowledge and skill development. There should be separate college for political training, with content of democratic system & public speaking skill, tools of national and state administration, rural development / legal system.
14. **Faculty :** To equip in Effective communication skill, Pedagogy, case studies, demonstrations, art of group discussion's methodology, project and assignment technique, surprise quizzes, monthly/term end exam, distribution of up dated handouts at the end of the session. Teacher should have inspiring personality, because he is a role model to the students.ACR should be based on performance indicators. Performance should be the key qualification as far as the promotion is concerned not only seniority.

Recruitment Procedure : There should be a paradigm shift in primitive type of selection procedure which is based on paper qualification not on action or result oriented, selection committee headed by vice chancellor of affiliating university as chairman, one nominee of government & three specialist of concerned subjects is a better way. Adhoc system should be discouraged to improve the performance of faculty and to ensure accountability, responsiveness, to maintain the quality of services & to bring uniformity within the organization. A teacher should have 17 qualities with inspiring personality. It is no secret that everyone is after money. Philosophy of schadenfreude should be avoided, teacher is multiplier, if a frustrated type of individual stands before the students, what will happen is self explained, transfer of faculty and support staff after five years should be mandatory. Faculty don't give the best to the pupil, there is a need to analyze the fact.

Students : Student community is needed to be trained massively in survival skill to face the hardship of life –

1- Personality, Knowledge, Confidence, Behaviour, Best Practices, perseverance, hard work, team spirit, sense of brotherhood, case studies, status paper.

2- Communication Skills(vocabulary/ language are tool of it), interpersonal skill, logical reasoning, decision making skill, analytical skill, social skill, negotiation skill, Creativity, Idea, Art of Self Evaluation, Sports Activities, determination and presentation skill**(tardy presentation has of no use)** psychological skill, to manage anxiety, stress, dedication, motivation and value system,

3- Observation Study Tour, Project work, Seminars, Assignments, Semester System and task to explore new areas in relevant subjects like ancient Taxila & Nalanda university for self realization& personal needs as well as continuing academic wealth.

4- Students don't attend the class– lack of desire, job opportunities, awareness, availability of sub standard study material in the market or

traditional methodology of examination system, teaching methodology, malafide system of evaluation or gossip trap classroom.

5- In admission Application Form there should be one column mentioning the area of interest of students for future planning, knowledge with technical skill.

6- Students should show gratitude to all those who were responsible for their elevation in life & they should develop humility a hallmark of their personality. Knowledge gained in school is fully utilized at work in real production process, students have access to equipment, machines & technology at all times.

Fee Structure : At Present

Rs. 4850/-	Graduation in Arts Faculty
Rs. 6700/-	Graduation in Science Faculty
Rs. 4850/-	Graduation in Commerce Faculty
Rs. 6126/-	PG Courses in Science and Arts Practical Subjects
Rs. 5126/-	PG Courses in Commerce and Arts Non Practical Subjects

It should be 10000/- at graduation level &Rs. 15000/- at post graduation level to meet out all the expenses of services being provided to the client & to maintain the quality up to a desired level. Reserve & BPL category are being benefited by scholarship& academic performance of this group has to be noticed monitor/ evaluate.

Budget : More budget should be provided through matching grant of government & outsourcing.

Expected outcome : If the proposed scheme is implemented the beneficiaries will be able –

1- It will create culture of learning research / development & consultancy.

2- The student will be able to get desired employment up to some extent.

3- It will create ecosystem of more enrolment in higher education with confidence & high self esteem.

4- All the stake holders will be able to get satisfaction and to eliminate poverty & unemployment.

5- It will provide cosy and modified classroom, lively faculty and student community will be able to built up confidence for a sustained academic excellence and carrier opportunities also.

6- All the students will be able to familiarize computer literacy exercise & deep thinking methodology.

7- The student community will be able to realize the hardship of life, they will be able to prepare themselves to face the challenges & to develop the art of liveliness.

8- The student community will be able to germinate the desire of healthy, happy, prosperous & ambitious lifestyle with confidence by the application of self evaluation technique and motivational tools.

9- Through student exchange programme or Credit transfer scheme, there will be a qualitative change in academic reforms. Managers of higher education would be able to plan, implement & monitor with accuracy. Eligible workforce will contribute to the national exchequer.

Before going into core issue I would like to mention the historic & praiseworthy steps taken by Government of Uttarakhand. No system of education is totally supported or rejected but the existing system of education has many commendable features. The Utkarsh Project is very innovative in terms of skill upgrading and capacity building; the credit goes to Mrs. Radhika Jha, IAS former Secretary Higher Education, Government of Uttarakhand State. In recent times, higher education has attracted unprecedented attention in the state possibly because of the pressure of the evolving global knowledge society. The central government has brought higher education at centre stage by describing **11th five year plan** an "**Educational plan**", to improve its quality a nine fold increase in the financial allocation for higher education is considered by expression to this intent, in current **budget 0.17%** has been allocated . There is need to revolutionize the sector, merely phoney war cannot bring quality. Need of massive infrastructure modernization and qualitative improvement in intellectual resources. The majority of students continue to crawl at the bottom of the scale, a vast majority of student

community is deprived of opportunities for qualitative higher education specially in rural Uttarakhand, even those who manage to get admission are forced to pursue substandard conditions, both in academic and infrastructure terms, it causes apathy among them, migration from the state in a directionless & aimless spoiled mission causing retrogressive progression. This is a big loss to national wealth. Our product (student) should be unique in all respect with a brand name of **Specialist.** The Need of the hour is to make the state higher education more productive, to meet out the challenges before this sector is there should be courses like Diploma in electrician, Diploma in Plumber, Diploma in Automobile Industry and Diploma in masonry and Architecture moreover the education system of the State to take inspiration from the past. Despite having a vast education system in the State the students are not able to get proper placement in private industries because they don't meet out the industrial requirements due to lack of desired skill and qualification. There should be specific colleges for specific courses. When we talk of Quality Education and skill development is an inherent part of its. Skill development is directly related to employment prospects for youth, therefore, the focus has to be on providing quality education with skill development. Universities and colleges are complimentary to each other. Universities are role model for colleges. Presidency University Calcutta, St. Stephen College, Sri Ram College of Commerce, Delhi School of Economics, St. Xavier, G.B. Pant University Agriculture and technology and I.I.T. Roorkee (formerly known as Roorkee Engineering College founded in 1856 A.D by Lord Dalhosie) are the best centre of Inspiring Quality of Higher Education in our country like Ancient University Takshila, Nalanda University. State will have to create infrastructure for youth in terms of informed choice.

State higher education has to inadequacies– the economic inability of the aspirants and poor quality input. The key to improve the quality of higher education effecting a fundamental change from the present inflexible system to one that could release the creative energy of students by ensuring their academic freedom focusing to **"Cafeteria Approach**". The gross enrolment ratio of higher education in the state is 9.4. There is need of semester system and a shift in the mode of evaluation from numerical system to grading system. The best use of existing resources to develop new one is the burning need of states. A complete overhauling of the undergraduate programme the

courses should consists of 12 compulsory ones which all students will opt, regardless of their area of specialization. Even we don't have good parliamentarian. It will serve & sensitize the student to socially, economically, biologically and politically important issues and to familiarize them with disciplines other than their field of specialization. The purpose of this exposure is to equip them to undertake interdisciplinary study and research/consultancy services later on. The existing institutions are only academic slums. There is urgent need to revolutionize the system. The central figures are service providers and beneficiaries. Students learn by teacher, they see teacher as intelligent, trouble shooter, capable, righteous individuals and finally a role models who shapes the future of student agile. A Liaison officer with a task force of department should be deputed to monitor the centers time to time to bring improvement in the sector for better coordination in the system and to encourage public private partnership. I come to conclusion that SWOT analysis will help to make higher education attractive and more productive. Even we can attract the students from abroad on the ground of spiritual wealth, natural beauty, rich biodiversity, medical tourism, climatic conditions, our value system & trade mark of **Martial Uttarakhand**. We need well furnished attractive hostels, good libraries& class rooms/ laboratories. Our knowledge centers are not satisfactory in terms of quality. Higher education of ours is not charming like metropolitan cities & Europeans or South East Asian countries. Education is in con-current list, therefore, both hands efforts are needed to return the debt/ loan of the people of this land. To wrap up, every student should be familiarize in Agriculture technology and commercial activity of the state. Student community should be trained in sense of brotherhood, community mobilization in disaster management/ mitigation, natural resource management, international relations, health services, environment conservation, business development, traffic management/control & on other socially important issues by providing degree & diploma certificates to them as a reward of their services for carrier development. There should be an industrial linkage and skill development unit at state higher education department for placement**. Good scar cement is the mother of education given by parents.** Our education should be unique in all respect. Can we make it a pre-independence intellectual Bengal or a land of great human resource? The study is based on my past ten years experience in higher education with 09 colleges and Directorate of

state higher education, although I lost my health in this sector. Suggestions are highly welcomed.*

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PERSPECTIVES ON HIGHER EDUCATION IN INDIA

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Introduction

Higher education in India has evolved in distinct divergent streams with each stream monitored by an apex body, indirectly controlled by the Ministry of Human Recourse and Development. The 433 universities / institutions are mostly funded by the state governments. However, there are 40 important universities, called Central Universities, which are maintained by the Union Government and because of relatively large funding, they have an edge over the others. The engineering education and business schools are monitored and accredited by the All India Council for Technical Education (AICTE), while medical education is monitored by the Medical Council of India (MCI). Like-wise agricultural education and research is monitored by the Indian Council for Agriculture Research (ICAR).

Apart from these National Council for Teacher Education (NCTE) controls all the teachers training institutions in the country. The country has some ace engineering, management and medical education institutions which are directly funded by the Ministry of Human Resources Development of the Union Government. Admission to all professional education colleges is done through All India Common Admission Tests of which the IIT-JEE, AIEEE, CAT and CPMT are the most popular ones. Most of the institutions reserve a small percentage of seats for foreign students.

The success of a country, state or organization, in the present scenario of knowledge determined by the abundance, excellence and relevance of the human resources. The expertise in the contemporary areas of higher education of high employment is potential is changing so fast that fresh graduate are not able to match their knowledge and experience to the requirements of the market. This is due to the

inertia in higher education i.e. in universities and colleges, lack of interaction with business and industry and absence of incentives and finances for a change; hence the studies and curricula lag behind technological advances and market trends.

On the other hand, for their survival private organizations, have to keep up with (if not anticipate) new trends and offer training / courses, which are marketable and vary in standards, depth and duration. These programmes provide marketable skills, but have little lasting impact, on account of inadequate academic foundation, which does not empower a student to adapt to changing technology and acquire corresponding skills.

Further, with presently available recourses it is not possible to even run the existing academic programmes at the universities/ colleges satisfactorily, let alone upgrade them, introduce new ones of high relevance or even increase the intake. The expenditure, incurred as per university norms, in term of faculty, supporting staff and infrastructure, in the introduction of new (market oriented) programmes is usually prohibitive. The university norms also do not permit, the acquisition of appropriate faculty in the areas of high market demand; the high number of vacancies in even not so specialized departments of Computer Science and Information Technology at universities and engineering colleges proves the point.

Education could be defined, in fictional terms, as the process of bringing about desirable changes in pupil's behavior. It also presumes the skilful use of methods and materials for the creation of suitable learning situation and for the provision of experience which would enable the pupils to acquire competencies indicating the achievement of objectives on the part of the pupils who needs test. These are provided through evaluation techniques which help us in knowing whether the students have acquired the objectives or not.

It may be concluded that the high demand for employment oriented programmes in higher education, the inability of the conventional system to meet this demand, the threat of continued expansion of distance education programmes by foreign and enterprising Indian universities, the miserable financial state of most universities and the availability of resources and initiative in the private sector call for a networking of the academic expertise of the university with the resources and market orientation of private institutions, to meet this challenge.

INNOVATIVE REFORMS IN EXAMINATION SYSTEM

Examination is mode of measuring the performance or abilities of students in academic fields. In a formal system of education, examination performs one of the three most important functions in education, the other two being effective teaching and learning. Thus, examination occupies an important place in formal system of education.

Objectives of Examination Reform

The major objectives of examination reform ought to be:

- To so reform examination that they help in improving the quality and standards of education instead of acting as hindrance.
- To de-emphasize, the over importance attached to examinations by the society.
- To reduce the undue strain of examination (On children, parents and society), the unreliable results of which frequently cause frustration.
- To conduct common examinations for the comparison and improvement of educational standards in schools and rather than merely for grading, classification and certification of students.
- To discourage the use of external examinations such as screening device for every purpose.
- To replace marks by grading and to give students an opportunity to improve their grades by appearing at subsequent examinations.
- To create a social climate against malpractices in examinations.

Programme for Examination Reform

Any programme of examination reform should aim at

- Improvement of questions and question papers.
- Improvement of scoring procedures.
- Enlargement of the areas of evaluation to cover the scholastic as well as the non-scholastic aspects of pupil growth.
- Extension of the techniques of evaluation from written examinations to other forms of evaluation.

- Enlargement of the uses of results for varied purposes.
- Introduction of corresponding changes in instructional methods and materials of the curriculum as whole.

The reforms that may be brought about in the examinations system may be divided into two categories: reforms which are, by and large, of an educational nature, viz. problems that relate to selection of students for various university courses, internal assessment, objectives of teaching different systems, etc. and reforms which are linked up with the technical aspects of examinations such as question of appointment of examiners, marking of answer scripts, scaling of marks, etc.

Trends in Examination Reforms

- From Arbitrariness of Systematization.
- From Periodical Evaluation to Continuous Evaluation.
- From Fewer Techniques of Evaluation to a Variety of Techniques.
- From limited users of test results to wider uses of the same.
- From measurement of achievement to improvement of achievement.
- From the treatment of testing in exclusion to its treatment in relation to other elements of the curriculum.

Trends in the Reform of Written Examination

- From standardized traditional form to a more flexible purposeful form of question papers.

From testing of memorization to testing of other higher abilities.

- From limited coverage of the syllabus to its effective coverage.
- From the use of one form of questions to a variety of forms.
- From fewer questions to a large number of questions.
- From overall options to limited options.
- From vague questions to specially worded questions.
- From subjective scoring to objective scoring.

Trends in the Reform of Practical Examinations

- The reform of practical examinations will mainly cover the evaluation of

both the product and process of performance.

- To give wider coverage of skills.
- To adopt more valid and objective scoring.

Trends in the Reform of Oral Examination

- The reform will mainly consist of the comprehensive coverage of various linguistic abilities and the institution of effective measures for objective scoring.

General Principles of Reform

The desirable pattern of examination must be based on the following general principles:

- Those who teach should also examine. In this sense, examinations must become "internal", and an integral part of the teaching process.
- Since sessional or continuous assessment measures a number of essential abilities (such as drive and capacity for hard work, motivation, quality of imagination, intuition and speculation, leadership and teamwork, skilled use of hands, etc.), which a terminal examination does not measure, such assessment must be shown on the grade sheet separately.
- If the award for a degree or diploma or examination depends on the performance of a student in a number of courses, these courses should be delinked from each other, so that if a student has failed to make the grade in a particular course, he/she may not penalized in other course due to this failure. The delinking of course in this manner will allow movement of students, if necessary, from one institution to another, and from one type of study to another.
- The performance of students must be assessed over well distributed intervals of time so that a course which is completed in a year or semester must come up for examination at the end of the year or the semester, without having to wait for the "final" examinations.
- Standards of judgment for various subjects are also different. Students must be awarded grades and not marks at the examinations and assessments;

- A national examination in various subjects at the bachelor's level must be conducted by a central authority, on a purely voluntary basis. This examination could be designed to test creative thinking and comprehension of subject matter, so as to serve as a national index of performance and achievement of students at large and of various institutions.
- To provide an opportunity for further study to those who fail to gain admission to any institution, correspondence courses should be widely organize, and courses should be run by the "open university."

Impediments to Reform

In the process of examination reform, the possible hurdles to be overcome in order to succeed are listed below:

1. Inherent resistance to change

- By the stated Department of Education, Boards of Secondary Education, as it involves a reorganization of the administrative machinery and procedures.
- By the teachers, because of their unpreparedness for taking up the challenges of the new system and because it requires some additional work.
- By the students, as examinations after the reform are likely to become valid and reliable and would require more precise and regular study.
- By unscrupulous elements, as malpractices are likely to lose ground in improved examinations.
- By vested interests, which are desirous of maintaining the status quo which protects their powerful position and even financial gain.

2. Lack of suitable sample evaluation material for providing illustrations of the nature of the reform envisaged.

3. Paucity of financial support, as the reform measure in examinations will necessarily be more expensive than the traditional ones.

4. Inadequate training of the teachers for keeping up with the changed situation.

Even though there are difficulties and shortcoming in our present system of education, those in the area of examinations are undoubtedly very serious. It may,

however, be mentioned that they are not inherent in the very concept of examinations and can be remedied through effective measures.

Examination reforms have to be approached not merely from the narrow angle of improvement of evaluation techniques but from the larger stand-point of making our educational system stronger to perform its function of developing the students. This would mean that we have to deal not only with the processes and procedures associated with examinations, but concern ourselves also with the broader issues involved in good education. When we approach the examination system this way, we have to consider its mechanics as well as such matters, as proper selection of students for university courses, clarification of the general and specific objectives of teaching, provision of residential facilities for students etc., which have a bearing on the standards of education.