INNOVATIVE STRATEGIES IN HIGHER EDUCATION FOR ACCELERATED HUMAN RESOURCE DEVELOPMENT IN SOUTH ASIA

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Contents

Tables and Figures

Tables

Figures

Foreword

South Asia's contributions to the Asian economy and the global labor force are substantial and will continue to grow. The Asian Development Bank's priority in the region is to complement infrastructure investments with strategic support to human resource development to help people move up the value chain. The objective of the Innovative Strategies for Accelerated Human Resource Development in South Asia (Subproject 11) under the Development Partnership Program for South Asia (RETA 6337) is to support emerging opportunities in priority human resource development through targeted policy dialogue grounded on relevant analytical work on technical and vocational education and training (TVET) and higher education.

Financial support from the Government of Australia's Department of Foreign Affairs and Trade—Australian Aid (formerly the Australian Agency for International Development) has helped to prepare six country-level reports on TVET and higher education for Bangladesh, Nepal, and Sri Lanka. The reports identify each country's human resource development priorities, examine issues and constraints, and recommend possible interventions to realize the full potential of their respective labor force. Overall, common issues revolve around equitable access, quality and relevance, and financing. Increasing the number of graduates with relevant skills has been a persistent challenge rooted in systemic quality assurance policies and practices such as the actual provision of market-responsive training and credible assessment and certification. Equitable access does not only depend on availability of funds to provide education and training but equally on efficient use of available resources and effective mobilization of and synergy between public and private institutions in each country.

South Asia's huge opportunities arising from demographic dividend could be harnessed fully only if it is able to skill a large number of new entrants to the labor market every year and upskill the expanding labor force that is still undereducated and inadequately trained compared with their counterparts in other regions. South Asia must capitalize on innovations, knowledge, and skills anchored on high-quality TVET and higher education. Investments in high-quality TVET and selectively in higher education will be crucial for South Asian countries to transition from low-skilled labor to higher productivity and globally competitive labor. There are ample reasons to be optimistic since all countries in South Asia consider investments in human capital development a critical pillar of overall sustainable development.

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Preface

The reports herein provide in-depth analyses of the state of technical and vocational education and training (TVET) and higher education in Bangladesh, Nepal, and Sri Lanka. Each country has two reports covering TVET and higher education which were presented in the three country-level workshops during the first week of December 2012: Sri Lanka (1 December), Nepal (3 December), and Bangladesh (5 December). Participants from government, the private sector, academe, and development partners discussed and validated the findings, and supported the recommendations as well as identified additional next steps.

In TVET, issues range from insufficient teachers and trainers in Bangladesh to lack of quality monitoring system in Nepal, and to inadequate industry participation in Sri Lanka. Among the common issues identified are weak quality assurance mechanisms, low employment rate of graduates, lack of information about demand (leading to a mismatch between training and available jobs), expensive and long-term training that excludes the poor and marginalized, weak institutional arrangements, and inadequate provision of high-quality TVET to manage and scale up training programs.

Higher education is equally affected by various constraints ranging from lack of accountability for performance among institutions in Bangladesh to high politicization in Nepal, and to weak quality assurance mechanisms in Sri Lanka. Common issues identified are regional disparities in access, high cost in private higher education institutions, and poor quality and relevance as well as lack of emphasis on courses that promote entrepreneurship.

Key recommendations of the reports include implementation of a national quality assurance system, establishing a reliable skills data and labor market information system, effective financing schemes, encouraging public–private partnerships, and international benchmarking and mutual recognition for global competitiveness. In TVET, the key priorities are strengthening private training provision with clearly identified and mandated apex agency to effectively coordinate and scale up training programs, development of national competency standards, and building the capacity of TVET institutions. In higher education, the key priorities are developing research capacity, improved targeting of financial assistance to students, adopting formula funding in allocating public funding to universities, promoting accountability and autonomy among higher education institutions, and depoliticization of the higher education system.

The reports were prepared by a group of national consultants: Md. Mohiuzzaman for TVET and M.A. Mannan for higher education in Bangladesh, Devi Dahal for TVET and Hridaya Bajracharya for higher education in Nepal, and Sunil Chandrasiri for TVET and higher education with initial inputs from Dayantha Wijeyesekara on TVET in Sri Lanka. Richard Johanson, the international consultant and main author of the regional report on TVET, reviewed and guided the TVET national reports. William Saint, the international consultant and main author of the regional report on higher education, reviewed and guided the national reports on higher education. The country reports should be read in conjunction with the two regional reports (Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia, and Innovative Strategies in Higher Education for Accelerated Human Resource Development in South Asia), which were published earlier in 2014.

The reports also benefited from comments from Brian Chin, Gi-Soon Song, and Karina Veal of South Asia Human and Social Development Division (SAHS), as well as from David Ablett and Sofia Shakil who at that time were also from SAHS; Rudi Van Dael from Bangladesh Resident Mission; Smita Gyawali from Nepal Resident Mission; and K.M. Tilakaratne and Nelun Gunasekara from Sri Lanka Resident Mission. Brajesh Panth, lead education Specialist from SAHS, managed and coordinated the studies with support from Rhona Caoli-Rodriguez, the national coordinator who replaced Nicholas Tenazas. Brajesh Panth and Brian Chin also made presentations at the country-level workshops. Administrative assistance was provided by Criselda Rufino, Erwin Salaveria, and Rosalia Baeza.

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Abbreviations

AFU	Agriculture and Forestry University
BPKIHS	B.P. Koirala Institute of Health Sciences
CMC	campus management committee
CTEVT	Council for Technical Education and Vocational Training
FY	fiscal year
GDP	gross domestic product
GER	gross enrollment rate
HSEB	Higher Secondary Education Board
ICT	information and communication technology
LBU	Lumbini Buddhist University
MOE	Ministry of Education
MOF	Ministry of Finance
MRMC	Mahendra Ratna Multiple Campus
NAMS	National Academy of Medical Sciences
NDHS	Nepal Demographic and Health Survey
NER	net enrollment rate
NLSS	Nepal Living Standards Survey
NPC	National Planning Commission
NRs	Nepalese rupees
NSU	Nepal Sanskrit University
PAHS	Patan Academy of Health Sciences
PCL	Proficiency Certificate Level
POKU	Pokhara University
QAA	quality assurance and accreditation
SHEP	Second Higher Education Project
SLC	School Leaving Certificate
STR	student–teacher ratio
TSLC	Technical School Leaving Certificate
UGC	University Grants Commission
UNDP	United Nations Development Programme

In this report, "$" refers to US dollars.

NR = Nepalese rupee

$1.00 = NRs95.62 (as of 15 July 2013)

The fiscal year in Nepal runs from 16 July through 15 July of the following year. "FY" before a calendar year denotes the year in which the fiscal year ends. For instance, FY2011 began on 16 July 2010 and ended on 15 July 2011.

Although the academic year in Nepal varies, depending on the university, it generally runs from mid-November to October of the following year. Academic years are written as 2010/11, for example.

Executive Summary

Nepal is home to a population of 26.5 million that encompasses several ethnolinguistic groups speaking a total of 123 languages, of which about a dozen are spoken by major sections of the population.[1] Despite being a poor country, with around 25% of its population living below the poverty line, Nepal has a tremendous potential for growth due to its abundant natural resources, strategic location between two of the largest and fastest-growing countries in the world (India and the People's Republic of China [PRC]), and to its recently improved performance with respect to socioeconomic indicators. Higher education is expected to play a transformational role in addressing Nepal's various developmental challenges, and in realizing Nepal's development goals.

The history of Nepal's modern educational system is very brief, as it had its beginnings only in the late 1950s. When Tribhuvan University, the first university in the country, was established in 1959, Nepal's gross enrollment rate in secondary education was less than 10%, and at the university level less than 1%. Higher education started expanding after 1990, with the establishment of several new universities, and of many new colleges through affiliations with Nepalese universities. Between 2005 and 2010 alone, the total number of colleges (referred to as "campuses") including those that are constituent of and those affiliated with the country's six universities and three medical schools expanded from 571 to 1,087. Of this total, 83 are university constituent campuses, 302 are affiliated community campuses (publicly funded), and 702 are affiliated private campuses.

Between 1981 and 2010, student enrollment in higher education increased more than tenfold, from about 34,000 to about 408,000. Impressive as it sounds, this expansion represents a higher education gross enrollment rate of only 14%, still much lower than the global average of 26%.[2] However, three new universities and a medical academy have recently opened. There are 11 broad areas of higher education in which programs are offered—agriculture and animal sciences, ayurveda, education, engineering, forestry, humanities and social sciences, law, management, medicine, science and technology, and Sanskrit. Over 15,000 faculty members are employed full-time at universities and campuses. A total of more than 65,000 students graduate each year at the bachelor's level and higher. During the fiscal year (FY) 2011, the government spent about 1.5% of the national budget on higher education—about $4.4. billion, or 0.3% of Nepal's gross domestic product (GDP). Out of the total education budget, higher education gets 8.1%, of which 90% is provided as block grants to the universities and community campuses. Despite the

1 Government of Nepal, National Planning Commission Secretariat , Central Bureau of Statistics. 2012. *National Population and Housing Census 2011*. Kathmandu.

2 Government of Nepal, University Grants Commission (UGC). 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

progress made thus far, and despite the resources now devoted to higher education, any efforts to develop the higher education system further face several challenges.

Issues and Challenges

Equality of access. Inequity in access for women and disadvantaged social groups, the lack of access in remote areas, and disparities between rural and urban areas are among the key issues in Nepali higher education. Although these gaps have been reduced due to national policies addressing these issues, the problems persist. Currently, the gender parity index of the higher education gross enrollment rate is about 0.7, the higher education enrollment rate for the country's poorest quintile is negligible (less than 1%), and the urban–rural disparities remain significant. Most of the institutions and students are concentrated in the Central Development Region, mainly in the Kathmandu Valley, which accounts for almost 51.0% of the total institutions and 55.4% of student enrollment. The Mid-Western and Far-Western development regions, each with 7.3% of the total number of institutions and total national enrollment, significantly lag behind the other three development regions (Western, Central, and Eastern); and in two remote mountain districts, there are no campuses at all. The Eastern and Western development regions are roughly at the same level, with the Eastern accounting for 14.4% of the country's enrollment, and the Western, 15.4%. Although its monopoly over Nepal's higher education is gradually declining, both in terms of quantity and quality, Tribhuvan University (and its associated campuses) continues to dominate higher education in the country, accounting for over 83% of the higher education enrollment.

Relevance and Quality. There is a major disconnect between the academic programs offered by the universities and what society and the economy require. For instance, Nepal is heavily reliant on subsistence farming, with over 70% of the population engaged in agriculture for some form of livelihood. But farming is proving to be less and less sufficient for sustaining rural families during the whole year. Most families therefore resort to seasonal labor, migrating temporarily to various cities in Nepal. And increasing numbers are seeking employment abroad to support their families. To expand opportunities for the people, the country needs to focus on such areas as modern farming and agribusiness, forests and other natural resources, tourism, cottage industries, and hydropower.

About 88% of the academic programs and of student enrollment are in conventional and traditional disciplines such as education, management, law, and liberal arts and humanities—all of which offer limited job prospects. And these are the programs that receive the bulk of the public funding allocated to higher education. On the other hand, technical programs enroll only around 12% of all tertiary students, with about 3.9% in science and technology programs, about 6.9% in medicine and engineering, less than 1% in agriculture, and around 0.4% in forestry, with the remainder in ayurveda. In 2009, most graduates (about 73%) had majored in general subject areas, while graduates from technical programs constituted only about 27%, and specialists in agriculture and forestry accounted for less than 1%.

Although a quality-assurance system has just been initiated by the University Grants Commission (UGC), and has been piloted in selected institutions, the quality and credibility of Nepali institutions of higher learning remain an issue. Some institutions have

been able to maintain competitive admissions standards by resisting external pressures, but others are unable to do so. Compromises with regard to admissions also lead to compromises in the quality of education. In order to maintain a high quality of student intake, institutions should be allowed to maintain strict admissions policies. Admission is highly competitive for some institutions, whereas other institutions offering the same or similar programs face a shortage of applicants. Concerns about quality have led a significant number of students to go abroad for their university or college studies. Many specific aspects related to educational quality in Nepal need to be addressed systematically, among them: operation and management, infrastructure development (e.g., laboratories, libraries, information and communications technology), incentives and service provision, faculty development, student counseling, and graduate employment.

Governance. Many institutions are unable to establish and enforce quality standards. This, in turn, affects the quality of applicants, quality of class instruction, examination results (high failure rate), and certification. Those who perform well find the quality of their education compromised due to disruptions in the academic calendar and to missed opportunities to enroll in various programs.

Nepal is yet to put in place clear policy framework, laws, or regulations governing higher education. Universities are established by the Parliament through legislative acts. Apart from state directives and national-development-plan guidelines, there is no single, overarching system or mechanism for addressing the development of higher education in a comprehensive and holistic way. A recently proposed umbrella act is a move in the right direction, but there should be input from all the key stakeholders to make the initiative credible and effective. Such a holistic and systematic approach is expected to provide clear direction and facilitate progress in the overall development of higher education.

Framework for financing higher education. Adequate funding is a key ingredient for developing quality institutions of higher learning. The government's budget allocation for higher education, as a share of the total education budget, decreased significantly: from 27.6% in FY1992 to 17.7% in FY1996, and down to 8.1% in FY2011. Options have to be explored for increasing funds for higher education, keeping in mind that all financing does not have to come from the government. Higher education institutions need to diversify their funding sources, and explore opportunities for cost recovery. Levies and tax credits should also be considered. And it may be possible to invite reputable universities overseas to establish branch campuses in Nepal, so that the trend of students going abroad could be reversed. In any case, the government needs to develop clear policies, regulations, and criteria for the public funding of higher education. Private funds could then be leveraged to mobilize additional funding through public–private partnerships and other arrangements.

In the absence of clear funding criteria, government allocations have been based on historical budget. In the cases of Tribhuvan University and Nepal Sanskrit University (NSU), the funds provided correspond more or less to the total salaries of the approved number of faculty and staff. In the case of the other universities, block grants are provided on a discretionary and ad hoc basis. As a consequence, there are wide variations among institutions in the funding available per student, without any clear or rational justifications. The government grant per student enrolled at Tribhuvan University is NRs16,118 ($169);

for Kathmandu University, NRs2,626 ($27); and for NSU, NRs73,538 ($769). The universities and their constituent campuses, on the other hand, have fixed student fees.

Capacity for innovation. Higher education institutions do not engage in strategic planning, and institutional leadership has not yet been recognized as a critical element. Moreover, institutions of higher learning in Nepal are generally highly politicized and subject to external pressures. Norms, guidelines, and criteria for defining the goals and modalities of institutional development, management, and operations have thus remained haphazard, adversely affecting academic quality. Universities and campuses also lack sufficient autonomy to make their own decisions regarding their development.

Reforms in higher education must link to knowledge generation and communication by utilizing information and communication technology (ICT), which is developing rapidly. The use of ICT would not only facilitate education, but transform it by linking experiential learning to socioeconomic development. ICT could also support collaborative research and development with the Nepalese business community, as well as with other universities around the world. It could also enhance access to current publications and research data, which would enhance knowledge and research in Nepal. Institutionalizing ICT applications as an integral part of higher education would, however, require a strategic shift in outlook.

Potential Areas for Reform and Intervention

The development of education has been the country's priority since the 1950s, and since 1990 the trend has become more rapid, particularly at the school level.[3] The implementation of national initiatives aligned with Education for All,[4] the Millennium Development Goals,[5] and the government's own School Sector Reform Plan (2009–2015), supported by development partners, have all helped to generate reforms in school education, including expanded access. At the tertiary level, the Higher Education Project (1998–2002) and the Second Higher Education Project (2007–2014) introduced several key reforms. The rapid development of the PRC and India are of particular importance to Nepal, as its location makes it a potential bridge between these two economic powerhouses. Nepal could connect with the development in the PRC and India through the provision of roads, transportation systems, and sustainable energy (hydropower), and by serving as a desirable meeting point in a scenic and pleasant environment. Harnessing this opportunity will require reliable infrastructure and human resources. Nepal has the potential to produce good engineers, managers, and hospitality service providers.

Another opportunity relates to the global labor market. Remittances have already become an important emerging aspect of the national economy. The Ministry of Finance's *Economic Survey 2013/14* estimated that the contribution of remittances to Nepal's GDP is over

[3] In Nepal, there are two broad levels of education: school education and higher education. School education encompasses primary level (grades 1–5), lower secondary (grades 6–8), and secondary (grades 9–10). Grades 11 and 12 are designated as upper secondary, and upper secondary schools are generally private institutions. Children generally enter grade 1 at age 5.

[4] The "Education for All" movement is an initiative of the United Nations Educations, Scientific and Cultural Organization (UNESCO). It was launched at the World Education Forum, in Dakar in 2000.

[5] The Millennium Development Goals were established by the United Nations (UN) at the UN's Millennium Summit, held in September 2000.

29%.[6] Since 2010/11 there has been an average annual outflow of about 428,000 workers seeking foreign employment. This figure does not include the traditional outflow of workers to India, who remain unregistered. Adding value to Nepali laborers with technical education and skills training would greatly add to their earning capacity, and to the country's remittance income.

These issues and challenges call for more intensive reforms, as well as new development initiatives to address the country's needs. Recommendations for such initiatives include the following:

Expansion of access to education. An accelerated expansion of access to education is important to catch up with world development, but the cost of higher education remains a critical inhibiting factor, particularly for aspiring students from poor and disadvantaged backgrounds. Financial support for such students who qualify for higher education would be the most effective and efficient way to promote equity in education. Scholarships, student loans, assistantships, and work-study programs are possible methods for providing that support. For this purpose, there is a need to develop a comprehensive system of identifying poor and disadvantaged, but qualified students.

Enhancing relevance and quality. Successive governments have emphasized economic development as a core priority for Nepal's development plans. The Poverty Reduction Strategic Plan, adopted as part of the National Development Plan, has focused on human resource development, including the training of skilled workers, specialists, planners and developers, entrepreneurs, and innovators, mainly in the areas of agriculture, forestry, natural resources, hydropower, roads, transportation, communications, tourism, and business and financial management. It is imperative that the development of higher education be aligned with the national economic and investment policies under the various development plans. This would require strengthening the capacity for effective coordination and monitoring with respect to higher education development as it relates to the implementation of the national development plans. Existing mismatches between higher education and the needs of the economy will have to be addressed seriously by monitoring the labor market and, based on the findings, responding appropriately.

To make higher education in Nepal more relevant, traditional programs should be transformed or phased out, and new market-oriented programs developed, to ensure that graduates are equipped with the knowledge, skills, and confidence necessary for addressing the country's human-resource needs and for successfully competing in the job market. The new programs should be geared to transforming the traditional modes of business and professions in Nepal, and to preparing students for—and connecting them with—the new emerging opportunities associated with current development. The programs should also focus on national priorities: alleviating poverty, generating economic activities with employment prospects, harnessing the country's immense potential for hydropower, and developing agroforestry and ecotourism.

A reform of the higher education institutions (particularly Tribhuvan University, given its size) will be necessary if these institutions are to achieve the basic quality

[6] Government of Nepal, Ministry of Finance. 2014. *Economic Survey. 2013/14.* Kathmandu. Volume 1. p. 25.

standards. There should also be a system of quality assurance, both internal (within the universities) and external (in the form of an independent national quality-assurance and accreditation body).

Reforms to achieve quality and organizational effectiveness. There is a need to improve the governance of institutions of higher learning, and to provide them with greater autonomy, so that they can take responsibility for critical decision making, effective management, and sustainable development. It is also imperative to implement organizational reforms that will enable higher education institutions to take the initiative when it comes to improving the curriculum and ensuring the quality of the faculty (through academic and professional development). And these institutions should receive enough support to acquire education-management information systems and to be able to use these systems for planning and decision making.

Improving governance and financing. To ensure a rationalized approach to financing that would operate in harmony with good governance and quality assurance, there should be a national regulatory framework to designate the appropriate roles and responsibilities for the relevant government agencies and institutions of higher education. Such regulatory framework should support the financing of higher education based on well-defined standards and measures of quality; national needs and priorities; clear criteria and modalities for public funding; norms for financial management; and provisions for ensuring transparency and accountability. It should also aim to support and promote the financial sustainability of the institutions, the establishment of a justifiable tuition structure, the safeguarding of students' and parents' interests, and institutional evaluation to facilitate effectiveness and efficiency.

Development of internationally competitive institutions. There is an opportunity to establish new, highly competitive institutions that could earn international recognition for academic excellence. The new focus should be on producing a new generation of graduates capable of thinking in innovative ways and of making the most of the opportunities in the world economy. To accomplish this, the government should look beyond the existing institutions and programs in search of new approaches and possibilities. For instance, given Nepal's immense challenges in conserving and harnessing its water resources, there will be a need for highly trained engineers who can tackle such projects as developing the country's hydropower potential, constructing mountain roads, and using the most up-to-date technology to manage energy infrastructure. Nepal can draw from the best practices of world-class institutions.

The suggestions listed above are all feasible for short-term and long-term national interventions in the form of policies, plans, programs or projects. Given the fact that national funds for higher education development are limited, there is a need for a strategy that could be executed judiciously. The first major step would be to identify what actions the country could undertake, such as preparing a policy framework or establishing a quality assurance system. The second step would be to seek the cooperation of international organizations for establishing new institutions, developing infrastructure, and undertaking new innovative programs. These organizations could include higher education councils, foundations, quality assurance and accreditation organizations, research councils, donors, and development partners that could provide funding as well as professional and

technical support. The cooperation of exemplary universities and colleges and training organizations should also be sought for system-capacity development, faculty exchange and development, fostering of new programs, and research and professional collaboration.

Political support for these reform and development activities will be crucial. Because the political parties have extended their organization and mobilization activities to university campuses through faculty unions, staff unions, student unions, and other groups, it is important that concerned political stakeholders come to a consensus in favor of supporting higher education reform. There is a need for a mechanism to facilitate critical and rational interaction between academia and the political parties. The UGC could be utilized to develop such a mechanism.

CHAPTER 1
Socioeconomic Background

Nepal is a country of great geographical and social diversity. Situated between India and the People's Republic of China (PRC), in the southern lap of the Himalayas, Nepal covers a total landlocked area of 147,181 square kilometers. Its unique geography features extreme variations in elevation, from 70 meters to 8,848 meters within a distance of a mere 100 kilometers. Nepal consists of three distinct ecological zones: (i) the Himalayas, a high, snow-capped mountain range that includes the highest peak in the world (Sagarmatha, or Mount Everest); (ii) lush high hills and valleys; and (iii) the Terai, a strip of fertile plains in the south that makes up only 17% of the country's total land area. The country is divided into five development regions: Eastern, Central, Western, Mid-Western, and Far-Western.

A. Population, Poverty, and Education

According to the Nepal's Population and Housing Census 2011 report, the country's population is about 26.5 million, made up of several ethnolinguistic groups speaking a total of 123 languages, of which about a dozen are spoken by major sections of the population. The male-female ratio is about 0.94. Although Nepal is mostly rural, its urban population has been increasing steadily, from 4.0% in 1971 to 13.9% in 2001, and to 17% in 2011. Males are more likely than females to migrate to urban areas in search of employment. About two-thirds of adult males migrate away from home. Of these, half move to Nepal's urban areas while the other half go to other countries, including India.

At present, Nepal is still one of the region's least developed countries.[1] About 25% of Nepal's population lives below the poverty line.[2] According to the 2011 Nepal Demographic and Health Survey (NDHS 2011), there are more poor people in rural than in the urban areas. There are also more poor people in the mountains and hill areas than in the Terai. Table 1 shows the population distribution in terms of economic quintiles, with the lowest quintile corresponding roughly to extreme poverty (i.e., below the poverty line).[3]

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1 UNDP. 2010. *Human Development Report 2010—The Real Wealth of Nations: Pathways to Human Development*. New York. p. 54. Nepal ranked 138 out of 169 countries in Human Development Index.

2 Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics. 2011. *Nepal Living Standards Survey 2010/11, Statistical Report*. Volume 3. Kathmandu.

3 Government of Nepal, Ministry of Health and Population, Population Division; New Era; and ICF International. 2012. *Nepal Demographic and Health Survey 2011*. Kathmandu.

Table 1: Population Distribution by Economic Quintiles and Regions (%)

Environment	Economic Quintile				
	Lowest	Second	Middle	Fourth	Highest
Urban	3.1	3.3	7.8	23.6	62.3
Rural	22.6	22.5	21.8	19.5	13.6
By ecological zone					
Mountain	41.4	30.7	19.8	7.7	0.5
Hill	31.9	21.1	14.6	12.5	19.9
Terai	8.0	17.8	24.2	27.4	22.7

Notes: (i) The lowest quintile refers to the poorest 20% of the population, and the highest quintile to the richest 20%; (ii) In cases where the figures do not add up to exactly 100%, the discrepancy is due to rounding off.

Source: Government of Nepal, Ministry of Health and Population, Population Division; New Era; and ICF International. 2012. *Nepal Demographic and Health Survey 2011*. Kathmandu.

In the 1950s there were very few schools in Nepal and the literacy rate was about 5%, and less than 1% for females.[4] Nepal's development plans have given education high priority since then and, as a result, the number of schools reached 32,130 by 2010/11, of which 2,512 were higher secondary schools.[5] According to the UGC, the number of higher education institutions increased to 1,087 as of 2010/11 from the one university and a few colleges that existed in 1959. The literacy rate for 6 years old and above improved from 54.1% in 2001 to 65.9% in 2011,[6] while for population 15 years old and above improved from 48% in 2003[7] to 62.2% in 2012.[8] Most children of primary-school age (5–9 years) are enrolled in primary schools[9] (Table 2). From primary to higher secondary school, Nepal is close to achieving gender parity. However, there is a notable disparity in tertiary education, where there are significantly more males enrolled than females.[10]

4 Government of Nepal, Ministry of Education. 2010b. *Nepal Education in Figures, 2010*. Kathmandu.

5 Government of Nepal, Ministry of Education, Department of Education. 2012. *School Level Educational Statistics of Nepal: Consolidated Report 2012*. Kathmandu.

6 Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2012. *National Population and Housing Census, 2011*. Volume 1. p 4. Government of Nepal, Kathmandu; Central Bureau of Statistics, 2002. *National Population and Housing Census, 2001*. Volume 1. Government of Nepal, Kathmandu.

7 Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2004. *Nepal Living Standards Survey 2003/04: Statistical Report*. Volume 1. p. 61. Government of Nepal, Kathmandu.

8 Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2014. *Annual Household Survey 2012/13: Main Findings*. p. 21. Government of Nepal, Kathmandu.

9 The levels of schooling in the Nepalese educational system are preschool, basic (including primary and lower secondary), secondary, and higher secondary, followed by institutions of higher learning. For details, see Chapter 2, section B and Appendix 2.

10 The gender parity index (GPI) is the ratio of females to males at each level of education. A GPI value of 1 indicates parity between the sexes. A GPI value between 0 and 1 means a disparity in favor of males, while a value greater than 1 denotes a disparity in favor of females.

Table 2: Number of Schools and Student Enrollment, Academic Year 2010/11

Indicators	Total	Primary	Lower Secondary	Secondary	Higher Secondary	Tertiary
Number of schools	32,130[a]	31,656	11,341	6,928	2,512	1,087
Enrollment	7,575,880	4,900,663	1,604,422	790,348	280,447	407,934
Gross enrollment rate[b]		141.40	88.70	65.70	23.60	14.0
Net enrollment rate[c]		93.70	63.20	40.80	6.80	...
Gender parity index[d]		0.98	0.96	0.97	1.01	0.70

... = data not available.

[a] Because a higher-level school may include lower-level grades, the total count of schools is not the sum of the number of schools at each level.
[b] The gross enrollment rate is the total number of students, regardless of age, enrolled at a level of education, expressed as a percentage of the population at the official age corresponding to that level of education.
[c] The net enrollment rate is the number of students enrolled at a level of education, excluding underage or overage students, expressed as a percentage of the population at the official age corresponding to that level of education.
[d] The gender parity index is the ratio of girls to boys in primary, secondary, and tertiary education.

Sources: Government of Nepal, Ministry of Education. 2010b. *Nepal Education in Figures, 2010*. Kathmandu; Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

According to the *Nepal Labour Force Survey 2008*, of the respondents who had a tertiary education and were employed, 35.34% were engaged in professional activities, followed by technicians and associated professionals, service workers, subsistence agricultural workers, and clerks. The percentage of respondents with a tertiary education was also significantly higher among legislators and senior officials. However, the survey showed no strict correspondence between education and employment.[11]

B. The Economy and Employment

The estimated growth rate of the country's gross domestic product (GDP) for the fiscal year (FY) 2012 to be about 4.5%, and the per capita GDP to be $735, among the lowest in South Asia.[12]

Nepal's economy is largely based on agriculture. About 75% of women and 35% of men aged 15–49 were engaged in agricultural occupations. The survey also indicated that 12% of women and 22% of men were engaged in sales and services. The other employment areas listed by the survey included manual workers (skilled and unskilled): 7% of women, 28% of men; clerical work: 1% of women, 6% of men; and professional, technical, and managerial fields: 4% of women, 8% of men. These figures represent significant changes compared

[11] Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics. 2009. *Nepal Labour Force Survey 2008: Statistical Report*. Kathmandu.
[12] Government of Nepal, Ministry of Finance. 2012. *Economic Survey, Fiscal Year 2011/12*. Volumes 1 and 2. Kathmandu.

with NDHS 2006, when 86% of women and 52% of men were employed in agricultural occupations, and 7% of women and 13% of men were in sales and services.[13]

According to the NLSS 2010/11 labor force participation data, the national unemployment rate was 2.2%, but the unemployment rate in the urban areas was significantly higher (7.5%) than in the rural areas (1.2%). The unemployment rate for youths (15–24 years) was 3.6%; in the case of urban youths the rate was 13%, which was much higher than the rate for rural youths, which was 2.1%.[14]

Remittances comprise an important emergent contributor to the national economy. In FY2012, remittances accounted for 27.5% of GDP. According to the NLSS 2010/11, about 56% of the families in the country were receiving remittance income each year. That figure had been only 23% in FY1996. The average remittances received by these households was NRs80,436 ($841) in FY2011. The share of remittances of household income averaged 31%. According to data from the Foreign Employment Department as reported in the MOF's *Economic Survey 2011/12*, some 1.75 million workers had sought foreign employment by the end of FY2010. In FY2011, a total of 354,716 workers went abroad for foreign employment, and this figure does not include the traditional outflow of workers to India, or the unregistered outflow to other countries via India.

C. The National Development Agenda

Since the mid-1950s, Nepal has been implementing national development plans. The latest one completed was the Tenth National Development Plan (2002–2007), which focused mainly on poverty alleviation. Following the change in Nepal's political environment in 2006, the government adopted an interim constitution and prepared the first Three-Year Interim Plan (2008–2010).[15] This plan pledged to eradicate poverty, social inequalities, and marginalization through social inclusion and participation. Aligned with the Millennium Development Goals, it emphasized the reconstruction of infrastructure, the rehabilitation and reunification of people displaced by the political conflict, economic resurgence, inclusive development, and social and economic transformation. It also allowed for the continuation of existing successful programs, and took note of the rapid development of the People's Republic of China (PRC) and India, highlighting the development of these countries as sources of opportunity for Nepal.

The objective of the second Three-Year Interim Plan (2011–2013) was to help Nepal achieve "developing country" status by 2033, by ensuring a sustainable high economic growth rate and by reducing poverty through employment generation and the maintenance

[13] Government of Nepal, Ministry of Health and Population. 2012. *Nepal Demographic and Health Survey 2011*; Government of Nepal, Ministry of Health and Population, Population Division; New Era; and Macro International Inc. 2007. *Nepal Demographic and Health Survey 2006*. Kathmandu.

[14] Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics. 2011. *Nepal Living Standards Survey 2010/11*, Statistical Report. Volume 3. Kathmandu.

[15] Nepal has experienced political and armed conflicts throughout its history. In 2006, conflict led to the abolition of the monarchy and the establishment of a democratic government under a tenuous multiparty coalition. An interim constitution is currently in place, and a constitutional assembly comprised of representatives from the various political parties has yet to draft a final version of the Constitution and submit it for ratification.

of peace, stability, and confidence in law and order.[16] This second interim plan was committed to attaining the Millennium Development Goals by the end of 2015, and to foster social equity in development participation and equal opportunity for all citizens regardless of caste, gender, ethnicity, or language. Nepal aims to reduce the proportion of its population living in absolute poverty from 31%, the rate as of 2010, to less than 21%.

Overall, Nepal's development priority is to nurture its newly achieved democracy and establish a federal system of government. As the country's economy is dominated by agriculture, the development of this sector will be emphasized, but other promising areas, such as tourism, will also receive particular attention. In any case, all development efforts and outcomes will be geared to employment generation. Development interventions will focus on the following:

(i) a poverty alleviation program with a microeconomic development scheme that focuses on microfinance;[17]
(ii) technical and vocational education, market-based educational growth, and public–private partnerships;
(iii) local development initiatives such as roads, microhydroelectric power, and community forest management;
(iv) tourism and hotels as important sectors of economic development;
(v) farming; and
(vi) cottage industries.

[16] Government of Nepal, National Planning Commission. 2004. *Interim Development Plan—Approach Paper, 2004–2007*. Kathmandu.

[17] This program receives support from the World Bank's Poverty Alleviation Fund II (Project ID P105860). Approved on 6 December 2007, this project provides direct funding to the poor, who are organized into cluster groups—such as mothers, small farmers, and small development cooperatives—for development.

CHAPTER 2
Nepal's Higher Education System

The development of higher education in Nepal had its earliest beginnings with the establishment of Trichandra College in Kathmandu in 1918.[18] Three years after the 1951 landmark political change in Nepal, the National Education Planning Commission was created to assess the educational situation of the country, identify its needs, and recommend developmental reforms. The commission's major recommendations emphasized the need for basic literacy education for all young children as well as for adults, vocational secondary education, and competitive higher education that would be relevant to the country's geography, cultural heritage, and socioeconomic conditions.[19]

In 1959, the first university in the country, Tribhuvan University, was established by the government in Kathmandu. Later on, some colleges were established by individual leaders or social groups.[20] Before the 7th Amendment of the Education Act in 1972, such colleges were called "public colleges." With the introduction of the National Education System Plan in 1972, all public colleges were assimilated into Tribhuvan University as constituent campuses, bringing them under Tribhuvan University's direct management. Under this plan, the government provided funds for higher education and allowed the expansion of university campuses in outlying districts. However, this move effectively abolished the mode of other social or individual stakeholders establishing and running public colleges.

After an uprising in 1980, a referendum was held to determine the future direction of the political system, posing the question of whether to retain and improve the existing monarchical system or to embrace a multiparty parliamentary system with a ceremonial king. The referendum results favored the monarchical system with improvements. Subsequently, the Royal Higher Education Commission was formed to generate recommendations for reform.[21] Acting on the commission's recommendations, Tribhuvan University allowed individuals, groups, and communities to open new Tribhuvan University-affiliated campuses. The emphasis was on developing institutions of higher learning in

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18 S. B. Shakya. 1984. *Establishing and Development of Tribhuvan University (1955–1973)*. Kathmandu: Tribhuvan University Research Division. p. 4. Trichandra College was established as the first higher education institution in Nepal by Chandra Sumshere J.B.J. Rana. It was opened, with a view to discourage Nepali students from going to India for higher studies so that they would not come directly under the influence of the political movement there against the British regime. Trichandra was modeled after a typical Indian college, and was affiliated with Patna University, in India. It used the lecture method and had the usual final examination system; and its graduates entered the government service or teaching profession.

19 Government of Nepal. 1956. *Nepal National Education Planning Commission Report*. Kathmandu.

20 Shakya, *Establishing and Development of Tribhuvan University (1955–1973)*. These included Patan College, Nepal National College, Public Science College, Ananda Kuti College, Public Youth College, Saraswoti College, Thakur Ram College, Ram Swarup Ram Sagar College, Nepalgunj College.

21 Government of Nepal, Royal Higher Education Commission. 1984. Section IV: Third Change in the Process of the Development of Higher Education. In *Royal Higher Education Commission Report—2040 BS*. Kathmandu.

the areas of science and technology, agriculture, forestry, and national cultural heritage (including Nepalese architecture and arts and crafts). The Mahendra Sanskrit University, now called Nepal Sanskrit University (NSU), was established in 1986, with the aim of modernizing Sanskrit education and preserving the traditional values of the region.

More universities opened only after another landmark political change: in 1990 the multiparty system in Nepal was reinstated.[22] Among these institutions were Kathmandu University, in 1991; Purbanchal University, in 1993; Pokhara University, in 1997; and Lumbini Buddhist University (LBU), in 2004. Other university-level degree-awarding institutions were established as well, including the B.P. Koirala Institute of Health Sciences (BPKIHS), in 1993; and the National Academy of Medical Sciences (NAMS), in 2002. More institutions of higher learning were established in Nepal, and with greater frequency, after the country became a republic in 2006. Among these were the Patan Academy of Health Sciences (PAHS), established in 2009. The establishment of three additional universities - Far-Western University, Mid-Western University, and Agriculture and Forestry University (AFU) - was approved in 2010. The Karnali Academy of Health Sciences was established in 2013.

Enrollment increased with the expansion of higher education institutions. In the 1970s, Tribhuvan University was the only university in the country, with 49 colleges (or "campuses")[23] providing higher education to about 17,000 students. In 1996/97, the number of universities grew to 5 and the number of constituent and affiliated campuses rose to 215. By 2010/11, there were 12 universities and 1,087 campuses with a total of 407,934 students. Of the total number of campuses, 83 are university constituent campuses, 302 are affiliated community campuses (publicly funded), and 702 are affiliated private campuses (Table 3). By 2012/13, there are a total of nine universities and four medical academies. All these universities plus their constituent and affiliated campuses enrolled over 450,000 students.[24] See Appendix 1 for further discussion on the development of higher education in Nepal.

Table 3: The Expansion of Higher Education in Nepal, 1970–2010

Year	1970/71	1981/82	1990/91	1996/97	1999/2000	2010/11
Number of universities	1	1	2	5	6	12
Number of campuses	49	...	154[a]	215[a]	277[a]	1,087[a]
Total number of students (including Proficiency Certificate Level)	17,000[b]	34,094[b]	102,826[b]	106,310[b]	176,326	407,934

... = data not available.

[a] Including number of constituent and affiliated campuses. Note that "campus" signifies "college."
[b] Until 1996 enrollment data refers to only those in the universities and their constituent campuses only, from 1999 it also include enrollments in other affiliated colleges.

Sources: Government of Nepal, Ministry of Education. 2010a. *Educational Information: A Glimpse, 2010.* Kathmandu; Government of Nepal, High Level National Education Commission. 1998. *High-Level National Education Commission Report (1998)*. Kathmandu; Government of Nepal, University Grants Commission. 2012. Education Management Information System: Report on Higher Education 2010/11 Sanothimi, Bhaktapur, Nepal.

22 A multiparty constitution that had been adopted in 1959 was suspended by King Mahendra in 1960, along with the Parliament.
23 The term "campus" is commonly used in Nepal; it is synonymous with "college."
24 Government of Nepal, University Grants Commission. Education Management Information System: Reports on Higher Education 2012/2013. Sanothimi, Bhaktapur, Nepal.

A. Higher Education Initiatives and Programs

In the absence of a dedicated policy framework for higher education linked to the national development agenda, the management and development of higher education in Nepal was guided by the overall national development plan. For instance, following the democracy movement of 1990, the emphasis was on the decentralization of management, with greater stakeholder participation. Universities were then encouraged to come up with locally contextualized programs. Tribhuvan University, for example, adopted decentralization regulations in 1998, and campus and institutional autonomy regulations in 2005. Today, decentralized management is exercised at 42 of the university's 60 campuses, with one of them becoming fully autonomous.[25]

To address the quality and relevance issues in higher education, the government has provided support for the development of the professional capacity of university faculties by expanding support to enhance opportunities of research and training. . A national teaching eligibility test and certification program has been initiated to ensure that faculty recruitment meets the criteria of minimum knowledge and teaching skills needed in higher education programs. Moreover, the government has developed and implemented two reform projects in higher education. The Higher Education Project (1997–2002), the first project, focused on reforming curricula, institutional infrastructure, and financial and academic management. A follow-up initiative was the recently completed Second Higher Education Project (SHEP, 2007–2014),[26] which worked to achieve (i) greater quality, efficiency, and relevance in higher education through a set of systemic reforms and the provision of incentives to selected institutions, and (ii) improved access for academically qualified students from disadvantaged groups to higher secondary and tertiary education.

B. The Structure of the Higher Education System

As a result of a school-sector reform program initiated in 2009, the educational system of Nepal now consists of four overall levels: preprimary (up to 4 years of age); basic education (5–12 years of age, grades 1–8); secondary (13–14 years of age, grades 9–10); and higher secondary (15–16 years of age, grades 11–12). Students can then go on to universities or other institutions of higher learning (i.e., medical and engineering colleges). Note that the basic education level actually has two phases: primary (5–9 years of age, grades 1–5) and lower secondary (10–12 years of age, grades 6–8). Appendix 2 offers a more detailed description of Nepal's educational system.

[25] Mahendra Ratna Multiple Campus, Ilam.

[26] The first Higher Education Project (HEP) as well as the Second Higher Education Project (SHEP) were funded by the World Bank's International Development Association, $20 million loan for the first and $60 million grant for the second.

At the end of grade 10, students take a sent-up examination, and those who pass are eligible to take a national test called the "School Leaving Certificate Examination." Those who pass can apply for admission to higher secondary school. The higher secondary schools operate under the Higher Secondary Education Board (HSEB), under the Ministry of Education (MOE). After finishing the coursework for grade 12, students must take the sent-up and national HSEB examinations to complete the higher secondary level.

Once they have completed higher secondary school, students are eligible to apply for bachelor's degree programs. University or campus programs in general subjects, such as the social sciences, liberal arts, and humanities, take 3 years to complete; while technical institutes, such as those specializing in engineering and medicine, take 4 years. Master's degree programs take 2 years. Tribhuvan University and Kathmandu University also offer doctoral programs in various fields. Appendix 3 has more details on the levels and types of education, and their requirements and duration.

There is also higher secondary level technical education, which mainly operates under the Council for Technical Education and Vocational Training (CTEVT). Currently, the technical schools affiliated with the CTEVT offer skill training courses to students who have completed grade 10 or have a Technical School Leaving Certificate.[27] Technical and vocational education is offered through the CTEVT's 9 constituent technical schools and 118 private technical training institutes. The courses offered range from 1 year to 2.5 years, but most are 2 years in duration.

C. Organization and Management

There are no private universities in Nepal. According to the parliamentary acts that established them, they are all technically state universities. However, given the apparent freedom with which Kathmandu University, Purbanchal University, and Pokhara University are operated and managed, they are perceived by many to be private, a perception that is also based on a provision in the preambles of the legislation creating them. Like the others, these universities were established by constituent acts approved by Parliament that dictated the nature and scope of their governance.[28] In the preamble section of their respective acts, Kathmandu University is designated as a university in the nongovernment sector, Purbanchal as a public university (to be run by public stakeholders), and Pokhara as a university established for the purpose of increasing private sector participation in higher education. While these acts define the schools are fully autonomous institutions, they also stipulate that, in the case of failure to operate, the government will assume full ownership over them.

[27] In the general stream of schooling, upon successful completion of grade 10 students, the School Leaving Certificate (SLC) Examination is administered by the Office of the Controller of Examination, whereas those who leave general school to join the vocational stream do so after grade 8. Upon completion of 2 years of vocational courses, the Technical School Leaving Certificate (TSLC) examination is held by CTEVT.

[28] For instance, the Kathmandu University Act, 2048 (1991), Purbanchal University Act, 2050 (1994), and Pokhara University Act, 2053 (1997).

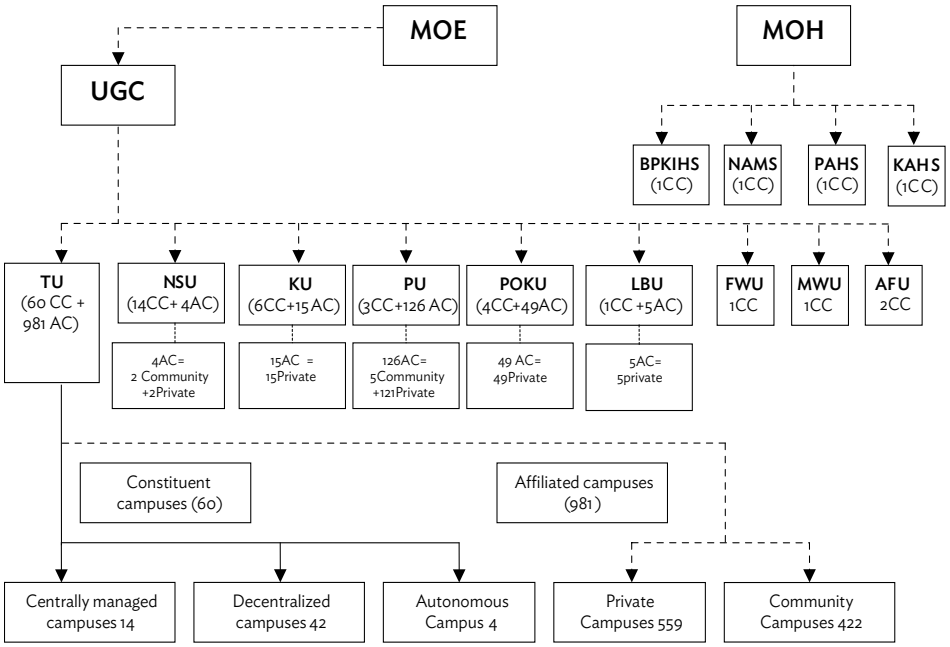
Private higher education institutions, on the other hand, are established and registered under the Companies Act, 2063 (2006). Universities affiliate these institutions, giving them the authority to offer the university's programs.

1. Organization and Provision of Higher Education

The organization and provision of higher education in Nepal are undertaken by the following:

(i) the national government, the MOE, and the University Grants Commission (UGC);
(ii) the universities; and
(iii) university constituent campuses and affiliated campuses (community and private).

Figure 1: Organizational Diagram of the Management of the Higher Education System



AC = affiliated campus, AFU=Agriculture and Forestry University, BPKIHS = B.P. Koirala Institute of Health Sciences, CC = constituent campus, FWU= Far-Western University, KAHS= Karnali Academy of Health Sciences, KU = Kathmandu University, LBU = Lumbini Buddhist University, MOE = Ministry of Education, MOH = Ministry of Health, MWU= Mid-Western University, NAMS = Nepal Academy of Medical Sciences, NSU = Nepal Sanskrit University, PAHS = Patan Academy of Health Sciences, POKU = Pokhara University, PU = Purbanchal University, TU = Tribhuvan University, UGC = University Grants Commission.

Note: "Campus" is synonymous here with "college."

Source: The Author, based on UGC 2014. *Education Management Information System, 2012/13.* Kathmandu.

The government has overall authority over higher education (Figure 1), exercising this authority primarily through two key agencies, the MOE and the UGC. The MOE is responsible for managing and regulating the country's education sector, including higher education, while the UGC is an autonomous statutory organization that facilitates, promotes, and supports the operation and development of higher education in the country.[29]

In accordance with the University Grants Commission Act, 1992, the UGC's mandate includes the following:

(i) advise the government on the opening of universities and programs, and on their affiliations with local or foreign higher education institutions;
(ii) formulate policies on the allocation of government grants to universities and other higher education institutions;
(iii) allocate and disburse grants to universities and make recommendations to the government regarding grant provisions;
(iv) set criteria, norms, and standards for higher education, and regulate the activities of higher education institutions, to ensure a conducive and appropriate academic environment as well as the good quality and relevance of higher education in the country;
(v) provide research grants, scholarships, and fellowships in higher education; and
(vi) make the necessary arrangements between universities and other educational institutions, within and outside Nepal, for the exchange of fellowships and mutual access to facilities.

The overall authority of the UGC lies with its board, which has 11 members:

(i) The executive chair (1) and executive member secretary (2) are prominent academics.
(ii) A member of the National Planning Commission (Social Sector/Education Desk) (3) and the secretaries of the Ministry of Education (4) and Ministry of Finance (5) are ex-officio members. As such, they help coordinate planning and program development, as well as budget allocations.
(iii) Two vice chancellors are members, usually one from Tribhuvan University (6) and the other from another university (7).
(iv) The remaining members include two professors (8, 9) and two scholars and/or education experts who have made major contributions in the field of higher education (10,11). They are there to ensure the integration of academic and professional-development concerns into planning and program development.

All the members are nominated by the government according to Article 5 of the University Grants Commission Act. The members' terms, including those of the chairperson and the member secretary, are 4 years from the date of appointment.

[29] The UGC was created through the University Grants Commission Act, 2050 (1993).

2. Policy Formulation

Higher education policies are developed by the MOE in consultation with the UGC. The MOE may also ask the UGC to initiate the process of drafting a policy. This is usually done by a UGC drafting committee, based on the results of consultations with various stakeholders. Once the draft policy is complete, it is submitted to the MOE, at which point it will start the formal adoption process. Relevant clearance will be sought from the Ministry of Finance (MOF), the Ministry of Law and Justice, and the National Planning Commission (NPC). The policy will then be tabled in the cabinet for endorsement, although the cabinet may first forward the policy to the NPC or further suggestions before endorsing it.

3. Standards Setting

The UGC began establishing a system for quality assurance and accreditation (QAA) in 2007. To this end, the high-level Quality Assurance and Accreditation Committee, consisting of 17 members, was formed under the UGC chair, with representatives from the MOE, all the professional associations,[30] and universities; as well as students, academic administrators, and professors.

The UGC also formed the Quality Assurance and Accreditation Division to serve as the committee's secretariat. Similarly, the UGC is in the process of forming an independent QAA board; and, on the recommendation of the Quality Assurance and Accreditation Committee, it has already adopted criteria, benchmarks, and processes for the QAA system. The UGC has also developed schemes for quality enhancement based on selected criteria and indicators, and has begun piloting the QAA system at a number of campuses, with the support of the Second Higher Education Project. Participation in the QAA has been opened to interested and eligible institutions on a voluntary basis.

D. University Autonomy

As universities in Nepal are given a mandate by dedicated acts of Parliament, they are considered self-governing autonomous bodies. Thus, they formulate and adopt internal regulations that guide their operations and management, particularly in terms of human resources, financial resources, and administration. They have the power to develop their own programs, operational modalities, and staffing, and to make decisions relating to size, salaries, recruitment, calendar of events, enrollment policies and admissions criteria, fiscal regulations (including tuition fees), examinations, and certification. At the inception stage of a university, the UGC and the MOE are responsible for drafting the university act and regulations, and for getting them endorsed. Later, they are responsible for monitoring the university's development, management, and operations on the basis of regulations and the relevant act's provisions. The MOE is represented on the university councils, the Prime Minister is the chancellor of all universities, and the minister of education is

[30] The professional associations represented are: the Nepal Medical Council, Nepal Engineering Council, Nepal Nursing Council, Nepal Veterinary Council, Nepal Ayurvedic Council, Nepal Bar Council, Nepal Pharmaceutical Council, and the Nepal Public Health Council.

the pro-chancellor. The council at each university sets the regulations and approves the annual budget and plan. The MOE or the UGC may monitor the implementation of the universities' plans, and allocate government grants to the universities accordingly.

These universities exercise varying levels of autonomy, depending, for example, on their financial resources. For instance, Tribhuvan University, despite its size, is almost totally dependent on the state for funding, and so enjoys only limited autonomy. It has to get the approval of the UGC, the MOE, and the MOF before adding any new program that would require more government funding, particularly in the form of additional staff or faculty salaries. Still, a number of its constituent institutions, such as the Institute of Medicine and the Institute of Engineering, have some control over their human and financial resources, allowing them a fair degree of academic autonomy. For similar reasons, Kathmandu University, despite its small size, is also able to exercise autonomy. Two other institutions, Purbanchal University and Pokhara University, also enjoy significant levels of autonomy.

The universities with a degree of autonomy can mobilize resources and generate income from various alternative sources; and they can budget, plan, and spend according to their own rules and regulations. On the other hand, autonomy can have negative aspects. For instance, the authority of universities to affiliate new colleges without ensuring that they have adequate academic standards, or gauging whether the colleges are appropriate or viable with regard to their locations, could compromise the quality and sustainability of the universities as well as the colleges. It should be noted that affiliation fees have remained an attractive source of funds.

All Nepali universities have their own university councils, executive councils, academic councils, and faculties. For example, the Tribhuvan University Council is the 49-member apex body of the university.[31] The Prime Minister serves as its chair, the minister of education as vice chair, and the rector as member secretary. The Kathmandu University Council is made up of 25 members with similar representation as the Tribhuvan University. The Purbanchal University Council, meanwhile, has 65 members, and the Pokhara University Council has 43. But although the stakeholders are represented, these councils are too big to operate as effective executive bodies. Council meetings are often more like ceremonial functions, such as when they are held to endorse annual budgets and plans, regulatory provisions, or programs. In order to facilitate decision making by the councils, universities have established smaller executive councils (e.g., the seven-member Tribhuvan University Executive Council), with membership determined by the universities. Similarly, smaller standing committees representing various stakeholders facilitate the work of the larger university councils. The compositions of the university councils, executive council, and the standing committees are outlined in terms of size and the representation indicated in the university acts and regulations.

Tribhuvan University gives the responsibility for academic management to the faculties of each discipline under their respective deans. Faculty offices serve as academic

[31] The Tribhuvan University Council members include officials from the national government and Parliament; Tribhuvan University functionaries; members of the academic community; and members who are not associated with the government or the university system, such as representatives of unions, of the Federation of Nepalese Chambers of Commerce and Industry, and of local chambers of commerce, as well as independent scholars, and a journalist, among others.

management offices. Departments and campuses are under the faculty offices, and are responsible for their own academic and professional performance, including teaching and research supervision. The faculty systems at Purbanchal University, Pokhara University, and Nepal Sanskrit University are similar to that of Tribhuvan University. In contrast, Kathmandu University has a system of six schools (education, management, science and technology, medicine, humanities, and engineering), each headed by a dean who is directly responsible for the delivery of academic and professional activities.

All the universities have both constituent and affiliated campuses. The affiliated campuses are either community (i.e., publicly funded) or private colleges. At the campus level, the highest body is the campus management committee (CMC). As outlined in the university regulations, major stakeholders—including students, faculty, and staff; local intellectuals; and business, industrial, community, and social leaders—must be represented in the CMC. In the case of constituent campuses, the campus chief serves as the chair of the committee. The nominations of the other CMC members are made by the campus chief and approved by the vice chancellor.

Within the scope of campus regulations, the CMCs at autonomous and decentralized constituent campuses are fully empowered bodies, responsible for undertaking regular reviews of campus management and operations, preparing and implementing campus development plans, monitoring and supervising the progress of plan implementation, and mobilizing resources for development and maintenance and operations. The CMCs also make decisions on the development and implementation of programs; CMCs of autonomous campuses can also decide hiring and management of the faculty and staff, among other areas.

Community campuses are governed and managed by CMCs based on their respective regulations, as approved by the affiliating university. In some cases, the campuses have a general assembly that encompasses various stakeholders, including representatives of district-level government bodies and business and industrial committees, academics, social and political leaders, and students. Most of the CMCs at community campuses in the outlying districts include district-level chiefs of government offices, such as the chief district officer, district education officer, and local development officer. The campus chief in a community campus serves as the member secretary, rather than as the committee chair. The CMC members and the chair are chosen from among the assembly members. In other cases, search committees are formed to identify three prospective members for the post of chair. The names, listed in order of preference, are sent to the vice chancellor for the final nomination. When arriving at a consensus is difficult, elections are held.

Private campuses are also governed and managed by CMCs. The members of the CMCs however mainly consist of the investors. Consequently, most of the private campuses are more concerned in terms of cost and benefit effectiveness and efficiency. Compared to the community campuses, CMCs of private campuses wield high levels of authority over the staff including faculty members in accruing better output and efficiency. CMCs of private campuses can decide hiring and management of the faculty and staff. CMCs of both community and private campuses can also decide which university to apply for affiliation.

E. Higher Education Financing

Education's annual share of the national budget have been steadily increasing between fiscal year (FY) 2002 and FY2011. The average annual share is 15.7%. (Table 4).

Table 4: Education's Share of Nepal's National Budget, 2002–2011

Fiscal Year	National Budget ($ million)	Share of Education (%)
2011	4,378.52	17.10
2010	4,084.71	16.30
2009	3,371.66	16.56
2008	2,414.22	16.80
2007	2,055.89	15.99
2006	1,812.64	16.75
2005	1,595.57	16.17
2004	1,462.86	15.25
2003	1,373.21	14.98
2002	1,425.60	14.10

Sources: Government of Nepal, University Grants Commission (UGC) annual reports 2001–2010. Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

Much of the education budget, however, goes to basic education, especially the primary level. For example, in 2009, the share of higher education as a percentage of the total education budget was only 9.92%. This is equivalent to 0.39% of GDP and 1.64% of the national budget. Table 5 shows the trend in government financing for higher education from FY2006 to FY2011.

The higher education budget, as shown in Table 5, still includes the Proficiency Certificate Level (PCL), which accounted for about 20% of the budget through 2009.[32] Consequently, government funding for programs at the bachelor's level and above were reduced by approximately 20%.

[32] The Proficiency Certificate Level (PCL) is a postsecondary program (after grade 10) that used to be offered by universities. Since 2010, the PCL has been completely phased out from the universities, and is now offered only by the Higher Secondary Education Board.

Table 5: The Share of Public Financing Allocated to Higher Education, 2006–2011

	Nepal's Higher Education Budget		
Fiscal Year	% of GDP	% of the National Budget	% of the Education Budget
2006	0.33	1.56	9.29
2007	0.36	1.69	10.60
2008	0.42	1.85	11.03
2009	0.39	1.64	9.92
2010	0.30	1.30	7.90
2011	0.30	1.50	8.10

GDP = gross domestic product.

Sources: Government of Nepal, University Grants Commission (UGC) annual reports 2006–2010. Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

1. The Budgeting Process for Government Grants

Some 3–4 months from the start of a new fiscal year, the finance divisions of all the universities, institutes, and campuses start their regular budgeting process. The UGC coordinates with the universities when preparing the national higher education budget. The MOE is responsible for coordinating the entire national budget for education, which then goes to NPC. Final budget allocation is done by the MOF, in cooperation with the MOE and the NPC. During this process, concerned organizations and institutions are consulted by the ministries of education and finance. The budget incorporates recurrent and development spending, and is based on the previous year's budget, though with minor adjustments when necessary. Due consideration is given to the particular needs of institutions, which are proposed along with a strategic development plan.

No criteria or norms are used for budget estimation, except for ensuring that salaries are covered based on a predefined number of employees (faculty and staff), particularly in the case of Tribhuvan University and Nepal Sanskrit University (NSU). These universities, including their constituent campuses and affiliated community and private campuses, are free to set, change, and manage their fees, and to use the fees to support operations and development. They are also free to engage in fund-raising, grow their endowments, and to make use of their funds within the scope allowed by the regulations. In the case of Kathmandu University, student fees and donor contributions provide most of the operating funds.

2. Funding Sources for Universities and Campuses

The institutions of higher education in Nepal are funded from four sources: (i) government grants, managed by the UGC; (ii) student fees; (iii) donations from various organizations and individuals; and (iv) other sources, including rents and leases.

The UGC manages government funding for universities and community campuses. Government support for universities is given in the form of block grants, which consist of two types of funding: regular (i.e., for recurrent or operating costs) and developmental. The regular funds for Tribhuvan University and NSU are estimated based on operational logistics and on the salaries of faculty and other university employees, including those at their constituent campuses. For other universities, the funds are provided on the basis of the previous year's budget. The UGC has also been providing a limited amount of grant funding to community campuses based on the number of students enrolled, the types and numbers of programs offered, and the campus location. Developmental funds are provided on the basis of need, and on what the individual institutions can negotiate.

Tribhuvan University and NSU rely heavily on government funding—almost 90% for total expenditures in the case of Tribhuvan University, and over 95% in the case of NSU. Government grants also cover part of the operating costs of Purbanchal and Pokhara Universities. The operating costs of Lumbini Buddhist University (LBU), which is still in the developmental stage, are almost totally covered by government grants, and similar grants are allocated for the establishment and development of upcoming universities. Table 6 lists the government grants provided to the universities in FY2011.

Table 6: Grants Disbursed to Universities in Nepal, FY2011

University	Grants for FY2011		
	Regular (NRs million)	Developmental (NRs million)	Total (NRs million)
Tribhuvan University	3,081.0	265.0	3,346.0
Nepal Sanskrit University	229.4	75.0	304.4
Kathmandu University	9.0	0.0	9.0
Purbanchal University	21.7	10.0	31.7
Pokhara University	20.5	12.5	33.0
Lumbini Buddhist University	6.0	20.0	26.0
Total	3,367.6	382.5	3,750.1

FY = fiscal year.

Sources: Government of Nepal, University Grants Commission (UGC). 2011b. *University Grants Commission Annual Report 2010/2011.* Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

In FY2011, the total grants given to the 6 universities listed in Table 6 was NRs3.75 billion (about $39.2 million). Aside from these grants, the UGC has also distributed NRs154.68 million (about $1.62 million) in total regular grants to 302 community campuses.

Community campuses initially did not receive any government funding. They relied totally on the resources they could mobilize through their own efforts—mainly from student fees and other local sources, such as contributions from organizations and fund-raising drives.

Government support began only after the UGC became fully functional, in 1992, and that support came in the form of grants. The grant amounts are not fixed; instead, they vary based on the government budget available for higher education. But the amount is very small, constituting less than 10% of the community campus budget.

Private campuses depend almost completely on student fees for all their recurrent and developmental expenditures. Board members or shareholders often provide the initial investments for the building infrastructure. The subject of student fees, however, is a sensitive issue for universities and constituent campuses that receive substantial government grants. This has certainly been the case with Tribhuvan University, where fee increases have been strongly resisted by student unions.

Student fees constitute the core of financing for Kathmandu University, Purbanchal University, and Pokhara University. For Kathmandu University, student fees cover 100% of regular expenditures. Donations or other types of individual support are used mainly for development. Similar conditions apply in the case of many other universities and community campuses.

3. Public Financing per Student

In FY2011, government expenditure per student in the universities listed in Table 7 averaged NRs35,125 ($367). The government provided the highest per student funding to NSU at NRs88,002 ($920), and the lowest to Kathmandu University at NRs2,510 ($26). Tribhuvan University received NRs20,992 ($219). Kathmandu University has relied mainly on student fees; there are other funding sources, but this heavy reliance on fees has led to the frequent perception of the university as a private institution.

The average government expenditure per student in constituent and community campuses in FY2011 was NRs11,569 ($121); but it was NRs22,045 ($231) for the constituent campuses, and just NRs1,093 ($11) for the community campuses (Table 8). As mentioned above, only token government grants are provided to community campuses, which rely more on student fees for their operation and management. In the case of constituent campuses, student fees play only a supplementary role.

The data show a trend of increasing regular public expenditure per student on constituent and community campuses during FY2006–FY2011 (Table 8). For the universities, the picture is mixed, with expenditure per student increasing at Tribhuvan and Nepal Sanskrit Universities, but declining for Kathmandu and Purbanchal Universities; for Pokhara University, expenditure fluctuated, but showed a decline in FY2011 over FY2006 (Table 7). For those universities not listed in Table 7, regular public expenditure per student has tended to fluctuate.

Table 7: Regular Government Expenditure per Student, by University (NRs)

Fiscal Year	Tribhuvan University	Nepal Sanskrit University	Kathmandu University	Purbanchal University	Pokhara University
2006	10,231	69,813	3,493	75,971	35,338
2007	9,595	54,551	3,370	44,753	32,613
2008	11,769	60,572	3,286	33,897	48,056
2009	15,568	69,041	2,626	32,190	48,056
2010	16,056	67,988	2,426	29,683	25,980
2011	20,992	88,002	2,510	36,013	28,109

Sources: Government of Nepal, University Grants Commission (UGC) annual reports for 2006 through 2010. Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

Table 8: Regular Public Expenditure per Student, by Campus Type (NRs)

Fiscal Year	Constituent	Community	Both
2006	10,903	460	8,027
2007	10,198	1,118	7,379
2008	12,551	678	9,183
2009	16,287	831	10,917
2010	16,779	832	10,521
2011	22,045	1,093	12,481

Note: Affiliated private campuses, which do not receive government grants, are not included in the table.

Sources: Government of Nepal, University Grants Commission (UGC) annual reports for 2006–2010. Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

F. Mechanisms for University Accountability

The universities are required to formulate annual plan and budget for the approval of their respective governing bodies. The universities have also developed internal fiscal regulations based on clearly defined planning needs, scope, and methods of implementation and monitoring. For example, Tribhuvan University has three books of regulations—organizational, staffing, and fiscal. These regulations outline the goals, objectives, mandates, functions, roles, duties, and responsibilities; and they delineate fiscal and procurement procedures. Although not mandatory, some of the universities have also prepared long-term strategic visions and plans. An example is the 20-year vision plan prepared by Tribhuvan University in 2000.[33]

[33] Tribhuvan University. *The Strategic Vision for Twenty Years.* Unpublished.

Given that they receive regular government block grants, universities are exposed to public scrutiny. They are also required to undergo annual financial audits and to submit reports to the UGC. Actually, annual financial audits are a requirement for all higher education institutions and organizations in the country. When significant government grants are involved, however, audits by the Office of the Auditor General are a must. Fiscal transactions are audited first by the universities themselves through a licensed auditor, and then by the Auditor General. Tribhuvan University established a separate unit for conducting its internal audits; and this unit conducts the first audit, before the one by the Auditor General. Tribhuvan University regulations also require that each campus submit an annual performance report to the university council, along with a financial report. All the other universities in Nepal have similar provisions, with the exception of Kathmandu University and Purbanchal University, as they do not undergo audits by the Office of the Auditor General.

G. Higher Education Performance

1. Higher Education Institutions and Program Offerings

According to the UGC, as of the 2012/2013 academic year, there were nine universities and three medical academies (a new one, the Karnali Academy of Health Sciences, was established in 2013, making it four medical academies), with a total of 96 constituent campuses and 1,180 affiliated campuses, located in 73 out of the 75 districts of Nepal. Of the affiliated campuses, 303 community campuses are registered with the UGC and receive grant support.[34] The remaining 709 campuses are considered private.[35] The medical academies are single-campus institutions, with one constituent campus each (Table 9).

The six operational universities and three medical schools together offer 421 programs, of which Tribhuvan University offers 173; Kathmandu offers 98; Purbanchal, 72; Pokhara, 43; the National Academy of Medical Sciences (NAMS), 14; the B.P. Koirala Institute of Health Sciences (BPKIHS), 10; NSU, 9; LBU, 1; and Patan Academy of Health Sciences, also 1.

[34] A community campus is established and owned by concerned stakeholders in a local community. Like a public trust, it is a nonprofit entity with public transparency and accountability; it is governed by a board or management committee that strictly follows its published rules and regulations; the land and buildings are owned by the campus (i.e., college). The campus is liable to public auditing, and will be forfeited to the government if it ceases to function at all. Community campuses have been catering mainly to middle- and lower middle-income groups. Like the constituent campuses, they offer mainly bachelor's degree programs, usually in general subject areas. Some of the community campuses also offer master's degree programs.

[35] A private campus may be established and owned by an individual or group. It can be registered under the Companies Act, 2063 (2006) or as a trust. The owner can invest and generate resources in the course of the functioning and development of the campus.

Table 9: Institutions of Higher Learning in Nepal, 2012/13

Institution (name and year established)	Number of Campuses				Total Number of Programs	Total Student Enrollment	Number of Teachers
	Constituent Campuses	Affiliated Community Campuses	Affiliated Private Campuses	Total			
Tribhuvan University, 1959	60	422	559	1,041	173	382,927*	13,679*
Kathmandu University, 1991	6	0	15	21	153	12,954	341*
Pokhara University, 1997	4	0	49	53	43	24,380	119
Purbanchal University, 1993	3	5	121	129	76	25,796	61
Nepal Sanskrit University, 1986	14	2	2	18	9	1,691	770
Lumbini Buddhist University, 2004	1	0	5	6	5	302	60
Agriculture and forestry University, 2010	2	0	0	2	4	140	81
Mid-Western University, 2010	1	0	0	1	27	2,472	100
Far-Western University, 2010	1	0	0	1	21	787	71
B.P. Koirala Institute of Health Sciences, 1993	1	0	0	1	10	1,155*	164
National Academy of Medical Sciences, 2002	1	0	0	1	14	115	221
Patan Academy of Health Sciences, 2009	1	0	0	1	1	60	114
Karnali Academy of Health Sciences, 2013	1	0	0	1			

Note: The figures referring to the number of programs and student enrollment include Proficiency Certificate Level courses.

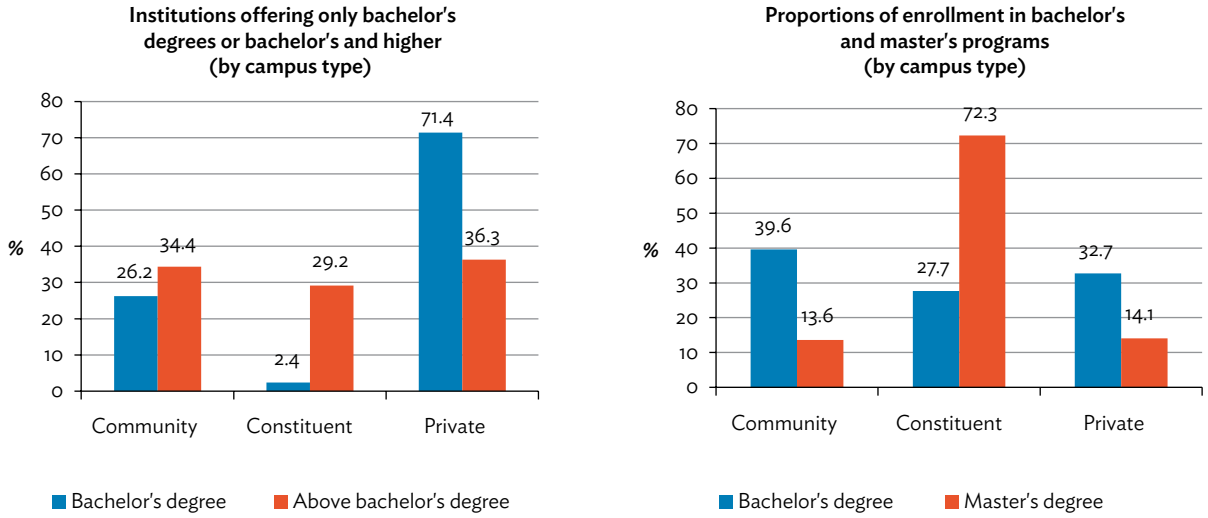
* University Grants Commission. 2013. *Education Management Information System: Report on Higher Education 2011/12*. Sanothimi, Bhaktapur, Nepal.

Source: University Grants Commission. 2014. *Education Management Information System: Report on Higher Education 2012/13*. Sanothimi, Bhaktapur, Nepal.

Until 2009, many of the constituent and affiliated campuses of Tribhuvan University and NSU were running Proficiency Certificate Level (PCL) programs, but these programs are now being phased out. Tribhuvan University completely stopped new enrollment in PCL programs in 2009, but NSU is still accepting applicants as of 2013. There were 66,927 PCL students in 2008, and by 2010 the total was down to 19,029 (92% at Tribhuvan, 7% at NSU, the rest at Kathmandu and the BPKIHS). Aside from the PCL programs, the universities also run some other nondegree programs.

Most university campuses (80%) offer only bachelor's degree programs, and about 19% also have master's degree programs. Only the main university campuses, which constitute about 1% of the total, offer degrees up to the PhD. Figure 2 shows the percentage of campus types according to the degrees offered: bachelor's degree only or graduate degrees as well.

Figure 2: Campus Programs and Enrollment: Bachelor's and Higher Degrees, 2010/11



Note: The date "2010/11" refers to the academic year.

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

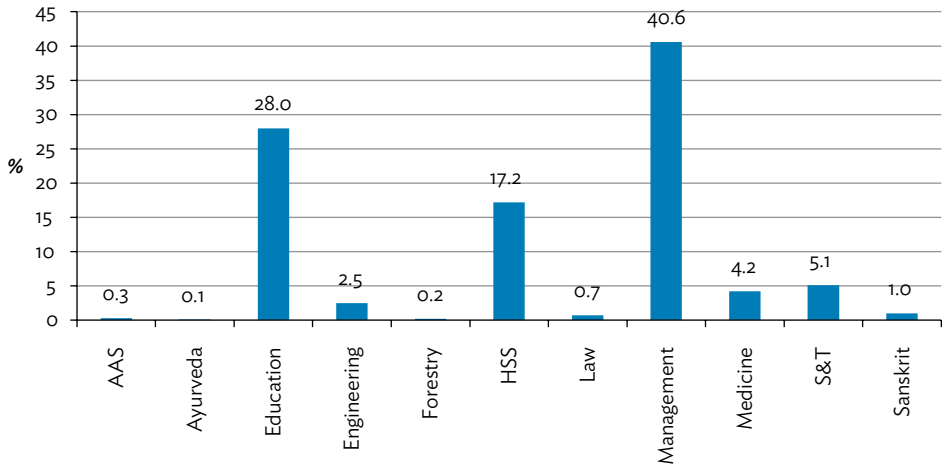
Figure 2 shows that most private campuses offer programs up to the bachelor's level only. Note that the various percentages given for the three types of campus do not reflect the actual sizes of enrollment. In the 2010/11 academic year, the average student body size for constituent campuses was about 1,774, but only 469 for community campuses and 170 for private campuses. Moreover, the country's 83 constituent campuses comprised only 7.6% of the total number of campuses, but accounted for 36.1% of total enrollment, compared with the 702 private campuses, which comprised 64.6% of the total number of campuses, but had only 29.2% of total enrollment. Similarly, the 302 community campuses comprised 27.8% of the total number of campuses, and had 34.7% of total enrollment. These numbers further indicate that the programs higher than bachelor's level are mostly concentrated in the constituent campuses.[36]

As shown in Figure 3, the highest proportion of campuses offer management programs, followed by education, then by humanities and social sciences.

Management, education, and humanities and social sciences together constitute 85.8% of campus programs. Science and technology comprise 5.1% of campus programs, while medicine and engineering programs constitute 6.7% of the total. Agriculture and forestry account for less than 1% of all campus offerings.

[36] Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

Figure 3: Distribution of Subject Area Programs across Campuses, 2010/11



AAS = agriculture and animal sciences, HSS = humanities and social sciences, S&T = science and technology.

Notes:
1. The date "2010/11" refers to the academic year.
2. The figures are based on nine major institutions: Kathmandu, Lumbini Buddhist, Nepal Sanskrit, Pokhara, Purbanchal, and Tribhuvan universities; B.P. Koirala Institute of Health Sciences, National Academy of Medical Sciences, and Patan Academy of Health Sciences.

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

2. Enrollment

Total enrollment in higher education institutions increased significantly, from 173,546 in 2005 to 444,994 in 2011/12 (Table 10). Rapid enrollment expansion has been most marked in four universities: Tribhuvan, Kathmandu, Purbanchal, and Pokhara. Tribhuvan University accounted for about 87% of all students in higher education.

Gross Enrollment Rate in Higher Education

Despite expanding access and increasing enrollment in higher education, the gross enrollment rate (GER) for higher education was still only 14% in 2010, though a small improvement over the 10.1% GER of the previous year.[37] The duration of tertiary studies include 3 years for the bachelor's degree and a further 2 years for the master's degree. The standard calculation of the GER for tertiary studies is based on the 17–21 age

[37] The gross enrollment rate (GER) is the total number of pupils or students enrolled at a specific level of education in a given year (regardless of age), expressed as a percentage of the official school-age population corresponding to that level of education.

Table 10: Enrollment in Higher Education by Institution (Bachelor's and Higher), 2005/06–2010/11

University	Academic Year						
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Tribhuvan University	152,135	189,891	216,856	252,482	333,683	353,718	382,927
Kathmandu University	4,422	4,947	5,814	7,406	8,909	9,658	11,310
Pokhara University	5,615	5,360	7,638	7,538	13,171	16,666	20,229
Purbanchal University	8,812	12,669	14,878	14,872	18,490	24,726	26,967
Nepal Sanskrit University	1,746	1,314	1,782	1,400	1,281	1,798	1,925
B.P. Koirala Institute of Health Sciences	691	1,191	1,070	1,072	1,072	1,072	1,155
National Academy of Medical Sciences	125	203	203	203	203	203	200
Patan Academy of Health Sciences					60	60	55
Lumbini Buddhist University						33	226
Far-Western University							
Mid-Western University							
Agriculture and Forestry University							
Karnali Academy of Health Sciences							
Total	173,546	215,575	248,241	284,973	376,869	407,934	444,994

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

group.[38] This figure, however, does not take into account the 4-year bachelor programs, not to mention doctoral studies. Calculated in this manner, the gender parity index for the GER in higher education improved slightly from 2009/10 to 2010/11 academic years: 0.66 to 0.70.[39] However, it still shows that female participation in tertiary education is low.

Pass Rates

Even if enrollment rates have been improving, graduation rates have not, particularly in the Tribhuvan University system, where the pass rates for both the bachelor's and master's levels are exceptionally low. Table 11 shows the pass rates by university and level for the 2008/09

[38] There have been ongoing discussions regarding the appropriate ages for reporting the GERs. Nevertheless, the rates listed here are based on the standard methods of GER calculation by school and age. Basing the calculations on the 20–24 age group would slightly increase the GERs.

[39] The gender parity index is a Millennium Development Goal indicator. Specifically, it's the ratio of girls to boys in primary, secondary, and tertiary education. See: http://unstats.un.org/unsd/mdg/Metadata.aspx?IndicatorId=9

and 2010/11 academic years,[40] calculated based on the number of students passing the final exams. These calculations do not include other yearly or semester examinations.

Table 11: Pass Rates by University and Level, 2008/09 and 2010/11 (%)

Level (Year)	Tribhuvan University	Kathmandu University	Pokhara University	Purbanchal University	Nepal Sanskrit University	All
Bachelor's (2008/09)	37	92	52	48	48	38
Bachelor's (2010/11)	31	95	58	48	49	32
Master's (2008/09)	39	86	75	39	44	40
Master's (2010/11)	32	97	52	63	61	34

Note: The years listed in this table refer to the academic years.

Sources: The offices of the controller of examinations of each university included in this table; Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

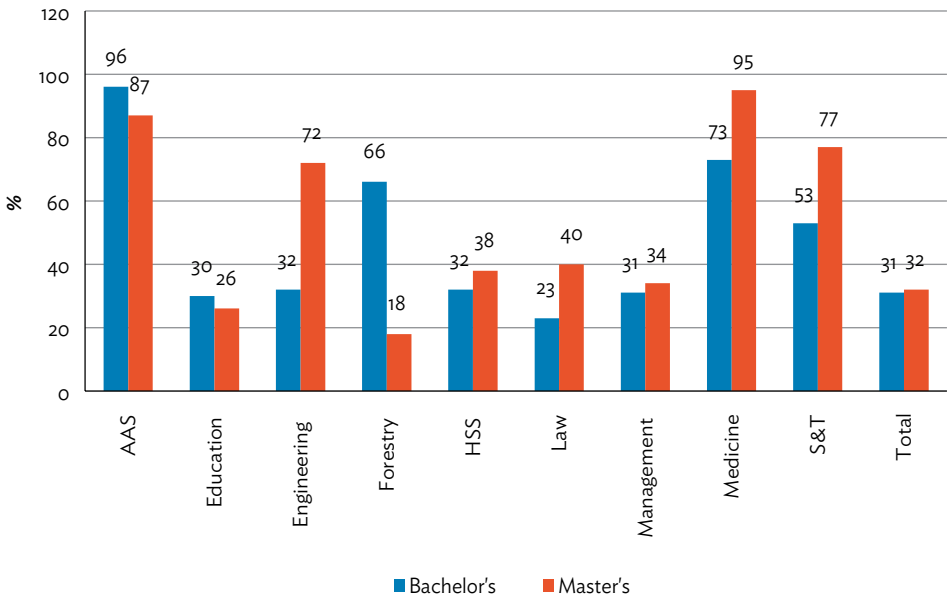
The pass rates vary significantly across subject areas and institutions. Kathmandu University has the highest pass rates, followed by Pokhara University. Tribhuvan University, on the other hand, has the lowest pass rates, a fact that has serious implications for the national pass rate, as it accounts for the bulk of higher education enrollment. Figure 4 shows pass rates by subject area. Science and technology, as well as other technical programs, generally have higher rates than the general subject areas (education, humanities and social sciences, law, and management).

The higher pass rates in science and technology programs can be attributed to two factors. First, most of the high-scoring School Leaving Certificate (SLC) graduates opt to take the science stream at the Proficiency Certificate Level (PCL) or higher secondary level, hoping to compete for entry into university-level programs that would offer better opportunities, such as those in medicine and engineering. While these programs are considered challenging, they are also known to be rewarding in terms of future prospects, and are therefore attractive. Campuses conduct entrance tests and select students on the basis of their test scores, together with their previous exam performance, which means that prospective students need to be very competitive for admission into these programs.

Second, science and technology programs are not affected by disruptions due to social or political issues, as is the case with other programs, because students in science and technology programs often demand—and the campuses manage to arrange—the continuation of classes even under difficult conditions. Traditionally, science students tend to complete their studies before looking for a job, and they have better opportunities for jobs or further studies upon the completion of their degrees.

[40] Generally, a "pass rate" refers to the number of people, expressed as a percentage of the total, who were successful in a particular exam. In this report, and in the UGC's *Education Management Information System: Report on Higher Education 2010/11* report from the UGC, from which the figures in Table 11 are taken, the pass rate refers to the number of students, expressed as a percentage of the total, that fulfill all the academic requirements, including passing all the exams, that are required for the successful completion of an educational program.

Figure 4: Pass Rates by Subject Area and Level, 2010/11



AAS = agriculture and animal science, HSS = humanities and social sciences, S&T = science and technology.

Note: The years 2010/11 refer to the academic year.

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

Graduate Outputs

Overall, a comprehensive database of graduates needs to be further developed in Nepal. Graduate data have been compiled from convocation lists, the UGC Education Management Information System, and the various constituent and community campuses. The data already provide some insights into the graduate rates in the country. But it has to be noted that, in Nepal, the convocation lists include only those who have applied for graduation, and not all campuses submit data to the UGC, especially the private campuses (Table 12).

Tribhuvan University accounts for almost 90% of total graduates of higher education institutions, followed by Purbanchal University, with 6%, and Kathmandu University, with 2.4%. The rest of the universities, campuses, and institutes each accounts for less than 3% of Nepal's higher education graduates.

Since Tribhuvan University has an overwhelming share of Nepal's enrollment and graduates, its performance in this regard greatly affects the system-wide rates. About two-thirds of Tribhuvan University's graduates are from its constituent campuses, with its affiliated community and private campuses accounting for the rest.

Table 12: Number of Graduates by University and Level, 2010/11

Level	B.P. Koirala Institute of Health Sciences	Kathmandu University	Nepal Sanskrit University	Pokhara University	Purbanchal University	Tribhuvan University	Level Total
Bachelor's	110	1,230	435	782	3,432	48,843	54,832
MPhil	0	5	0	0	0	32	37
Master's	136	333	40	271	492	9,173	10,445
PhD	0	4	3	0	0	61	68
Higher Education Total	**246**	**1,572**	**478**	**1,053**	**3,924**	**58,109**	**65,382**
Percentages	0.4	2.4	0.7	1.6	6	88.9	100

MPhil = Master of Philosophy, PhD = Doctor of Philosophy.

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

Number of Students Studying Abroad

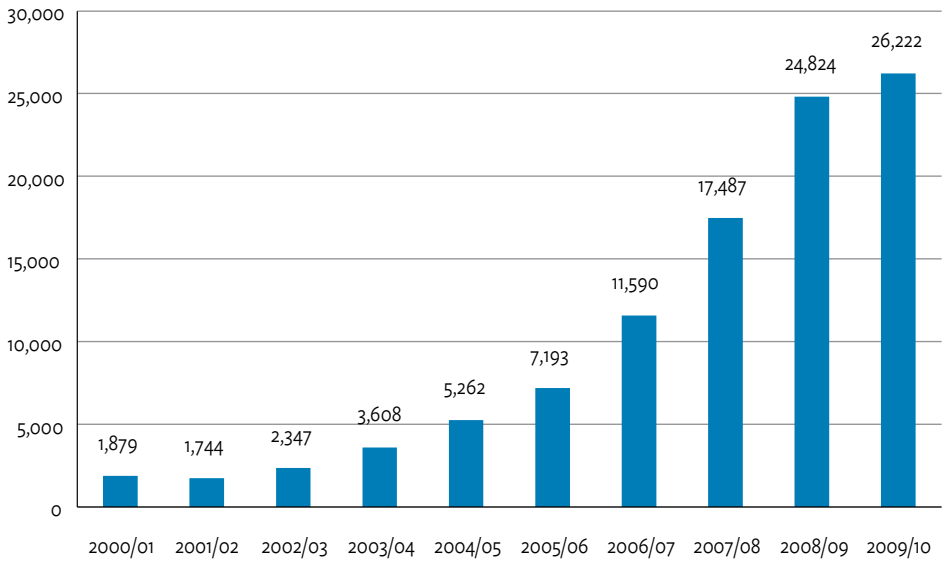
There has been a trend of increasing numbers of students pursuing self-financed higher education in other countries, and Figure 5 shows the statistics from 2000 to 2010. About one third of these students are female. Note that this trend has accelerated since 2006.

Countries in which Nepali students pursued higher education in 2009/10 included Australia, Bangladesh, Canada, the People's Republic of China (PRC), Finland, Germany, Georgia, India, Japan, Norway, the Philippines, Sweden, the United Kingdom (which had the highest number of students from Nepal), and the United States.

Official records show only those students who have received clearance from the MOE to study abroad. Many students go to India without official approval. Similarly, there are many Nepali students abroad who do not need such formalities. This trend toward pursuing studies abroad has brought a new dimension to the country's economy. Many private institutions have been established, such as student-help centers and preparatory centers, to liaise with foreign institutions of higher education and even facilitate visa applications. Financial institutions, including banks, are now providing loans for study abroad.

The attraction of pursuing studies abroad, particularly in Australia, the United Kingdom, the United States, and other Western countries, is enhanced by the opportunity for Nepali students to work while studying and to improve their employment prospects after completing their studies. By working, Nepali students can cover tuition and at least part of their living expenses. The perception has also been that the degrees conferred, the knowledge and skills gained, and the overall experiences of these students in other countries provide a higher quality of education; hence, the students' greater confidence in their ability to gain better employment in Nepal. Although there is a lack of research on this trend and its overall implications, there are now many unrecorded cases of parents and students staking their property, including their houses and lands, to finance studying abroad.

Figure 5: Number of Students Studying Abroad, 2000/01–2009/10



Note: Listed on the basis of No Objection issued by the Ministry of Education (MOE). Those going abroad to study need to get no objection from MOE. This is very important in the case of self-financed students, otherwise they will not be able to get foreign currency exchange which is limited and strictly regulated in Nepal.

Sources: Government of Nepal, Ministry of Education. 2009a. *Nepal Education at a Glance 2009*. Kathmandu; Government of Nepal, Ministry of Education. 2010c. *Nepal Education at a Glance 2010*. Kathmandu.

H. University Faculties

The total number of full-time faculty members at Nepal's universities, including their constituent and affiliated community campuses, was 15,365 in FY2011. However, this number is actually much higher system-wide, as the data does not include faculty at affiliated private campuses of a university. Tribhuvan University's faculty constitutes 90% of the total number.

Table 13 shows the distribution of academic staff by rank and gender across the country's universities and affiliated community campuses. There are about 6,472 faculty members in the community campuses. There is no explicit national policy regarding the proportions of males and females to be hired at various levels, though there is diversity in faculty composition across the universities and the medical schools.

Table 13: Number of Faculty Members in Universities by Rank and Gender, 2010/11

School	Professors		Readers or Associate Professors		Lecturers		Assistant Lecturers		Others (Including Instructors)		Total	
	F	T	F	T	F	T	F	T	F	T	F	T
B.P. Koirala Institute of Health Sciences		52		26		66				39		183
Kathmandu University		33		0		171				137		341
National Academy of Medical Sciences		43		35		42				22		142
Nepal Sanskrit University		65	3	130	39	520	0	15	0	40	42	770
Patan Academy of Health Sciences		17	0	21	0	47	0	0	0	0		85
Pokhara University		5	0	8	0	64	0	31	0	8		116
Purbanchal University		0	0	0	0	31	0	4	0	14		49
Tribhuvan University	48	589	405	2,082	423	5,242	12	3,326	392	2,440	1,280	13,679
Total	48	804	408	2,302	462	6,183	12	3,376	392	2,700	1,322	15,365

F = female, T = total.

Source: Government of Nepal, University Grants Commission. 2012. *Education Management Information System: Report on Higher Education 2010/11.* Sanothimi, Bhaktapur, Nepal.

1. Faculty Qualifications

Further study is necessary to acquire data on the individual backgrounds of faculty members of Nepal's higher education system, but it is nonetheless possible to draw some information from university regulations and hiring practices. Junior faculty are normally hired by universities as assistant lecturers or lecturers. The minimum eligibility criteria is a master's degree in the area in which the candidate will be teaching, with a standard average score of at least 50%.

To be promoted to associate professor (or reader) or professor, a lecturer must have experience, usually 5 years or more, preferably with research and publications, as well as a PhD. The selection criteria usually include measures of academic standing, such as the degrees obtained, experience, and research and publications (including textbooks); other creditable academic merits or contributions; a written exam at the entry level of employment; and an oral exam at the senior level.

Instructors, on the other hand, are specially recruited: they are specialists in fields for which master's-level graduates are not available, or for which it is impossible to hire faculty using regular requirements and procedures due to special circumstances. This mainly applies to specific technical areas, such as medicine, engineering, and agriculture.

Most of the existing faculty members are graduates of Tribhuvan University, simply because it used to be the only university in the country. Until the 1970s, Tribhuvan University

recruited faculty from India and other countries under various support schemes. Similarly, Tribhuvan faculty have often had the opportunity to study abroad under different national and international support programs made available to the university by the government. Lately, however, such institutional arrangements have been neglected.

Also, due to the rapid expansion of campuses and student enrollment, the universities have had to resort to ad hoc provisions, which, along with the incursion of political interest groups in the hiring process, have created some serious issues at Nepal's higher education institutions, particularly Tribhuvan University. One of the issues relates to the limited experience of faculty members.

2. Faculty Responsibilities

Ensuring a balance between teaching responsibilities and research opportunities remains a challenge in the institutions of higher education in Nepal. Universities issue regulations on the minimum time required for teaching duties. In the case of Tribhuvan University, for example, a minimum teaching load of 15 classes per week is prescribed at the bachelor or PCL levels (at higher levels, the teaching load can include thesis supervision. At Kathmandu University, regulations prescribe the same minimum teaching load combined with a minimum number of hours a faculty member must be present at the university.

At all the universities, faculty are encouraged to participate in research and academic development through incentives such as sabbaticals, study leave with pay, and limited funding support for higher studies. However, the provisions for other professional development activities, such as participation in academic seminars and writing journal articles and books, are very small, not enough to cover the actual costs involved.

3. Student–Teacher Ratios

The student–teacher ratio (STR) is the average number of students per lecturer, instructor, professor, etc.; and it varies by university, campus, and program. Table 14 shows that, on average, the STR for Tribhuvan University is 22:1, slightly less than the average STR of its affiliated community campuses. Still, the average STR would be difficult to use as a gauge of average classroom conditions, especially given that higher education in Nepal generally involves crowded lecture classes, sparse special classes, and limited practical classes. The general feeling is, however, that Tribhuvan classes have been getting crowded in most of the popular subject areas.

It is interesting to note that the STRs of the other universities are significantly smaller than those of Tribhuvan University. In 2010/11, the STR for the constituent campuses of Pokhara University was 10:1; for Kathmandu University, 11:1; and for Purbanchal University, 18:1. These ratios indicate a need for further analysis of academic staffing in higher education in Nepal, particularly as it concerns staff management, cost, efficiency, quality, and institutional culture.

Table 14: Student–Teacher Ratios, 2008/09 and 2010/11

University	Student–Teacher Ratio 2008/09	Student–Teacher Ratio 2010/11
TU—constituent campuses	21:1	22:1
TU—community campuses	24:1	24:1
KU—constituent campuses	10:1	11:1
POKU—constituent campuses	9:1	10:1
PU—constituent campuses	14:1	18:1
NSU—constituent campuses NSU—constituent campuses	5:1	3:1
BPKIHS—constituent campuses	8:1	7:1
NAMS—constituent campuses	1:1	1:1

BPKIHS = B.P. Koirala Institute of Health Sciences, KU = Kathmandu University, NAMS = National Academy of Medical Sciences, NSU = Nepal Sanskrit University, POKU = Pokhara University, PU = Purbanchal University, TU = Tribhuvan University.

Note: The dates "2008/09" and "2010/11" indicate academic years.

Sources: Government of Nepal, University Grants Commission (UGC). 2010c. *Education Management Information System: Report on Higher Education 2008/09*. Sanothimi, Bhaktapur, Nepal; UGC. 2012. *Education Management Information System: Report on Higher Education 2010/11*. Sanothimi, Bhaktapur, Nepal.

4. Scope and Issues of Teaching

Universities and their constituent and affiliate campuses (including community and private campuses) employ a significant number of higher education graduates, and this is likely to continue over the coming years. While data on job intake is not available, it should be noted that, between 2005 and 2010, an average of about 106 campuses were opened yearly. As mentioned above, in 2010/11, the universities (including their constituent and community campuses) have altogether 15,365 full-time faculty; this implies an average of about 40 full-time faculty members per campus. A rough estimate of faculty requirements based on the trend of new campus construction will show a likely annual demand for about 4,200 master's level graduates. Coupled with the fact that there are significant numbers of nonteaching staff, and the current reality that all the universities engage many part-time faculty, the implication is that the universities will be offering a high number of faculty and staff positions.

While teaching at a university is generally considered a respectable job, it is not seen as particularly attractive. Thus, when it comes to finding suitable candidates, academia in Nepal faces competition from other careers opportunities, as well as from teaching possibilities in institutions abroad. Because of the poor economic situation in Nepal, the country's institutions of higher education have not been able to effectively compete against these opportunities. This issue affects the system in two ways: (i) it is getting increasingly difficult to attract competent academics to join the faculties of Nepali universities; and (ii) it is getting increasingly difficult to retain high-quality faculty.

Another important issue is the aging faculty population. Eventually, these academics will retire, and will have to be replaced. Although data on the distribution of teaching staff according to age is not readily available, the issues of an aging teaching staff and the lack of a plan for replenishing its ranks with qualified new faculty have been raised as a management issue at the higher education institutions around the country.

CHAPTER 3

Major Issues and Constraints in Nepal's Higher Education System

A. Access and Equity

With the opening of new universities and campuses in Nepal in recent years, enrollment in higher education has increased dramatically between 2005/06 and 2011/12 by about 75% from 254,808 to 444,994. Between 2005/06 and 2012/13, an additional 705 campuses were established (about 123% increase from 571 to 1,276 campuses) with the greatest number of campuses opening in 2009.

Among the campuses added between 2005 and 2010, only three were university constituent campuses; the rest were affiliated campuses. Of the latter, 135 were community campuses and 394 were private, and both of these types of campuses depend on student fees for their operation and management. As already mentioned, the community campuses receive token grants from the University Grants Commission (UGC), while the private campuses totally depend on student fees. The community campuses charge substantial tuitions, but the tuition at private campuses are significantly higher. The access of poor students to these campuses will remain very limited unless there are scholarships or fee waivers. Also, some private campuses are expensively constructed and equipped, and are geared to the elite, consequently making the divide between the rich and poor even more pronounced.

Despite the rapid increase in enrollment, the country's higher education gross enrollment rate (GER) of 14% in 2010/11 was much lower than the world average at the time: 26%.[41] In 2011/12, it increased to 16.8%. The expanded access to higher education achieved so far was still not enough to reach a respectable GER of at least 20%.[42] Given the current GER average annual growth rate of about 1.7%, it will take until 2018 for Nepal to reach the 2010 world GER average.

Enrollment is also skewed toward general fields of study, which account for 86% of the total, and these are the areas receiving most of the public funding for higher education. In contrast, enrollment in specialized fields such as science and technology, medicine, and engineering is very limited. Despite the fact that Nepal's economy depends almost

[41] United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics. 2009. *Global Education Digest 2009: Comparing Education Statistics Across the World.* Montreal, Canada: UNESCO.

[42] N. V. Varghese. 2011. The Government and Governance of Higher Education: Issues for Discussion in the Contexts of Reforms in Nepal. Paper presented at the National Conference on Higher Education Policy in Nepal. Kathmandu. 10–11 February; J.B.G. Tilak. 2011. Financing of Higher Education. Paper presented at the National Conference on Higher Education Policy in Nepal. Kathmandu. 10–11 February.

solely on agriculture, forestry, and traditional vocations, and the fact that national development plans highlight the need for expanded higher education in technical, and employment-oriented areas, the number of new technical institutions and the enrollment rates in technical higher education programs remain very low. The low enrollment can be attributed in part to inadequate access, due to the limited number of institutions offering science and technology or professional programs (only about 11%); the higher operational costs and higher tuitions and other expenses for students; and to the lower demand for these programs because most students are unprepared and not interested in science and technology.

Most of the affiliated community and private campuses, including the new additions, offer bachelor's programs in education, management, and the humanities and social sciences. These programs do not require laboratories and specialized teaching staff, so they are less costly to maintain. As a result, access to and enrollment in these programs have expanded rapidly. On the other hand, some private institutions have developed the necessary infrastructure for programs in science and technology, engineering, medicine, and health sciences. However, these programs are financially unaffordable for students from average-income families. Similarly, a limited number of private campuses are running such programs in affiliation with international institutions, but these are targeted at high-income groups.

1. Geographic Distribution

There are also disparities in access across the different regions in the country, despite decades of effort to level the differences. The Far-Western development region is rather behind, followed by the Mid-Western region, while the Central region, mainly the Kathmandu Valley, can be considered privileged in terms of access. The government has been working to ensure that there is at least one university in each of the country's five development regions; and now each region has at least one major university. The distribution is as follows: Purbanchal University and B.P. Koirala Institute of Health Sciences (BPKIHS) in the Eastern Development region; Tribhuvan University, Kathmandu University, the National Academy of Medical Sciences (NAMS), Patan Academy of Health Sciences (PAHS), and Agriculture and Forestry University (AFU) in the Central Development Region (all in Kathmandu Valley, except AFU); Pokhara University and Lumbini Buddhist University (LBU) in the Western region; Nepal Sanskrit University (NPS) and Mid-Western University (MWU) in the Mid-Western Development Region; and Far-Western University (FWU) in the Far-Western Development Region. To date, there are still two districts in the mountains of the Mid-Western region (out of 75 districts in the country) without publicly funded campuses.

2. Social Equity

The disparities in access to education are related to social discrimination. Before the 1950s, higher education was beyond the means of the general public. Education in general, and higher education in particular, was limited to the elite, or at least to those with white-collar jobs in the government. In the distant past, Dalits (lowest in the Hindu caste system), Janajatis (indigenous ethnic groups), and women were not even permitted to pursue higher education. As the country gradually underwent social and political change from traditional to modern values, people increasingly became aware of the importance of education.

However, the expansion of access to education is still inadequate, and has been limited to the country's urban areas.

The *Nepal Living Standards Survey 2003/04* (NLSS 2003/04) had indicated that access to higher education among the poor, disadvantaged ethnic groups, and the Dalits was very low. For the poorest quintile, that survey showed a tertiary-level net enrollment rate (NER) of 0% and a higher secondary NER of just 1%.[43] For the richest quintile, the NER was 10% at the tertiary level and 13% at the higher secondary level. In the NLSS 2003/04, there was also a huge NER gap for the higher secondary level between the urban (11%) and rural (1%) areas. About six years later, NLSS 2010/11 results showed that only 0.7% of the poorest quintile and 2.4% of the second-poorest quintile had completed their secondary education; and only about 0.3% of students from the poorest quintile and 0.4% of students from the second-poorest quintile had continued on to institutions of higher education.

The government is working on generating education data disaggregated by gender and by groups. A recent UGC Education Management Information System report (2010/11) showed some improvement for females and socially disadvantaged groups. Out of a total enrollment of 141,518 in the 302 community campuses, 50% were female, 17.3% Janajatis, 6.0% Madhesi (indigenous groups in the Terai), and 3.5% Dalits. However, these figures also indicate that there is still a long way to go before equity is achieved. According to the National Population and Housing Census 2011, Janajatis constituted about 35% of the country's total population, and Dalits about 18%.

The government has been providing prioritized support for the development of rural areas and disadvantaged groups that includes scholarships for students from remote areas. However, it has been noted that such intervention has been ineffective. Those who were able to get such support eventually moved to urban areas. There is thus a need for a similar strategy that will ensure benefits to the rural areas.

3. Graduates

The country's number of graduates was about 65,000 in 2010/11. Total enrollment was about 408,000 during the same academic year, which was about 60% higher than the number in 2005 (255,000). One major issue affecting the graduation rates is the universities' inability to strictly enforce the academic calendar, especially the schedule for examinations. This means that it takes longer for students to finish certain programs than the prescribed duration. This is particularly true in the Tribhuvan University system, which has the lowest pass rates—37% at the bachelor's level and 39% at the master's level. Given that 90% of the country's higher education students are in the Tribhuvan University system, Nepal's overall average pass rates are rather low—38% at the bachelor's level and 40% at the master's level. Kathmandu University exhibits a different trend in this regard, with a pass rate of 92% at the bachelor's level, and 86% at the master's. It should be noted that the graduation rate is likely to be lower than the pass rate because many students,

[43] According to UNESCO, the net enrollment rate (NER) is the total number of pupils or students in the prescribed age group for a given level of education who are enrolled at that level, expressed as a percentage of the total population in that age group. See: http://www.uis.unesco.org/DataCentre/Pages/country-profile.aspx?code=6040&SPSLanguage=EN

especially at Tribhuvan University, do not pass their examinations in the prescribed years. These students typically need more time to pass their exams before they are eligible for graduation.

B. Quality of Education

Higher education stakeholders, including faculty, students, parents, and employers, are now becoming more worried about the quality of education. Their concerns stem from expectations that educational institutions will meet the expected level of quality, norms, and standards, and that their graduates will possess an expected level of knowledge, skills, and aptitudes. Efforts are being made to achieve improvements in the following four important aspects that are considered crucial in achieving better quality education: curriculum, faculty quality, student admissions, and the institutional environment (including class size and classroom conditions). This section looks at each of these aspects in turn, and then finishes with a discussion of the issues involved in Nepal's implementation of a quality assurance and accreditation (QAA) system.

1. Curriculum Reform

In Nepal, each university develops its own curriculum. The academic council determines the curriculum standards in coordination with the subject committees and the faculty board. All the departments and campuses need to follow the curriculum approved by the academic council. At Tribhuvan University, professors can contribute to curriculum changes through these committees, but at Kathmandu University, professors are given more freedom and authority to shape the curriculum, its scope, and implementation, as deemed necessary.

Tribhuvan University undertook a comprehensive reform of its curriculum in 1998, supported by the Higher Education Project (1998–2002). The main thrust of that reform was a change in the curriculum structure so that the university's programs would meet the standards of the member-countries of the South Asian Association for Regional Cooperation. The reform was limited to content, however, with curriculum implementation practices remaining rather conventional, including the traditional mode of teaching from textbooks. In 2010, Tribhuvan University made revisions in the curricula for all subject areas, using the funds received under the Second Higher Education Project (2007–2014). The revisions included the establishment of some new programs, but the traditional conventions, existing infrastructure, and unchanged standards of faculty training and experience limited the scope of curriculum improvement and teaching innovation. Moreover, even with the new programs, this curriculum reform was still disconnected from national development priorities and opportunities, raising questions about the relevance of the higher education system.

Given the experiences of earlier curriculum-reform efforts, a successful curriculum-reform strategy would have to be comprehensive. It should include training in teaching, infrastructure improvement, and student orientation, as well as technical and logistical support. The reform effort would also need to focus on student learning, emphasizing

practical experience. Students and faculty both need to be made responsible for academic accomplishment, based on measurable achievements.

2. Quality of Faculty

There are no standard national criteria for the recruitment, screening, or hiring of higher education faculty in Nepal. However, universities have faculty-recruitment provisions that are guided by their respective regulations. For example, at Tribhuvan University, a service commission develops the relevant guidelines, criteria, and modalities, and hires faculty for permanent positions based on quotas. In order to apply for a junior faculty position at a Tribhuvan University constituent campus, a candidate must satisfy the university's minimum eligibility criteria, including a master's degree in the relevant subject area and passing grades on the master's exams with an average aggregate score of at least 50%. Prospective faculty recruits must also take a written exam and face interviews with a panel that includes experts and service commission members. The university's affiliate campuses have their own regulations for faculty recruitment, but they must also demand the minimum requirements of the university regarding academic qualifications. It should be noted that, for campuses in the outlying districts, particularly in rural areas, attracting and retaining good faculty members is not so easy, particularly those in specialized fields. In the outlying districts, there is little opportunity for professional development or other beneficial activities for ambitious and enthusiastic individuals, and the salaries are not attractive enough to retain highly competent professionals.

Due to the difficulty in finding qualified and dedicated faculty, and to the complicated process involved in filling permanent full-time positions, the universities and campuses often resort to shortcuts in the recruitment process by hiring part-time or temporary faculty. Normally, for temporary arrangements, campus management reviews the academic certificates of candidates, who are then interviewed and, in some cases, asked to demonstrate their teaching ability in classes that are observed by senior faculty. Tribhuvan University was forced by protesting part-time and contract faculty to give in to their demand for full-time permanent recruitment en masse. This outcome has been considered a significant setback for the process of ensuring competitive and quality faculty recruitment.

Having a master's degree or PhD is considered desirable, and increasingly emphasized for promotion, particularly to the levels of associate professor and professor, but it is not considered essential for faculty recruitment. Moreover, an applicant with a bachelor's or master's degree, but no training or practical experience, can be hired to teach at a university or campus, as there are no requirements regarding training or experience.

A separate issue is the lack of academic productivity on the part of faculty with regard to research, publications, and participation (including the presentation of papers) in academic workshops, seminars, and conferences, even when these activities are considered merit points in faculty recruitment and promotion. Although all universities have provisions for leave with pay, so that faculty members may pursue further studies such as MPhil or PhD studies or research, there aren't many takers. Consequently, the percentage of academics with an MPhil or PhD, or with research experience, has remained small.

The UGC has been providing scholarships and research grants to a number of academics selected on a competitive basis, in an effort to support quality enhancement. And it has started developing a national system for evaluating faculty in higher education. The system is still at a preliminary stage, and must be developed further. In addition, there is still a need to develop programs for pedagogical training for university faculty.

Overall, the quality of faculty teaching requires improvement. The present recruitment criteria and modalities for academic positions should be reviewed to ensure the teaching skills of faculty members upon recruitment. There is also a need to develop and enforce a system of pedagogical training, both in terms of preservice instruction and in-service refreshers. There should also be resource centers that could provide technical and professional support services to university faculty, and to help them keep abreast of instructional methods and resources, including the uses of information and communication technology (ICT). And, most importantly, there is a need to support and motivate faculty to continuously engage in research and professional development.

3. Student Selection

Enforcing entrance tests and an academic calendar for general-subject-area programs has been a challenge at many universities, particularly Tribhuvan University and its affiliated campuses. The situation is different for science and technology, and for other professional programs such as engineering and medicine; these programs have been successfully using entrance tests for admissions. Past efforts to enforce entrance tests in all program areas at the university were met with strong, sometimes violent, resistance from student groups. Tribhuvan University was forced to abandon those efforts, as student protests caused disruptions in the admissions schedule. Kathmandu University has been using entrance tests successfully, however, and the other universities also use entrance tests to regulate enrollment.

Interestingly, there has been no difficulty in enforcing the use of entrance tests for professional and technical education programs. This is because such programs are regulated by professional councils. In science, technology, and management programs (such as those in business administration), the strict requirements in terms of class hours and technical requirements, including laboratory work, leave little room for compromise. Similarly, the students in these programs have a stake in completing their studies on time, so as to have faster access to opportunities for jobs or further study. Such programs tend to attract good, competitive applicant pools, and they require significant investments on the part of the students themselves.

4. Institutional Environment

There is generally no standard for the sizes of higher education classes, except in the case of professional and technical programs, where the professional organizations such as the Medical Council or the Engineering Council dictate their respective standards to the institutions under their jurisdiction (e.g., maximum class sizes of 30 students for bachelor of medicine, bachelor of surgery (MBBS) programs, and 40 for bachelor of engineering (BE) programs). On the other hand, class sizes in general-subject-area programs are often

extended, sometimes beyond capacity, requiring the cramming in of additional chairs and benches. There are also some programs that have fixed class sizes defined by the university dean's office. For example in Tribhuvan University, in the case of bachelor of business administration (BBA) programs, the maximum class size is 30 students, and for master of science programs in physics, the maximum class size is 60. But class sizes are often determined on ad hoc basis, taking into account the demand, physical size or capacity of the existing classrooms, and the need for cost recovery.

There are no norms or standards for classroom sizes, seating arrangements, or basic resources such as blackboards and audiovisual equipment. However, professional programs and programs in science and technology entail specific activities, including demonstrations and lab work, so classrooms used for these programs follow certain standardized arrangements. Classrooms used for general subject areas, on the other hand, are organized rather haphazardly, with few parameters regarding class size, classroom size, or the arrangement of classroom seating, thereby contributing to an environment that is often chaotic. Further, most of the institutions have poorly equipped and maintained libraries, computer labs, cafeterias, student lounges, and extracurricular facilities.

5. Quality Assurance and Accreditation System

In 2007, Nepal implemented a QAA system under the Second Higher Education Project, on a pilot basis. The UGC worked in collaboration with the Asia Pacific Quality Network and India's National Assessment and Accreditation Council to develop the system. As mentioned above, the UGC formed the Quality Assurance and Accreditation Committee and the Quality Assurance and Accreditation Division to serve as the secretariat for the committee. The division also operates the QAA system with the support of a technical advisor, a technical (expert) committee and of a number of resource persons. The UGC is now working to establish a National Board of Quality Assurance and Accreditation, which will be an autonomous body, independent from other functions including reform/ development or support.

In the course of developing the QAA system, it was observed that most higher education institutions

(i) lacked the necessary environment for research, publications, and other academic activities;
(ii) lacked curriculum reviews, feedback mechanisms, and innovation;
(iii) pursued infrastructure development that focused only on classrooms, while facilities for cocurricular and extracurricular activities remained very poor;
(iv) still faced challenges in the servicing, maintaining, and updating of infrastructure; and
(v) lacked adequate full-time staff even for basic core tasks such as management, student supervision and counseling; fostering teamwork in research and development, extracurricular work (including sports and cultural activities), and, most importantly, taking responsibility for academic program development and implementation.

In addition, the education management information system, including basic staff and student record systems, remains inadequate. In order to implement the QAA system, higher education institutions will need both technical and financial support to develop facilities

for information management systems and information and communication technology, to implement professional-development programs for faculty, and to build capacity for operations and research.

C. Relevance

Nepal's current development priorities are clear: to eliminate extreme poverty, generate employment opportunities, and achieve sustainable economic growth. The national strategy is to develop agriculture, forestry, tourism, cottage industries, roads, and transportation. However, an economic survey conducted by the Ministry of Finance (MOF) in 2009 and 2010 indicated that the country had failed to implement any effective policies for these sectors. For example, although national development plans have designated agriculture as a priority sector and as potentially major contributor to the GDP, government efforts to enhance agricultural production capacity and efficiency remain inadequate. Higher education, for its part, has failed to address the staffing needs of the agriculture sector, for instance, through specialized programs to train farm managers, pest controllers, marketers, agricultural engineers, agronomist, and scientists. The number of agriculture campuses and their capacities have remained almost unchanged for decades. The promotion of agricultural innovation—necessary for developing agriculture into an intensive, profit-oriented, and job-creating sector—has not happened. In fact, most agriculture in the country is still subsistence farming. A similar situation exists in the case of other traditional sectors of production. As a result, even such traditional skill areas as forest-based production work, cattle raising, and handicrafts (e.g., woodwork, metalwork, ceramics, leatherwork, and weaving) have declined or remained stagnant for several decades. Analyses of the linkages in other parts of the world between higher education and the development of the national economy—for example, in the Republic of Korea[44] and Singapore[45]—show that success is achieved when they are planned and programmed in a coherent and concerted manner.

The agriculture sector needs to be based, not on subsistence farming, but on entrepreneurial enterprise, so as to broaden the range of opportunities for people with better skills and education. There is also scope for managed forest development and forest-based industrial development, for which higher-level research and expertise are essential. Tourism, hydropower, and transportation are other areas that have been prioritized by national development plans, and these areas could benefit from concerted linkages with reform initiatives in higher education. The manufacture of herbal products and cottage industries could also benefit from the attention of higher education institutions.

Concerned stakeholders have noted that Nepal's higher education graduates, particularly in the general fields, are unable to compete in the labor market, and that, because they are graduates, they are unable to adjust to more traditional forms of social and economic

[44] C. J. Lee. 2006. The Development of Education in the Republic of Korea: Approaches, Achievement and Current Challenges. Background paper for the Policy Seminar for Senior African Educational Policy Makers, organized by the World Bank. Singapore. 19–23 June.

[45] C. B. Goh and S. Gopinathan. 2006. The Development of Education in Singapore since 1965. Background paper for the Policy Seminar for Senior African Educational Policy Makers, organized by the World Bank. Singapore. 19–23 June.

participation. Nepalis traditionally expect "educated" people to work in white-collar jobs; thus, graduates are supposed to be unfit for manual labor, including agriculture and other traditional occupations.

The prospects for employment is an important issue when it comes to educational quality and relevance. However, there is still a lack of research in Nepal examining the links between higher education institutions and the employability of their graduates.

The Nepal Labour Survey for 2008 reported an unemployment rate of 2.1% among persons 15 years old and above. It also noted that only 16% of those employed worked in salaried jobs, indicating that most of the people were self-employed or engaged in jobs as unpaid laborers, probably in family-owned businesses. The survey showed that subsistence agriculture, elementary occupations (basic traditional occupations such as blacksmith, shoemaker, sewer, and weaver), workers in crafts and related trades, and service workers together accounted for 90% of total employment. People with a tertiary education were mainly professionals (35%), followed by technicians and associates of professionals, and then by service workers. However, correspondence between the rate of employment and level of education was not strictly established, except in the case of high-level officials.

Given the employment situation shown by the Nepal Labour Survey, combined with the state of Nepal's economy at the time (with the per capita GDP at $473), and the fact that more than 30% of Nepalis were living below the poverty line, there was clearly a need for a comprehensive plan of economic development with an emphasis on enhancing formal and organized economic activities. The demographic and economic consequences of Nepal's ever-increasing mass movement of workers, particularly that of youth leaving for foreign employment, are now attracting more public attention. The NLSS 2010/11 indicated that 56% of households received remittances during FY2011. Remittances accounted for 27% of national household income in FY1996 and 31% in FY2011. The total number of Nepalis working in foreign countries as of 2011 was 1,753,822. In FY2011 alone, 354,716 went abroad for work. From 2004 until 2011, there was an average annual outflow of about 200,000 youths from Nepal seeking work abroad. It is important to note that this figure does not include the large number of people who have gone to India for employment.

The trend of increasing migration of workers seeking foreign employment is likely to remain for many years to come, given the poor economic conditions in Nepal.

Although the government is making efforts to facilitate and expand opportunities for foreign employment, there is little provision for preparing new prospective workers in terms of education and training. No university, campus, or institute is involved in educational or training activities relevant to youths seeking employment abroad. Consequently, job seekers have to contend with low-skill and hazardous jobs. They also face problems due to the language barrier and to the lack of skills needed to adapt to a new culture and environment in the countries where they will be working.

Higher education institutions must also work to help identify decent employment opportunities abroad. Nepal has already become one of the sources of laborers for Hong Kong, China; the Republic of Korea; Malaysia; Singapore; and the Middle East. Also, a significant number of students—more than 26,000 per year—are going to other

Asian countries, and to Australia, the United Kingdom, the United States, and European countries for study, as these countries offer opportunities for both a good education and employment.

D. Organizational Management

1. Role and Responsibilities of the University Grants Commission

The UGC is a statutory body that was established to coordinate the system of higher education, manage government grants for higher education, provide advice to the government on the establishment and development of higher education institutions, formulate and implement higher education policies, monitor quality, and provide feedback. However, the exercise of its authority has so far remained limited to distributing government grants to universities and community campuses, and providing funds to faculties for their quality-enhancement programs.

Although the chair and the member secretary of the UGC are academics appointed by the government, its execution mechanism was basically set up as a financial management unit, with an administrative and accounting staff. There is no mechanism for monitoring and evaluating whether the commission is functioning according to its statutory role or fulfilling its original mandate.

Also, in the current highly politicized environment, the appointment of the chair, member secretary, and non-ex officio members has been a difficult task. The UGC is sometimes left without a chair and/or member secretary for months, greatly compromising the commission's ability to function effectively.

Examining the roles and responsibilities of the UGC is imperative, particularly with regard to the distribution of government grants to affiliated community campuses. The UGC also registers, monitors, and supervises community campuses, but affiliated campuses are mainly the responsibility of the affiliating universities. The focus of the UGC is on the overall strengthening of university systems by ensuring that they are well monitored and supervised. In this regard, there is a need to develop a national policy framework to define the scope, potential, and modalities of all institutions concerned—whether a university has affiliates or only one campus; whether it is technical, multidisciplinary, or has any special types of programs, such as distance-learning, open-university courses, etc. In the case of the affiliating universities, the scope of affiliation in terms of location, distribution, and program types should be defined.

2. Universities and Their Campuses

There is an absence of rational guidelines, standards, and frameworks according to which different universities should be run and managed—for instance, regarding a fixed academic calendar, course equivalency programs, inter-university academic exchanges, and the

sharing of programs and facilities. Moreover, affiliation is based on demand and pressure, rather than on any set of criteria. Universities have become affiliating entities rather than academic centers. They are expanding through their constituent campuses as well as through affiliation, yet they lack the internal mechanisms to ensure that such expansion is taking place in line with established rules and standards, and in a manner that is supportive of the country's development plans.

Moreover, the affiliated community campuses exercise autonomy. For example, they can decide which university to apply to for affiliation, and for what programs. They are also responsible for mobilizing their own resources and determining their own procedures and criteria for hiring faculty and staff. They maintain ownership of campus properties, and they collect student fees. However, these campuses must comply with the academic requirements set by the affiliating university. The campus management committee (CMC) is the governing body of each community campus, and it is comprised of several stakeholders, the number of which varies by campus. The composition of the CMC is structured to ensure the participation of organizations and individuals that have contributed to campus development or that are potential contributors.

Community campuses are required to operate like public institutions, but without adequate and stable sources of funding. Although the government has recognized the importance of community campuses since 2007 and has provided some funding in the form of block grants, community campuses are still hard-pressed for resources, and are vulnerable in terms of financial sustainability. Many community campuses face difficulties in meeting their financial obligations, including paying staff salaries on time. These campuses have also started to be threatened by political incursions by student and faculty unions. In an effort to prevent the situation from worsening, community campuses have been inviting representatives from political parties to be members of their CMCs.

Private campuses are established and registered according to the Companies Act of Nepal, which means that they can earn profits and are liable for taxes. Usually owned and run by private individuals or by a group, they may have shareholders or a board of directors. The owners keep the property, including the campus endowments, in their own names, and can sell or transfer it like any other property. There is no government policy framework regulating private campuses other than the requirements for registration and taxes based on the Companies Act. Private campuses have almost full management autonomy, with the right to make decisions regarding all aspects of their operation, management of student fees, endowments, and staff recruitment and professional development. They depend on the affiliating universities only for program affiliation, the academic calendar, and for examinations and certification.

One positive aspect of the private campuses' autonomy is that they have the freedom to implement any innovations they want. For example, some campuses have started collaborating with hotels to include practical and experiential learning in their hotel management programs, or with hospitals for their health-related programs, such as for nursing and the MBBS. A negative consequence of the autonomy of private campuses is that many of them have become very commercialized. For example, a campus may charge students all kinds of fees, such as the annual admission or admission-renewal fee, computer fee, campus development fee, and logistics fee, in addition to tuition. School bus fees are enforced

where buses are provided. Private campuses also offer only those academic programs that are in high demand, cost-effective in terms of management, and profitable.

These campuses have also practiced "shopping for programs" by affiliating with different universities. Thus, some private campuses affiliate their bachelor of business studies (BBS) program with Tribhuvan University and their BBA program with Purbanchal University. Some even run programs such as the "A level" (General Certificate of Education, Advanced Level) and the BIM (bachelor of information management) in affiliation with institutions abroad. "A level" programs are mostly affiliated with Cambridge University, in the United Kingdom. This has helped expand opportunities for students to benefit from diversified programs that are recognized abroad. However, a fundamental question has been raised regarding the concept of institutional affiliation: Would it be more rational to affiliate by institution or by program? For example, should a campus be institutionally affiliated only with Cambridge University or would it be better to run different programs adopted from different universities?

3. Required Monitoring

As of early 2013, there is no comprehensive system for monitoring higher education institutions in the country. The UGC monitors the universities and community campuses receiving government funding, accomplishing this through audit reports and an information document each recipient institution must submit to receive its funding. The UGC has also set up an education-management information system that collects and publishes annual statistical reports on selected indicators. The report covers the 9 universities and about 429 community campuses. However, a practical strategy is needed for bringing private institutions into a monitoring system. In addition, there has to be a more effective way to monitor the performance and service delivery of all institutions, to ensure their public accountability with regard to the concerns of the stakeholders and the government.

The universities are responsible for monitoring their affiliated institutions and academic programs. They monitor all their affiliated campuses through student enrollment and examination records. The campuses are required to pay affiliation fees to the universities, and to submit reports on student enrollment, programs activities, examination results. But a more meaningful monitoring processes still need to be developed for many other important aspects of affiliated campus and program operations, such as curriculum, teaching and learning practices, infrastructure, academic environment, student examinations, and support services such as counseling.

4. The Need for Political Commitment

In Nepal, political commitment on the part of the government is important for ensuring the appropriate environment for higher education development. The faculty unions and student unions at the country's higher education institutions, particularly at Tribhuvan University and many of its affiliated campuses, have direct and explicit ties with Nepalese political parties. Therefore, the national political situation has a direct impact on higher education. The ties between the faculty and student unions and the political parties are deeply rooted in the country's culture and history. These unions have participated, and

even taken lead roles, in national political movements since the earliest years of higher education development in the country. Their strength lies in their ability to plan protests, and to mobilize intellectuals to offer their intellectual and vocal support to these protests and even participate in them.

One negative aspect of these ties is that competition among political parties also affects the institutions directly and openly, often dwarfing academic concerns and interfering with staff recruitment and placement, student enrollment, and the operation of academic programs. Another negative aspect is the incursion of dubious elements into the unions, and their exertion of pressure on administrative decision making, for instance, regarding the process of student admissions, examination scheduling, the academic calendar, and even the financial management of higher education institutions. For these reasons, there must be a political consensus in support of a stable and conducive academic environment at the universities, campuses, and institutes, together with support from the political parties for the enforcement of academic standards, including adherence to the academic calendar.

5. Student Disruptions

Additionally, pressure from students for sporadic admissions and shifts in examination schedules has upset the integrity of the academic calendar.[46] As the result of student-group pressure, student admissions can take place in the middle or at the end of a semester or academic year, especially at Tribhuvan University's affiliated campuses that offer programs in general subject areas. University authorities have often given in to student pressure because student groups are associated with unions that are, in turn, directly linked to powerful political parties. In many instances, the academic year was extended, even overlapping into the next one. Such practices have delayed graduations for more than 6 months, generating additional opportunity costs for students and increased financial costs for the institutions. Given the graduation rate of over 65,000 per year, and the annual public spending per graduate of $653, the cost due to a 6-month delay would amount to an additional 50% of total expenditure, totaling over $60 million; and the graduates would lose 6 months of potential income from employment.

These student disruptions are less frequent at Tribhuvan University's affiliated community campuses, and they are rare at the affiliated private campuses. Nevertheless, all Tribhuvan University-affiliated institutions are affected, at least indirectly, because of the disruptions in Tribhuvan University's academic calendar and central examination system. Disruptions are also frequent at the other public higher education institutions, except for Kathmandu University, which has been least affected by student protests, and has been able to follow its academic calendar.

Addressing student concerns, such as those involving the admissions process, compliance with university rules, and the academic calendar, requires a serious and effective approach. One possible strategy would be to ensure the availability of student counseling, as this service could help students with their studies, financial planning, academic difficulties, and planning for their future careers. Maintaining a student record

[46] "Sporadic admissions" refers to irregular or unscheduled admissions periods, often taking place before exam registration or student union elections.

system with individual portfolios is a must for effective counseling and follow-up support. There is also a need to build a consensus within the student unions, and the political parties they are associated with, in support of academic integrity and of compliance with university-prescribed norms and standards, including the academic calendar and the integrity of examinations.

Setting and following the academic calendar has remained a huge challenge because of the current social and political environment in the country. In the case of Tribhuvan University, even the student admissions date could not be fixed; as a result, the scheduling of examinations and notification of exam results are often delayed—even, as mentioned above, to the point where they overlap with the following academic year.

E. Financing and Internal Efficiency

Because of the lack of funding formulas or criteria, the allocation and distribution of government grants vary widely across universities. Based on per-student allocation, in FY2008/09 Kathmandu University received the lowest amount of funding in grants, about $38 per student per fiscal year, while Nepal Sanskrit University (NSU) got the highest, at $986. For Tribhuvan University, the amount was $222, and the national average was about $233 per student. Total public financing per student averaged $661 per fiscal year, with NSU getting the highest amount, at $3,179; Kathmandu University the lowest, at $93; and Tribhuvan University averaging $653.

Should the current situation continue, government funding will need to continue increasing, as student enrollment is expanding by 11% annually. For example, if average grant funding is to be maintained at $233 per student, then—with an 11% increase from the 2009/10 enrollment of 351,000—the requirement for FY2009 would be an additional $9.2 million. Over the following years, the amount would have to keep increasing by 11%, on a compounded basis, just to maintain the same level of per-student funding. In 2020, the government would have to provide grants totaling 2.9 times the amount it provided in 2010. Still, the current level of financing cannot be considered satisfactory, given the quality and conditions of higher education. The government will have to increase its grant funding many times over to reach an adequate level. The current trend of growing enrollment and the development needs of higher education will thus have a strong impact on government budgeting. Government funding for higher education currently constitutes 9.92% of the total education budget, and 1.64% of the national budget. These percentages will inevitably have to increase.

A study that would analytically and systematically assess the cost-efficiency of higher education, and determine the exact financing requirements of higher education over the next several years, based on set goals and targets, would be a strong, pragmatic step toward reconfiguring higher-education financing practices. Such a study would also help identify the funding sources that could support immediate and long-term plans.

There should also be a rational framework for cost sharing between the government and the higher education institutions (with the institutions' contributions coming from student fees, among other sources). There are two points to be made in this regard:

(i) cost sharing may depend on the nature of each university and the types of programs offered there; and (ii) it should be complemented by other sources of support for institutions, such as income-generating investments that would be implemented by the institutions themselves.

A rationalization of the methods for calculating recurrent costs is in order, as there is the possibility of variations without justification. For example, the 2009/10 annual work plan and budget report of Tribhuvan University presented the estimated program costs per student (Table 15). With this information, it is possible to estimate the total expenditure on the basis of cost per enrollment and the number of enrollments—which comes to about $68.4 million. The government may decide to fix its contribution as a percentage of the calculated cost. The cost per student for agriculture and animal sciences is more than three times higher than for forestry. Similarly, law is several times more costly than management, education, or humanities. Cost calculations should also be based on the ideal number of students per class and the desirable level of efficiency in management.

Table 15: Tribhuvan University Cost Estimates per Student and Enrollment, by Program, 2009/10

	Engineering	Agriculture and Animal Sciences	Medicine	Forestry	Science and Technology	Law	Management	Education	Humanities
Cost per student ($)	1,625	7,693	8,379	2,304	505	647	100	116	199
Total number of students	5,638	1,181	1,945	520	15,016	3,583	45,941	54,828	59,498

Source: Tribhuvan University. 2009. *Tribhuvan University Annual Work Plan and Budget, 2009/10*. Kathmandu.

The lack of consistency in funding across higher education institutions and across fields of study have some critical implications for the development of higher education in Nepal. The lack of consistency in funding across higher education institutions raises the critical question of why some universities get high amounts of funding per student while others receive insignificant amounts. On the other hand, the lack of consistency in funding across fields of study has implication on the quality and effectiveness of the programs in the fields of study receiving very small funding. Overall, it also raises the question on cost efficiency of institutions and fields of study that receive high amounts." of funding.

Student–teacher ratio (STR) data show that the universities are operating in a marginal-efficiency environment. At Tribhuvan University's constituent campuses, the average STR is 21:1, while at the university's affiliated campuses, the average STR is 24:1. The ratio varies greatly by campus and, more importantly, by program, particularly by subject area. It should be noted that even when programs are phased out or closed down due to insufficient student enrollment (e.g., law programs granting proficiency certificates or bachelor's

degrees), the faculty in these programs remained on the university payroll, while faculty in other areas were forced to handle overcrowded classes.

The average STR at the constituent campuses is 10:1 at Kathmandu University, 9:1 at Pokhara University, and 14:1 at Purbanchal University. The STR for NSU is only 5:1; this university has very few students, as the curriculum consists mainly of Sanskrit and Sanskrit-based subjects linked to ancient literature and traditions. The lowest STR, 1:1, is observed at the National Academy of Medical Sciences (NAMS), an old hospital that was transformed into an academic institution. The class sizes at Tribhuvan University are both manageable and cost-effective, an indication that Tribhuvan University is more efficient than other universities in this regard. There is scope for further analysis in determining efficiency and effectiveness in terms of STRs in Nepalese universities.

An analysis of staffing at Tribhuvan University and its constituent campuses shows that it has four categories of employees: academic (i.e., teaching and/or research) staff, administrative staff, technical or support staff, and utility or service staff (Table 16).

Table 16: Size of Faculty and Nonteaching Staff, 2009/10

Staff Category	TU	NSU	KU	PU	POKU
Academic	7,950	560	341	49	50
Administrative	2,240	223	62	99	45
Technical or support	1,920	30	...	99	91
Utility and service	2,962	207	61	64	41
Total	15,072	1,020	464	311	227

... = data not available, KU = Kathmandu University, NSU = Nepal Sanskrit University, POKU = Pokhara University, PU = Purbanchal University, TU = Tribhuvan University.

Note: The date 2009/10 refers to the academic year.

Sources: The annual reports of Kathmandu University, Nepal Sanskrit University, Pokhara University, Purbanchal University, and Tribhuvan University for 2009/10.

The academic staff consists of professors, associate professors (readers), lecturers, assistant lecturers, and instructors. The administrative staff consists of the administrator, associate administrator, deputy administrator, assistant administrator, head assistant, and assistants. The technical staff mainly consists of the librarian, assistant instructors, and laboratory assistants. The utility or service staff mainly consists of drivers and laborers. This staffing arrangement is based on traditional staffing pattern, and thus needs critical review for possible restructuring.

The academic and nonacademic staffs are almost equal in size at Tribhuvan University and Nepal Sanskrit University, indicating that there is room for nonacademic staff rationalization. The need for such rationalization is even more evident at Purbanchal University and Pokhara University, where the size of the nonacademic staff greatly

exceeds that of the faculty. Kathmandu University has stringently kept the number of nonacademic staff low; and this institution does not differentiate between technical and nontechnical personnel within the administrative support staff. The community campuses have also managed their staffing stringently; as a result, their nonteaching staffs are proportionately far smaller.

The concept of cost recovery for higher education institutions is directly linked to student fees. Until recently, the monthly fee at Tribhuvan University for general subject areas was NRs50 (less than $1). Now, after a major struggle, the university has been able to raise that amount to NRs250 (about $3) per month. A tentative cost recovery calculation indicates that the university's monthly operational cost recovery is below 15%. The situation is similar at NSU. Various universities and campuses have taken measures to increase their student fees. One such measure is to raise the development fees charged to the students. When targeted development programs and their costs are presented in a transparent manner, it is possible to convince the students and their guardians to pay the relevant development fees on an annual basis. Another measure, taken by Tribhuvan University's Institute of Engineering, consists of providing two admission options: (i) tuition subsidized by a government grant and (ii) tuition fully paid by the student, covering the total per-student operational costs. Prospective students in the engineering program are free to compete for admission with a grant-subsidized tuition, based on criteria clearly defined by the university, such as entrance tests, interviews, and the scores on the School Leaving Certificate and Higher Secondary Education Board exams. Many high-demand programs, such as the BBA and the MSc in physics, are now being run by Tribhuvan University constituent as well as affiliated campuses on a full cost-recovery basis.

Kathmandu University, Purbanchal University and Pokhara University are already recovering their operating costs through student fees, and they have raised their campus affiliation fees. Community and private campuses have also raised their student fees to recover their total operating expenses.

Cost recovery is a critical issue that is often related to the level of commitment of the government to higher education development. The critical question is what formula to use to compute how to recover costs from student fees and other sources. This is an area for further study, including an investigation of various modalities and options for cost recovery that could be incorporated into a funding framework.

The absence of a funding framework is yet another issue: such a framework is needed to ensure consistency in government funding for universities. For example, during FY2006–FY2007, the government calculations and provisions regarding grant funding per graduate output was highest at NSU, followed by Pokhara University, Tribhuvan University, Purbanchal University, and Kathmandu University.. The national average for government grant funding per graduate output is about NRs48,462 ($507). A coherent policy on grants, including norms and criteria will rationalize funding across institutions and through fiscal years.

F. The Use of Information and Communication Technology

Nepal has achieved some progress in the application of information and communication technology (ICT). In the higher education institutions, ICT generally consists of computers, projectors, and multimedia equipment used for internet services, course software, and teaching and studying. ICT development is a priority in professional and technical programs and in private colleges, which typically set up computer labs and use ICT in the classroom. In the case of private colleges, these facilities are also used as a public relations strategy to attract more students. At community campuses, ICT facilities initially offer only limited access, gradually increasing that access as cost recovery permits. ICT is generally used in the universities for information dissemination, communications, record keeping, accounting, and for general administration.

ICT in Nepal is in need of further development. There will be opportunities as well as challenges for its greater application to higher education. The crucial first step would be to gather information on the existing ICT facilities, through an assessment or in-depth study of the level of ICT use, and a comparison with ICT use in other countries. There should also be a comprehensive ICT development framework for the higher education system. Finally, all the universities need to develop reliable education-management information systems for use in planning, monitoring, and providing information to their stakeholders.

CHAPTER 4
Innovations and Good Practices

Implementing higher education reform in Nepal is a tremendously challenging task, especially given the current problems resulting from social, political, and economic events in the past. Higher education institutions were the traditional base for mobilizing youth and intellect in the service of pro-democracy movements. Today, however, the traditional rules and structures of these institutions. For example, at Tribhuvan University and its affiliated campuses, such groups often oppose reforms aimed at enforcing rules, academic discipline, and individual responsibility. Despite this situation, the Mahendra Ratna Multiple Campus, a constituent campus of Tribhuvan University, was able to achieve success. The lesson learned from this case is that, although political groups and movements can generate intense emotions, and are difficult to contain if they get out of hand, mitigation is possible by engaging stakeholders in thought-provoking dialogues and consensus-building consultations (see section E of this chapter).

While the number of university constituent campuses increased only a little from 86 in 2005/06 to 96 in 2012/13, the numbers of affiliated private and community campuses increased markedly, from 485 (170 community and 315 private) in 2005/06 to 1,180 (429 community and 751 private) in 2012/13, primarily due to initiatives on the part of communities and private entrepreneurs.

The government recognizes the contribution of the communities to the development of higher education institutions, and for this reason provides funding support for community campuses through the University Grants Commission (UGC). The government also provided community campuses with development support under the Second Higher Education Project (SHEP).

In line with the higher education strategies under the Tenth National Development Plan, the UGC has identified some important needs, including: quality improvement, with a focus on professional recruitment and development; a quality assurance and accreditation (QAA) system; and greater access for poor and disadvantaged students. The UGC has been generating various schemes for enhancing the standards and relevance of higher education through government funding under its regular quality-improvement program.

A. The University Grants Commission Regular Quality Improvement Program

The UGC has been supporting various schemes for enhancing the quality of higher education by regularly allocating funds to training, scholarships for MPhil and PhD students, faculty research, study visits, travel for participation in academic seminars and conferences, the organization of academic workshops and seminars, library and infrastructure development, etc. This support is provided according to the UGC's quality improvement program guidelines.

To set consistent standards for the qualifications and competence of higher education faculty, the UGC has started to develop a teacher-training program, together with teacher eligibility tests and certification. This is to ensure that recruited faculty members meet the minimum criteria for knowledge and teaching skills needed in higher education programs. This initiative, however, is still at the preliminary stage.

B. Funding Research and Academic Enhancement Activities

The UGC has been providing small grants to support the research capacity of university faculties. Since 2007, it has initiated various mechanisms for providing research support to faculty members and their institutions, with a view to linking university curricula to the country's development goals and other needs. These mechanisms include funding for competitively selected research projects, training in research methodology, dialogue with business and industry, the establishment of research management cells, and the development of a research library. The UGC has set up a 13-member research council, with various stakeholders represented, including universities, researchers, other research councils (e.g., Nepal Health Research Council, Nepal Agriculture Research Council, and National Academy for Science and Technology), and the Federation of Nepalese Chambers of Commerce and Industry. It has also established a division to develop an effective system of research support. These initiatives were funded until recently under the SHEP.

The UGC has been providing support for academic seminars, workshops, and curriculum orientation programs. These grants also cover the travel expenses of university teachers who participate in academic seminars and conferences. Finally, an academic committee consisting of professors from various subject areas has been formed to facilitate the various quality-enhancement programs funded by the UGC.

C. The Second Higher Education Project

The government developed and implemented the SHEP in order to spearhead major reforms in higher education. The project ran from July 2007 to June 2014, utilizing $60 million from the World Bank's International Development Association. There were two major goals: (i) to improve the quality and relevance of higher education and research

through a set of incentives promoting better institutional management and financial sustainability; and (ii) to achieve better access to higher education for academically qualified underprivileged students—including females, Dalits, and Janajatis—through financial assistance and improved standards at higher secondary schools.

The implementation of the SHEP is expected to result in (i) greater stakeholder participation in (and contribution to) the reform process, in the form of matching grants; (ii) performance grants, given on the basis of criteria- and indicator-based assessments; (iii) a proxy means test to select the most disadvantaged students for financial assistance; (iv) funds for public higher secondary schools to support better performance and expanded access; and (v) the development of a QAA system and a management-information system to strengthen the higher education sector.

The grant from the World Bank focused on four components: the reform of higher education, student financial assistance, the reform of higher secondary education, and a strengthened higher education system capacity.

The reform component had two subcomponents: institutional reform grants and research grants. Institutional reform grants accounted for 59% of SHEP assistance, providing higher education institutions with incentives to undertake reforms, particularly those focused on good governance; institutional autonomy; management efficiency and effectiveness, financial sustainability; expanded services; and improved equity and inclusivity for female, poor, and disadvantaged students. A total of 126 institutions (including 3 universities [Kathmandu, Purbanchal, and Pokhara], 4 autonomous and 30 decentralized constituent campuses of Tribhuvan University, and 89 community campuses) participated in the institutional reform grants program.

One important aspect of SHEP support for Kathmandu University, Purbanchal University, and Pokhara University was the introduction of "formula funding." Under formula funding, the universities received block grants that included fixed amounts for core administrative costs, student tuition waivers, and scholarships for needy students. They also received subsidies for the recurrent costs of master's and doctoral programs. The SHEP provided incentive grants to these universities only for a limited time, in preparation for the adoption of formula funding (Box).

The research grants amounted to $4.5 million, and supported the following activities:

(i) research projects by faculty or students at institutions, to be selected on a competitive basis;
(ii) the development of the Tribhuvan University library as the national research library;
(iii) the development of research management cells by selected institutions;
(iv) research methodology training, industry–academia dialogue, and dialogue to foster a culture of enquiry;
(v) support for university research laboratories; and
(vi) coordination between laboratories for sharing testing services.

The SHEP also established the Student Financial Assistance Fund (SFAF) for academically eligible students from poor and disadvantaged communities, to cover the cost of their

Box: Formula for Funding the Participating Universities

With formula funding, the government provides a block grant to the recipient university in an amount equivalent to

(F = A+B+C)

A = student fee waivers and scholarships for up to 20% of the students.
B = cost sharing through subsidies equivalent to 20% of student tuition at the master's level and 50% at the MPhil and PhD levels.
C = a lump sum allocated for core administrative support, equivalent to the bare minimum needed to run a publicly funded university office.
F = the total amount of the block grant.

The university may run on-demand programs for the government, in which case the government should bear the full cost of these programs.

Source: Second Higher Education Project, Project Appraisal Document.

studies at the higher secondary and bachelor's levels. To ensure that the financial assistance from the project reached the target groups, proxy means testing was used to identify needy students and to provide them with scholarships. Proxy means testing under SHEP–SFAF gives preferential treatment to disadvantaged castes and ethnic groups, and to female students. An expansion of the assistance fund is envisioned to be achieved through fund-raising activities.

The component on enhancing higher secondary education was designed to improve access to higher education for rural students by improving their access to quality higher secondary education. Provisions included basic grants to all community higher secondary schools that met basic accountability requirements for upgrading their physical facilities and teaching staff.

The higher education capacity component was designed to develop the capacity of the higher education system through activities such as (i) establishing a national QAA system to provide a regulatory framework for quality assessment of higher education institutions and their programs, (ii) developing a comprehensive higher education management information system, and (iii) initiating policy research and dialogue. The system capacity development component also included support for staff training and equipment.

D. The Role of Official Development Assistance in Reform Efforts

Development assistance for higher education reform has been geared mainly to conducting studies, analyzing policies and programs, and supporting improvements in infrastructure, curriculum, and management.

The first significant reform initiative was an analysis of higher education, including policies, programs, issues, challenges, and needed changes. This analysis was supported by the United Nations Development Programme (UNDP) during the 1990s, with a view to providing technical and funding support for various reform activities at Tribhuvan University. A higher education development master plan was prepared as an important outcome of this partnership between UNDP and the university.

This analysis was followed by the Higher Education Project, supported by a loan from the World Bank, which provided technical assistance as well as funding. The technical assistance included the engagement of experts to analyze contexts, issues, and experiences, and the development of conceptual approaches to reform. After the completion of the project, an impact study was carried out and consultations were held regarding the outcomes of the study and the way to move forward. These activities led to the formulation of the SHEP, including its implementation plan, funding modalities, and provisions for monitoring and technical support.

In February 2011, the major stakeholders in the higher education system, including the National Planning Commission, the Ministry of Education (MOE), and the UGC, jointly organized a conference in Kathmandu on higher education policy, with technical and funding support from the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Bank. Earlier, UNESCO Nepal had supported a study on higher education policy options, with an emphasis on social inclusion.

Further reforms are anticipated at Nepal's universities and campuses, and government is expected to provide opportunities for students, faculty, and administrators to participate in them—and benefit from them.

E. Some Notable Initiatives

Reform grants, which are a combination of performance grants and matching grants, motivated universities and their affiliated campuses to undertake major reform initiatives. The administrations of the participating institutions were emboldened by the prospect of long-term support from the UGC through the SHEP. They also engaged in stakeholder mobilization, with methods that often proved to be genuinely innovative and even inspiring. What follows is a description of some these initiatives.

Stakeholder mobilization at Mahendra Ratna Multiple Campus. Jas Bahadur Lungeli, chief of Mahendra Ratna Multiple Campus (MRMC), in Ilam district, Eastern Development Region, worked with his team to initiate consultations with faculty, students, and the campus management committee (CMC) to build a consensus in favor of gaining autonomy for MRMC within Tribuhavan University. He knew that the first and most challenging hurdle would be resistance from students and faculty, due to earlier unresolved issues that made them think that autonomy would lead to a loss of government funding for the campus.

Initially, the dissatisfied students and faculty resorted to protests, even padlocking Lungeli's office. Eventually, mainly through Lungeli and his team's confidence and persistence, they won over the students and faculty. He helped to form a council of student unions to

bring and discuss their concerns on autonomy and other issues. He also helped faculty members get organized through faculty committees to discuss and to reach a consensus for autonomy and to address the issues of job security and professional development opportunities when the campus becomes autonomous. Lungeli and his team also formed a resource mobilization committee consisting of faculty, some members of the CMC, a former mayor of Ilam, and representatives of local organizations. A broad educational forum was created in Ilam by mobilizing the stakeholders in the district as well as outside, particularly in Kathmandu. This innovative approach, involving multilevel mobilization, helped to break the resistance to autonomy and reform.

As a result of the efforts of Lungeli and his team, MRMC became the first autonomous constituent campus of Tribhuvan University. MRMC is now authorized to make and implement its own development plans, establish new programs, and manage its own staff and resources. As MRMC remains a constituent campus of Tribhuvan University, it still follows the university's rules, regulations, and organizational provisions; and the government still provides the campus with earmarked block grants through the university. Prior to this, however, MRMC was not allowed to choose decentralized management over the centralized Tribhuvan University system. The campus depended on the university's central administration regarding all decisions, appointments, and programs. For example, despite the many development opportunities in Ilam district, which is well-known for its entrepreneurial environment (with many tea estates and spice, herb, and dairy farms), the campus did not benefit from these opportunities because it functioned only as an outpost of Tribhuvan University, without any divergence from the university's traditional courses.

Since achieving autonomy, in 2009, MRMC has made progress in developing a strategic plan and improving its resource mobilization. It became eligible for the SHEP reform grants of up to NRs162.5 million, and received support from the Government of India in the form of Rs40 million for building new classrooms and another Rs15 million for library development.[47] Faculty members have planned and managed their own training program with SHEP funding support. And MRMC is now developing a new market-oriented program in floriculture.

MRMC's success in mobilizing its stakeholders to support autonomy is highly significant, as it can serve as a model for other constituent campuses, enabling them to break the constraints imposed by Tribhuvan University's complicated bureaucracy and centralized management of human resources; funding; and, most importantly, academic programs and activities.

Student union council at Balkumari College. The management of student unions by Balkumari College, a community campus in Chitwan district, Central Development Region, is another example of an innovative approach to institutional reform. Although the leadership of the college student union is chosen through elections, students affiliated with political parties formed their own unions (also linked to their respective parties), and they organized activities that often led to chaos, and even conflict, among the student unions. The college administration, particularly the campus chief, took the initiative in finding a solution to this problem.

[47] "Rs" refers to Indian rupees.

Through consultations with the student unions, and through general representative gatherings, the college administration was able to engender cooperation. It set up a council representing all the unions to coordinate various student activities and representative organizations, and it provided separate notice boards, erected in a row, to allow the student unions to post their own messages, notices, and programs. An agreement was made among the student unions and between the council of student unions and the college management, that students would not indulge in wall painting, paste posters, distribute pamphlets, or hold mass meetings on campus without the approval of the administration. This agreement ended some long-standing problems at the college, and has helped to keep the campus environment clean, student-friendly, and academically conducive. Several other campuses have since adopted this approach to managing student unions and their activities.

This participatory form of management at Balkumari College has even helped the college gain certification for quality and environmental management, based on the criteria set by the International Organization for Standardization (ISO). This success motivated the college to participate in the initial pilot of Nepal's QAA system, under which it achieved accreditation on the first attempt.[48]

Bachelor of science in tea technology and management at Mechi Campus. Following stakeholder consultations held under the SHEP reform grants program, Mechi Multiple Campus, a Tribhuvan University constituent campus in the Jhapa district, Eastern Development Region, decided to make its programs more relevant to the local social and economic environment. Motivated by the prospect of being a pioneer in developing curricula directly relevant to the local economy, Mechi Campus introduced a 4-year bachelor of science (BS) program in tea technology and management.

The Eastern Development Region has 40 tea estates and more than 12,000 small tea farms, covering a total area of 17,000 hectares (with the potential to expand to 100,000 hectares). There are 42 tea factories and about 70,000 workers, but the region does not have enough trained personnel to manage them properly.

The BS in tea technology and management is an ambitious program intended to address (i) the technical, scientific, managerial, and socioeconomic aspects of tea cultivation; (ii) the processing, packaging, and stocking of tea; and (iii) the tea business in general. Establishing the program was not easy, however, as there was no precedent in Nepal's higher education system. Even in other parts of the world there are few institutions offering such programs, so there was a lack of qualified faculty required to make this program function. But Mechi Campus adopted an innovative approach to overcoming these obstacles: tapping the scientific, technology, and management expertise of Tribhuvan University. The tea technology and management program, which operates under Tribhuvan University's Faculty of Science and Technology, set up an academic advisory committee that included deans of the faculties of Management, Agriculture, and Science

[48] In 2008, Balkumari College received an ISO 9000 certificate, which refers to quality management criteria stipulated by the ISO, for its good management practices. This success boosted the college's confidence to apply for an assessment by Nepal's QAA system, under which it was accredited in 2009. Further, in 2010, the college received an ISO 14000 certificate, which is given for good environmental management. Note that the ISO develops the standards, but certification is done by other organizations.

and Technology; the director of Curriculum Development Centre; and the controller of examinations.

As Tribhuvan University had no previous experience in developing and running a multidisciplinary program, Mechi Campus sought technical support from three relevant institutions in India that did have such experience: the Department of Tea Science, at the North Bengal University, in Darjeeling; the Department of Tea Husbandry and Technology, at Assam Agricultural University, in Jorhat; and the Assam Darjeeling Tea Research Centre, in Kurseong. Mechi Campus also mobilized local stakeholders for the necessary initial investment. The program later qualified for SHEP support.

Turbine testing lab in Kathmandu University. In view of Nepal's immense hydropower potential and the country's plans for promoting hydroelectricity to address existing energy demand, Kathmandu University decided to make its academic programs and laboratories directly relevant to the development of hydroelectricity. Utilizing facilities that already existed on its premises, the university set up a turbine testing lab. In the course of its exploration for financial resources and technical support, Kathmandu University entered into a collaboration with a Norwegian institution. It also mobilized local resources and applied for SHEP matching grants. The laboratory is now accessible to relevant academic programs within Kathmandu University, to academic programs at other Nepalese universities, and to industry representatives and entrepreneurs. It has initiated experimentation with turbine designs suitable for the diverse hydropower resources in the country, particularly for microhydro and medium-sized hydropower projects. This laboratory is thus expected to significantly increase the exploitation of hydropower in Nepal.

Decentralization of campus management. Tribhuvan University has been encouraging its 60 constituent campuses to operate in a decentralized manner, with 42 campuses falling under the provisions of the Decentralization Regulation 2055 (1998). The university has also taken the further step of granting management autonomy to various campuses and institutes under its autonomy rule, 2062 (2006), whereby an autonomous institute or campus can formulate and implement its own development plan, establish its own programs, mobilize and manage resources, and hire and manage its faculty and nonteaching staff. As mentioned above, MRMC was the first campus to become autonomous. It was under the autonomy rule 2062 that MRMC acquired its new status.

Decentralization of institutional management is an important means of improving higher education in Nepal. Learning from its earlier attempts at decentralized management, Tribhuvan University now envisions institutional autonomy across its system. The university's policy in favor of autonomy allows the empowerment of institutions and campuses in a more holistic way; and some of its institutions, research centers, and campuses have thus been able to develop their own capacities and to function independently. Utilizing their new freedom and powers, they have formulated their own strategic plans, developed and implemented programs, and even conducted their own examinations (though under university regulatory provisions and academic supervision).

This change, and the concept underlying it, has aroused interest throughout academia, and inspired other universities to promote autonomy for their own affiliated campuses. In most

cases, however, similar pro-autonomy policies have not gotten very far, due to the resistance of students and faculty who opposed any departures from traditional campus management. Faculty unions were often concerned that, if a campus were to become autonomous, the faculty would fall under the direct control of the CMC, compromising union influence.

The Autonomy Rule of Tribhuvan University 2062 (2006) stipulated that the university's Service Commission would ensure that the terms and conditions that apply to constituent campuses would continue to apply to those campuses after they become autonomous. These include the university-wide regulations covering the hiring of new faculty under the approved quota and provisions. However, an autonomous campus would be free to create additional new positions on its own, to be funded through its own resources. It could also ask permission from the Service Commission to transfer faculty members who are nonperforming or who have become irrelevant to the existing programs. Opponents of autonomy, including student and faculty unions, believe that the government would renege on its commitment to support the autonomous campuses, thereby paving the way to privatization. They are also concerned that autonomy would mean higher student fees to keep the campuses self-sustaining, as is the case with private campuses.

F. Lessons Learned

Current and future interventions would benefit greatly from the lessons learned during earlier reform initiatives. One of these lessons is that, while it is easy to develop infrastructure, it is difficult to sustain academic activities or to establish a desired institutional culture. For instance, facilities built or enhanced under the Higher Education Project, including laboratories and libraries, were often underutilized and even neglected after the project ended. Questions were therefore raised as to why these facilities were not used by faculty and students.

Another lesson learned is the importance of reforms to be comprehensive and sustainable, even beyond project's life. Changes should not be confined to the institutional environment, infrastructure, and facilities. They should permeate the working practices and organizational culture. During its earlier reform initiatives under the Higher Education Project, Tribhuvan University established entrance tests for student admissions, with a computerized examination management and record keeping system; ensured the preparation and implementation of the academic calendar; and set up a system of curriculum reform. Later on, however, the university could not sustain and institutionalize these reforms. It failed to follow its own academic calendar, could not maintain a reliable record-keeping and retrieval system, and could not even regularize the procedures for giving examinations and releasing the results.

A sense of reform ownership on the part of major stakeholders may help sustain improvements. Through consultations and consensus building, students, faculty, and campus management—individually and as a group—could be convinced to be more supportive of reform efforts. Physical infrastructure and instructional equipment are important, but for the facilitation of academic activities, it is equally or even more important to effect sustained improvement in teaching and learning practices; research, publications, seminars, and workshops; and in day-to-day management. There is also a need to

develop the capacity of both academic and support staff in higher education institutions, and to inculcate a culture that values the quest for knowledge, academic activities, and professional development.

The reform of higher education calls for comprehensive changes and new approaches, values, and modalities. This is in contrast to infrastructure or human resource development projects, where inputs and outputs can be clearly visualized and objectively measured. Comprehensive reform should also include the participation of the stakeholders who are appropriate, given the social and political contexts. There is a need to challenge the resistance from those who want to maintain the status quo, many of whom benefit from the lack of reform. Competitiveness, clear and transparent criteria for participation, public performance audits, and incentives for better performance are some of the important elements needed to ensure the cooperation of stakeholders.

CHAPTER 5
Summary, Conclusions, and Recommendations

Nepal has recognized importance of higher education for its overall development, and considers it a priority for alleviating poverty. The importance of higher education has also been highlighted by the emerging world trend toward knowledge-based economies. This trend offers new hope for a country that is poor in terms of natural resources, but rich in terms of human capital. The transition to a knowledge-based economy is proving rather challenging, however. The World Bank's 1999 *World Development Report* on the knowledge-based economy listed four important characteristics required for such a transition: (i) an appropriate economic and institutional regime, (ii) a strong human capital base, (iii) a dynamic information infrastructure, and (iv) an efficient national system for supporting innovation. Nepal has the potential to grow in terms of all these characteristics.

The government's focus on universal basic education, especially at the primary level, has expanded primary school enrollment, which in turn has driven rapid expansion at the secondary and tertiary levels. This expansion of access has had critical implications for the quality of education, particularly at the tertiary level. Colleges have been established rapidly, without provisions for ensuring academic standards. The Tribhuvan University system, the country's oldest and biggest, is overextended due to a rapid expansion in enrollment, a situation found at all Nepalese universities and colleges. Academic management has been affected the most. Acquiring and retaining competent faculty remain a challenge; the student admissions process for general subject areas (e.g., bachelor of arts [BA], bachelor of business studies [BBS], bachelor of education [BEd]) has become unwieldy, both in terms of admission dates and the ever higher numbers of students admitted; the academic calendar remains unenforced; and student examinations are hollow, ritualistic affairs, and unreliable measures of overall student achievement. Because of the pressures on academic management, it has been difficult to support progress in pedagogical methods and technology. In fact, the use of learning resources has remained rather debilitated, and the utilization of information and communication technology (ICT) in higher education has so far remained only a dream of planners and enthusiasts.

There is now an increasing realization among students and parents that education is important, and that the *quality* of education is critical for better job prospects. The fact that more and more of them are eager to pay for higher quality education has created opportunities for private sector investment in tertiary institutions. Today, more than 25% of students in Nepal attend private primary and secondary schools. Private education providers have even formed associations to safeguard their interests. Moreover, a large proportion of youths are going abroad for study, looking for a quality of education that will garner better job opportunities. The availability of scholarships and the chance to work while studying are also important motivations for studying abroad. Higher education

institutions in Nepal have yet to address the challenge of attracting these students, which could be done by offering programs that are employment- or market-oriented; providing financial support, including loans and work–study arrangements; and ensuring the quality and credibility of university research and development, among other academic activities.

These issues reflect both the problems and the opportunities that will require critical assessment, reflection, and responses. Many countries have made paradigmatic shifts in the planning and development of their higher education systems in order to address similar challenges. The People's Republic of China (PRC), for example, has launched Project 211 to strengthen 100 of its higher education institutions and key disciplinary areas as a national priority in the interest of social and economic progress. Since the late 1990s, the PRC has been implementing Project 985, which has aimed at establishing world-class universities, now numbering about 40.[49] India's Prime Minister Manmohan Singh announced the country's intention of establishing 14 world-class universities, showing that the Government of India also planned to aim for excellence in higher education. And India has expanded its prestigious Indian Institute of Technology from 6 to 12 campuses. These moves are apparently intended to copy the inspirational success of top universities in other parts of the world in driving scientific, technological, economic, and social advancement in their countries. Indeed, there is an ongoing lively debate in India about the need to develop world-class institutions.[50] It is high time that Nepal also take appropriate steps toward developing its higher education system, in order to advance the country's economic and social development.

In Nepal, higher education is expected to help develop skilled, productive, and open-minded graduates capable of creating, applying, and spreading new ideas and technologies relevant to the country's economic and social environment. A competitive higher education system that includes research universities will be important for preparing the professionals, scientists, and researchers needed by the economy, and to generate knowledge in support of the national innovation system.[51] It is important for the government to learn from successful world development trends and to understand the important features of successful institutions of higher education. Several ways have been devised to identify, list, and rank successful universities. The basis of this identification lies in assessing the proportion of graduates who are in high demand in the job market and/or have demonstrated the ability to engage in advanced research, publish papers in peer-reviewed journals, and generate innovations. Universities that are successful in producing such graduates are deemed to be world-class. Jamil Salmi pointed out that there are three important and interdependent features of world-class institutions: (i) a high concentration of talented faculty and students; (ii) a rich learning environment, with resources and opportunities for advanced research; and (iii) supportive governance that practices flexible decision making, uses its resources to encourage innovation, and enables the institution to take the necessary steps in achieving world-class status.[52]

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49 China Education Center. 2014. Project 211 and 985. http://www.chinaeducenter.com/en/cedu/ceduproject211.php

50 *India Today*. 2013. Our Higher Education Has Hit a Low: PM Manmohan Singh. 6 February. http://indiatoday.intoday.in/story/higher-education-in-india-has-hit-a-low-prime-minsiter-manmohan-singh/1/249035.html; Government of India, Department of Higher Education, Ministry of Human Resource Development. About Department of Higher Education: Overview. http://mhrd.gov.in/overview

51 World Bank. 2002. *Constructing Knowledge Societies: New Challenges for Tertiary Education*. Washington, DC.

52 J. Salmi. 2008. *The Challenge of Establishing World-Class Universities*. http://portal.unesco.org/pv_obj_cache/pv_obj_id_70765BABC9E57DBC2FEBD57A61877024A7ED0200/filename/Salmi.pdf

The important questions at this point are: Can universities in Nepal undergo the reforms that could help them get to that stage? Or should new universities be started from scratch? The answer to these questions can be inferred from the ongoing efforts in the PRC and India. Both countries are working to establish new universities in collaboration with top universities abroad, with the intention of having these new institutions achieve world-class status. But the two countries are also reforming their existing universities by providing liberal reform grants and by giving them autonomy with regard to academic exchanges and collaboration. In return, theses universities must accept the responsibility for achieving clearly positive performance outcomes.

A. Major Issues in Higher Education Reform

The following is a summary of the major issues drawn from this study.

1. Improvement of Equitable Access

The upswing in the demand for higher education, created by the recent rapid expansion of secondary education, has not been completely met. From 2005/06 to 2011/12, the number of higher education institutions more than doubled, and enrollment increased by over 2.5 times. Gross enrollment increased steadily over the same period, from 6.6% to 16.8%. However, the expansion of gross enrollment needs to accelerate further if Nepal is to reach the world average, which is currently about 26%. Also, any effort to expand gross enrollment must address the issues of equity, relevance, quality, effectiveness, and sustainability.

The issue of equity relates to the lack of access of poor and disadvantaged groups, including certain indigenous ethnic groups, Dalits, and females. University programs must support such groups with financial assistance and counseling services.

The recent improvement in access remains insufficient in light of national development goals, strategies, and future prospects for higher education. There is a need for more meaningful reform to enable higher education institutions to benefit more students and better serve the country. Higher-education programs must be relevant to economic development and employment growth. There is significant room for improvement with respect to regulating institutional development and expanding enrollment to align them with national priorities and opportunities. For example, the national strategy for poverty reduction requires human resources with knowledge and skills in financial leadership, planning, creativity, and entrepreneurship. Similarly, Nepal's development priority is agriculture, which requires specialized human resources—skilled farmers, marketers, managers, engineers, scientists, and other experts focused on the field of agriculture and livestock.

2. Improvement of Quality

The most important concern in Nepal is that a rapid expansion of enrollment in higher education is taking place without adequate measures to maintain academic quality. The

criteria, standards, and practices governing student admissions and faculty and nonteaching staff recruitment are still rudimentary. Consequently, there are issues regarding the quality of students, faculty, and other staff, including administrative staff. These issues are directly linked to the quality of teaching and learning, of research and publications, and of the administration of academic programs. And they are linked as well to problems such as noncompliance with the academic calendar, poor management, and the unreliability of assessments and examinations. Similar concerns exist regarding the development, management, operation of institutional infrastructure, and facilities for basic amenities, logistics, student services, etc.

The government recently started a national quality assurance and accreditation (QAA) system, under which there were pilot assessments of a number of community campuses affiliated with Tribhuvan University. The assessments indicated that the campuses had a reasonable system of governance, with stakeholder participation, and that they complied with Tribhuvan University requirements with regard to curricula, faculty recruitment, student admissions, and examination norms. But Tribhuvan University failed to adhere strictly to its academic calendar, and lacked an explicit set of criteria and norms for ensuring academic quality in its affiliated campuses. Besides, Tribhuvan University's supervision and monitoring system was neither adequate nor effective. The campuses are mostly left on their own to devise or adopt whatever measures they think will help them improve their standards. The assessments noted that the affiliated campuses lacked a conducive learning environment and innovative academic practices, and that their infrastructure development focused only on classrooms. Campuses need support in updating their infrastructure and facilities for cocurricular and extracurricular activities. They also need to train management staff and support them in their efforts to address core tasks such as student supervision and counseling.

Nepal clearly needs to focus on consolidating its QAA system as a mandatory aspect of institutional reform and development, and as a core aspect of the national system for higher education monitoring and government funding.

Research and publications are essential aspects of knowledge generation and, as such, constitute an important part of promoting excellence in higher education; the other important part is sharing, transferring, and applying knowledge. In the current context, ICT is central to improving higher education. In Nepal, however, the introduction of ICT would be a whole new endeavor, requiring technical as well as financial support.

The other major concern is that higher education needs to take into account the human resource needs of the economy and of the country. Thus, academic programs, curricula, modalities, and approaches to teaching should be made practical, with an emphasis on the application of knowledge. For instance, the curricula need to be more research-oriented and more focused on current issues; teaching and learning should be activity- or project-based, and linked to the world of work through such arrangements as internships.

New institutions should be established for higher education in technical areas, and for research in the applied sciences. The purpose should be to produce graduates with the knowledge and skills to innovate and to make the most of their career opportunities.

In 2010, Parliament endorsed legislation providing for the further development of Agriculture and Forestry University (AFU). This university requires sufficient resources to be able to develop in line with national expectations. Similarly, there should be financial and technical support for two other new universities, Mid-Western University and Far-Western University, to help them develop programs that would be relevant to national needs and priorities.

In order to make higher education more responsive to the needs of the national economy, and to explore or open new opportunities, higher education institutions must engage in research and development to address the concerns of stakeholders. For this to happen, there have to be closer ties between higher education institutions and business and industry. There is scope for cooperation and collaboration between academia and industry, starting with forums that foster dialogue.

Many of the needs discussed above—such as qualified faculty and students, high academic standards, QAA, faculty training, research and development, and the building of infrastructure and service facilities—concern all institutions of higher education in Nepal. That is why it would be helpful to foster exchanges and collaboration with tertiary institutions in other countries, particularly with those that are long-established and successful.

It would also be beneficial to create some outstanding institutions in the country that could lead initiatives for reform. Following the examples of the PRC and India, Nepal should develop at least one world-class institute, if not a university. There is both the potential and the need to create such an institute in areas of science and technology, including medicine, engineering, agriculture, and forestry.

The government has set national guidelines for teacher evaluation and certification, but this system still needs to be developed. To this end, there is scope for a comprehensive higher education faculty training and support system.

3. Strengthening Governance

Autonomy is important for higher education institutions, to ensure an academic environment conducive to research and other scholarly activities. Given the current circumstances, strong leadership is needed to prevent any undue political and other external infringement on the development, operation, and management of higher education institutions in Nepal. In the case of existing institutions, such leadership must develop a shared vision and strategic plan for reform. In the case of the establishment of new institutions, the leadership must mobilize stakeholders to evolve a shared vision and strategic plan, reinforcing their sense of ownership and commitment. There should also be a national regulatory framework to designate the roles and responsibilities for the relevant government agencies, institutions of higher education, and stakeholder organizations (including faculty and student unions), and to foster systemic reforms to ensure that these roles and responsibilities are clearly defined and publicly monitored.

There should be a monitoring and feedback system, and a higher education management information system, to provide a reliable and verifiable basis for planning and policy making.

The system should also help make the management and operation of higher education institutions transparent and accountable to the public.

4. Rationalization of Funding

There should be a framework for financing higher education, with clear criteria and modalities for public funding, norms for financial management, and provisions for ensuring transparency and accountability. The framework should help sustain the institutions' finances, while protecting the students and parents against excessive fees. The framework should also outline measures for cost recovery, formula-based funding, and student financial assistance. Student tuition, the use of infrastructure for income generation, and investments could be part of cost-recovery schemes. Important factors to be included in the funding formula are the number of students enrolled; the inclusiveness of the admissions process; the number, types, and levels of programs to be offered; and performance in terms of quality, relevance, management effectiveness, and efficiency. Need-based scholarships, loans, and work-study opportunities are important aspects of student financial assistance. There should also be a framework for institutional analysis to promote effectiveness and efficiency.

B. Priorities for Higher Education in Nepal

While there is scope for further research and analysis regarding the key issues discussed in this report, a summary of the problems and recommended responses are discussed below, in order of priority.

(i) Nepal urgently needs to ensure the economic and social relevance of its higher education system. To accomplish this, universities and colleges will have to design new programs with relevance in mind. Existing university-level curricula should be made more research-oriented, especially with regard to practical research; and they should be focused on the generation and application of knowledge and skills that are aligned with national development priorities. The government should provide targeted support for curriculum reform and new program development at higher education institutions.

(ii) There is need and scope for opening new institutions and programs of technical education and applied sciences that would provide students with the knowledge and skills needed for the country's economic development. The establishment of a model institution in collaboration with institutions of international repute, such as the Indian Institute of Technology, could encourage improvements in Nepal's higher education system.

(iii) There is a significant need for a comprehensive program to ensure that improvements in academic quality and relevance at Mid-Western University, Far-Western University, and the Agriculture and Forestry University have a good foundation of technical and funding support.

(iv) Technical institutes within existing universities could develop new programs, and new polytechnic institutions could be established offering curricula aligned with national development strategies and priorities. Some of the areas of particular

importance include: agriculture; animal science; forestry; roads and transportation; and hydropower-related fields. Students should graduate with the requisite skills for foreign employment and for the domestic labor market.

(v) There is a need for better training for both faculty and nonteaching staff, and for an institutionalized teacher-training and support system. Good and capable personnel—well-trained, proactive, and entrepreneurial—are needed to meet the challenge of developing these facilities.

(vi) Organizational management, particularly at Tribhuvan University, needs to be reformed and strengthened, with stakeholder commitment and participation. There should be a national framework consisting of policies, acts, and regulations to facilitate, regulate, and support competent management, in the interest of achieving better academic quality and relevance in Nepal's higher education system.

(vii) Higher education institutions should receive technical and professional support in the conduct of self-assessments and in going through the process of national QAA system accreditation. The QAA system should be the core strategy for ensuring the quality, relevance, and effectiveness of higher education institutions and programs.

(viii) Eventually, ICT should be incorporated into institutional management and into the teaching and learning processes. This could be done best through training programs, as well as with technical and financial support, in collaboration with international institutions.

(ix) There should be a framework and modalities for public finance that dovetails allocation of higher education funds to relevance, quality, effectiveness, as well as to outcomes and outputs, in relation to national development priorities. The QAA system could be a major part of this approach to funding policy.

There are highly important areas in which some reform efforts have already been initiated, such as performance-based reform grants, the establishment of the QAA system, fund development for student financial assistance, education-management information-system development, and a national eligibility test for faculties. In order to consolidate these efforts into a comprehensive national higher education reform program, there should be collaboration to attract technical and financial support from various international development partners.

C. Proposed Strategies for the Reform of Higher Education

The following strategies, and the reforms and innovations they include, should be considered as possible approaches to addressing the problems of Nepal's higher education system.

1. Strategies for Expanded Access and Quality

An accelerated expansion of access to higher education will be important if Nepal is to catch up with world development. However, there will be a need to ensure that new

institutions or programs meet quality standards, and are relevant to Nepal's economy. The cost of higher education for students is an important inhibiting factor, particularly for those from poor and disadvantaged communities. There must be intervention to ensure equity, and the most efficient and effective method would be to support poor and disadvantaged students who are eligible for higher education.

Proposal 1: Support the improvement and expansion of higher education institutions and programs to enable them to meet the QAA requirements.

To ensure that all newly established higher education institutions and programs meet basic quality norms and standards, the following elements will be required: (i) good governance and management of the higher education institutions; (ii) learning-centered, practical, and application-oriented curriculum and practices; (iii) academic and pedagogical development of faculty to improve competence; (iv) well-functioning student supervision, guidance, and counseling systems; (v) interface between higher education institutions and civil society, industry, and business for sharing infrastructure and for engaging in mutually beneficial activities (e.g., student internships); (vi) safe, useful, and adequate institutional infrastructure; and (vii) functional management information systems.

Proposal 2: Support the expansion and maintenance of student financial assistance to ensure equity in access.

To develop a sustainable system of comprehensive pro-poor student financial assistance, the following should be in place: (i) a system for identifying the most needy and disadvantaged students, (ii) fund-raising and resource mobilization schemes, (iii) scholarships and loans, and (iv) efforts to network with business and industry for the purpose of developing work–study programs.

Under the Second Higher Education Project, the government identified the most needy students and provided scholarships, with the support of the World Bank's International Development Association. The government's efforts in this direction must be expanded, and made more comprehensive and sustainable, so as to strengthen its capacity to identify the most needy and eligible students, raise funds, offer scholarships, and set up work–study programs.

2. Strategies for Greater Relevance in Higher Education

To address the issue of relevance, traditional higher education programs should be transformed or phased out, and new, market-oriented programs should be developed to ensure that graduates are equipped with the necessary knowledge, skills, and confidence to meet the country's human resource needs and to compete successfully in the job market. The new programs should be geared towards transforming the traditional modes of business in Nepal, especially in preparing graduates for, and connecting them with, the new opportunities arising from economic development and modernization. The programs should focus on the national priorities—alleviating poverty, generating economic activities with employment prospects, harnessing the country's immense potential for hydropower,

and developing agroforestry and eco-tourism. In this way, they could turn the burden of overpopulation into an abundance of human resources.

Proposal 3: Support innovative institutions and programs that help create jobs and/or help graduates to find jobs.

To support the development of practical studies that will ensure knowledge application, the following will be necessary: (i) research-oriented programs that will help harness the country's social and economic potential, (ii) fieldwork-based programs to develop entrepreneurial skills, and (iii) programs with internships.

Proposal 4: Develop and establish highly innovative and competitive institutions at par with international standards.

To develop new institutions with innovative programs that will qualify Nepalese students to contribute in meaningful ways to the national development, the government will have to (i) create innovative ways for higher education institutions to produce graduates capable of addressing the country's need to conserve and harness its water resources, hydropower potential, and alternative energy resources; and (ii) utilize technological advances to meet national challenges, such as developing a transportation system through mountainous terrain.

Developing such cutting-edge institutions will require cooperation and collaboration with similar institutions overseas. The possibilities for such cooperation and collaboration are very high in the field of engineering.

3. Strategies for an Effective Higher Education Policy Framework and for the Improvement of System Capacity

A national regulatory framework that designates the roles and responsibilities for the relevant government agencies and institutions of higher education would help systemic reform, and system-capacity development would help ensure effective policy implementation.

Proposal 5: Develop a comprehensive policy framework and a system-capacity-development plan for implementation.

To develop a policy framework that clearly outlines the criteria for quality assurance, there will be a need for (i) higher education financing based on clear criteria and modalities for public funding, and on clear norms for financial management; (ii) a systemic mechanism for ensuring transparency and accountability (e.g., monitoring and feedback based on an information-management system); and (iii) an enhanced capacity for planning and for implementation follow-up.

The policy framework should emphasize QAA for higher education institutions, and provide incentives to those institutions that are accredited, thereby motivating other institutions to earn accreditation. It should clearly delineate the financial aspects of

institutional development, management, and operations. The financial sustainability of higher education institutions, reasonable tuition structures, the safeguarding of students' and parents' interests, and institutional analysis conducted to promote effectiveness and efficiency should also be objectives of the framework.

Proposal 6: Develop a sustainable national system for quality assurance and accreditation.

To develop a sustainable national QAA system, there will have to be procedures for identifying criteria and benchmarks; and there should be technical support, including training, orientation, follow-up, and monitoring. A professional and academic forum should also be created to help guide the development of the QAA system.

4. The Importance of Political Commitment

The proposals listed above could be developed either as short-term or long-term national policies. Given the current state of affairs in Nepal, these proposals are essential if the country is to resolve its higher education issues. However, due to the government's limited funds for higher-education development, it is unlikely that Nepal could initiate these policies alone. For this reason, the government must have a good strategy.

The first important step of the strategy should be to specify those actions that the government could undertake on its own, such as preparing a policy framework, establishing important systems (e.g., for QAA and education management information), and promoting institutional networking and coordination.

The second step would be to seek the cooperation and support of higher education institutions and organizations in other countries, including higher education councils, university grants commissions (UGCs), QAA-related organizations, research councils, funding agencies, and other entities. Relationships should be sought with exemplary universities and training organizations to facilitate system capacity improvement, faculty exchanges and professional development, the design of new programs, and research and professional collaboration.

The third step would be to seek the cooperation and support of development partners and donors for establishing new institutions, undertaking new and innovative programs, and developing infrastructure. The commitment and support of political stakeholders will be very important for the success of Nepal's reform and development efforts. As the political parties in the country have extended their organization and mobilization activities to the universities and campuses (through faculty, staff, and student unions), it is important that the concerned political stakeholders develop consensus in favor of the government's reform policies, or at least agree to cooperate with them.

APPENDIX 1

The Expansion of Higher Education in Nepal

The rapid expansion in the number of campuses in Nepal has been due to several factors. There has been a greater demand for higher education, as reflected in the upward trend in enrollment. To respond to this demand, and to provide equitable access across the country, the expansion of the Tribhuvan University system to more regions was implemented until 1990. Other universities were also established, and they followed the Tribhuvan University model of providing affiliation to other campuses.

The expansion in the number of campuses (i.e., colleges), rather than in the number and average size of universities, is unique to Nepal. It is rooted in the history of the country's higher education system, during which growth occurred exclusively within Tribhuvan University, from the university's inception, in 1959, until 1990. Because of the ever-increasing demand for access to higher education in rural parts of the country, in the name of regional equity politicians pressed Tribhuvan University and the government to open new constituent campuses in their own constituencies, or at least to get Tribhuvan University affiliation and support for new community campuses. The constituent campuses of Tribhuvan University are centrally managed by the university with regard to human resources, for which almost 90% of funding comes from the government (community campuses get regular government grant support). Thus, the number of Tribhuvan University constituent campuses gradually grew to 60.

In 1980, Tribhuvan University started to allow affiliation with campuses established and run by individuals, private groups, or communities. In the initial phase, Tribhuvan University approved the affiliation of campuses established by local stakeholders, often including intellectuals, government bodies, the business and industrial communities, and social and political leaders. Because such campuses are initiated, developed, and sustained with local resources and mobilized by stakeholders, and because the tuition expenses are paid by the students, these campuses like to refer to themselves as "public" campuses. Until recently, there was no regular government grant support for these campuses. A public campus is now referred to as a "community" campus if it is run according to regulations that have been duly endorsed by the community stakeholders, affiliating university, and by the University Grants Commission (UGC), and if the campus is publicly liable. Community campuses can receive local community and government support in the form of land provision, development support, and grants (e.g., regular grants from the UGC). There are 302 community campuses. Private campuses are those opened and run by private individuals or groups, and that have chosen to remain private entities, assuming all liabilities and benefits. There are 702 private campuses.

After the revolutionary changes in the political system in 1990, there were structural changes in the higher education system as well. Previously, after completing grade 10 and receiving a School Leaving Certificate, a student would be eligible to continue on to 2 years of Proficiency Certificate Level (PCL) education at a university, followed by 2 years of bachelor-level studies, and then 2 years at the master's level. The restructuring phased out the PCL and replaced it with higher secondary education, which covers grades 11 and 12, followed by 3 years of study for a bachelor's degree, and then 2 years for a master's degree. The Higher Secondary Education Board was formed to implement the shift, and an act was promulgated in Parliament to facilitate the process. In a drive to popularize higher secondary education and expand access, the board started to affiliate a wide variety of private and community-run institutions, including colleges, academies, institutes, and research centers. Many of these institutions also received university affiliations, which enabled them to run tertiary-level programs.

Other developments after 1990 included the founding of Kathmandu University, Purbanchal University, and Pokhara University. These institutions, in turn, started to affiliate private and community campuses that met their eligibility requirements and paid affiliation fees, along with other predefined development and operational fees. Purbanchal University is in Biratnagar in eastern Nepal. Total enrollment in its three constituent campuses is 675. Purbanchal University has 81 affiliated campuses distributed all over the country, though most are in the Kathmandu and Eastern Development regions; and the total enrollment in the affiliated campuses amounts to 14,197. Similarly, Pokhara University was established in Pokhara, in western Nepal. There are 426 students enrolled in its three constituent campuses, and 7,112 in its 23 affiliated campuses, which are located throughout the country, though mainly in Kathmandu and Pokhara. Kathmandu University has 3,427 students enrolled in three constituent campuses, and 4,368 students in its 15 affiliated campuses. The total enrollment at Tribhuvan's 60 constituent campuses is 172,594. There are 1,053 campuses affiliated with Tribhuvan located all over the country, but mainly in Kathmandu; the number of students at these campuses totals 144,445. In the case of Nepal Sanskrit University, 2,780 students are enrolled at 13 constituent campuses, and 481 are enrolled at the university's 14 affiliated campuses.

APPENDIX 2
The Overall Structure of Nepal's Education System

The education system in Nepal is basically structured as follows:

Preprimary education: Early childhood development and preprimary education are emerging as important areas, and the government now provides 1 to 2 years of preprimary education, also known as "early childhood development programs."

Basic education: Basic education encompasses grades 1 to 8, combining primary education (grades 1–5) and lower secondary education (grades 6–8). The minimum entry age for this level is 5 years.

Secondary education: Secondary education comprises grades 9 to 12 (4 years). Grades 9–10 are called the "secondary level." A national centralized examination, popularly known as the School Leaving Certificate (SLC) examination, is given at the end of grade 10. Those who pass the SLC examination may apply to higher secondary schools (grades 11–12), which operate under the Higher Secondary Education Board. Higher secondary education was established in 1992. Before then, students who passed the SLC could apply to Proficiency Certificate Level (PCL) programs at university campuses. However, in 2010 the PCL was completely phased out at universities.

There is also provision for higher secondary level technical education under the Council for Technical Education and Vocational Training (CTEVT). The technical schools affiliated with the CTEVT now offer vocational courses to students who have passed the 10th grade[1] or who possess a Technical School Leaving Certificate.[2] Technical and vocational education is offered under the CTEVT at nine constituent technical schools and 118 private technical training institutes. The programs offered are mostly of 2-year duration, but there are also 1-year and 2.5-year programs.

Higher education: After grade 12, students may apply to bachelor's degree programs, which generally take 3 years to complete, though programs at technical institutes (like those for engineering and medicine) are of 4-year duration. Universities also run some 4-year bachelor's degree programs. The master's degree follows the bachelor's degree, and is of

[1] Students who have simply passed the 10th grade are at an academically lower level than those who have also passed the School Leaving Certificate examination. Students take a sent-up examination at the end of grade 10, and those who pass this exam become eligible to take the SLC examination.

[2] A student earns a Technical School Leaving Certificate by entering a vocational stream after eight grades and then completing 2 years of vocational training. The practice of admitting such students to vocational schools has been abolished, however, after the enforcement of a new policy on technical and vocational education.

2-year duration. Tribhuvan University and Kathmandu University also offer PhD programs in various fields.

Besides formal education, there are provisions for nonformal education at the basic level. Out-of-school youths who did not attend primary school and are overage can enter a 9-month nonformal primary education program, popularly known as the OSP (Out-of-School Program). Upon completion of the OSP, the student may join the formal school system at grade 3. There are also provisions for flexible school programs for those who cannot attend during regular school hours, and there is a school outreach program for those who do not have access to regular schools. In addition, there are various adult education programs, mainly for adult literacy and functional education, and these are run by various government, community, and private organizations or agencies.

Table A2 depicts the structure of Nepal's educational system, while Figure A2 is an organizational flow chart of the system showing the pathways and exit points for students from primary through higher education, including technical and vocational education and training (TVET) options.

As the Government of Nepal is committed to fulfilling the objectives associated with Education for All and the Millennium Development Goals, it has been working to ensure universal access to basic education, gradually implementing compulsory primary school education. Primary education is currently free, and is considered a fundamental right. The interim constitution has decreed that education up to the secondary level will be free, with the objective of expanding access to secondary education so that the majority of primary school graduates can continue to this level. Higher education facilities are limited, and therefore only accessible on a competitive basis. The availability and cost of higher education depends on the institutions and on the specific programs.

Table A2: Levels of the Nepali Educational System

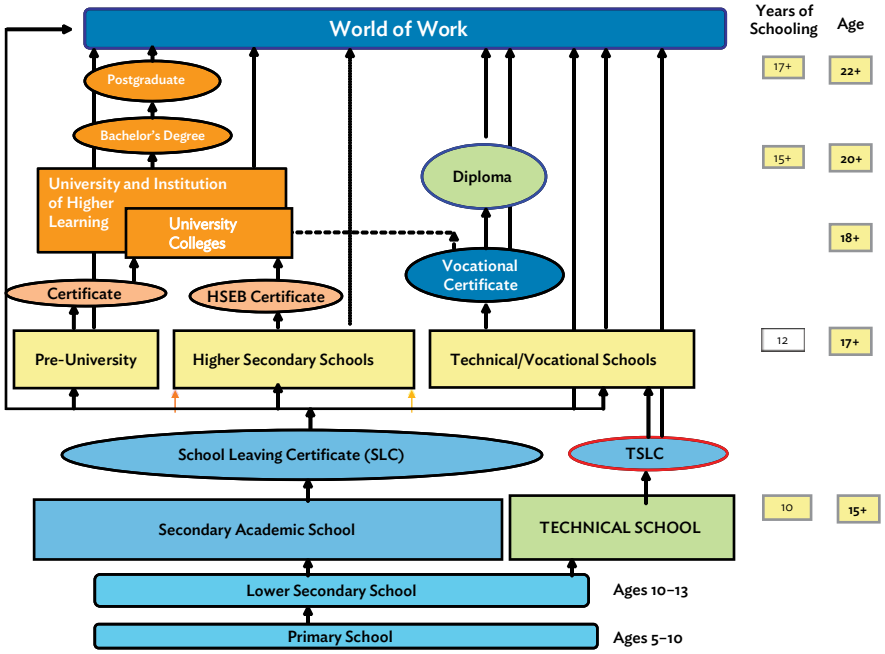
Grade		1	2	3	4	5	6	7	8	9	10	11	12	(...)				
Normal age for each grade	3–4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
School level	Preprimary/ ECD	Primary					Lower Secondary			Secondary		Higher Secondary		Higher Education				
Education	Preprimary	Basic								Secondary				University[a]				

ECD = Early Childhood Development.

[a] This section of the table refers to tertiary education in general, including colleges and institutes, as well as universities.

Source: Government of Nepal, Ministry of Education. 2012. *Education Information.* Kathmandu.

Figure A2: Pathways through Nepal's Educational System



HSEB = Higher Secondary Education Board, SLC = School Leaving Certificate, TSLC = Technical School Leaving Certificate.

Source: Author.

APPENDIX 3
Levels and Types of Education, Requirements, and Duration

Level and Type of General Education	Entry Requirements	Duration (years)	Final Examination (internal, external)	Qualification Granted
Primary	Age: 5 years	5	Resource center-level exams[a]	Grade 5 pass
Lower secondary	Grade 5 completion	3	District-level exam	Grade 8 pass
Secondary	Grade 8 pass	2	National exam	School Leaving Certificate
Technical education	Grade 8 pass	2	CTEVT exam	TSLC
(i) Higher secondary (ii) Proficiency certificate	School Leaving Certificate	2	(i) National HSEB exam (ii) University intermediate exam	(i) Grade 12 pass and HSEB exam (ii) Proficiency Certificate
Overseer	Grade 12 pass	2	(i) Overseer University (ii) IOE	Overseer
Junior technical assistant	Grade 12 pass	2	CTEVT	JTA
Junior nursing	Grade 12 pass	2	CTEVT	Nurse
Assistant health worker	Grade 12 pass	2	CTEVT	AHW
University bachelor's degree (science, management, humanities, law, education)	Grade 12 pass and HSEB exam, or Proficiency Certificate Level pass	3	University exam	Bachelor's degree (BA, BBS, BS)
Bachelor's degree in professional areas	Grade 12 pass and HSEB exam, or Proficiency Certificate Level pass	4	University exam	Bachelor's degree (BE, BBA, MBBS,[b] etc.)
Master's degree in various subject areas (e.g., physics, chemistry, botany, zoology, management, economics, education, history, geography, and rural development)	Bachelor's degree	2	University exam	MS, MA, MBS, MEd, etc.

AHW = assistant health worker; BBA = bachelor of business administration; BBS = bachelor of business studies; BE = bachelor of engineering; BS = bachelor of science; CTEVT = Council for Technical Education and Vocational Training; HSEB = Higher Secondary Education Board; IOE = Institute of Engineering; JTA = junior technical assistant; MA = master of arts; MBBS = bachelor of medicine, bachelor of surgery; MBS = master of business studies; MEd = master of education; MS = master of science; TSLC = Technical School Leaving Certificate.

[a] Primary schools in each district are clustered in groups of about 10–15 schools. One of the centrally located schools is chosen to house a government resource center to provide learning-resource support, short-term training, and technical supervision.

[b] This degree also requires a 2-year internship.

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Innovative Strategies in Higher Education for Accelerated Human Resource Development in South Asia: Nepal

This publication is part of a series of six country reports on technical and vocational education and training (TVET) and higher education in Bangladesh, Nepal, and Sri Lanka. Each report presents current arrangements and initiatives in the respective country's skills development strategies. These are complemented by critical analyses to determine key issues, challenges, and opportunities for innovative strategies toward global competitiveness, increased productivity, and inclusive growth. The emphasis is to make skills training more relevant, efficient, and responsive to emerging domestic and international labor markets. The reports were finalized in 2013 under the Australian AID-supported Phase 1 of Subproject 11 (Innovative Strategies for Accelerated Human Resource Development) of Regional Technical Assistance 6337 (Development Partnership Program for South Asia).

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