A White Paper on
Open University of Nepal Initiative

"Through the Light of Knowledge©"

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Open University of Nepal Initiative Steering Committee, which galvanized the work of the mission until the formation of the Open University Infrastructure Board Nepal by the Cabinet of Ministers, Government of Nepal.

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-Author

What is White Paper?

A white paper is a technical report or guide prepared to help the policy makers to understand an issue, solve a problem, or make a decision. It describes the what, why, where, when and how aspects of the proposition. Businesses and governments use white papers to decide whether to enter into a complex undertaking that requires significant resource commitment. White papers are used in participatory democracy as tools for providing reasonably detailed information for the members to be able to make informed comments and to ultimately decide on the merit of the proposition.

As and when it needs a legislation to be passed by the parliament, it is a practice in many countries that the government presents the legislative Bill along with a white paper. Such white paper lays the policy and technical ground upon which the proposed bill should be passed. The parliament members study the white paper to understand the basis for support or opposition to the bill.

Executive Summary

Part I: Context and Opportunity

"If your plan is for one year, plant rice.
If your plan is for ten years, plant trees.
***If your plan is for one hundred years, educate your children."* – Confucius, Chinese Philosopher**

Democratization of education and massification of learning has been a cherished pursuit of nations in the 21st century, Nepal's aim being no different than every other nation in the world. We as an advancing society are deeply interested in making education accessible to each and every citizen. Such ambition often referred to as "education for all" requires that we dismantle all barriers in the access to education, including the barriers of wealth, race, caste, gender, geographic location, work circumstances, past preparedness, time of access, pace of learning, place of learning, and disability. We are seeking effective, efficient, affordable and sustainable ways and means for achieving this goal.

Although substantial efforts have been made in providing mass access to primary education, higher education has not so far become a matter of national priority in Nepal. At individual level, however, excessive numbers of Nepalese youth are taking foreign employment with outflow of more than 1500 youth a day. They are facing disadvantage in not having technical, vocational, and language training before taking those jobs. More critically, the country has depleted youth resource in agriculture and industry, thereby subsequently raising the wages in these sectors to an extent that it is no more economical to farm or run business in Nepal in traditional ways. Their consequences will come in many fronts. The most immediate consequence will be that: (1) the agriculture and industry will be forced to concentrate on productivity, and (2) service economy and knowledge economy will occupy large part of the economy in the future. Besides this situation, tens of thousands of highly educated and talented youth have been going to other countries for studies every year and not returning back, a loss for Nepal's development.

Equipping people with necessary physical skills and mental tools for navigating through the technical complexities brought in by material and intellectual developments of the world has thus become increasingly important. Being able to live competently, ethically, and in an enriched way amidst a flux of worldly materials, things, information overload, and technology dependence has also been equally important for us as social humans. We can no longer prepare competent human resource in traditional ways where rote learning has become mainstream.

The new paradigm in education and development is not about traditional nationalism which sought to change the shape, size and face of our country. The new paradigm is about transforming the lives and minds of people so that their potential and excellence are fully harnessed. The new paradigm is about how we align our skills, knowledge and innovation with the needs of our economy, culture, society, and natural endowments. The new paradigm is about making our society an intellectual, prosperous, sustainable, always-learning and always innovating one. The new paradigm is about personal renewal of each and every one of us in a way that we are progressing forward through a staircase of action, dedication and knowledge. The new paradigm is about a rediscovery and renewal of our unity as people and the unity of our nation with other nations of the world. The new paradigm is about how we

collaborate, co-develop, and co-own with the world in pursuit of excellence in skills, knowledge and innovation.

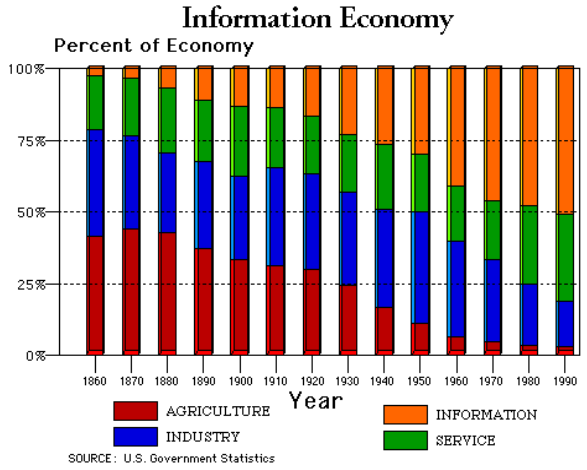
Today mobile devices, Internet and technologies have emerged as pervasive means to spread an idea or information originating from one person to the entire world at an instance. They have opened a door to make a lecture delivered in a hall in Kirtipur to be watched by all interested learners of Nepal simultaneously. It has made it possible to transmit inconceivable amount of information in a fraction of time. Book collection equivalent to a library can be carried in a single mobile device, which also allows us to run hundreds of software applications in it. Technology has thus created a new purpose and possibilities for all. The excitement at the grassroots is such that the illiterate people want to become literate and the literate want literacy in English language so that they can make better use of technological devices.

These devices and technologies have increased the contact and connectedness among distant people, institutions and businesses. They can also act as means to develop fellowship, affinity, and meaningful relations among distant people. Proper exploitation of this opportunity can bring transformative changes in how we spread education, how we deliver government services, how we do business, how we handle our economy, how we prosper intellectually, and how we relate to and collaborate with the world. On the contrary, to not have right arrangements for a worthy use of emerging technologies would amount to giving room for their use towards wrong ends. We, therefore, have collective social responsibility to exploit the technology for serving people and society in an ever better and productive way.

Technology has enabled our human dialogues to transcend beyond face-to-face format to include the entire population in dialogue by use of collaborative tools and technologies. The whole population can engage in authoring new knowledge content in an open and transparent space for the world to view it, refine it, and add onto it. Globally scattered communities of people could be self-organized to take ownership of furthering the globalized content. People could collaborate using their collective intelligence to translate knowledge produced by one person or institution from one language to another and from one context to another. They can co-create, co-innovate, co-develop, co-use, and co-spread the ideas, products and systems. Today people could dream together, design together, innovate together, solve problems together, develop products together, deliver services together, and implement ideas and processes together. Collaboration is so much more powerful in all knowledge initiatives never conceived in industrial approaches to doing things. Perhaps that is the reason the service and knowledge economy is quickly eclipsing the agricultural and industrial economies. Our future is destined to be largely determined by our ability to exploit the service and knowledge economy more than anything else.

A 130 years trend in the US economy, shown in the figure below, is an indicator of a where the modern economy is headed to. The US economy was agriculture dominated in 1890 but in one hundred years' time agriculture and industry were subsumed by the knowledge economy. Nepal can entirely skip the industrial economy and enter directly into knowledge economy in one generation. Nepal is awaited by an enormous opportunity if it can set a priority in education, natural health, bio-information, bio-technology, sustainable natural resource management, eco-tourism, knowledge

tourism, terrain specific technologies, social and cultural heritage, and other knowledge intensive areas.



Profusion in technology and technological tools has presented us a tremendous opportunity in fulfilling our social responsibility to engage everyone in our society in education and lifelong learning. Technology and technological tools are already drawing the attention of our young people, whom we call the "connected generation". We are no more "isolated people" and "isolated nation". We are already integrated with the world in a way that we either rise together or fall together with other people and nations. We are interconnected and interdependent with the world. We are part of a worldwide phenomenon and our responsibility now is to not "cry over it" but to utilize it to our advantage. Thus time has come to treat the spread of Nepalese people around the world not as a loss but as the spread of Nepal's advantages and opening of new opportunities for prosperity.

With mass utilization of technology, we can make lifelong learning seamlessly weaved with our lives and make our pursuit of producing and earning weaved with lifelong learning. We can all be teachers and students of one another and make learning a social phenomenon where we as a society engage in questioning, discussing, generating ideas and making innovations. We can be learning anytime we are free, we can be learning anywhere we are free, and we can all be engaging with one another without any limitation of time and space. We can all be participating in designing, in innovating new systems, and in harnessing the collective wisdom for our entire population. We from Mechi-Kali-Karnali can be engaging in a simultaneous national dialogue thereby freeing our society from perpetual dependence on the wisdom of a few people in Singha Durbar. We can chart the course of our future together.

We might have some limitations in our financial capacity but we overcome our limitations in technology, money, geography, and time through way we think and the way we engage with the world. We will no longer be a country of 46% unemployment but a country of hard working people, innovating people, and always learning people. We have an opportunity to become a learned society and a society of wisdom, a centre of open knowledge of the world. The Open University that we are set to establish in Nepal is one such institutional platform to engage our population in national discourse, education, learning and innovation. This is an opportunity to espouse three tenets in our society: (1) spirit of inquiry, (2) attitude of discovery, and (3) collaborative design.

Part II: Vision and Mission

Institution:

University of Nepal: the national open university of Nepal

Logo:

The logo of the university is made up of a single color green on a white background to embrace the value of green living that is in harmony with the nature. Its base symbolizes terraced land with green rise and rice paddies symbolizing human ingenuity to adapt with the nature, especially that of mountainous Nepal. The top terrace has been given a shape of a baby in the womb symbolizing regeneration and birth. Shown above the top terrace are lotus petal shaped rays, symbolizing knowledge and the spread of knowledge. The five petals and the top terrace are also to symbolize human feet to symbolize our journey to the future. This logo depicts human activity in agreement with our green future empowered by the light of knowledge.

Mottoes:

The University for All of Us
Through the Light of Knowledge
Democratization of Education and Massification of Learning

Vision:

Igniting the spirit of learning and harnessing the excellence in every human being for building an intellectual, prosperous, sustainable, and always-learning society.

Mission:

To establish a comprehensive research university of open learning

Goals:

(1) to take university to people's homes and communities over a robust technological foundation,
(2) to remove all barriers to learning including those of income, circumstances, geography, and readiness by mode of open learning,
(3) to meet informational, educational, technical and vocational needs of people by connecting learners with sources of knowledge and skills that may be found anywhere inside or outside the country,
(4) to convert the raw knowledge and skills found in the nature, society and culture into formal knowledge by means of mass participation in knowledge production,
(5) to continue educating and training youth that take foreign employment by facilitating lifelong education and learning,
(6) to convert brain drain into brain gain by mobilizing diaspora people in education, research and transfer of knowledge and skills,
(7) to offer a learning system that scales to rising enrolments and efficiently adapts to population movement,

(8) to bring people residing outside big cities into the mainstream of knowledge economy through education, transfer of skills, and transfer of entrepreneurial knowledge,
(9) to become the model open university of the 21st century,
(10) to democratize education and massify learning by making it possible to educate all people.

Objectives:

1. Establish University of Nepal: a public open university by 2015
2. Mobilize in-country and diaspora contributors for distributed educational content development and delivery by 2015
3. Offer at least 3 degrees of rural interest, 2 degrees of urban interest, and 1 degrees of workers-abroad interest by 2015
4. Secure broadband communication infrastructure in 12 districts in Muktinath-Lumbini corridor for first pilot operation of the university by 2015, and throughout Nepal by 2018
5. Secure technical collaboration and assistance from the best distance learning institutions to establish best practices and best technological solutions by 2016
6. Provide technological foundation, content foundation and bridging programs to school systems for improving primary and secondary education by 2020
7. Become the university with the largest range of program offerings in Nepal by 2025

Part III: Plan for Success

Distinguishing Features:

(1) Openness
   1. Lectures, libraries, forums, and conferences open to all people
   2. Process of producing content open to all people
   3. Open and mass participation in institutional design and innovation process

(2) Reoriented pedagogy
   1. What used to take place in the classrooms of face-to-face model institutions would take place outside the university. Reviewing lectures, studying textbooks and learning in multimedia interactive environment fall in this category.
   2. What used to take place at home would take place inside the university or university organized facilities. They include doing homework, gaining advanced understanding, and mastering the expression of understanding. They refine the art and science of applying words, syntax and semantics in expression in supervised environment.
   3. Problem based learning and active learning would take higher precedence over prescribed course-material based learning.
   4. Pedagogical philosophy where we are all teachers, we are all students, and we are all producers of new knowledge.

(3) Open Admission and Measure of Excellence at Exit
   1. Unlike other universities that can deny entries to nearly all qualified applicants and accept only a few, the Open University does not deny qualified students of entry.

2. Achievements demonstrated at the end of program get higher precedence over those demonstrated before entering in the programs.
3. All get opportunity in technical, vocational and continuing education with an opportunity to excel and attain ever advanced academic degrees and highly regulated professional degrees.

(4) Graduated Learning

1. Continuing education, citizen science, non-formal training, and informal knowledge management systems to the general public,
2. Vocational, technical, and entrepreneurial education for all youth above 18,
3. Professional, innovative, and entrepreneurial education for the accordingly prepared,
4. Advanced scientific and highly technical and theoretical education for the extremely competitive scholars.

(5) Co-creation and Co-ownership with world's other institutions

1. Explicit commitment to be the leader in co-development
2. Explicit commitment to be the leader in co-ownership
3. Explicit commitment to be the centre for open-source knowledge movement

(6) Choices in learning:

1. Ability to choose desired courses from thousands
2. Flexibility to select unique combination of courses
3. Ability to choose a 100 lessons from thousands in every subject

(7) Just for us

1. Just-in-place education: Offer unique programs to Humla and unique to Jhapa.
2. Just-in-time education: Allow program to be available as and when learners need.
3. Just-for-me education: Let an individual select subjects to suite his/her personal needs.
4. Just-enough education to let people engage in action after every step of learning and in turn create new demand for more.

(8) Mobile learning

1. Truck installed mobile classrooms, materials, labs, and workshops to distant communities.
2. Maximum utilization of smart mobile phones and mobile learning devices in reception and storage of learning materials, and in interactive learning.
3. Tutoring, mentoring, evaluation, and support services through mobile devices.
4. Delivery of learning materials and facilities on mobile devices.

(9) Focus on green, local, rural and connected

1. Bypassing paper and bulk, and entering into digital and miniaturized systems,
2. Bypassing polluting technology and leapfrogging into green solutions to health, life and economy,
3. Making local cultural, technological, and natural strengths and opportunities the objects of learning, education and research.

Program distribution:

(1) School of lifelong learning: Here a student may take a credit, non-credit, or bridging courses of their interest and choice with or without learning support. One may get his/her extra-institutional learning assessed for formal recognition, for carrying them over towards diplomas and degrees, for enhancing earning potentials, or for elevating their personal and social wellbeing. The university may offer massive open online courses aimed at unlimited participation and open access via the web, radio or television.

(2) School of technical and vocational studies: These are two year programs of three types (a) vocational-technical fields leading to employment, vocation and entrepreneurship, and (b) general studies, which include science, mathematics, languages, philosophy, psychology, and history like subjects. They receive Associate Degree in Science, Arts or Technology.

(3) School of Liberal Studies: These are four year Bachelor's Degree where a student receives a degree after successfully completing the study of prescribed number of units from 1^{st}, 2^{nd}, 3^{rd}, and 4^{th} level (year) courses, or Master's Degree after completing studies of prescribed number of units of 5^{th} and 6^{th} level (year) courses.

(4) School of professional studies: These are also four year Bachelor's degree and two year Master's degree programs that lead to named degrees such as Bachelor of Electrical Engineering, Bachelor of Nursing, Bachelor of Science, and so on, where students would take courses prescribed by the university. They may then appear in professional licencing examinations.

(5) School of advanced studies and research: These are highly rigorous academic and technical studies program intended to develop researchers and high academics and admitted through stringent entrance examinations and track record of academic performance. Ph.D. Degrees will be awarded only through these streams. Students in this stream are required to study full-time.

Inter-program Transfer Arrangements:

(1) Anyone above 18 years will be permitted take programs in the first three streams. The fourth stream will admit top 33% students and the fifth stream top 12.5% students in the country. The top 33 and 12.5 percent students on national basis and per class basis from all public schools, and top 33% and 12.5% students on national basis and per class basis from private school will be admitted to the professional and higher academics programs. For every two students admitted on professional and academic program in the first year, one student will be taken from other streams on third year program.

(2) One central campus will be the administrative and academic centre of the university. Four centres in the High Hills, ten in Mid Hills, and ten in Terai provide lifelong, technical and vocational education specifically suitable to the society, economy and geography of the region of their coverage.

Part IV: Benefits to Society

(1) Access to technical, vocational and higher education for all.

(2) Education directly relevant to the contemporary needs of the place, person and community.

(3) Institutionally facilitated and supported learning and lifelong learning while working.

(4) University goes to people's homes and communities instead of requiring people to go to the universities. Traditional classrooms, bookstores, and libraries come home and people go to classrooms for advanced learning, problem solving, co-creation, laboratories, and workshops.
(5) Whole population engages in education, discovery of indigenous knowledge, and knowledge production.
(6) Cross-pollination of ideas between persons, communities and nations.
(7) Utilizing diaspora skills, knowledge, experiences and innovation in nation building, and taking education to diaspora that has scattered around for work.
(8) Popular ownership and participation in institution building through transparency and open dialogue in institution development.
(9) Co-development and co-ownership of open knowledge in collaboration with successful world institutions.

Table of Content

I. Motivation

“Education is the largest single contributor to break poverty, income gap, gender inequality and ethnic inequality, and also to improve nutrition, health and longevity of people” – Conclusions of the 2005 OECD Report on Education

"If your plan is for one year, plant rice.
If your plan is for ten years, plant trees.
If your plan is for one hundred years, educate your children." – Confucius, Chinese Philosopher and father of Confucianism

को हि भार: समर्थानां, किं दूरं व्यवसायिनाम् ।

को विदेश: सुविद्यानां, क: पर: प्रियवादिनाम् ।। चाणक्य नीति १०।१४

Nepal, a small country in Asia with unparalleled natural beauty and diversity, is characterized by its high population density, difficult-to-reach mountain terrain, and low national income. The increasing integration of its economy with the world has meant that it is in need of injection of highly educated people in the economy. Almost half of its 28 million population being of school age and 38 percent below 14 years[1] means that it has a vast pool of young people. This bodes well for its future but only if the country were to be able to provide quality education and training to this population. There is a significant gap between the need and the delivery in education reflected in its high drop-out rate throughout schools and universities. Considering that 18% of government's entire budget is unable to provide sufficient quality education to those “privileged” who are already in the system, bridging knowledge and skill gap for the majority who are left out of the prevailing system is even more so challenging. The carrying capacity of the government for developing its human resource appears smaller than the magnitude of the need. Therefore, “education as a human right” and “education for all” amount to challenging propositions for Nepal.

Rural Nepal, which holds more than 80% people, is where most educational investment is needed at the present time. And this is the population in need of vocational and technical education, which is more expensive to deliver than theoretical education. To exasperate the situation further, rural Nepal is and will remain unable to retain its population. The inevitable migration of people from rural to urban centres would mean that opportunities and investments would also move with them. The experiences of closures of vast numbers of rural schools and colleges in industrialized countries have taught us that traditional educational infrastructure were not designed (1) to adapt with population movement, (2) to handle sudden demand for tertiary educated people created by the knowledge economy, and (3) to adapt to rapidly changing skill-market. This is necessitating the developing countries like Nepal to take some hard look on other innovative alternatives to the means and modes of providing access to education to their people.

In recent times, more and more countries have been actively promoting open and distance education as means to break the barriers of access, geography, cost and quality in higher education but it remains as a missing frontier in Nepal. In 1980 itself, Nepal had envisioned to train large number of teachers through “radio teacher training and distance training system” in its Sixth Five Year Plan (1980-85) [2]. The Seventh Five Year Plan (1985-90) stated to further strengthen and diversify the open and distance education. The plan stated, “To acquire higher education while on job and to

reduce the excessive pressure of admission on campuses, arrangements will be made to impart higher education by open education method through medium of radio, publication, tapes and correspondence"[3].

Nepal was one of the participant in the Round Table Conference organized by Asian Development Bank on Distance Education in South Asia held in Islamabad, Pakistan on November 6-8, 1989. The Government Plans and Policies section of the country paper summary on Nepal in its proceedings states that, "There is an apparent need to use distance learning technology in order to: achieve universal primary education by the Year 2000; impart necessary training to teachers; provide access to higher education by high school graduates; impart functional literacy education to illiterate adults; impact technical and vocational training to out-of-school youth and adults; and to improve participation rate of women in education and training" [4].

Subsequent national plans also aspired to extend the reach of education to women, rural, remote and marginalized population and training the untrained teachers employed in schools throughout Nepal. During the Eighth Plan of 1992-97, the government commissioned a feasibility study on open and distance education. A consortium of Nepali and Canadian companies (CHIRAG Nepal, Hickling Corporation and Gary Coldevin International) conducted a study between 1993 and 1995 and released a report [5] strongly recommending that the government start a Centre for Open Learning/Distance Education, critically linked to Ministry of Education and other highest level of planning and policy institutions. They recommended that the centre provide teacher training, non-formal education, support for SLC failed students and create foundation for establishing an Open University. The proposition remained as proposition and went unimplemented.

High level government officials and educationists attest that world's prominent open and distance universities have been visited over and over again and many open and distance education conferences have been attended by Nepalese officials. Nepal has also hosted a number of informational and interaction programs and workshops in preparation of establishing an open university.

The government proposed to establish an Open University in the Ninth Five Year Plan of 1997-2002 [6]. Subsequently, waves of activities to establish an Open University also took place, especially during 2002-4 by groups of prominent educationists. These parallel efforts were later consolidated to form one committee under the leadership of the Secretary of the Ministry of Education. It is said that a Legislative Draft was submitted in 2004 to the then king by a group of promoters and was on the verge of being made a law by ordinance [7]. Note that the then King Gyanendra had assumed absolute power by dissolving the parliament at that time period. Those activities also ultimately waned. Sometimes after 2006, the University Grant Commission had formed an Open University of Nepal Preparatory Committee, which had commissioned a study and made a strong recommendation for the establishment of the OUN in 2008 [8]. After the parliamentary election of 2008, the effort was renewed in the legislative front. This culminated into tabling of a Private Member's Bill on Open University of Nepal Bill 2066 by three young parliamentarians on April 8, 2010 [9], but it could not gain needed political backing of larger political parties. A second bill named University Act (a.k.a Umbrella Act) [9-1] was tabled by the Government of Nepal in 2011, which invited much resistance from top officials of the existing universities. This resistance delayed its passage but was nearing breakthrough with

revisions in May 2012, when the parliament was dissolved and all processes of making new acts came to a halt.

In 2008, the GoN announced for the first time a budgetary provision [9-2] to establish Open University (OU) in Nepal as a means to take education to the grassroots people who have missed the opportunity for various reasons. Independently, diaspora knowledge-workers also took up the cause of building such university. Consequently, the Government of Nepal (GoN), Non-Resident Nepali Association (NRNA), Canada Foundation for Nepal (CFFN), and Athabasca University (AU) of Canada came together to collaborate.

In the diaspora circle, CFFN shared the core motivation of this mission to small group of Nepali scholars. From this informal approach emerged the first Task Force of NRNs in North America [Appendix A], which would later be expanded into various committees and working groups [Appendix B]. A brief concept note [Appendix C] was then presented to NRN Canada conference in 2009 that generated interest of NRN Canada and NRNA ICC. Weighing on the strong interest shown to the mission, CFFN prepared the first draft of this document in December 2009 and a joint NRNA and CFFN and NECASE expedition team made a historic visit to Athabasca University and submitted their findings to the NRNA [Appendix D]. Series of workshops were then organized [Appendix E] to propel the mission further that led to declaration of OUNI as the Flagship Project of NRNA [Appendix F], formation of OUN Strategic Committee, and publication of first academic paper advocating OUNI mission with strong Diaspora participation [Appendix G] in May 2010. This work also stimulated interest among its promoters on ways to establish OUN as a research and innovation institution and to propose ways to manage innovation [Appendix H].

The work of the Strategic Committee led to an agreement between NRNA, AU and CFFN in September 20, 2010 [Appendix I]. Then a resolution was signed between NRNA and Ministry of Education of Nepal in October 7, 2010, when Open University of Nepal Initiative Steering Committee (OUNISC) was formed with representatives from all participating institutions and institutional experts to advance the mission as a collaborative venture [Appendix J]. The signed document states, "whereas, in its pursuit for supporting Nepal's development, the Non-Resident Nepali Association (NRNA) has proposed to collaborate in establishing the OUN, the MoE welcomes this engagement and supports the proposition" in recognition of "the possibility of turning problem of out-migration of educated human resource into a source of knowledge, education and innovation". This "publicly owned, NRN supported, Open University of Nepal" would be "based on the principles that: universal access to education should be available to all, regardless of citizens' position in the socio-economic strata and geo-ethno locus; education programs and services should meet national and international standards; collaboration, resource sharing, efficiency, choices and innovation in education should be encouraged for the growth of the institution". The GoN and NRNs agreed to "unite hands and create a resource synergy" and to "extend collaboration with mutually identified worthy partners". Leading up to this event, the ministry officials had also been promoting OU concept through articles on national newspapers [Appendix K].

The OUNISC organized its first planning meeting on OUNI with international collaborators in January 2011 in Ottawa [Appendix L] and the second Workshop during its 5th Global Conference in Kathmandu with prominent figures of Nepalese universities and international experts [Appendix M].

In May 2012, the Government of Nepal attempted to take a major responsibility of the work by establishing Open University Infrastructure Development Board under the chairmanship of the Minister of Education. The Board initially showed interest to maintain the collaborative arrangements that were made with outside institutions. A high level delegation from the Government and the Board participated in the NRNA 7th Regional Conference in Sydney where an intellectually engaging program was organized on OUNI [Appendix N] and in this program two MoU were signed, one between the OUNIDB and Athabasca University [Appendix O] and the other between OUNIDB and the NRNA [Appendix P].

The executive arm, appointed to carry out the day to day operations, of the Development Board, however, started its own new approach by giving contract to write a new concept paper, repeating the same steps that had already been long crossed due to works of UGC, the High Level Commission on Education, NRNs, OUNISC and other promoters. Most importantly it abandoned the approaches like massive stakeholder participation in design, co-creation, co-development, collaboration, crowd-sourcing, and diaspora mobilization that were considered important by the participants. Instead it started viewing the collaborators and co-developers as donors. While setting aside the assigned work of developing infrastructure for the OU and developing the comprehensive operational plan, the Board executives sought to develop programs through exclusively selected team without any open engagement of the stakeholders. No planning work could be commenced. Nevertheless, the Open University budget allocated by the government started flowing, pressure to building the university continued to mount, and curriculum outlines are prepared for some programs that could be adapted by the academic system to be developed.

Despite some difficulties like the ones mentioned above, the proponent NRNs continued promoting the mission with the government and other stakeholders through their resident representative for the mission and through NRNA delegations. The 6th Global Conference held in October 2013 organized a program dedicated to OUNI [Appendix Q] as in its past conferences and the project remained as a prominent agenda of the NRNA. The newly elected NRNA ICC executive body started its interaction with the government [Appendix R]. The Ministry of Education responded to the NRNA proposition to re-honour the past agreements and to revitalize the collaboration favourably in the meeting of March 13 2014 [Appendix S]. The steps taken by the government in relation to OU have also remained positive and the government leadership did not backtrack from its commitment for collaboration despite some glitches that surfaced on the path. As a consequence a new Memorandum of Understanding was signed between the Ministry of Education and NRNA on June 10, 2014 [Appendix T] that more clearly outlined the instruments for implementing the technical and academic works along with the roles of participating institutions. Through this the Ministry of Education issued a directive to OUNIDB while giving instruments for further strengthening its work. This development has been viewed as a positive and tangible step forward towards the establishment of the Open University in Nepal.

Having faced difficulty passing the Umbrella Act through the past parliament, the Ministry of Education has taken leadership in drafting a separate draft bill [9-3] for the Open University and the Cabinet of Ministers has given an “agreement in principle” to prepare the bill, which could be submitted to the parliament for its passage or to the President to obtain interim legal stature through Ordinance.

Preparation of this bill is a proof of continued commitment from the government on the mission. And in addition, the largest three parties of Nepal have committed themselves in the establishment of the OU through their election manifesto released prior to the election that was held in November 19, 2013 [9-4, 9-5, 9-6]. From the budget allocated by the government for the universities, the University Grant Commission has allocated 19 million Rupees towards the Open University purpose for Fiscal Year 2070-71 [2013-14] - nearly double from the previous year. These developments are encouraging and, consequently, a legal outlet for the establishment of OU appears imminent.

As professed by ancient philosophers and validated by modern scientific research, education is the cross-cutting single contributor to address national development and its sustenance. Education brings higher private earnings and improved quality of life for individuals in terms of nutrition, health and wellbeing, and benefit to society in terms of population control, social justice, economic growth, and productivity. Studies have concluded that the returns from investment in education are generally greater than returns to capital in other sectors of economy and education facilitates entrepreneurship [10].

Today is a time of rising social disparity, economic globalization, rising economic inequalities, massive outflow of youth in foreign employment, migration of skilled human resources to other countries, outflow of academically sound students, married women being out of reach of universities, large number students of marginalized communities dropping out from the system before completing the high school, and fast changes occurring in knowledge and skills frontier. And the greatest tool for a country to mitigate these problems and spur economic growth with least amount of effort is to promote quality education across the population by removing prevailing and potential barriers. And, in breaking those barriers to the access, a developing economy has to face tremendous challenges in monetary, technological, and human resource fronts.

Therefore, a collaborative engagement of government, resident and diaspora Nepalese, international scholars, development partners, and national and international institutions has been identified as the most desirable way to tackle this problem. Experiences from around the world on open and distance education indicate that open universities instrumented with proper mechanism for content development, quality control, collaboration, and delivery can accelerate the breakdown of barriers that exist on the access to quality education. Such institutions can teach large population with limited resources with the use of information and communication technology (ICT) in content production, student-centred learning, and course delivery. Such institutions could promote higher studies in population who would otherwise be unable to attend classroom lectures and, therefore, accelerate the development of much needed human resource for the society. Nepal is also in need for such institution for ensuring increased access and participation in high quality, relevant, and affordable higher education. Therefore, establishing a world class, technologically rich, and the most accessible open university as a driving force for the massification of higher learning and democratization of education is identified as the most worthy national mission for Nepal. This document has been prepared as the white paper for taking further actions in building such institution.

II. Present Context of Higher Education in Nepal

A. Education is Well Recognized but Unaffordable Public Good in Nepal

Education is one of the best public good there can be and it has not gone unnoticed in Nepal. Parents who can afford are spending huge amount of their fortune in educating their children. The country has already accepted education as a basic human right and this right has been spelled out in the interim constitution. The government has already approved the policy for allowing local schools to develop curriculum and content as a means to address the local learning needs. In 2008, it also allocated budget for establishing an open university. Also, the UN and donor countries have committed to eliminating illiteracy and alleviating poverty. They are actively engaged with least developed countries with Millennium Development Goal.

Despite positive trends in enrollment, Nepal is struggling to maintain the quality of education in existing institutions, which have over 300,000 tertiary students in them. While improvements in quality are most needed, public expenditure per student in higher education is falling. If half the 90% tertiary age population that is outside institutions were to enter into tertiary systems, there would be more than a million more students to be taught but it would be almost impossible to build that much more classroom based tertiary institutional infrastructure for not having enough resources. Already so many qualified students cannot be admitted to public university because there is far less intake capacity than the population of interested candidates and far less program offerings than market demand.

B. Underdevelopment of Human Resource in the Margins of Society

Despite decades of efforts, tertiary education remains poorly accessible to rural and working people of Nepal. Although, the for-profit private education was introduced a quarter century ago to cope with the rising demand in higher education, private purchase of schooling and higher education has remained beyond the means of most rural people and the urban poor. The effect of this has been sub-par education among women, people of rural and remote communities, people of low economic strata, and traditionally marginalized people. There is 20 percent repeat rate and 38 percent students drop-out before reaching Grade 5, and, consequently, near 1 million children of primary age group are out of school systems [11]. Age participation rate (APR) of only 3 percent for women and 9 percent total in tertiary education [12]. This is at a time when the labour shortage is shifting upward to tertiary level. It is predicted that 40 percent of global workforce will be knowledge workers with tertiary or higher education by 2020[13], and 40 to 50 percent tertiary APR is perceived as necessary for sustained and sustainable development of knowledge economies [14].

Studies in rural schools of Nepal, however, reveal that there is a gap between the experience, need and aspiration of rural people and what is offered in educational material. High dropout rate in primary and secondary schools are making tertiary education an unattainable dream for the majority of disadvantaged people. There is a question mark on the competency and learning outcomes of what learning system is available. To mitigate this gap, government introduced a policy to permit local curriculum and course material development to address the local needs but faced difficulties in its implementation due to lack of qualified human resource in local communities. Due to irreversible trend in urbanization, emigration, and foreign-employment, the vast majority of qualified people live in cities and foreign countries while the needs in the rural and remote communities remain unaddressed.

C. Problems of Population Movement

The inevitable migration of people to urban and industrial centres, and to other countries, would mean that educational opportunities and investments meant for the masses have to be in rural areas today and in urban areas tomorrow. Experiences of closures of vast numbers of rural schools and colleges in industrialized countries have taught us that. Traditional educational infrastructure is not adaptive to population movement.

Population movement creates a problem of numbers. Because the numbers are changing independently of educational plan, it is hard to know how many students there have been, how many there are, how many there will be a decade or two from now, and how they will be distributed in the country. It is extremely difficult proposition to plan this in a country where the movement is just taking its speed but all clear patterns are yet to be established.

We already know that, despite having huge capacity, the enrolments in Tribhuvan University have gone down and that in private colleges have been increasing. But the buildings and facilities of the brick and mortar university campuses that become underutilized will remain where they are and go further underutilized. Some campuses will have students in excess to planned numbers and other campuses will have large amounts of unused space, resulting in waste and deficiencies in the system at the same time.

Expanding urban college spaces means acquiring land in crowded urban centres at excessively high cost and requiring students to stay in high rental properties, face excessive living expenses, and the poor students incurring larger debts; the shrinking rural campuses under-utilize their real estate, require to maintain unused real estate, become over staffed, offer program not coherent to student needs, and take up high cost per student. This is a tremendous loss of public resources as well as of private citizens.

Therefore, we are in need of a different kind of university that does not get affected by population movement but instead adjusts automatically with the population pattern, thereby always providing optimum services.

D. Impact of Rising Foreign Employment

In recent years, young people of Nepal are taking foreign employment at an unprecedented rate. More than three million youth are said to be working in the Middle East, Korea and Malaysia alone. Young people are taking these jobs at any time of their study periods. They compromise education in preference for securing jobs, which are hard to come by in internal market. Taking these jobs without any prior technical and vocational training, they become among the lowest paid workers. Therefore, even just as to increase the remittance flow, it has become important to send them with technical and vocational training. Besides, a sizable number of these people have shown eagerness to continue their education, complete degrees, or enhance work specific knowledge and skills even when they are in foreign employment. However, they have no opportunity to realize those dreams. The universities are taking classes in Kathmandu and they are working far flung places like Dubai, Doha, and Seoul. The offerings of existing universities are impracticable for serving this population and provide education, training and lifelong learning opportunities in places of their work.

E. Some Problems Remain Unsolved by Traditional Institutions

It is often not possible for a mother of small children to attend classes run in set times. Similarly job-holders are often unable to quit jobs to pursue higher education, which is needed for their career advancement. Some people miss education due to family obligations to look after their family farm, ill or elderly family members, or due to disability. Some cannot attend for being unable to afford to live in cities and towns for studies. Some would not get admission into programs at they did not have sufficient marks in the past or due to preparedness gap. As we move higher up in the education ladder, individuals need to branch off into many areas of study choices but offering of such choices would be uneconomical outside large cities. Most rural areas do not even have institutions of higher studies because we do not have enough qualified people in rural areas and the resources to build institutions in large numbers.

Because there is no other formal alternative available, more than three quarter students in country's largest university, the Tribhuvan University, enrol in programs and pay fees as full-time students but do not attend the classes; they self-study the textbooks and guides and then appear in the exam without receiving any learning support from the university. As they rely on self-studies alone, they face poor learning outcome and high failure rates. Learning support beyond lecture is not institutionally available due to reasons like cost. The current model of learning offered by institutions do not suite people of all learning needs. There is no economy of scale in classroom based delivery model to teach a large student population anticipated to seek higher education in the near future.

Access to education is also affected by cultural and natural barriers. Most women simply resign on higher education either after marriage or after they complete whatever was possible from local schools as parents are reluctant to send daughter and daughters-in-law to distant places. When attainable at home turfs, women of Nepal are found to aim for maximum education and academically perform better than men [15]. Having more than 80% population in rural areas with greater economic, geographic and cultural constraints and even greater need to uplift their economic potential, problem like this are large in magnitude. We cannot afford to offer them the needed technical, vocational and higher education in a traditional way.

F. Erosion of Academic Integrity

While the economically underprivileged youth are hard pressed to take foreign employment, there are significant numbers of urban middle class and upper class youth who are seeking to go to developed countries for studies and work. Their preferred study areas are science, technology and business. This has led to mushrooming of schools aiming to catch this demand in degrees and diplomas. There is so much focus on good grades that the whole education system has turned into a grade factory, not one of espousing critical thinking and problem solving. Transpired from this culture are rote learning of guides, erosion of persistent learning, diminished focus on deep understanding, and guess papers replacing reference materials. There are complaints on the street that masters and doctorate thesis are written in contract. There are serious issues raised in areas of academic integrity, learning outcomes, examinations, and standards.

Complaints like attraction of sub-par academics, professionals and material resources and underpayment of teachers in private colleges, and getting full time salary without teaching in public university campuses are also rife in Nepal. Delivering quality

education as a means to multiply the effect of human, financial, and technological resources remains a challenge. How long can we maintain the status quo and not adopt improved approaches to delivery of education?

G. Vocational, Scientific and Technological Disciplines are Difficult to Teach

The modern society is becoming increasingly dependent on science and technology, escalating the demand for people trained in those fields. However, almost all student failures in rural Nepal are attributed to failure in Mathematics, English and Science education. These are difficult fields of studies to produce highly trained teachers. Today, the need for science, technology and vocational education has taken a quantum leap. But, when it comes to science, technology and vocation, there are added complexities in establishing laboratories, supplying experimental materials, and providing logistical support to teachers.

Mobile or shared laboratories, virtual realities, and simulations are emerging as increasingly viable teaching aids in difficult fields like medicine, genomics, chemistry, earth sciences, and more. However, those aids are out of reach for the students of Nepal. The social, occupational and natural environments of the learners are converted into laboratories of learning elsewhere but we are nowhere close to doing so in Nepal. Our students also do not have access to interactive learning materials, open education experts, collaborative and distributed learning, citizen contributions to learning material development, and learners becoming producers of knowledge. We are unable to use Wiki and Open Source platforms in creating learning materials by popular mass and experts together. We do not have a competitive and reward rich institutional environment to encourage grassroots professionals, educators, and institutions to proliferate innovation. In absence of those foundational means, popularizing science, technology and vocational education to the masses would remain difficult.

H. Needs are Changing Faster than the Adaptability of Traditional Institutions

Due to emergence of knowledge economy and increasing sophistication and specialization of employable skills, the demand for higher education has jumped at a faster rate than developing countries like Nepal can handle. Rising enrolments in new fields of studies and lowering enrolment in traditional programs has been challenging both economically and logistically for the existing universities. We need ever more educated people to teach the people and to teach in ever newer fields of studies. But educating, training, and re-training hundreds of thousands of teachers to introduce new fields of studies, or to keep the existing fields relevant, is not possible in traditional face-to-face settings. To make the matter more complicated, the new fields introduced today might become obsolete as quickly due to further innovations made elsewhere. Consequently, traditional institutions would be too slow to adapt to the changing needs of the rapidly evolving society.

In TU alone, it is informally said that thousands of full time teachers are getting salaries without teaching because students no longer are enrolling in subjects they used to teach. Consequently, student enrolment is decreasing in the TU. People are moving away from subjects of general knowledge and into vocational and technical fields. People complain that traditional subjects are making them neither employable nor entrepreneurial. There is a huge demand of other newer subjects but there are no teachers to teach them. In programs introduced as futuristic, students are poorly

served due to unavailability of teachers sufficiently trained in the field. The technical and innovative prowess of the nation has, therefore, been hindered from being unleashed.

A recent OECD study in the use of information and communication technologies (ICTs) in universities found that they use ICTs more effectively in public relations, management, administration, funding and research then in teaching and learning – the most profound purpose for their existence [16]. This does not bode well for the future of institutions that do not adapt to the demands of time.

I. Internal Migration, Emigration and Brain Drain

While Nepal is attempting to produce more educated people, the effect is dampened by global human movement and open immigration policies of industrialized countries. Many aspiring people are settling in industrialized countries and significant proportions of them have achieved demonstrable academic, professional, technical and economic success. That success has been of little value to Nepal at present. It is excruciatingly difficult and economically not practicable to turn this potential into benefit to Nepal by means of current educational setup. The diaspora identified in the world economy as "the agent of change" remains of little utility to Nepal.
Nepalese economists often show optimism in that masses of people are converging to cities. But the country does not have any rising industrial economy and factories that can employ the large number of migrants. People living in smaller and remote communities are forced to move away for a hope of getting education and employment. But as Nepal is unable to create employment at sufficient rate, we are facing a problem of rising urban unemployment and poverty, and consequently emerging frustration in youth. In absence of a tangible alternative, this situation can be as explosive as it might have been considered an opportunity.

J. Many Non-Unified Projects but no Institutional Approach

Whereas there are significant numbers of academics, professionals and technically skilled people in towns, cities and distant countries, there is lack of an institution to utilize their talents into educating the masses. Efforts have been made over the years by individuals and organizations in channelling the goodwill of urban intellectuals, Diasporas and friends of Nepal to improve education for the people in the margins of society. Both distance and direct education efforts have been made at various places. While people are helping with great goodwill, there is no mechanism to interlink their energy to produce something pervasive and sustainable.

In the absence of any substantive institution to collect the information and knowledge and to make it available to the scattered masses, the efforts have largely remained fragmented and unsustainable. In absence of an institution that combines the numerous strands of efforts to produce a multiplier effect, philanthropic contributions made in education will remain poorly effective, let alone resulting in delivery high quality professional and advanced academic education. Only an institutional approach to solving the problem of education would bring a greater and sustainable impact compared to executing many small projects and would help solve the complex problems of breaking national boundaries, achieving overall academic integrity, maintain consistency in academic excellence, and handling the need of the population at a manageable cost. Being a resource strapped developing country, Nepal has this forced option to harness the power of modern technology, openness of the world,

intellectual capabilities of its diaspora, and the goodwill of the countries around the world to ensure that education reaches to the margins of society.

K. Summary

Nepal's present context of higher education is one of mismatch in the need and the supply, elite control of higher education, mass migration of educated people, unskilled labour export to other countries, and education that does not produce entrepreneurs and enterprise developers but job seekers. Whereas the jobs in the market require ever sophisticated technical and vocational skills the higher education is in large part confined to theoretical learning. Whereas large number of Nepalese people have acquired transferrable knowledge and skills useful to Nepal there is no institutional mechanism to transfer that skill and knowledge. The higher education sector is in need of innovative intervention for it to be made accessible to the masses and for the purpose of democratizing the education.

III. Opportunities for Educating All

A. Successful Use of Open Education in Other Countries

Thanks to technological revolution of late, institutions have already demonstrated that those who possess world class education and intimate knowledge of subject matters could educate people living at distances. Britain and Canada, the two pioneering countries in open higher education, started their Open Universities in 1969 and 1970 respectively. These universities exclusively specialized in open and distance learning and have been offering fully accredited programs and degrees. Their courses are also taken by students attending regular classroom based universities and their programs and courses are transferable to best of the best universities. Today more than seventy countries have established open universities.

Countries around Nepal also entered into Open University movement not so long after UK and Canada. Pakistan established Allama Iqbal Open University in 1974, being the first in Asia and Open University of Sri Lanka was established in 1978. China, in 1979, established China Central Radio & TV University (CCRTVU), together with other 28 RTVUs, which now enrol the country's more than 2/3 student population, numbering in excess of 3 million. Established in 1985, Indira Gandhi National Open University (IGNOU) claims to be the largest university in the world by student enrolment, with 4 million students. Bangladesh established Bangladesh Institute of Distance Education (BIDE) in 1985, which was then converted to Bangladesh Open University in 1992. Today, China and India are the largest providers of open and distance education in the world. Successes of Open Universities are being emulated by many countries and it is only matter of time Nepal takes its turn and place in this emerging opportunity.

B. Convergence of Education Systems: Tackling a Common Problem

The history of open universities has significant interrelationship with distance education, which took off with print-based correspondence courses, then tutoring through off-campus study-centers. In the next stage, real-time technologies like telephone, radio, television and Internet, and video-conferencing were introduced. Today, both regular and open universities make use of advanced technologies to address the emerging needs of accessibility, quality, efficiency of delivery, and affordability.

There is a growing recognition that learning occurs in a variety of ways be in classrooms, homes, workplaces and other encounters, and thus forcing us to invent new ways of achieving learning outcomes. Also the ever changing nature of jobs, rapid obsolescence of old knowledge, and requirements for new knowledge and skills have demanded flexibility on how, where, when, and to-whom education is delivered. This emerging necessity is not the problem of an isolated institution but of all forms of universities.

Open learning movement has promoted an educational system where barriers to entry-and-acquisition of education are sought to be removed through means such as liberal transfer of credits, recognition of prior learning, and providing institutionally managed programs to bridge the learning gaps. Therefore, the term open and distance learning (ODL) carries a special significance in education. Lately, "Online learning and e-learning have emerged as terms to describe the application of ICT to enhance

distance education, implement open learning policies, make learning activities more flexible and enable these learning activities to be distributed among many learning venues" [17]. New focus has emerged on mobile-learning (m-learning).

Economic limitations and logistical complications in preparing human resource for the knowledge economy have grown sharply over the years. The problems are even more dramatic for small developing countries like Nepal. Thus there is this necessity to pursue new avenue for educating people that can scale, be economically viable, be flexible and accessible, and be of best quality. Therefore, all universities – regular or distance – must evolve to serve the changing world and in that process they are bound to reach at a point of convergence. We will all meet there.

C. The Multiplier Effect

At present the universities in Nepal are unable to offer the same quality of delivery on a single subject in all of their campuses offering the same program. A student attending a class in Kirtipur Campus of Tribhuvan University may have access to one of the best professors whereas a remote campus may not even find remotely qualified teacher to conduct its classes. Due to its inherent lecturing nature and administrative nature, students of all campuses are not allowed to attend the lecture of the best professor that in known in the country. But that is not so in an open university.

Open universities can multiply their work with maximum effectiveness. They achieve that by first bringing together the best academics, professional course developers, technologists, and technology to develop learner centred paradigm in course development and delivery with a high initial cost, and then by using mass access approach. This way all the students uniformly access the same high quality learning material, lectures, and resources. In them, the technology allows a student in Humla to be tutored and lectured by a professor in Kathmandu or even the USA, consequently it would be possible to deliver high quality learning support even to the learners of remote and isolated communities. Therefore, it is possible to achieve economy of scale in open and distance universities as has been achieved in modern software industries. This multiplying effect and the use of information and communication technology are the main catalysts behind breaking access-barriers.

It might then be argued that producing a high quality course material requires high consumption of intellectual-capacity, time, and money, not easily affordable by many developing countries. However, new approaches like co-creation, co-development, co-distribution and co-use have emerged as means to cross those financial and technological barriers. Such collaborative initiatives in authoring of contents are facilitated by internationally accepted collaboration tools and ICT. Such tools permit globally scattered collaborators to accomplish the task collectively and globally scattered volunteers to contribute. This process can help Nepal build its own content development capacity by involving Nepalese educators in collaboration with experienced international contributors and diaspora contributors. Today in Nepal, even the freely available materials from international institutions have gone unused due to lack of awareness, ownership and capacity.

D. Paradigm Shift in Curriculum and Evaluation in Web Enabled Society

Information, human exchanges, global economy, shifting markets and rise of entrepreneurship and enterprises has demanded preparation of human resources that

carry latest of scientific, technological, social, and every other kind of knowledge. At the same time, the distributed nature of global knowledge and its exponential growth have made it almost impossible for set number of permanent professors in a university to acquire all available knowledge and teach it all. To any question a teacher can ask, a student can instantly search a volume of answers in the Internet.

While young learners find answers to their real questions in the Web, they are not permitted to do so in schools. While the world of knowledge has expanded far beyond the grasp of a traditional teacher possessing a narrow set of knowledge, an average teacher is reluctant to understand his or her limitations and to mobilize emerging opportunities in learning. Today, ability to memorize and recite has lesser practical value than ability to efficiently navigate through, discriminate, and synthesize the vast volume of information that can be pulled from the Web in search of solving a problem before us. Therefore, traditional "memorize and write" model of curriculum and examination practices are bound to be overshadowed by those that will give priority in real life problem solving, knowledge synthesis, critical thinking, possession of useful experiences and skills, and "new literacy".

The "new literacy" not only includes math, science, language and ICT skills as known before but also the ability to make sense of the unedited and voluminous information that one can access and be able to synthesize it and use it for problem solving. This necessitates a fundamental shift in how we develop curriculum, learning modules, and finally examination systems to measure learning achievements.

E. Existing Institutions and their Contributions

Tertiary level distance education has already reached Nepal through foreign institutions. Universities from India, Thailand and Europe have used private local institutions as marketing and administrative front ends and to offer their distance education programs to Nepalese knowledge seekers. The local institutes offer access to ICT facility, Internet connection, and tutoring through campuses. Their service is adding some bricks in the endeavour of educating Nepalese people. The limitation is that the level of collaboration in program, material development and research is virtually non-existent and the flow is almost unidirectional. Although this model can offer comprehensive programs and serve urban students that have sufficient level of English and Hindi proficiency, it is unable to serve the rural poor who make up more than 80% of the population. To serve the most underprivileged population, Nepal needs its own open university. Further, due to recent trend in employment, majority of rural households depend on foreign employment income for sustenance. Preparing this population for appropriately taking advantage of the situation requires program offerings that are in synch with labour force and enterprise development needs. Rural youth that go on foreign employment could bring more remittance and more valuable skills with them if they are sent with vocational and technical skills rather than sending as unskilled workers. This would be a departure from current academic system that prepares Nepal's human resource for the service of society and economy of other countries.

F. Collaboration, Co-development, Co-ownership and Open Education

Open education movement has a long history of collaboration and it has no principle barrier in welcoming Nepalese institutions to the league of collaborators. In fact, vast technical knowledge and educational material built over the years by other institutions

is available to be obtained for free of cost. It has, therefore, become easier to develop the capacity to offer programs rather swiftly. The technical assistance from the experienced and reputed players would help train the faculty, establish technical platform, produce content, incorporate the content in content databases, adopting technology enabled learning management systems, and so on. Developing these capacities by an isolated institution would be a very slow and painful.

Online learning could be of different nature: self-learning, supported self-learning, virtual class, collaborative learning, "just-in-time" learning, "just-enough" learning, and "just-for-me" learning. They are facilitated by learning objects, such as lessons, interactive lessons, tests and exercises with feedback, and project works. It is difficult for a single teacher of a single institution to meet in isolation the needs for learning objects. Collaboration with Diasporas and educators of schools and universities of other countries could help develop, improve, adapt, and fix-bugs in a short time in presence of technologically enhanced collaboration environment. The collection of courses would grow quickly if development is done collaboratively. Collaborations would also act as the greatest agent of capacity building in Nepal.

Nearly all institutions of higher learning (open or conventional) in the world are now experiencing competition and cost pressures. This is making co-development and co-ownership of programs, contents, and even technology infrastructures to the advantage of all participating institutions. Therefore, there is opportunity to works with vast number of universities that are not open universities. Opportunities are especially strong in research areas if which Nepal offers some natural advantage. Collaboration, co-development and co-ownership approach could be extended with other developing countries with similar human resource needs. These ways can accelerate program development, curriculum development, materials development, and teacher training for Nepalese learners while incurring lower cost in developing and offering comprehensive programs.

G. New Ways in Learning

As we are knowing more and more on how people learn, we are finding that there is not a single model that serves all the people. Transformation is at the heart of all systems and a learning system is no exception. Today we recognize that education is a social process that cannot take place in isolation. At the same time there is no pouring in of knowledge but only self-willed acquiring from a social or natural context. With evolution of our understandings the learning metaphors have changed from container, conduit, control, war, to dance-ritual [Appendix N]. As a conscious effort to open up to people who have missed out, open education attempts to be learner-centered, effective and scalable by use of a system of learning with two way feedback, virtual learning environment, and social media in learning.

A learner-centered paradigm of learning provides flexibility to students on when, where, how and at what pace they learn. It focuses on the needs of individual learner individually. It allows them to choose what and why they would like to study, learn through experimentation, through active engagement, learn deeply, and understand deeply. Although considered theoretically interesting, this type of learning was considered less practicable in the past but modern breakthrough in education has made it possible.

H. New Ways of Content Development

Recent advancements in the use of ICT in education has taken ICT from being a vehicle for transporting and rendering traditional courses to an agent for rendering flexible and interactive learning. Academicians, teaching experts, and technologists are teaming together to produce learning content in such a way that they are managed through databases and applications, content management systems, and learning management systems. Institutions spend large sums of money in producing interactive course contents specially tailored to ICT so that it (1) could maximize the learning outcomes, (2) could be accessed by learners around the world, (3) could evaluate the learners' learning outcome, and (4) reuse the material. Modular learning objects are created such that they can be stored in network databases and aggregated, recombined or re-engineered to suit the purposes of multiple institutions, faculty members or instructional developers. They also help render large programs through "byte-sized" chunks suitable to render through mobile devices and low-bandwidth communication networks. The learning outcomes are maximized by learner centric interactive content that have choices, flexibility, mobile accessibility, customizability and fun. The learning resources, such as text, audio-visual content, lesson plans, and assessment strategies are qualitatively made equivalent or superior to those available in the traditional learning environment [18].

I. Internet and Mobile Technology Infrastructure and its Utility

Internet, Web and ICT literacy are considered to be the backbone of education of this century. Availability of broadband Internet access, ICT infrastructure, and ICT skills are the most foundational elements in rendering services of a 21st century open university. Global information machinery has already rendered this message to the government and policy bodies of Nepal. The only part lacking is the know-how and concerted action in developing such infrastructure and skills. Nevertheless, private and public initiatives are already building ICT infrastructure in urban communities, although the access to ICT in most university campuses remains poor. And, the bulk of the currently available access is utilized for non-academic and administrative purposes. Considering the state of the economy, the ICT is not affordable at personal level to most rural people without external assistance at the moment. Further, the convergence of voice, data, video, and text features through a single device has just started to surface in the market.

Economic constraints of people would dictate that a feasible mode of taking ICT infrastructure to people is through "learning centers" created in public schools, notwithstanding availability of electricity. Use of Internet Cafes in distance education initiatives is not sufficiently understood, although such Cafe's exist in Nepal. It is likely that they will be uneconomical for educational purpose. It will take some time for affordability and feasibility for mobile computer based ICT to reach masses of people.

However, the revolution in personal mobile devices, laying of fibre optic communication trunks by private and public initiatives, and the 3G and 4G mobile telecommunication services is happening at such a rapid pace that they are going to be economical tools for the population of developing world in not so distant future. If the government can establish a policy to make it mandatory give a fraction (<10%) of that bandwidth (which is a small fraction of the available bandwidth in those communication trunks) for public education purpose, delivering open and distance

education to entire population could become a reality within a decade. In this context, instead of spending time and money in infrastructure that might become obsolete soon, it would be desirable for Nepal to go directly to mobile learning. And there is some more reason behind this decision.

Asia has 18 computer users per 1000 population as opposed to 760 per 1000 in the US, but Nepal would rank among the poorest even in Asia in computer uses [19]. On the contrary, when it comes to telephony and mobile devices, Nepal is gaining steady grounds. Surprisingly enough, even mature people, who were supposed to be least technologically savvy, are obsessed with these devices. Considering this trend, it would be far more feasible for Nepal to jump into mobile learning as compared to other forms of computer based or traditional distance learning. The ease and versatility of using mobile devices is all apparent even from the experiences of the developed nations. "At one Japanese university, all students had mobile phones and on an average each student sent 200 messages per week for study purposes, as opposed to seven voice mails per week. Only 43% used PCs sending only 2 messages per week." [20]

The Internet infrastructure dedicated to education in the immediate project area (stated below) might have to be developed by the institution to accelerate the establishment of the university, while public and private groups expand the reach of Internet throughout the country. This is because we intend to use Internet as the primary medium for advancing learning activities and in taking the learning materials to learners. The same infrastructure would be used for providing the Internet connectivity required to support internal and international collaboration and collaborative production of content.

J. Converting Emigration and Brain Drain into Brain Gain

Nepal is attempting to produce more educated people. Of the educated, a significant number lives as diaspora in industrialized countries. This latter population carries demonstrable academic, professional, technical and economic strength. Instead of taking the downside of emigration, Nepal could turn this trend into an opportunity by utilizing distant academics, professionals and skilled resources to educate those in the margins of society. The diaspora professionals not only carry knowledge and skills in their fields but also the intimate knowledge of, and goodwill to, people and places they left behind. The first generation emigrants carry the potential to develop learning material that can relate to social, cultural, economic, environmental and occupational experiences suitable to local people, and the latter generations the latest frontiers of knowledge. The confidence on such utilization has been heightened by proven track records of distance education tools, technologies, and practices. It is time that the diaspora with world class education and local knowledge help produce educational content and tutor people they left behind.

K. Building Economy at Places Where People Live

Traditional industrial economy depended on masses of people to converge to cities to take up jobs in factories that employed large number of people in them. However, the modern economy is increasingly becoming knowledge oriented. The power of knowledge economy is that people living over vast geographic distances could collaborate to solve a common problem or to execute a common task. Therefore, living in smaller and remote communities is going to be less of an impediment if only

it was possible for people to acquire world class education, high quality information, and latest knowledge from where they live. Further, instead of teaching the same subjects throughout the country, we ought to teach subjects that are directly relevant to specific localities. For example, Humla might concentrate in potatoes, highland crops, and pastoralism whereas Sunsari-Morang-Jhapa like places may concentrate on rice. An open university can convert such dream-like-ideal into reality. An world class open university could let people stay where they are and productively participate in the world economy.

L. Summary

Successful use of open education in other jurisdictions, convergence of open, distance and conventional education systems, the multiplier effect of computing and communication technologies, proliferation of mobile technologies, Internet and the world wide web, maturation of we enabled learning environments, emergence of new learning and evaluation systems in web enabled learning environment, availability of vast amount of open content and technologies for low-cost adaptation, opportunities for collaboration, co-development and co-ownership in content, resources and research are considered as some of the opportunities emerging in higher education system. Open universities of today are experiencing accelerated growth and rendering tremendous service to the societal goal of massification of learning and democratization of education due to maximum exploitation of those opportunities.

IV. Vision, Values, Mission, Goals, and Preliminary Activities

A. The Vision

"Igniting the spirit of learning and harnessing the excellence in every human being for building an intellectual, prosperous, sustainable, and always-learning society"

The more than a million extra tertiary enrolments required to prepare Nepal for the emerging knowledge economy would be impossible to meet through traditional institutions. Further, investment in education has been most required in rural Nepal, whereas if trends have anything to say, there will be depletion of population in rural areas and people will slowly concentrate in urban areas, thus rendering much investment being poorly used in the long run. Yet, the purpose of an investment in tertiary education is to serve generations of Nepalese, and also to the knowledge seekers from around the world. In view of Nepal's inability to supply high quality educators and build massive infrastructure in a short time, most potent means available for Nepal to proliferate tertiary education among the masses is the educational use of ICT to rapidly multiply the educational and technical achievements made by limited intellectuals, professionals, technical people, and educators who are found sparsely in the population. This task cannot be completed without a dedicated organization and dedicated institution.

The vision that emerged from a survey of options is a university exclusively dedicated to open learning. This would be the most effective means to assure sustainable future and rapid proliferation of tertiary education in Nepal. Mobilization of diaspora and international partners in co-development of learning materials, collaboration in research and innovation, technical capacity building, technology transfer and knowledge translation bodes well for Nepal. Arrangement of help from a consortium of international agencies during its development and growth phase, use of collaboration with similar international institution, built in institutional mechanisms for continuous quality improvement, broad stakeholder engagement in institutional innovation, and effective educational use of ICT would be the means for the sustainability and continuous relevance of the university.

B. Mottoes

- ***The University for All of Us***
- ***Through the Light of Knowledge, ignite the excellence in all***
- ***Democratization of Education and Massification of Learning***

The rationale has been that this university should not serve exclusively to the rich, the poor or a specific segment of population, but to everyone in need of higher education and lifelong learning. This institution is meant for inclusion.

C. Logo

The logo of the university is made up of a single color green on a white background to embrace the value of green living that is in harmony with the nature. Its base symbolizes terraced land with green rise and rice paddies symbolizing human ingenuity to adapt with the nature, especially that of mountainous Nepal. The top terrace has been given a shape of a baby in the womb symbolizing regeneration and

birth. Shown above the top terrace are lotus petal shaped rays, symbolizing knowledge and the spread of knowledge. The five petals and the top terrace are also to symbolize human feet to symbolize our journey to the future. This logo depicts human activity in agreement with our green future empowered by the light of knowledge.

D. Mission

Establishing a comprehensive research university of open learning to

a. take university to people's homes and communities,
b. achieve excellence in education, research, innovation and lifelong learning,
c. bring marginalized people into the mainstream of education by removing barriers to learning including those of distance, time, money, circumstances, exclusion, disabilities and readiness,
d. connect learners and their learning needs with global sources of knowledge.

E. Goals

Our goals are:

a. to take university to people's homes and communities over a robust technological foundation,
b. to remove all barriers to learning opportunities including those of income, circumstances, geography, and readiness by mode of open learning,
c. to meet informational, educational, technical and vocational needs of people by connecting learners with sources of knowledge and skills that may be found anywhere inside or outside the country,
d. to convert the raw knowledge and skills found in the nature, society and culture into formal knowledge by means of distributed knowledge production, co-development and collaboration,
e. to continue educating and training youth that take foreign employment by facilitating lifelong education and learning,
f. to convert brain drain into brain gain by mobilizing diaspora people in education, research and transfer of knowledge and skills,
g. to offer a learning system that scales to rising enrolments and efficiently adapts to population movement,
h. to build economies away from big cities by directly entering into knowledge economy through education, transfer of skills and entrepreneurial knowledge,
i. to become the model open university of the 21st century.

F. Values

Our values are the basis for our actions. We, therefore, set some principle values against which our actions and integrity will be tested.

Ethical values: These are the values that put limit to our actions and bind our ambitions. They set some boundaries that we would not cross at any cost. These are the values we must live by.

a. Equality: We practice inclusion, fairness and justice, and adhere to the principles of universally accessible public education by removing barriers for all in access to education
b. Honesty and respect: We earn credibility and trust through fair and transparent actions and mutual respect
c. Commitment to excellence: We are committed to be accountable to our words and actions and demonstrate excellence in them
d. Green: Our University will be one of the greenest institutions of higher learning in the world

Inspirational values: These are the values that inspire us to cross all limits and reach new heights not reached before.

a. Learning: We aspire to build a society devoted to lifelong learning with insatiable curiosity
b. Creating: We aspire to create knowledge, skills and technologies, including exploration and utilization of indigenous know-how
c. Collaborating: We actively collaborate to provide best possible education and to innovate for better solutions
d. Quality: Our products, services and people will be internationally known for excellence in credibility, quality and reliability
e. Sharing: We value in translation and transfer of knowledge and openly sharing our knowledge will all in the world

G. Objectives

a. Establish University of Nepal: a public open university by 2015
b. Mobilize in-country and diaspora contributors for distributed educational content development and delivery by 2015
c. Offer at least 3 degrees of rural interest, 2 degrees of urban interest, and 1 degrees of workers-abroad interest by 2015
d. Secure broadband communication infrastructure in 12 districts in Muktinath-Lumbini corridor for first pilot operation of the university by 2015, and throughout Nepal by 2018
e. Secure technical collaboration and assistance from the best distance learning institutions to establish best practices and best technological solutions by 2016
f. Provide technological foundation, content foundation and bridging programs to school systems for improving primary and secondary education by 2020
g. Become the university with the largest range of program offerings in Nepal by 2025

H. Key Differentiation with Other Universities

The most fundamental differentiation of Open University with other universities is its openness. In the early history of written knowledge, there was a time when priests kept written sources of knowledge exclusively with them and even ordered to burn their books with their body. We reached to a stage of openness by taking knowledge to classrooms of schools and universities. This is a new wave where the knowledge will be taken to the masses of people.

A. Openness

a. Lectures, libraries, forums, and conferences will be open to the masses of people.
b. Process of producing content will be open to the masses of people.

B. Upside down pedagogy
a. What used to take place in the classrooms of face-to-face model institutions would take place outside the university. Reviewing lectures, studying textbooks and learning in multimedia interactive environment fall in this category.
b. What used to take place at home would take place inside the university or university organized facilities. They include doing homework, gaining advanced understanding, and mastering the expression of understanding. They refine the art and science of applying words, syntax and semantics in expression in supervised environment.
c. Problem based learning and active learning would take higher precedence over prescribed course-material based learning.

C. Open Admission and Measure of Excellence at Exit
a. All aspirants get admission in the university and achievements demonstrated at the end of program get higher precedence over those demonstrated before entering in the programs.
b. All admitted receive opportunity to excel and eventually to highly regulated professional degrees and advanced academic degrees.

D. Graduated Learning
a. Continuing education, citizen science, non-formal training, and informal knowledge management systems to the general public,
b. Vocational, technical, and entrepreneurial education for all youth above 18,
c. Professional, innovative, and entrepreneurial education for the accordingly prepared,
d. Advanced scientific and highly technical and theoretical education for the extremely competitive scholars.

E. Co-creation and Co-ownership with world's other institutions
a. Explicit commitment to be the leader in co-development
b. Explicit commitment to be the centre for open-source knowledge movement

F. Choices in learning:
a. Ability to choose desired courses from thousands
b. Flexibility to select unique combination of courses
c. Ability to choose a 100 lessons from thousands in every subject

G. Just for us
a. Just-in-place to offer unique programs to Humla and so to Jhapa.
b. Just-in-time to allow program to be available as and when learner needs,
c. Just-for-me education to let individual develop progression path and subjects to suite his/her personal needs.
d. Just-enough education to let people engage in action after required education and in turn create new demand for more.

H. Mobile learning
a. Classrooms, materials, labs, and workshops will be made mobile by installing laboratories and workshops on a truck
b. Maximum utilization of smart mobile phones and mobile learning devices
c. Delivery of learning materials and facilities on mobile devices.

I. Focus on green, local, rural and connected

a. Bypassing paper and bulk, and entering into digital and miniaturized systems,
b. Bypassing polluting technology and leapfrogging into green solutions to health, life and economy,
c. Making local cultural, technological, and natural strengths and opportunities the objects of learning, education and research.

J. Preliminary Program Offerings

The initial program offerings of Open University in Nepal will be selected judiciously because it will not be possible to offer a broad variety of program at once and achieve desired level of quality in them. Programs will be prioritized based on urgency needs such as need to train school teachers to improve elementary and secondary education, need to develop institutions, businesses and entrepreneurship, need to embrace information, communication and other modern technologies, need to increase agricultural productivity, safeguard environment and embrace sustainable development, and taking the reach of health services to entire population. Therefore, the following areas have been proposed for discussions. The priorities will be settled and finalized through wide public participation in the institution building dialogues and be reflected in the comprehensive operational plan.

1. Technical and Vocational: This stream will offer undergraduate diploma in various technical and vocational areas. This stream will cover almost all areas of contemporary market demands. This will also upgrade practicing technicians and artisans into undergraduate diploma level.
2. Applied Science and Technology: This stream will offer interdisciplinary programs in information technology, computer science, plant and animal sciences, traditionally established engineering disciplines, environmental engineering, food technologies, nanotechnologies, steep terrain agro-forestry technologies, green architecture, and green technologies. These programs should be relevant in making Nepal an IT and ICT conversant country, taking international IT consulting business in rural Nepal and also taking appropriate and sustainable technology to Nepalese hinterlands.
3. Health and Biomedical Studies: Rural health, health support workers, para-clinical studies, health policy, health management, and nursing are some of the areas of focus in this program. We hope not only to provide health services to rural, remote and disadvantaged Nepalese but also for developing business of caring people of developed countries in Nepal as a way of developing health related international businesses in rural Nepal.
4. Development Studies: Considering that Nepal is undergoing administrative transition and is in practice to devolve and distribute the centrally controlled governing structure, studies of administration, management, and planning has become urgent not only on business and industries but also for management of rural governments and economies. This discipline will also include studies in sustainable and participatory development, rural development studies, accounting and management of local governments, resources, and economy.
5. Applied Humanities and Human Sciences: This will also focus on applied aspects of human sciences and interdisciplinary studies of human sciences, including applied arts, psychology, counselling, philosophy, economics, religions, sociology, anthropology, criminology, mass communication, and journalism.

6. Business, Entrepreneurship, and Cooperative Studies: All disciplines of studies shall also focus on innovation, entrepreneurship, and business development in their respective areas. Providing applied education, poly-technical studies, and understanding oriented learning environment, volunteer service, industrial or agricultural internship for graduation are emphasized. Studies on areas such as tourism, micro-enterprise, organizational leadership, business management and administration, accountancy and financial management will also be offered under this stream.
7. Education: At present, most college and university teachers are not trained on educational practices and in ICT skills to adapt learning environment in a Web enable world. Special education and training opportunities to teachers while being on the job can not only add qualifications for their promotion but also transform the way teaching is approached in schools to university by way of planning of instructions, management of classrooms, facilitation of learning, and uplifting of learning outcomes in students. The program will offer degrees specialized in Web enabled learning and theory and practices in education, especially open education.

K. Preliminary Project Area

The purpose of this university is to break geographic barriers in the access to education. However, overcoming the geographic limitation requires development of appropriate infrastructure of delivery like broadband Internet connectivity, access to educated human resource, and suitable demonstrate the power, reach, and viability of the institution in rural Nepal. Urban Nepal can benefit from the university without much difficulty as connectivity and support systems are much economically rendered in cities compared to the rural areas.

We have identified the land from Muktinath in the Himalayas to Lumbini in the southern plains of Nepal along a historically important trade route of Kali watershed, termed here as Muktinath-Lumbini corridor (Figure 2) as the most viable location for establishing the central campus of the university. A fault-line between the most underdeveloped part of Nepal and the developed part, this corridor has some other salient features that are unique and inspiring. This corridor contains 12 populated districts out of 75 and contains 18% of Nepal's population. No other corridor in Nepal covering mountains, hills, and plains has a level of high literacy and population density as this corridor.

A mission of expanding higher education becomes successful where its foundation, the elementary education, is strong over a significant geography. Muktinath-Lumbini corridor has the largest geographic area with high literacy to successfully initiate Open University programs. This corridor has produced highly educated people that dominate Nepal's bureaucracy and are also found in large numbers among diaspora Nepalese. This area contains plenty of educated people who could be trained as tutors, professors and extension workers. This corridor was a historically literate area and carries significant heritage of the literature, culture, and philosophy of the region. Dhaulagiri and Nilgiri mountains and the watersheds emerging from them carry great importance in Hindu-Buddhist history. Muktinath and Lumbini also possess other features that may help promote the university.

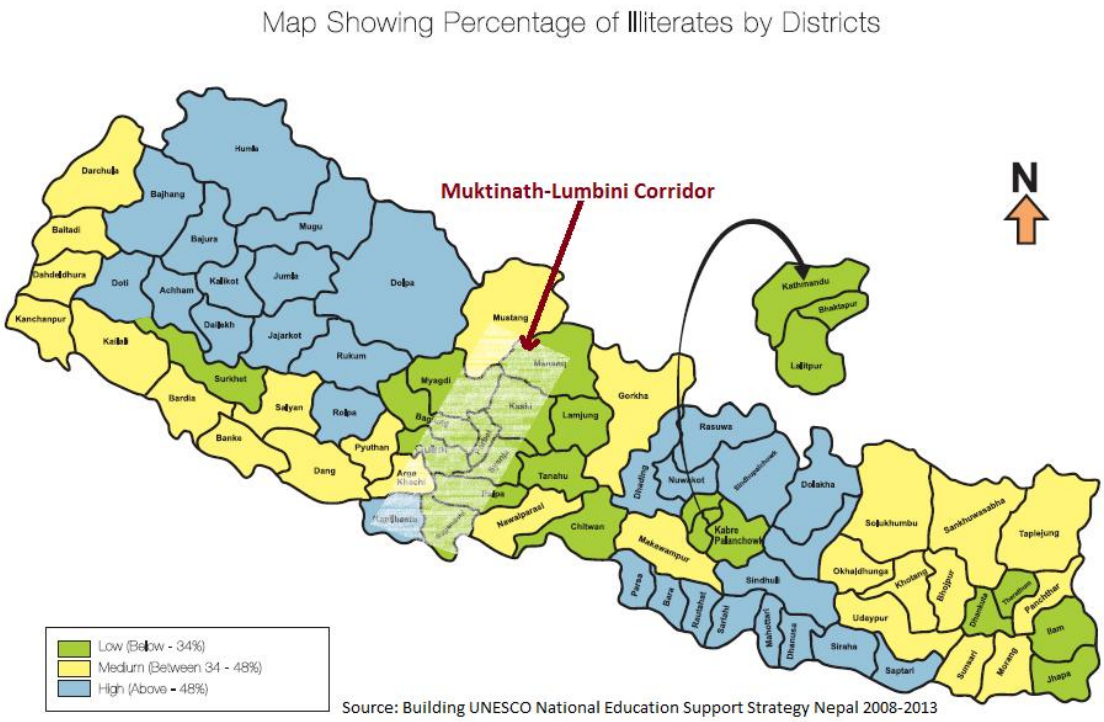


Figure 2: Illiteracy Map of Nepal and Muktinath-Lumbini Corridor

Muktinath is a well-known and highly revered place of pilgrimage to Hindus and Buddhists alike where the priest would be a Buddhist woman and not a man. This place is the one known to ancient Hindus where the five gross-elements met naturally. It is also the source of all Shaligrams (typical fossil rock), which are established by Hindus as symbol of Vishnu. In any temple Hindus build anywhere in the world, establishment of Shaligram takes the centre stage. This place of origin of Tibetan Buddhism, as saying goes that Padmasambhava (Guru Rinpoche) meditated here for three years before taking Vajrayana Buddhism to the Tibet. Therefore, Muktinath is a place where Hindu and Buddhist philosophies fuse. Lumbini, the birthplace of Buddha, is sandwiched between a Hindu population in the East, Muslim on the West, and Buddhist on the North. Lumbini is chosen as a symbol of tolerance and harmony. Therefore, this choice of project area carries some important weight and significance to both Nepal and the world.

This coverage area includes some major commercial centres like Pokhara and Butwal and passes through 12 administrative districts of Nepal out of total 75 from upper Himalayas to inner Tarai (Rupendehi, Kapilvastu, Palpa, Arghakhanchi, Syangja, Gulmi, Parbat, Baglung, Kaski, Myagdi, Manang, and Mustang). This represents a confluence of major religious groups (Hindu, Buddhist, Muslim, Christian) and major linguistic groups (Nepali, Magar, Awadhi, Bhojpuri, Tharu, Gurung, Newari, Tamang, Sherpa, Hindi, Thakali, Tibetan, and Urdu).

A recent survey identified that ten points: Muktinath (3800m), Punhill(3200m), Sarangkot (1600m), Panchase (2030m), Bhairamthan (1900m), Gaja (3100m), Handikot (2200m), Mushikot (2100m), Srinagar (1500m), Nuwakot (1200m), Butwal (160m), and Lumbini (100m) have thus far been surveyed as being strategic locations for major access points for broadband Internet connections. Further survey is required to carry out appropriate technical design.

L. Target Population

This university will be founded on the principle of inclusion of all and exclusion of none. It is for the poor, for the rich, for the urban and for the rural at the same time, but not exclusively for a specific population group to the exclusion of another. Therefore, the target population of the university will be wide ranging and diverse.

Yet, with median age of 20.8 years [21], Nepal's population could be considered overwhelmingly young and teachable. There are 13 million Nepalese under 18 years of age [UNICEF 2013 South Asia Data Pocket Book]. Therefore, youth who have and are in the process of completing high school education who like to obtain certificates, diplomas and degrees, or in need of learning in specialized fields are the primary target audience of the university. Special constituency within the target audience is one of rural youth, unemployed youth, youth in employment with time available for studies, and youth in foreign employment. Despite having potential and desire, significant segment of this youth encounter circumstances that debar them from attending the universities. In fact, if prerequisites happened to be their impediment, the objective of this institution would be to provide evaluation mechanisms to recognize of prior learning outcomes where applicable and meet the prerequisites through bridging programs of studies.

When age barriers are removed, a university student in Nepal could be anywhere between 18 and 50 years of age and we expect overwhelming participation of women in tertiary distance education. Education of women would be of special interest considering how women are outperforming men when given an opportunity for higher education. As per recent UGC report, more than two third women students are enrolled in education and arts program. This is largely because they are the preferred programs for students who could not attend the classrooms on a regular basis. Given an opportunity to attend them from home, villages or towns, women would enter into field of studies that help them secure employment and enterprise opportunities.

People engaged in farm, business, regular employment and in unstructured labour force or those in search of employment are also target groups of this university. This population may seek education for professional growth, enterprise development, or exploration of new opportunities. A sizable number of these people could be found in government employment, police, army, schools, colleges and universities, business corporations and enterprises. A vast size of target population that has to be brought to the mainstream of education through policy interventions is among Dalits, people of remote regions, Janajatis, and other marginalized population groups whose education suffers severely well before they reach university age.

Once the university program mature and gain broader recognition and repute, the university will be able to expands its offerings to the Diaspora Nepalese and international students. Further, there will be a point where students of this university and other universities will be able to move from one institution to another with transfer of credits. A full time classroom attendee may end up attending the open university and an open university attendee may take full time classes in other universities due to changed circumstances or interests.

Although it may not be feasible to break all logistical and technological barriers for the entire target population in the immediate term, especially due to limited availability of ICT infrastructure, trained professionals, and specifically tailored programs, the first wave of entry would be among the people in the above stated project area and they could be expanded rapidly as Internet enabled personal devices penetrate the population landscape of Nepal either by natural market dynamics or through policy interventions and investments.

M. Strategic Plan

This particular document is an extension of a strategic plan. This plan has been developed as a synthesis of human efforts that were carried out by open university enthusiasts in absence of any institutional funding. Consequently, it is less than comprehensive because such plan would require activities like significant research data, sufficient stakeholder inputs and specific expert inputs that could not be carried out in absence of any institutional funding. Therefore, the first operational (business) objectives has been stated as the preparation of a Comprehensive Operational Plan (COP), which should be much expanded form of this plan and be supported by other data not available in this document and formalized through approval from appropriate regulatory agencies.

Like any other plan, this plan is also a common and agreed upon basis for making changes. This plan will certainly undergo changes over its life time. Nevertheless, it will act as a reference against which all changes that will be made from here on could be recorded and known.

N. Comprehensive Operational Plan

The operational plan development involves three constructs: top, middle and detailed. The top level construct sets vision, mission, goals and strategies. There we determine leadership and direction. At the middle level we develop business plan where we try to identify how many ways a project could fail, and what should be done to manage the program successfully. We determine what are the costs, how the budget would be acquired and allocated, what measures are taken to control the cost, who are the people who would implement the plan, in what stages/phases the plan will be delivered, and what matrices will be used to measure the performance. At the bottom level, we break the program into a set of projects and we integrate the project's outputs to ensure the expected outcome. Here we focus on how we would develop the comprehensive business plan.

A dedicated team of national, international and diaspora institutional experts may carry out necessary studies, data collection, situation analysis (stakeholder, problem and objective analysis), and strategy analysis in relation to establishing the Open University. Such work would further develop this white paper into a Comprehensive Operational Plan (COP), which acts as a detailed master plan. A likely methodology used for this purpose would be Logical Framework Analysis used by many reputed organizations for planning, designing, implementing, and evaluating projects. This work synthesizes and integrates the works listed in the subsequent paragraphs and presents on a logically organized package.

It may better be emphasized here that the COP should precede other programs of the OU. Otherwise, the institution may run into a situation where the programs

overwhelm the institutional plan and derail or dilute the institutional mission. This situation may be compared with a building made before preparing its architecture and design. We may run a risk of performing activities that do not properly integrate to yield the desired institution. It is like having a collection of cement, rods, doors, windows, bricks and land but not having a finished building. Therefore, a plan should drive the activities rather than activities driving the plan.

The strategic plan would collect, process and develop foundational data and information needed for planning, clarify efficacy of different pedagogical models and recommending the best, model for adaptability and sustainability, and frameworks for institutional operation. The COP will cover the following topics:

1. Pilot programs to test reliability and effectiveness of pedagogical models, practices and technologies,
2. ICT infrastructure testing and ICT plan,
3. Physical infrastructure plans and green strategies,
4. Program development and diversification plan,
5. Learning strategies and systems,
6. Recommendations on content and learning management systems,
7. Framework for a student support services and learning support system,
8. System of program accreditation, credit recognition and credit transfer,
9. Standard for measurement and recognition of prior learning and programs for filling preparedness gaps,
10. Protocol and specification for instructional and learning material design,
11. Strategy for adopting, and adapting courses of other institutions,
12. Strategy for research and innovation,
13. Framework for institutional management, governance, and collaboration,
14. Faculty, staff, and tutor recruitment, development and training plan,
15. Budgeting and funding model,
16. Determination of sources of revenue and expenditure plan, including recommendations on fees, grants, subsidies, and endowment modalities,
17. Growth and sustainability plan,
18. Global service strategies

This plan would be submitted to the Government of Nepal and must get approval of appropriate agencies such as Ministry of Education, Ministry of Finance, and University Grant Commission.

O. Approach

A five-pronged approach coordinating fundaments, actors, instruments, system, and providence will be used to develop this university. This approach is briefly introduced here.

Fundaments: Fundaments include understanding and availability of a geographic location, land, scholarly and technological resources, and financial resources, target population needs, vision, mission and goals.

Actors: Nepalese educators and experts, diaspora and international experts, educators and collaborators, tutors, students, administrators and people as stakeholders are the actors.

Instruments: The instruments are strategic plans and policies, activities like financial resource generation, educational collaboration, technical collaboration, infrastructure development, people mobilization, student recruitment, content production, tutoring, evaluation, quality control, accreditation, and motivation.

Systems: The system builds structures, processes and work-culture to institutionalize and sustain what is built so it endures and excels for generations into the future. The system ensures that the institution stays true to an ideal of nurturing human potential and building human capital.
Providence: The providence frontier prepares for risk mitigation, mechanism for managing leadership, fairness, innovation, and productivity. The main purpose of this last frontier is to devise steps to ensure the survival of the institutions in times of unexpected events and hardship.

Distributed approach to knowledge consumption, production and innovation and multi-pronged approach to knowledge accumulation, preservation, and inter-generational continuance-and-growth are some institutional instruments. Our focus would be on access to learning for all, sustainable development, and preservation of traditional knowledge and skills. Engagement of national and international experts and educators to produce an internationally minded institution is our aim. It is a charitable entrepreneurship of local, diaspora and international contributors who co-develop and co-deliver educational programs and services.

P. Steering Committee

Until an Act could be passed by the parliament, the Steering committee will develop a charter, get necessary approval from government authorities and carry out its duty as per that charter. The steering committee will implement the plan through formation of various committees and task forces. It would work to create appropriate policy environment by working with parliamentarians, policy-makers and educational leaders and facilitate and coordinate the work of other committees and task forces (e.g. strategic planning, finance, program, ICT infrastructure, physical infrastructure, learner support, governance, research, private sector liaison, partnership development, and funding arrangements).

The following are some areas in which this body would work:

1. Coordinating and integrating the work of all other committees and task forces;
2. Identification of funding sources, securing of funding and allocation of funds;
3. Preparation of high level task force and approval from the executive organs of the collaborating institutions;
4. Preparation of MOUs with GoN, UGC, NRNA, AU, CFFN;
5. Securing permissions and endorsement from GoN for partnering with international institutions, and establishment of partnership arrangement;
6. Regulatory approval, university act, parliamentary approval;
7. Formation of a legal advisory body;
8. Formation of technical advisory committee (national, international);
9. Publicity and gaining public support for the university;
10. Developing management structure of the project;
11. Making/approving term of reference for committees and appointment of their members;
12. Oversight of comprehensive operational plan development and its implementation.

V. Governance Plan

A. Introduction

Efficiently providing high quality education, carrying out high quality research, innovating new ways to inspire learning, providing intellectual freedom to scholars, and meeting the contemporary higher education needs are the societal ends of universities. Today, Nepal is on the verge of establishing its national Open University as an institutional instrument for democratization of education and massification of learning. But this is happening at a time the mistrust towards the quality and relevance of public higher education is on the rise in the country. Youth, frustrated with an education that does not lead them anywhere are openly demanding that it be up-to-date, relevant, useful, practical, and of respectable quality. Therefore, the makers of future higher education policies and institutions have a monumental challenge to meet the expectations of the up and coming generation.

The efficiency, responsiveness, and resilience of a university are directly interlinked with its governance. The stability of its structure, efficiency of its operation, instruments of checks and balances for incorruptibility, degree of accountability to the public, and ability to democratically self-evolve are all functions of its governance. What then lies at the centre of good governance is the legal instrument to which it must comply with. The law leaves an inter-generational effect on the institution by laying rules on the service responsibilities, admission responsibilities (admission of all vs. selected), population it serves (exclusively competitive vs. inclusion of disadvantaged and disabled), geographical area of its operation and recruitment (national vs. international), type of leadership and management it ought to have (professionally competitive vs. politically appointed), processes it ought to follow (hierarchical vs. participative), accountability it out to demonstrate to the public, type of democratic disposition its leadership ought to have, level of service efficiency it ought to achieve, degree of responsiveness it ought to have to market conditions and competitions, the succession of leadership it ought to nurture, and in sum, how it ought to remain relevant, effective, responsive and sustainable.

Beyond mandates set by the state through the laws, good governance of a university also depends on the processes and systems it develops for instilling good work culture, attracting quality of human resources, utilizing quality material resources, planning, mobilizing people, networking and collaboration with national and international institutions, continuous improvements in academics, responsiveness to market dynamics, research, innovation, and institutional integrity. Governance of a public university is one of difficult balance among often competing and conflicting interests of its members, local governments, state governments, general public, markets, and the funding agencies.

B. The Burning Issues in University Governance

Throughout the world, there was a time when only the elite people or selected few were able to enter into the university education. But as the sophistication grew in every sphere of life with the rise of knowledge economy, job requirements also changed to demand tertiary education, training, and sometimes license to acquire an entry level position. What we used to call “blue-collar worker”, such as carpenter, baker, computer technician, or worker at a hardware shop, now have grown to a sophistication needing 2-3 years of education and training beyond high school. More

than 50% high school graduates of the developed nations today enroll in degree programs of universities and majority of the rest enter into 2-3 year technical diploma programs. It seems as if everyone ought to have post high school education to survive. This has created a call for dismantling the exclusive access system. In a march towards those goals, both public and not-for-profit private models of higher education have been promoted around the world. Some countries also have for-profit-private institutions as the third force.

Experiences from around the world show that the private universities (both not-for-profit and for-profit) often do not serve the purpose of mass education although they serve well in some niche areas to reasonably affluent, exceptionally-talented, or special-need target population. Even in the most private enterprise friendly country like USA, where the debate of "private versus public" was allowed to rage throughout its history, the education sector remains largely public and vast majority of students are educated in public institutions.

Government of California conducted a series of studies after World War II on "public versus private" issues of higher education. Those studies concluded that public education is the major way to build a fair society and to advance its economy. Substantial investment was, therefore, made in public education. "Governor's budget as submitted to the Legislature for the fiscal year 1956-57, amount… 39 cents of each dollar for the support of education at the state level", said a report [23]. This required substantial taxation to the fury of California Taxpayer's Association. Yet the report concluded that more centers of public higher studies be built. Amazingly enough, the California Taxpayer's Association stated that "Publicly supported higher education in California is one of the most costly activities of the State Government. [But] the sound principles stated … merit the support and backing of taxpayers [24]." It laments high tax and yet supports the cause of public higher education to all Californians at the same time. Considering that California's economy now ranks 7th or 8th in the world solely on the lead role of its knowledge economy, who can argue today that the heavy investment the state made in education was a waste? This fact must be of interest to Nepal, which also has a better future in knowledge economy than in industrial one. In non-economic sense, education is the greatest equalizer in the society and Nepal can deliver justice to its marginalized population through fair and equitable access to education, which we refer to as democratization of education and massification of learning.

The three largest parties of Nepal have publicly committed to building a national Open University in their 2013 election manifesto. It indicates that we are politically committed to treat all people of this nation as individually worthy humans who deserve fairness and equity into the access to higher education. It is a testament that we as a society are principally committed to the pursuit of mass higher education. For we have taken this moral position, we then ought to deal with many pertinent issues that come with such a lofty mission.

While other universities can deny entries to qualified students and even reject 90% of the qualified applicants and take only top 10%, the Open University by its principle cannot do that. The Open University's mandate to not deny students of entry, while providing education quality at par with other universities that reject qualified students,

is a matter of noteworthy significance. With such an ambition at hand, there emerge some issues and contentions including the following:

(1) Mass education and quality: The most burning issues in higher education are those brought by the pursuit of mass education. On one hand we need quality service and on the other we need it in large quantity and numerous varieties. On one hand we promote fixed size classrooms and seek fixed teacher-student ratio and on the other hand we seek scalability (ability to serve any number of students) in the institution. On one hand we loath taxation and on the other we want ever burgeoning number of students in a public university. Therefore, we are compelled to look for new and innovative ways to inspire learning and to exploit the power of modern computing and communication technologies in reaching the entire population of the world in real time and at once, worldwide open collaboration in content production, new ways of tutoring, and new ways of learning in our pursuit to massify quality learning.

(2) Democracy versus efficiency in decision making: On one hand we want efficiency and on one the other internal democracy in the institution, allowing its members to take active role in its governance. Traditionally, instruments of democratic scrutiny were used to be established in institutions by making multiple committees, groups or departments taking part in decision making. Involvement of many groups in one decision prolonged decision making and affected operational decisions, e.g. delays in equipment purchase and renovation of buildings [25]. Linking responsibility (accountability) with role (decision making power), separating strategic decisions from operational decisions, and distributing operational responsibilities among management roles are new paradigms ought to be incorporated in universities. However, making university governance democratic and accountable to the public is an important goal of any modern public institution.

(3) Public accountability versus political interference: Nepal is practising a system of political shareholding in executive posts of universities. We make the Prime Minister of Nepal the Chancellor of each and every university. The instrumental powers given to the Prime Minister are such that s/he can interfere with the affairs of the university including the appointment of the executives. The governing instruments have consequently become turbulent. On one hand, there is heavy hand of government and political parties, and on the other hand inadequate institutional instruments to make institution democratic, evolving and accountable to the public. Universities such as Kathmandu University and Purwanchal University took some departure from others to give special powers to the Vice-Chancellors but without checks and balances built within the institutions as instruments of autonomous self-correction. Institutions without self-correction mechanisms appear to work well when led by a good leader but then if a leadership quality were to erode for some period, institutions go to ruin speedily. This problem has also been seen in once great institutions like SEDA, APPROSC, NARC, ISC and more. Today, there is a public backlash against political shareholding in universities for it has eroded the scholarly culture, which it ought to uphold. Therefore, there is an issue of separately understanding public accountability with that of political accountability. Perhaps public

accountability should take a higher precedence over political accountability. Perhaps the funds that government gives to the university is the money of the public, therefore the university should be accountable to the general public while being governed professionally as opposed to being governed through political shareholding.

(4) Faculty development versus faculty attrition: Successful universities ought to professionally train their faculties and staff in areas of personal development, leadership, financial management, accounting, technology, management tools, teaching methods, writing, language training, and tutoring, which cost money to the institution. Nepalese universities also aimed to train their faculties but suffered high attrition of full-time faculties and staff due to emigration to other countries, taking jobs in other countries, and engagement with other private, non-governmental, and government projects and colleges. The need for training and professional advancement, need to minimize the loss of trained human resource, and need to continue utilizing diaspora human resources for transfer of new knowledge and technology are major issues requiring resolution.

(5) Institution versus Destitution: An institution as a mechanism of cooperative social order created for achieving a social purpose in a human community or a nation existed in Nepal for time immemorial. There were institutions of marriage, culture, religion, education, justice, infrastructure development, infrastructure use and maintenance, and so on. As Nepal and its people got exposure to industrialized world, there arose need for new institutions of industry, research, innovation, and education. Consequently, Nepal attempted to make many modern institutions to that effect. But none of the missions to develop modern institutions succeeded long enough to truly give rise to institutions including those of making universities. As institutions, they were supposed to yield social self-organization transcending conscious intentions of participating individuals. Instead, in Nepal, many once-successful institution building missions degenerated or disintegrated before us, universities being part of them. We often hear today experts saying, “Nepal failed to build one successful institution in modern times”. Once thriving missions of building great institutions have turned destitute over time and have failed miserably, take TU, NAC, SEDA, APPROSC, NARC, ISC, Bhrikuti Paper, and more as examples. Missions to build institutions have thus turned to be ones of destitution. Perhaps, it is time that we recognize institutions as those entities that are not built by individual intentions but by collective human choice that let social roles and social expectations interplay rather naturally. Perhaps it is time that we let Open University be developed in an open social platform by letting people themselves participate in its design, development, evolution and sustainability than by letting some all-knowing “experts” design and develop it in a board room of a government agency.

(6) External watchdog versus internal self-correction: Often it is a predisposed thinking of a government bureaucracy to think that it ought to be the watchdog, or if not it ought to be the one to appoint the watchdog, of the public institutions. The wishful thinking is that watchdogging will keep institutions healthy and incorruptible. However, it is like an outsider

going to someone else's home to find if there is anything wrong in their family. The reality is that it is excessively difficult for an outsider to know the problem of a family unless (1) the family had total fracture in internal relationship and (2) the grieving side trusted the outsider. But that rarely happens. People who have worked as School Supervisor for the Ministry of Education candidly attest to this dilemma. If we are to learn from nature and engineering, we see that systems that last for a long time and evolve for their betterment are those which have self-correcting mechanisms built within. That is because even subtle changes and subtle signs of stress could be instantly experienced from within but for them to be felt from outside, its effect must spread system wide and be measurable from outside. A fault in a winding of an electric motor could be known by inner probes and feedback system nearly immediately but outside observer may know it after the motor is burnt beyond repair. Whereas a small motor can be thrown away and replaced if burnt but that would be devastatingly expensive if the motor is big. Therefore, the larger a system is, the more robust its internal checks and balances ought to be. The university under discussion is a monumentally large institution to fail without huge consequences. Therefore, it would be prudent that instruments of checks and balances are built from within rather than being left to be checked by an external agent.

Perhaps an incorruptible, always self-correcting, and always improving institution have to have independent yet interacting parts in the system such that they counter one another from degenerating and help one another to be better. A university system could at least have an organ for developing a system, one for executing as per that system, one to ensure ethical operation, and one to innovate. The four may interact in a way that execution and ethics work as each other's counterweight and so do system and innovation. The executive may be driven by ambition and desire to outperform thereby remaining in constant temptation to circumvent the rules. The ethics may seek justice and compassion yet remaining vulnerable to lack of ambition. The system may instil best practices while being vulnerable to stagnation. The innovation may discover new products, processes or knowledge while disregarding stability. Together however, they may yield an evolutionary system.

I. System: A governing council that is a representative of the stakeholders to set the mission, plans, policies, rules, budget and boundary parameters by which the rest of the faculties function.
II. Execution: Efficient administration and execution of plans and programs through competitively selected executive board.
III. Ethics: Organ to hear the complaints of members and public and uphold the ethical standards.
IV. Innovation: Independent research and innovation organ which has a permanent body for research on institutional evolution and sustainability.

(7) Elitist governance versus public engagement in governance: Often top officials of Ministry of Education and ruling political leaders are put in university governing body as instruments of public accountability. However, in Nepal, nearly all of these people educate their children in

private schools, private colleges and foreign universities. The genuine stakeholder, however, would have been the general population whose future is directly tied to the performance of the university. Then a question arises on whether these top position holders are true representatives of the broader public interest and true representatives of the stakeholders, except that they control the fund. Even if they were truly sincere to the public cause, could the ingenuity and will of a few officials who are trained to operate in hierarchical and authoritarian system be sufficient to positively intervene on a system meant to flatten the hierarchies? Could the idea of a few be more than those of the whole population? What do we achieve by not involving the whole population in review, design and innovation dialogues? Perhaps the total capability to innovate lies within the whole population and not in few top officials. That we have an ambition to open up the products and services of the open university to each and every person of Nepal through technology, would not it be prudent to open up its internal processes and organizational design to the governors, managers, professors, tutors, administrative employees, students, parents, employers, donors, and the rest of the general public - in an open, collaborative and egalitarian dialogue process for its improvement? If we were to engage the whole population in conversation, we would perhaps bring in major innovations required for the sustainability of the institution and would align the institution with the aspirations of the population.

(8) Fee versus Free: For a long time higher education in many countries was free and in recent times many countries introduced fees and differential fees for domestic and international students. In UK higher education was free until 1976 when fees were introduced. Today countries like Norway, Sweden, Germany, Denmark and France recover around 10% higher education expenditure from student fees and the rest is covered by public funding whereas countries like UK, New Zealand, Australia and USA recover 27%, 40%, 50% and 54% respectively [26]. Here, countries charging significant student fees seem to do better in terms of performance of research and education as indicated by student choice and international ranking. Those countries which charge significant student fees support student usually through income contingent loan. This loan is given to student when studying. The interest on the loan covers only the inflation and that also kicks off only from the time of graduation. Upon graduation, students pay set percentage of their income made beyond minimum threshold and continue paying back until the loan is paid fully or a set maximum number of years (15 to 25 years) have elapsed. The income contingent student loans aim that (1) whoever earns higher wages from studies must pay back portion of what was invested on him/her, (2) fees help universities to be less affected by ups and downs of economy and government funds, (3) higher education remains free at the time of delivery to make it affordable to everyone, (4) earning a degree has greater monetary benefit to individual (15-25%) than to the society (6-15%) [27]. Although fee vs. no-fee debate is also prevalent in Nepal, it appears that Nepal is in no financial position to offer free higher education. That almost all policy makers of Nepal educate their children in for-profit private institutions, it is unlikely that Nepal will have another Tribhuvan University, which receives nearly 90% of its operating

expenses from public grants. Also benefit of paying some fee has quality advantage. What is considered a fair proposition is that Nepal's national Open University could receive 100% government or outside grants for program and infrastructure development while on the operating expenses side it receives 80% grant during the first five years of program offering, 50% operating expenses for the next five years and 35% there on, with provision for income contingent loans and targeted scholarships to students for the purpose of inclusion and mass access. This will force it to be one of the most public fund efficient public universities in the world for it will then naturally plunges into a system of public audit of its quality. Once students pay for 50 to 65% of university operations in fees, they would be forced to judge whether the university and programs are worth the money. The university will have to strive to be in the business of responding to quality aspirations of students. It ought to have demonstrable public accountability to thrive and grow. But then the university may turn to serve affluent population sector for maximizing its dollar advantage. To not allow the university to move away from the mandate of democratization of education and massification of learning, the infrastructure and growth grant may be allocated preferentially to reward cost-effectiveness, student enrolment and student satisfaction. Such could be an effective instrument for self-correction in the system as opposed to being monitored and corrected by a government agency or an outsider.

(9) Planned Funding versus Market Driven Funding: Large funding agencies and business schools have taught us so intensely and forced us to prepare comprehensive business plan as the minimum basis for receiving funding. This in large part a fortunate compulsion because it makes us do due diligence beforehand than getting funding and then fail. However, the value of planning has been emphasized to such an unrealistic extent that they be prepared by hired international experts who "know it all." This sounds as if we are building yet one more highway and the necessary know-how for its planning is already there among the experts who have made it before. The proponents of the Open University in Nepal have been asked to exactly tell how many programs the university will offer, how many students will be in the 1st, 2nd, 5th, 10th, 15th, and 20th year of its establishment, what will be the student fee per course, what will be the cost of developing a program, how many programs it will offer, and lastly how much each component will cost. These are validly asked as the basis on which the funding could be secured. However, we ought to note that we are building the first university completely dedicated to serve the people of mobile generation, using mobile technology as the targeted platform of learning, diaspora as the springboard for academic and scientific leapfrogging, and establishing a technology made university at a time tools, technologies, country, population, economy and aspirations are in massive transition. While we may do a good job of planning, prediction and estimation in some of these areas, we may be widely far off in others. Making predictions in systems that are in massive transition amounts to predicting in 2000 the real estate price in Kathmandu for Year 2010. Therefore, would not we be better off planning for the infrastructure, program development and delivery systems, learning support system,

scalability instruments, and many more aspects of the university while letting other aspects that depend on individual choices and market be determined by the market itself? Would not it be appropriate for the program and course prices and student numbers be not estimated but be determined by the market mechanism in real time? In such light, may not it be prudent that we set a policy of accepting that the plan is contingent upon many factors that are themselves in transition and interact in complex ways? Instead of predicting the cost per course in five years, it may be prudent to plan how that cost will be recovered. For example we may plan that foreign students study on operating-cost recovery basis, Nepali workers overseas pay higher fee than resident students, working people studying part-time pay per course enrollment, and full-time resident students may take income contingent loan, and advanced studies students may study as many courses as they can on a flat full-time fee per year. Instead of predicting the quality and cost of quality of a program in 5 years, it may be better to plan for competing on the basis of quality, cost and value. Because people willingly pay for education for its quality, cost and value, they are the greatest force to iteratively improve the quality instead of the planners. Instead of predicting number of enrollments, it is better to plan to take for example 20% of national enrollment of all universities in Nepal by the Open University. Nevertheless, these arguments are not put forward to undermine the value of planning. We ought to plan, albeit in a new way that is from the burden of "expertism."

(10) Public funding versus institutional autonomy: The main and the greatest issue in a public university has been its public funding and self-governing (autonomous) status. Autonomy allows a university to use its own statutory power of employment and operation. In theory, all universities are autonomous in Nepal but the instruments developed for their governance provide neither good autonomy nor strong government control. Instead they have been the places of contentions, tensions, delays, and inefficiencies. The acrimony between the government and the university management and faculty never ends. Government wants to have control over the universities using funding card to such an extent that to add a single position of professor, a university must get permission from three agencies: UGC, MOE and MoF. Universities want government out of their space playing "autonomous" card to such an extent that they say the government has no business setting any national quality and performance authority because they are autonomous. Today, state funding come with a package of political appointments by which people who keep political affiliation with the ruling parties often displace the people who worked to build the institution. This has had a detrimental effect on the institutions because universities become neither controlled nor free, neither accountable nor efficient.

It ought to be that a public university be truly autonomous to elect its own leadership while being subject to a system of professionalism, transparency, responsibility and accountability to the public. By that we mean the following:

I. Autonomy: By virtue of accountability an institution governs by itself from within, corrects its flaws from within, keeps itself free of unethical disposition of power or inefficiency in decision

making and service delivery by applying internal checks and balances.

II. Professionalism: Through professionalism an institution elects its leaders based on professional competence, recruits its faculties and staff through open and professional competitions crossing ethnic, economic, geographic and national boundaries whatever best serves the aspiration of the institution and the public.

III. Transparency: Through transparency the members of an institution and the concerned public engage in its design, governance, innovation and accountability dialogues, and its systems, processes and outcomes are obviously visible to its stakeholders.

IV. Responsibility: By means of taking responsibility, the institution centres its activities on the sole purpose for which it was established. That in case of an OU is to deliver mass education, quality education, and excellence in research and innovation without putting any barriers to keep out qualified candidates.

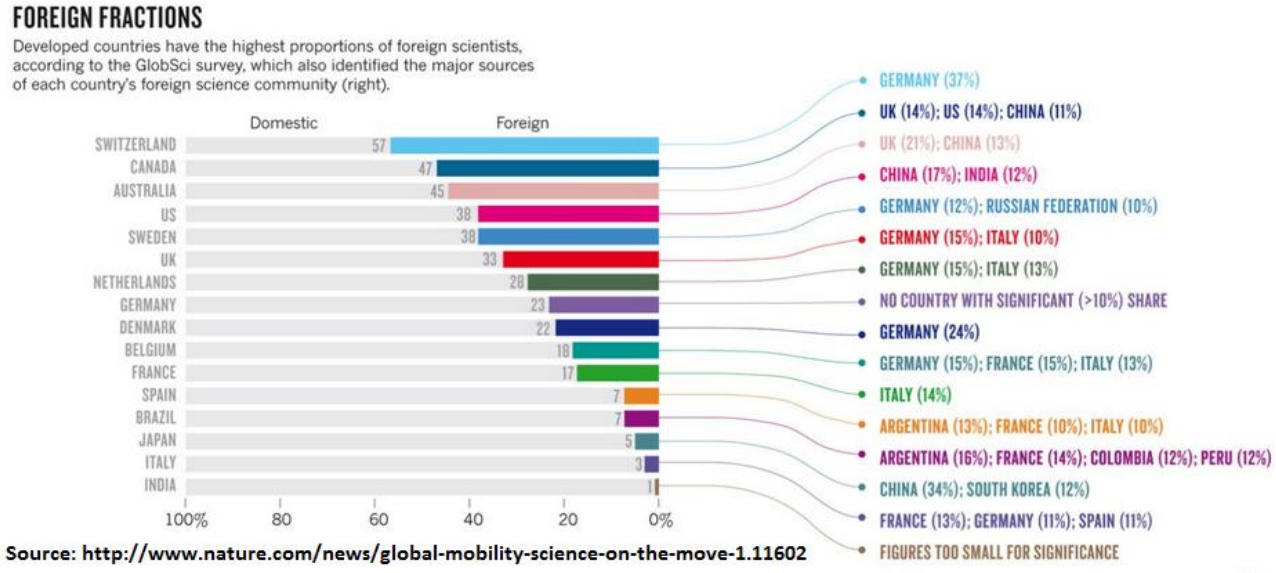
V. Accountability: By being accountable, an institution satisfies the public that funds it and the public that takes its services (the students, staff, parents, and taxpayers in case of OU) by maximizing its efficiency and scalability.

Throughout the world, publicly funded universities have had a history of government control. However, autonomy with accountability was considered a more efficient way in the 20th century. A 1959 US study report titled "The Efficiency of Freedom" said, "effective, responsible management of the academic institution is more likely to result from giving authority to strong, able boards of lay trustees than by scattering managerial responsibility among various agencies of state government. Boards of trustees should of course have not only responsibility but accountability as well. [28]" US universities were made autonomous institutions at a fast pace after World War II and their out-performance compared to European universities was evident within decades.

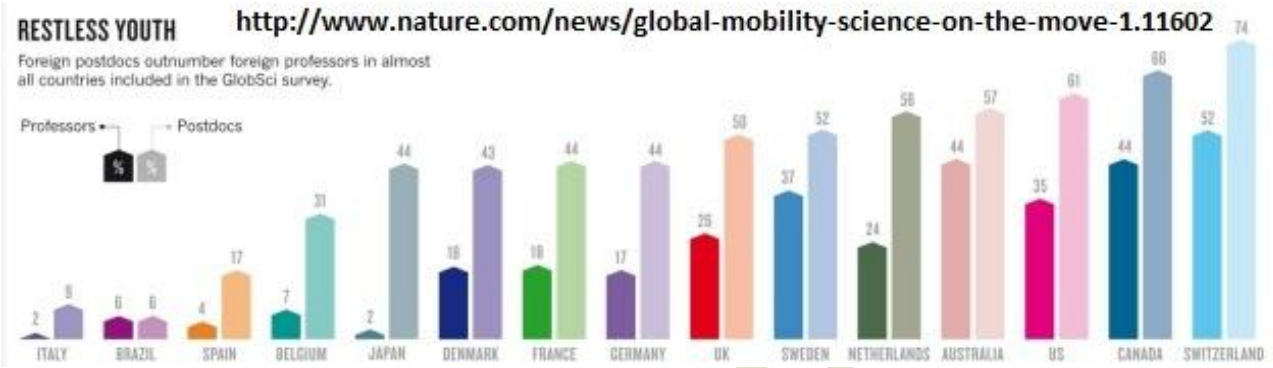
In the 1990s and after, countries in Europe also followed suit in reform in university governance, citing need for (1) massification of learning, (2) diversification of programs, (3) harmonization (internationalization) of programs and degrees, (4) marketization of budgeting (performance and profit based funding of programs, projects and research), (5) quality control of teaching and research and accreditation of programs and institution (thus focus in performance assessment). Those instruments were adopted to counter the inefficiency, over-regulation, bureaucratization, and inflexibility in institutions [29]. European universities were forced to become more businesslike focusing mainly on efficiency, entrepreneurial management, management by contract, responsiveness to people and responsiveness to market needs. University leadership was strengthened throughout Europe due to the state's withdrawal and the delegation of authority to the institutions [30]. Institutional autonomy has been found to result in more responsive institutions. Having withdrawn from the direct control in university governance, the ministry of education in Austria took the role of state funding, supervising, and steering universities from a distance through performance contracts [31]. The state funding was partitioned into a fixed

component and a flexible component where the latter is linked with performance measured by teaching, evaluation, number of graduates, research output, contribution to university development internationalization efforts, and faculty development.

(11) Transnationalism versus nationalism: Nepal's politics, bureaucracy and scholarship are habituated to play nationalism card to prevent professionalization of professions, including those of education, science, technology, research and scholarship. Diaspora Nepalese were barred from taking executive roles in Open University Infrastructure Development Board even in the context that NRNA and the Ministry of Education had signed an agreement to "establish a publicly owned, NRN supported, Open University of Nepal". Instead, making political and bureaucratic appointment of Development Board executives was considered professionally appropriate, perhaps as a measure to protect Nepal from the "second class" Nepalese. In the last forty years, North Korea has been barring its diaspora from coming back and South Korea has been actively attracting all diaspora Koreans (North-South alike) to come back and contribute in business, entrepreneurship, science, technology and research. The difference between the progress made by those two countries in science, technology, and economy is now so starkly obvious. South Korea has entered into the league of developed nations but then it also attracts scientists of other nationalities including Nepalese. Experiences of Taiwan. Korea, Ireland, Israel, China and India demonstrate that diaspora are not just sources of remittance but major engines for advancement in education, research, skills, knowledge and technology transfer, business, trade, entrepreneurship and foreign direct investment. Surveys on the mobility of scientists [see Figure below] have shown that developed nations take in large number of foreign scientists, let alone the diaspora. The result of this recruitment is the reason why 40% of all scientists of Indian origin are diaspora scientists. Nepal's situation in not largely different. Therefore, time has come to accept the importance of transnationalism in knowledge production, education, science, technology, research and innovation.



After much deliberation within the diaspora community, Nepal's diaspora through NRNA is proposing that Open University be such an institutional instrument to mobilize diaspora knowledge and skills in the transfer of skills, knowledge, innovations, and technology. These views stem from observing the fact that those countries where universities recruit foreign scholars as professors and research scholars seem to do better in science and technology compared to protectionist nations [see Figure below].



Perhaps it is time to rethink traditional conservative nationalism and even attract not only diaspora capabilities but also those of foreign nationals. Perhaps it is time to adapt openness in production of knowledge and knowledge products rather than taking protectionist and proprietary road. Due to its non-threatening size, non-alignment with specific power centres and its location, Nepal has an opportunity to be a world centre for movement on open source knowledge products, and there cannot be a better venue than an Open University to be the host of that movement. Open University would perhaps be far better off by actively engaging diaspora and international scholarship than barring them from taking active role. Similarly co-development, co-utilization, and collaboration with universities around the world is a major way to deliver high quality education at a reduced cost as each participating university contributes only a portion of the cost but utilizes the whole of what is produced. For that reason the law governing the Open University must make opening for co-development and co-ownership with foreign universities and embrace open approach to knowledge production.

The proposed Open University is a government funded, publicly owned, and autonomous university with objective to (1) let no one deserving be left out of higher education - including those who were left out of higher education opportunities in the past - by having flexible entrance requirements and not denying entry to qualified applicants, (2) meet vocational, technical and higher education needs of its students, (3) provide a flexibility in time to complete, time of study, place of study, and program structure so as to provide opportunities to those who cannot attend regular institutions, (4) provide the same level of academic, technical and vocational rigour as any other university to an extent for credits being transferable across institutions at their face value, and (5) carry out advanced scientific studies, research and innovation. It is not a regular type of university but one mandated to serve the masses of people, including the disadvantaged. The university serves those people through a

new distributed form of learning that maximally harnesses extra-institutional knowledge. That is possible only with (1) maximum use of information and communication tools and technologies, (2) absolutely affordable access to broadband internet to all people, (3) both technology enabled and direct learning support, (4) maximum use of smart mobile telecommunication devices in learning and mass delivery of education (e.g. MOOC), and (5) mobile teachers, laboratories and workshops to reach out to rural communities and urban poor. In that sense, an OU is often known as the technology made university, which is initially costly and finally economical. In building a national open university, there requires significant national will to cross the initial technological and logistical barriers.

That this task is monumental, we ought to professionalize its operation and to not mire in inefficiencies by inviting undue interference of government and political parties. The institution should autonomously and democratically select its own executives while the government and parties take their hands off. But then this university cannot also set off in whatever direction it wants while consuming the public money. It must stand on legal requirements to take up assigned public responsibilities in admission and intake, in meeting quality and diversity in education, in meeting assigned percentage of cost recovery, in demonstrating financial accountability, and in operational transparency. The government and the political parties have the role in determining those public policies of service, accountability and transparency. All these objectives require that we take a new approach to governance that does not inherit the problems of the past and becomes the beacon for the future.

C. University Governance and the Law

There are some countries where one law governs all universities to be established in them. In Canada, one Post-Secondary Learning Act governs all universities of a province, whereas the differences among the universities are preserved through the Charter of the respective university. In USA, each state has a single law to govern all its universities. In Nepal, there is no such common law. As a consequence Open University shall have to be promulgated by a separate Act of Parliament or through a Presidential Order if the process has to be expedited. In any case, an Act of parliament is a must.

Passing an act of parliament is a complicated and lengthy process involving Ministry of Education, Ministry of Law, Ministry of Finance, University Grant Commission, Cabinet of Ministers, Legislative Parliament and the President. The collective effort of these agencies can only give necessary outlet for the Open University.

(a) Process of Passing an Act and Time

Before the government tables a Draft Act (Bill) to the legislative parliament, the case for the law has to be sufficiently established. In case of Open University of Nepal, this exercise has been done many times through high level commissions and studies. The case for OU has been established by Ministry of Education, University Grant Commission, National Planning Commission, and Commission on Education 2049.

Practices in some other countries has been that when the government tables a bill to the parliament it also submits a "white paper", which tables the issues and proposes

ways to solve them and how the bill ought to address them. The government introduced bill then goes through a number of stages of scrutiny, debates and amendments before it can be agreed in the parliament. The parliament approved bill then goes to the President to receive assent, and to thus become a law.

Excluding the time taken by the government to table the bill to the parliament, the time taken in the parliament to carry it through all formalities is usually a year or even two. And in a country of transition like Nepal, situation may take many new turns in such a time period. Therefore, this process is prone to risks.

(b) Content of the Bill

The bill would state the powers that are vested by the state to the institution, the governing structure through which such power could be exercised, and the means by which the institution would deliver service to the people, and mechanism by which the institution would be responsible to the people and the state.

The bill would spell subjects like:

(1) Name, purpose of establishment and scope of the university

(2) Extent of autonomy and powers granted to the institution

(3) Establishment of major functions and bodies responsible to execute those functions along with processes of selecting persons who head those bodies and the mechanism of succession. They may include:

1. The head of the institution – Chancellor – the head of the governing-council and the powers vested upon him/her. Many established universities, including almost all Canadian universities, have a tradition of electing the chancellor from among the most successful alumni of the university. Chancellor shall be elected by the members of the university from among candidates nominated by at least three members of parliament belonging to different political parties and three current or former heads of public institutions that have no less than 200 employees, and conferred to the position by the Prime Minister.
2. Governing Council (council): the supreme governing authority of the university, the body that ensures public governance of the university.
3. The head of the executive board – Vice-Chancellor and President, the head of the executive board of salaried officers and employees. Governing council members shall vote for the president from among candidates nominated by a high profile selection committee from top three applicants who apply in response to a public call for applications and be appointed by the chancellor.
4. Executive Board (board): the body responsible for executing the financial, academic, and administrative duties of the university and implementing the orders, plans, programs, and policies of the governing council.
5. Academic Council: this body is the engine of academic affairs, the main business of the university, under the authority of the executive board.
6. Research and Innovation Council: this body is an agency for advanced academics, research and innovation, and one responsible to bring innovation in institutional efficiency, sustainability, and advancement in learning systems.

7. Ethics Council: this would investigate the complaints or cases of misconduct, miscarriage of duty and incapacity of a member of the university organization or a constituent unit of the university.

(c) Formation of Governing Council

1. The university shall constitute a public trust, to be administered by the Governing Council with full powers of organization and government, subject only to such legislative control as may be necessary to insure the security of its funds and compliance with the terms of the endowments of the university. The governing council is suggested to be composed of ex-officio and appointed members. The ex-officio members consist of (1) the Prime Minister or Chancellor appointed by the Prime Minister for 8 year term from among nationally acclaimed public figures and approved by the majority members of the council, (2) Minister of Education, (3) Chair of UGC, (4) Secretary of Ministry of Education, (5) Secretary of Ministry of Finance, (6) Mayor/Chairman of Municipality/VDC, (7) Chairman of District Development Council, (8) the president of the alumni association of the university, (9) the vice president of the alumni association of the university, (10) the acting president of the university, (11) President of NRNA, (12) President of ICDE, (13) President of AAOU. Then there will be four members appointed by the Prime Minister among Distinguished Class and First-Class officers one each from among (14) Ministry of Science and Technology, (15) Ministry of Agriculture and Cooperative, (16) Ministry of Industry and Commerce, (17) Nepal Telecommunication Authority. Other members would be, (18) one former Vice Chancellor from among all living former Vice Chancellors of Nepal's universities and NAST elected by members of the university. Then there will be one member each from among (19) women scholars, (20) Dalit scholars, (21) disabled scholars, (22) disadvantaged ethnic minority scholars, (23) youth innovators below age 35 in way of being candidates nominated in each category by at least five members of the respective category and elected by members of the University by majority, (24-28) one representative each from each school of study elected by the academic council members of respective schools, (29) one student elected by currently enrolled students by electronic voting from among best three students of each schools and be elected every year, (30-34) five best resident Nepali scholars, institution builders, innovators, or technology experts from among candidates nominated by at least 5 resident Nepali scholars holding PhD and elected by university membership from among resident Nepali scholars, (35-39) five best diaspora Nepali scholars, institution builders, innovators, or technology experts from among candidates who are nominated by at least 5 diaspora scholars holding PhD and elected by university membership, (40-42) three donors from all donors elected by the university membership, (43) one administrative staff from among candidates nominated by five other staff and elected by all university staff, (44-45) two tutors from among candidates who are nominated by at least five other tutors and elected by all tutors, (46-49) four renowned social figures of Nepal nominated by 50 members of general public and elected by general public through Internet based electronic voting process, (50) One member among Presidents and past Presidents of non-partisan

business and professional organizations from among candidates nominated by at least five executive members of professional organizations and elected by university members. (51) Vice-Chancellor and President (or Acting VC and Acting President) as Member Secretary, nominated by a selection commission set by the Governing Council and selected by the council by majority vote from among top three candidates recommended by the selection commission and with a provision to open the position for international competition if the governing council finds it to be advantageous to the institution; the President will also serve as the ex-officio member.

2. The term of appointed or elected members shall be eight years except for student member and ex-officio members. Every two years randomly drawn 25% members with 8 years term will be replaced by the same process as they were elected.
3. The governing council may elect to add five more members through majority vote from among acclaimed national and international personalities for their expertise.
4. In case of any vacancy, the vacant position shall be filled by the same process for the balance of the term for which such vacancy exists.
5. Meetings of the governing council shall be public, with exceptions and notification requirements as may be provided by statute.
6. The governing council shall be reflective of the economic, cultural, and social diversity of Nepal, including ethnic minorities and women, without imposing specific ratios be applied in the selection.

(d) Roles and Responsibilities of Governing Council:

1. Elect the Chancellor, select the Vice-Chancellor/President and the members of the executive board.
2. Make rules to govern the university based on the framework given by the law and government rules and regulations.
3. Set vision, mission, policies, plans and programs of the university and manage its evolution.
4. Enquire into any matter that might benefit the university and enhance its position in the public.
5. Set, deliberate, modify and approve plans, budgets, programs, faculty requirements, and any matter proposed by the executive board or by the governing council members.
6. Keep powers not specifically assigned to any position or organ.
7. Be accountable to the public for upholding the aim of public education to educate the masses and that of academic and research excellence.
8. Keep the university independent of all political or sectarian influence and kept free therefrom in the appointment of its governing council members and in the administration of its affairs.
9. Keep legal title, managing, and disposing of the property of the university and of property held for its benefit and exercising power to take and hold, either by purchase, donation, gift, or in any other manner, without restriction, all real and personal property for the benefit of the university or incidentally to its conduct; provided, however, that sales of university property shall be subject to such competitive bidding procedures as may be provided by statute.

10. Exercise powers necessary for the effective administration of its trust, including the power to sue and to be sued, to use a seal, and to delegate to its committees or to the faculty of the university, or to others, such authority or functions as it may deem wise.
11. Remove any person of the executive board or any employee on the grounds of misconduct or incompetence in assuming the assigned roles and responsibilities, with due chance for hearing.

(e) Formation of Executive Board:

1. The executive board shall be composed of as follows: (1) President and Vice-Chancellor – as Chair, (2-6) Vice-Presidents of Research & Innovation, Academics, Administration, Student Affairs, Infrastructure & Technology, (7) Member-Secretary.
2. The governing council shall select the executives through a special executive selection commission it sets up to select candidates in an internationally competitive basis and approves each candidate by council majority vote.
3. The term of the executives shall be 4 years.

(f) Roles and Responsibilities of Executive Board:

1. Implement the decisions of the governing council and those by the Government of Nepal.
2. Prepare and table progress report, financial report, programs, budget, and proposals before the governing council for approval.
3. Implement the financial, administrative, academic, and research plans and programs of the university.
4. Prepare roles, responsibilities, salaries, terms of references, and selection criteria and process of employees of the university for approval from the governing council.
5. Hire and fire employees for and of the university.
6. Prepare by-laws with regards to management and use of land, buildings and facilities for approval from governing council.

(g) Formation of Academic Council:

1. The formation of the Academic Council will be done as follows: (1) Vice-Chancellor/President as the Chair, (2) Vice-President of Academics, (3) Vice President of Research and Innovation, (4-8) Directors of each schools of studies, (9) Chief of Library and Resource Centre, (10) Chief of Higher Education division of Ministry of Education, (11) Chief of Higher Secondary Education Board of Ministry of Education, (12) Members appointed by the governing council.
2. The term of appointed members shall be four years.

(h) Roles and Responsibilities of Academic Council:

1. Make the university one of the best among institutions that deliver technical, vocational, professional and academic programs.
2. Implement any academic rules, standards, and criteria set by the governing council.
3. Determine standards for quality, curriculum, learning resources, evaluation and examination, admission, teaching and research

requirements, including minimum qualification required to become a faculty and tutor.

4. Develop or select processes, methodologies, tools and technologies required to achieve academic excellence in the university and make the university one of the best among universities.
5. Determine what amount of learning constitutes what level of earned degree, and what can be the criteria for awarding honorary degrees.
6. Develop instruments to integrate research and innovation in academics and academic quality enhancement and in drawing research funding.
7. Perform annual evaluation of the relevance of current programs, take action to make them up-to-date with current developments in that knowledge domain, develop new programs of studies and phasing out of programs.
8. Approve arrangements on transfer and exchange of credits with other universities.

(i) Formation of Research and Innovation Council

1. The formation of Research and Innovation Council will be done as follows (1) President as the Chair, (2) Vice-President of Research and Innovation, (3) Vice President of Academics, (4-5) two top researchers and innovators of the university elected by the faculties, (6-7) two top researchers and innovators of Nepal not belonging to this university elected by the university membership, (8-9) two top researchers and innovators among diaspora Nepalese elected by university membership.
2. Council members shall be appointed by governing council for four year terms.

(j) Roles and responsibilities of Research and Innovation Council:

1. Develop plans and policies to maximize research, achieve excellence in research and innovation and make the university one of the best among research universities.
2. Develop a system for fair evaluation of research and innovation proposals and already accomplished research and innovations.
3. Develop a transparent and democratically justifiable formula for disbursement of research and innovation funds in order to solicit mass engagement in research and innovation and that for professional research and innovation.
4. Establish research facilities and laboratories in the university.
5. Set research priorities and hire research personnel to implement them.
6. Solicit national, international and philanthropic funding for research and innovation.
7. Ensure advanced access to body of knowledge through libraries to the research community.
8. Disseminate research outcome in the society.
9. Bring research funding from national and international sources and develop a system of fair disbursement.

(k) Formation of Ethics Council:

1. The Ethics Council shall be formed as follows: (1) Chair appointed by governing council from among former head of university, former head of

national institution with more than 1000 employees, or a former judge of supreme court who had successfully served in those positions for at least four years and known for ethics, fairness and non-partisanship, (2-5) four nationally acclaimed people know for their ethics, fairness and non-partisanship.

2. The council members will be appointed by governing council by randomly selecting from among 100 such national figures selected by voting by university membership for two year term.

(l) Roles and responsibilities of Ethics Council:

1. Investigate the complaints or cases of misconduct, miscarriage of duty by a university member or a body.
2. Investigate incapacity of a member of the university member or a body.
3. Determine that a person or a body be punished and may so recommend to the governing council, which shall implement the decision.
4. Be accountable to general public in upholding ethical values of the institution.

D. Naming of the University

The name of the institution has been popularized now as Open University of Nepal (OUN) and so has been this mission popularized as Open University Initiative for the following reasons:

1. That Nepal adopted multi-university policy and opened six new university in recent times, introducing this university by any other name at the moment would make it sound like yet one more university,
2. That the past campaigners of this university have used this name,
3. That "Open University" phrase can automatically draw curiosity to know about it, and therefore making it easy to popularize.

Having said that, renowned international personalities with educational institution building credence have suggested that it is not prudent to keep "Open" word in the name for the following reasons:

1. All universities are beginning to adapt to the changing needs of the society; there will be a day when traditional and open universities will eventually converge by adopting successful practices of one another to reach an optimal balance of service satisfaction and cost; in not so distant future the term "open" could look superfluous; while the university may last a thousand years, but the "open" slogan may last only for decades.
2. There are many open universities of great repute that have established their credence without adding "open" in their name such as Athabasca University, University of South Africa, The University of Philippines, University of Terbuka, Nalanda University, and so on. Nearly all open universities established after 1990 have not used Open word in name but in practice and slogans.
3. The message that it is an open university could be easily given through a slogan besides it logo and name such as "The Open University of Canada" written by Athabasca University.
4. In naming any institution that is not made for immediate commercial limelight, it is far more prudent to be modest and normal in name and distinguished by actions and product delivery.

5. Its students do not have to explain what kind of university it is, if its name does not impose a difference on their mind.
6. All good universities produce excellent products compatible with one another, not inferior or superior. We ought not to be so different than others simply through distinctiveness in naming.

Therefore, the most modest name for this university is suggested to be University of Nepal, Nepal National University, or simply Nepal University. However, it could be done at the time of passing the Act. Until such time, it would be convenient to just say Open University, which provides immediate convenience in introducing the mission to the people. For any convenience of promoting it as open it may write "*The National Open University of Nepal*" as its secondary designation.

E. Charter

A charter would be written for the university, which will define the terms of reference, statement of the scope, objectives and participants in the project. It will provide a preliminary delineation of roles and responsibilities, outline the project objectives, identify the main stakeholders, and define the authority of the project leader. It serves as a reference of authority for the future of the project. This charter will be ratified from the Government of Nepal and serve as the document granting permission to develop and operate the university in the stated manner.

Some features of the charter would be as follows:

1. The purpose, time-frame and organizational-structure will be written in the charter.
2. The university will be a public institution of Nepal, with some special operational exemptions.
3. Ministry of Education, NRNA and CFFN will be chartered members of the consortium, and NRNs are equally permitted to take leadership in establishing and operating the university.
4. In light of achieving highest standards of quality in the world, this university will also recruit academic and administrative staff from around the world irrespective of nationalities.
5. Quality, innovation, reach, and breaking barriers in education would be its core principles. A concept paper on how we intend to inspire, reward, and maintain innovation has been presented in Appendix G.
6. The working committees formed under the steering committee, will concentrate on specialized areas, such as governance, funding and finance, infrastructure, course development, marketing, and administration.
7. Each working committee will have operational staff during the project period.

F. Governance During Project Phase

The framework of governance during project phase be set as per the charter, which defines the purpose, time-frame, structure, and authority for the execution of the project. It is expected that there would be a Steering Committee authorized by the appropriate organ of the government that implements the mission set by the charter and develops master plan for the long term governance of the institution. The Steering Committee may execute its tasks through various working committees.

G. Summary

Although many different models of universities exist around the world, the Open University of Nepal can serve the mandate of democratization of education and massification of learning as a publicly owned, publicly funded, and autonomously governed entity. The instrument of checks and balances in governance be achieved through (1) publicly accountable and representative governing council to set plans, policies, rules, budget and boundary parameters, and to be the public interface of the university, (2) efficient administration and execution of plans through competitively selected executive board, (3) independent organ to hear the complaints of members and public, (4) independent innovation organ to proliferate research and to develop new ways for institutional evolution. The ultimate aim is to deliver quality higher education to the masses while becoming democratic and sustainable, thus not to collapse when the first money runs out and the first leadership takes a back stage.

VI. Academic Plan

"The field of knowledge is the common property of all mankind." Thomas Jefferson, US President 1807

"Direct experience, inference, metaphor, and words from trusted sources are the ways of gaining valid knowledge." Nyaya Darsanam (Chapter 1, Formula 3)

A. Context

In Nepal, government budget allocated to higher education have been unable to meet the need of one, Tribhuvan University, let alone satisfying the entire need of the country. To make the matter more difficult, the demand for higher education and consequent enrolment is expected to grow for a foreseeable future. Private colleges have mushroomed in every corner of big cities to cash on this demand. However, private colleges offer small number of programs – especially business, management, medicine and engineering – to upper middle class youth who seek to join foreign universities and emigrate. Ironically, the agriculture, forestry, veterinary and engineering programs in TU, meant to serve Nepalese farmers and to produce technical human resource for building national infrastructures, are taken by elite urban youth aiming to join good foreign universities and to emigrate. Many students of elite schools and colleges are admitted into the best universities of industrialized nations. Amidst this, there is shortage of highly qualified professionals in the country.

While there is duplication of efforts and inefficient use of resources in the higher education sector, the vast majority of youth numbering in millions do not either enter into higher education or do not get the type of education they need. Those who are taking higher education are not succeeding as expected. Millions of youth are, consequently, working in neighbouring countries as unskilled labourers and those working in Nepal also lack vocational and technical skills for securing right employment or for advancing their own vocations and enterprise. In addition, there is a large segment of youth that has dropped out from mainstream – the theory oriented – education is in need of a technical and vocational training and education, recognition of indigenous knowledge and skills, and recognition of prior learning in wider areas of knowledge and skills to succeed in the immediate term. These youth in technical and vocational stream also need an appropriate mechanism to get formal credits and ladder to re-enter into mainstream higher education.

The key message here is that Nepal is in need of a full spectrum of educational choices – technical and vocational education on one end, professional advancement in the middle, to cutting edge research and innovation on the other end. Providing abundant higher education opportunities with multiple entry and exit points and opportunities for lateral shift are needed to meet diverse higher education needs of qualified young people who could benefit from higher education. Providing such diversity and choices in programs ought to be the academic goal of the OU as well as that of higher education policy of the country.

The problem then arises in how to address the need for variety, quality and excellence while also upholding the ideal of human equality by serving large number of students. How to prepare our population for vocation, employment, enterprise building, advanced learning, research and innovation at the same time? That is an important question of the time.

B. Approach

The proposed Open University ought to serve varying educational needs of the population through fair and democratic access to education, open door, second chances, public credibility, and political viability, thus producing opportunity for upward mobility in skills and knowledge. The aim is to inspire and facilitate a type of advanced learning that serves the needs of individuals, society and the market. Such needs span on one extreme to include advanced inquiry, research, innovation, and academics and on the other extreme to include the most fundamental technical skills for the general masses. The goal of massification of learning and democratization of education could be fulfilled as and when we can offer broad spectrum of programs and curricula.

Nepal is not the first country to experience a massive disparity in educational attainments among different population groups based on social and economic circumstances. In the USA, New York State education commissioner stated a few years ago that "there are too many students who arrive at high school not prepared to do high school work" [32-1]. The students of rural and black communities of USA have had been facing the situation rather similar to that of rural and disadvantaged communities of Nepal. Fortunately, there seem to be ways to rescue those population groups from the state of perpetual disadvantage. Research on performance between students from disadvantaged black communities and advantaged white communities in Chicago, USA found that students groups that had chronic problem in academic advancements in regular setting did dramatically better when they were given opportunity to attend technical schools and career academies. They graduated at a much higher rate and built solid careers by use of their practical skills [32-2]. Once people discover that they "can do", even the "mediocre" students of one time may develop to become the "superior" ones through the process of continuous learning and improvements. Perhaps, the intrinsic capability of humans in learning is more adapt to progress from the direct, concrete, and experiential learning space to the indirect, abstract, and theoretical learning space. But current practice in Nepal has been to work the other way around. One lesson to be learnt from the American experience is that all people are wired to learn but differently. Therefore, massification of higher learning can be fair and equitable in presence of broad access to technical and vocational programs for all and not just for the advantaged and elite groups. Today in Nepal, the elite who can pay have the access to both practical and the theoretical but the poor are fed with pure theory in absence of practical utility on the ground.

One more lesson to be learnt from the experiences noted above is that giving the same access to theoretical education and giving the same level of learning support to all students are insufficient to serve the objective of reducing the advantage gap among population groups. Although viability and profitability may be great in programs like B.B.A., M.B.A., B.Ed. and M.Ed. programs in Nepal, they are not the ones to serve the true aim of open education. Therefore, what is required from an Open University is a continuum of education to progress from continuing, technical and vocational education at the bottom of the higher education pyramid to the highest grade academic and scientific learning and research on the top, with adequate mechanisms for people to progress gradually from the bottom to ever higher levels and from practical space to the theoretical and abstract spaces.

State of California in the USA is considered among the most reputed jurisdictions in the world for quality and access in public education. California degrees are most sought after around the world while the state admits all high school graduates and all residents above 18 years of age to its higher education system without any discrimination. This is something to be noticed by Nepalese planners. The agent of this reputation and mass access was its Master Plan for Higher Education undertaken by and endorsed by state legislature in 1960 [33-1] which was set to (1) prevent unnecessary program/degree duplication to limit taxpayer expense, and (2) offer access to all qualified residents who could benefit from post-secondary education. Key principles expounded by the plan were:

1. access to all who can benefit,
2. state to provide fund for the access,
3. differential admissions pools to:
    a. ensure high standards and
    b. encourage students to take first two years of programs in the technical and vocational colleges,
4. guaranteed transfer of one student from technical and vocational colleges to third year university for every two students enrolled directly to university to ensure universal access as well as second chance to all those who did not make to four/five year programs in the first place due to circumstances.

This master plan accepted public education as the provider of capacity, knowledge, and skills to its people to sustain its growing technological economy and provide the foundation to serve all citizens fairly and to not leave out any citizen behind. The revised plan in 2002 said, "Today, students enter, exit, and re-enter the education system at various points in their lives, bringing increasingly diverse learning needs ... our state must have a comprehensive, coherent, and flexible education system in which all sectors ... are aligned and coordinated into one integrated system. [33-2]" Nepal has many things to learn from 1960's California and that of now in education sector.

C. Academic Structure

Establishing the Open University is of lesser value compared to making the university a respected and most sought after by prospective students for its programs and services. Drawing highly aspiring students to the university is only possible with a combination of quality institution, quality faculties, quality programs, and situation relevant programs. In the end, the quality and desirability of the institution to a large extent depends on the quality of students it can admit and retain. And the cycle goes on. When an institution is not obliged to teach all qualified students but only top brass students, the institution can boast as to be the best. The problem arises when the university is obliged to open its door to all like an Open University. In such situation some measures are necessary to keep the quality of programs and quality of graduates to be rated as excellent, be sought by the market, and be respected by the society.

Proposed Open University programs are offered in five different streams through five separate schools, with different qualification required in getting admitted in each stream. The rationale here is to retain most students that are admitted and to place the best students in right programs. This way each school can apply different learning strategies, remedial measures, counselling, learning support and student retention strategies to best cater to the group it is serving and best serve the mandate received by it. An Academic Council headed by the Vice-Chancellor/President and represented

by all schools will be responsible to coordinate the activities and set standards in academics.

C.1. Levels of Studies with Multiple Entry and Exit Points

The university will provide a variety of certificates, diplomas, and degrees. All the programs, courses, content, and processes will be monitored and accredited by the academic council and may also be accredited by accreditation council of other countries, and such council of Nepal if one is formed in due time. These certificates will be of the following kind:

1. Certificate of self-assessed completion of a course,
2. Certification of academically assessed completion of a course,
3. Certificate of completion of a program,
4. Certificate I, II, III, IV in named occupation (academically and/or skill assessed),
5. Diploma in named profession,
6. Associate Degree in named profession,
7. Bachelor's Degree in Liberal Arts,
8. Bachelor's Degree in named profession,
9. Advanced Bachelor's Degree in named profession,
10. Post-Baccalaureate Certificate in named profession,
11. Post-Baccalaureate Diploma in named profession,
12. General Master's Degree,
13. Master's Degree in named profession,
14. Advanced Master's Degree in named profession,
15. Doctorate Degree.

There will be provision of multiple entry and exit points in any stream of studies and provisions for moving from technical stream to academic stream and vice versa. These arrangements are to be introduced in recognition of the fact that increasingly more people today are migrating, changing workplaces, enterprising, and exiting from disappearing professions, and entering into emerging professions. People worldwide are now in need of an education system that supports multiple entry and exit levels as opposed to strictly 2 year diplomas and 4 year bachelor degrees. More crucially many people from ordinary economic background want to benefit from technical and vocational education first and be able to move on to ever advanced levels from there on. Higher education system designed as a continuum between technical and vocational sector on one end and the academic and scientific sector on the other with a system of mutual recognition of qualifications. In doing so students may study closer to home in more technical and vocational areas and advanced programs may be offered through more advanced technical platforms.

The university will also recognize technical, vocational and academic competencies gained through work and varieties of other ways and means by way of a system of assessment and recognition called Recognition of Prior Learning (RPL), Skill and Knowledge Testing System, and establishment of standards for skills and training. This system is part of a process to address the need of youth who exit from regular education. These youth would rebuild their career through technical and vocational stream and may then re-enter back into regular academic programs. For example, Diploma of Electrical Engineering may be counted as equivalent to first year Bachelor

of Electrical Engineering. There will be bridging programs for students wishing to move from one stream to another.

Open University will set levels of certification similar to one developed by the Government of Australia as the Australian Qualification Framework. The following table is adopted from its Second Edition 2013 [34-1] and is believed to be in line with emerging aspiration of higher learners and the needs of tooling people with all levels of skills and knowledge.

Level	Skill and knowledge level expected of the graduates	Qualifications	Time
Level 10	Systematic and critical understanding of a complex field of learning and specialised research skills for the advancement of learning and/or for professional practice.	Doctoral degree	3 to 5 years
Level 9	Specialised knowledge and skills for research, and/or professional practice and/or further learning.	Masters degree: extended Masters degree: coursework Masters degree: research	3 to 4 years 1 to 2 years 1 to 2 years
Level 8	Advanced knowledge and skills for professional/highly skilled work and/or further learning.	Graduate diploma Graduate certificate Bachelor honours degree	1 to 2 years 6 months - 1 year 1 year
Level 7	Broad and coherent knowledge and skills for professional work and/or further learning.	Bachelor degree	3 to 4 years
Level 6	Broad knowledge and skills for paraprofessional/highly skilled work and/or further learning.	Associate degree Advanced diploma	2 years 1.5 to 2 years
Level 5	Specialised knowledge and skills for skilled/paraprofessional work and/or further learning.	Diploma	1 to 2 years
Level 4	Theoretical and practical knowledge and skills for specialised and/or skilled work and/or further learning.	Certificate IV	6 months - 2 years
Level 3	Theoretical and practical knowledge and skills for work and/or further learning.	Certificate III	6 months - 1 year
Level 2	Knowledge and skills for work in a defined context and/or further learning.	Certificate II	6 months - 1 year
Level 1	Knowledge and skills for initial work, community involvement and/or further learning.	Certificate I	6 months - 1 year

C.2. Schools of Studies: The five schools of academic advancement are planned in such a way that students would have opportunities to move from one stream to another by meeting specified requirements. Similarly, these streams of educations are planned and coordinated as complimentary parts of one large system to avoid any duplications and to make the transfers smooth:

1. **School of Lifelong Learning:** Lifelong learning is an ongoing, voluntary, and self-motivated pursuit of knowledge and by that term the university recognizes that learning is not confined to classroom but takes place throughout life and in a range of situations. Continuation of learning beyond the years of full-time studies is a way to continuously develop intellectual and academic performances of individuals. These studies must address the cultural, personal and occupational needs of the individuals for these needs keep evolving. In lifelong category, people of different learning categories might join: those with independent learning skills, those with skills to learn in the web-enabled environment, those who need direct classes to prepare them as independent learners, and those who will always require teacher assisted learning and classrooms. Therefore, OU may run morning, afternoon, evening, and extended-day classes, conferences, workshops, counselling, testing services and discussion programs in the communities to serve this population. The type of programs offered may be
    a. bridging courses in language, science, mathematics and other subjects,
    b. language training and foreign languages,
    c. advancement of indigenous knowledge and skills,
    d. business education and development studies,
    e. agricultural, industrial, technical, and vocational extension programs,
    f. civic education,
    g. parent education,
    h. social sciences,
    i. mathematical studies,
    j. science education,
    k. fine arts and crafts,
    l. health, fitness and yoga education,
    m. ancient knowledge, culture and philosophy.

    Under this stream an individual may either take any credit course of choice in regular learning environment with support, take not-for-credit courses offered by the university, or self-study the for credit material in variety of means and give a challenge exam to get credit if so desired. Similarly, a system for assessment of prior learning and extra-institutional learning would be developed under this stream. Applicable credits earned through this stream may be carried to programs of other streams as applicable. In this stream, formal learning in interest-based subjects are pursued. Lifelong learners may develop higher earning potentials and elevate their personal and social wellbeing as done by other learners. The school may offer massive open online course (MOOC) series aimed at unlimited participation and open access via the web. Courses that are offered to bridge the learning gap between the minimum standard set by the university and the current state of achievement of student.
2. **School of Technical, Vocational and Transitional Studies:** These programs would offer one, two or three year programs of three types (a) vocational-technical fields leading to employment, vocation and entrepreneurship, (b)

standard university courses towards degree programs – upon achieving a set minimum standard in them a student transfer into Bachelor degree programs, and (c) general studies, which include science, mathematics, languages, literature, philosophy, psychology, history, like subjects that are not covered by professional, vocational, or technical curricula. Students receive Associate Certificate after successful completion of one year program, Associate Degree after completion of two year programs, Associate Degree Plus after completing three years of studies in Science, Arts or Technology, with indication of specialization such as Physics, Law, Nursing, Mechanical Engineering and Agriculture. In regulated professions, students completing those programs successfully will be able to appear into licencing exams of those vocations. To receive Bachelor's Degree these students will have to transfer to higher streams of studies.

3. **School of Liberal Studies:** These are four year Bachelor's Degree in Liberal Studies or one or two year Master's Degree in Liberal Studies, particularly suitable to entrepreneurial, established professional people, or others who wish to choose their own courses and set their own learning path towards a degree. These are types of Liberal Studies programs, where a student receives a Bachelor's Degree after successfully completing the study of prescribed number of units from 1st, 2nd, 3rd, and 4th level (year) courses chosen freely by student's own preference, and Master's Degree in Liberal Studies after completing studies of prescribed number of units of 5th and 6th level (year) courses. The highest degree that can be attained in this stream is Master's Degree.
4. **School of Professional Studies:** These are also four year Bachelor's degree programs that lead to named degrees such as Bachelor of Electrical Engineering, Bachelor of Nursing, Bachelor of Science, and so on, where students would take prescribed number units from among courses prescribed by the university for that specific named degree. The students would then be eligible to appear in professional licencing examinations. The highest degree in this stream would be Masters Degree.
5. **School of Advanced Studies and Research:** These are highly rigorous academic studies program intended to develop researchers and high academics needed for innovative programs and initiatives. The students enter into the program through stringent entrance examinations and proven track record of academic performance. They will be distinguished as Advanced to distinguish the rigour they had to pass through. Ph.D. Degrees will be awarded only through these streams. Students of other streams must eventually succeed to enter into this stream to enter into Doctoral studies.

Each school shall have a director and own set of faculties and staff for their functioning. Each school shall strive to achieve excellence in its respective domain and the Academic Council should coordinate among them in such a way that there is transfer of students.

C.3. System of Continuous Refinement: The academic council will have the role of coordination among the activities of all schools. This council shall review the budget and capital requests of each school, interpret the functional differences of the schools, review the programs and plans of each school and make recommendation through the Vice-Chancellor to the governing council. The academic council shall have the access

to data on costs, capacities, enrolment and retention of students, and any information relevant for its functioning.

Schools shall submit standardized annual report to the Academic Council with statistical studies on:

1. entrance pattern,
2. scholastic success,
3. persistence,
4. rate of dismissal,
5. scores on standard tests,
6. distribution of undergraduate grades among different programs and among different years of programs,
7. score-differential of transfer students that moved from one school to another and those who transferred from other universities.

D. Admission and Transfer

यथा चतुर्भि: कनकं परिक्ष्यते, निघर्षण छेदन ताप ताडनौ: ।

तथा चतुर्भि: पुरुष परिक्ष्यते, त्यागेन शिलेन गुणेन कर्मणा ।। चाणक्य नीति

(The way gold's purity is tested by rubbing, tearing apart, heating and pounding, similarly, a person's quality is tested by sacrifice, moral integrity, merit of composition and work performance.)

Standard aptitude tests are found to closely relate with student success and are, therefore, widely used by universities of developed countries as admission criteria, along with high school scores, and position in the class. These admission requirements are meant to select potentially successful students and filter out students those who may not succeed. However, a public institution with object of serving the mass should be careful not to discriminate upon those students who have low marks in high school and perform poorly on entrance exams not because of their intelligence or aptitude but because of disadvantaged learning environments they had had. Besides, this university ought to develop skilled technical people who are not scholastically outstanding. It has been found that many students who come from less than optimal learning circumstances could achieve scholastic success given appropriate opportunities and environment. Therefore, many educators believe that success in the first year of studies and continuation in program might have greater validity than comparison of high school marks and aptitude tests scores obtained in widely varying circumstances. Similarly standardized tests held institution wide or better nationwide can have better comparative value. However, the best measure of success of a person is the improvement that person makes against his own past performance. We ought to develop the academic plan of OU with those factors in mind.

D.1. Admission Requirements:

In order to not leave out anyone who could benefit from higher education while striving to produce highest quality human resource for the country, the following admission criteria are recommended to be set:

1. From among the fresh batch of Grade 12 pass-outs of Nepali public schools, the Advanced Stream will select students from top 12.5% and Professional Stream will select from top 33% public school students nationally.

2. To compensate for the geographic and local disadvantages, the top 12.5% students of every public high school graduating class who could not make the top 12.5% nationally will get a conditional admission to transition programs of technical and vocational school such that if they meet set minimum standard for advanced studies in those courses taken from School of Technical, Vocational and Transitional Studies, they will then be transferred to Advanced Studies programs. Or if they meet standards for Professional Studies, they will be admitted in those program. Else they will pursue Technical and Vocational Stream or Liberal Studies program.
3. To compensate for the geographic and local disadvantages, the top 33% students of every high school graduating class who could not make the top 33% nationally will get a conditional admission to transition programs of technical and vocational school such that if they meet set minimum standard for professional studies in those courses, they will then be transferred to Professional Studies programs. Else they will pursue Technical and Vocational Stream or Liberal Studies program.
4. The top 12.5% and top 33% students nationally and locally of the private high schools systems will also get similar treatment in admission.
5. Any individual who has passed Grade 12, equivalent certificate, or Grade 12 proficiency examination in language (vocabulary, reading, writing, comprehension), mathematics, and one subject among science, humanities, and technology by the university is allowed to enter into Personalized Stream of program without any restriction. But the students here choose their own courses and set their own learning path towards a degree.
6. All students who have passed Grade 12, equivalent certificate, and those who do not have Grade 12 certificate but prove their proficiency in language (vocabulary, reading, writing, comprehension), mathematics, and one subject among science, humanities, and technology will be allowed to enter into Technical and Vocational stream of program without any restriction. Those not meeting those qualifications would begin with bridging programs. No student meeting minimum qualification will be denied entrance to this stream. This level of freedom may not be available during the first 5 years of establishment of the university because building such capacity takes time and resources.
7. The university will take a proficiency test in basic literacy to all students. If the proficiency is found to be below set standard, students will be required to take bridging courses from lifelong learning stream and demonstrate required level of proficiency before formally beginning regular courses. Those students who had a long break in studies will also be required to take bridging courses and demonstrate the minimum proficiency. The bridging courses will be freely available to all people for self-study and students may appear in the exam paying 10% of the fee paid by fully registered student. If a student seeks formal tutoring from the university in those bridging courses, the person must pay applicable fee for the course.
8. All students of degree awarding streams must take and pass mandatory courses on usages of learning technologies, online learning system, collaborative learning and learning communities, academic expectations, system of online tutoring and evaluation of learner achievements, system of personal counselling, system of marking and grading, discipline and ethics. Students will not be allowed to take other courses until they pass these courses either through self-learning and appearing in challenge exams, or by taking

these courses formally. However, credits will be awarded towards the degree from these courses as well.

9. Anyone can take credit, non-credit or bridging courses offered through lifelong learning stream. Successful accomplishments in this stream might lead to entering degree awarding streams and up to advance studies stream. Success in bridging courses will lead to entrance in vocational and technical stream or personalized stream of studies. Demonstrated success in required courses beyond set threshold may lead to admission into professional and advanced studies.
10. School of Lifelong Learning should be required to admit any high school graduate and any other person over sixteen years of age capable of profiting from the programs being offered.
11. The university may set higher entrance requirements for foreign students seeking to enter into professional stream and advanced study stream.
12. The validity of the entrance requirements will be reviewed every year by academic committee and be adjusted in order to verify or adjust:
    a. standard for entry into a stream,
    b. procedures and requirements to transfer from one stream to another,
    c. desirability of differing standards of admission for the varying programs,
    d. maintain quality of education to the highest level.

D.2. Transfer arrangements:

While there are many doubts about quality of open education, the university ought to take precaution on maintaining high quality of its graduates. Therefore, guarantee of open entrance to the university, demonstration of proficiency, and transfer to ever advanced level through demonstrated academic proficiency is a way to maintain the quality and not leaving any aspirant out of opportunities. As per studies carried in other jurisdictions where transfer between colleges and universities are permitted, many systemic advantages are found to be realized. We hope to emulate those successes by creating specialized schools to cater to distinctly different educational needs while allowing upward mobility towards highest academic achievements through transfer arrangements. The reason for giving transfer opportunities to learners are as follows:

1. easy accessibility and reduced cost to students as they tend to take early years of studies in local colleges,
2. cashing on high scholastic records often made by transfer students [34-2],
3. ability to screen those students who will succeed academically in the future by giving common early year platform for students of all social, economic and geographic groups,
4. ability to give window of academic success to all by providing level plain field and incentives for higher studies,
5. ability to provide technical skills for employment to those who cannot afford 4/5 year degree programs,
6. opportunity to utilize currently underutilized public facilities for saving cost of education for the government and the students in their early years of studies when they require mentoring, family support, hands-on assistance and technical help.

D.3. Transfer arrangements between schools:

Transfer arrangement between the schools would be made as follows:

1. Guaranteed transfer of all those students of lifelong learning stream who meet the minimum requirements to be admitted to Technical and Vocational Stream or Liberal Studies stream.
2. Transfer as an institutional policy instrument to ensure universal access and second chance to all those who did not make to four/five year programs in the first place due to circumstances.
3. Transfer of Technical and Vocational stream and Liberal Studies stream students who meet the transfer eligibility requirements to Professional Stream and Advanced Stream with a minimum guarantee that:
    a. For every two students enrolled in the first and second year program of Professional Stream there will be no less than one student transferred from the technical and Vocational Stream and Liberal Studies Stream be transferred into third year. In the first four years of Professional Studies Stream Bachelor Degree programs, there ought to be 40% students in first and second year of studies, and 60% students in third and fourth year to create guaranteed space for transfer students.
    b. For every two students enrolled in the first and second year program of Advanced Stream there will be no less than one student transferred from the technical and Vocational Stream and Liberal Studies Stream be transferred into third year. In the first four years of Advanced Studies Stream Bachelor Degree programs, there ought to be 40% students in first and second year of studies, and 60% students in third and fourth year to create guaranteed space for transfer students.
    c. Students who fail to achieve required scholastic success and cannot continue due to changed life circumstances in more advanced streams may transfer to more technical and less difficult streams, without need to meet any entrance requirements.
    d. The student performances would be assessed every year to compare scholastic achievement of transfer and non-transfer students and the percentage of transferred increases or decreased over years to ensure that the transfer students and the directly admitted students demonstrate scholastic achievements no more apart than 5%.

E. Student Support

Continuation in program and dropout have strong correlation with student support, scholastic achievements, socioeconomic status, the state of health and emotion, marriage, distance between residence and university, and family obligations. Dropout rates are much lower in colleges with mandatory campus residences and well planned campus life. Because open university students live far apart from one another and university campus, they must learn over technological platform, and they come from more difficult situations, dropout rates are found to be higher than in face-to-fece type universities. Therefore, more remedial measures and student support are required for open university students than those of regular universities. Such supports to learners on an ongoing basis may be rendered through varieties of schemes.

E.1. Scholarships, Grants and Loan to Students:

1. Scholarship shall be fairly distributed among schools in the first two years of studies and subsequently tilted towards advanced studies so as to inspire students to strive for excellence.

2. Special scholarship shall be established to relieve students who have to go out of their locality to attend laboratory, workshop, field work and internship type study programs.
3. National student loan and grant scheme may be established to give needy student grants and low interest load to pursue their studies.
4. In case of availability of national, state, local government scholarships and from private individual, foundation, and corporate scholarships, it would be made sure that they are fairly distributed to meet the need of as many students as possible rather than letting them concentrate on limited individuals.
5. Subsidized health insurance plans be made available to students.

E.2. Recognition of prior learning and extra-institutional learning:

1. Take a principle that by publicly recognizing the previously unrecognized knowledge and skill, we encourage people to bring knowledge and skills buried deep inside the society into the surface and help us preserve and advance those skills and knowledge for future generations.
2. The recognition of the recognition comes from the fact that Nepal is a country rich on cultural diversity, cultural richness, and invaluable traditional knowledge, skills, cultural practices, and social values worth preserving and promoting. On the contrary these social, cultural and livelihood artifacts may be lost at a rapid pace due to coming of the techno-culture and displacement of local beliefs by newly spreading religions, value systems and lifestyles.
3. The university will develop a system of assessing the current skills and knowledge in return for effort to preservation of such knowledge and skills,
4. The university will develop a system of awarding prior learning credits for such skills and knowledge to be counted towards taking diplomas and degrees in appropriate stream,
5. Students receive help in developing learning plan based on assessment of the nature and extent of the prior learning.

E.3. Counselling:

1. Provision be made for career counselling and in selecting appropriate programs.
2. Counselling on learning strategies and learning styles be made available to students.
3. Guidance be available in developing personalized advancement path and course selection and ordering.
4. Counselling on financial, health, emotional, personal and family circumstances be available through university.

E.4. Tutoring and Community of Learning:

1. Providing tutoring to students at an scheduled time and day mutually convenient to tutor and the student.
2. Keeping student-tutor ratio below 1:10.
3. Developing institutionally facilitated and moderated communities of learners which bring together students taking common courses.
4. Training all tutors in student mentoring skills to keep the learning spirits high.
5. Developing and deploying in-community mentors and applied learning facilitators.

E.5. Supplementary Learning Facilities:

1. MOOC style lectures by highly qualified faculties be delivered over the Internet and/or television
2. Student learning be supplemented learning management systems.
3. Classroom based tutoring and collaborative learning in local communities be made available for the first years of students who require them.
4. Maximum attention be given to mobile learning, which is to be promoted as the dominant learning mode of the future.
5. Portfolio of learning be maintained as part of learner records and be made accessible to learners themselves and people who counsel them.
6. Computing services, information, and course material be provided over cloud computing environment, access devices be provided as part of joining the university on at-cost or subsidy basis along with Internet access for a flat-fee so as to break all barriers to access.

F. Faculty Preparation

Availability of well qualified faculty members is necessary for offering good quality programs. We have yet to have full statistical information on number of doctor's degree holders in the country, the rate of production, and the quality of production. We assume that there are as many or more doctor's degree holders among diaspora community (numbering in several thousands) as there are in the country. Both these resident and diaspora pools would be utilized to meet the faculty need of the university. There is also a pool professionals who have made demonstrable achievement in life and could be guest lecturers and program developers. Similarly exists adequate number of master's degree holders and bachelor's degree holders with long work experiences and skills who could be trained to be tutors, mentors and guides. We will have full information on the available pool and the true extent to which we must further develop the faculty at that point. With this view the following recommendations could be made with regards to faculty development:

1. OU staff be recruited not only from among fresh graduates and faculties of other universities but also from among experienced individuals from various fields including government, NGO sector, business, industry, and research.
2. Graduate training programs for qualified individuals who already hold Master's Degree to prepare them as tutors and effective additions to the faculties be started at the earliest.
3. Training programs to those candidates of (1) be offered by OU in collaboration with established OUs.
4. Partial scholarship for participating graduate trainees be provided by the government.
5. Ph.D. Degree be minimum requirement to take a faculty position in Professional Studies and Advanced Studies streams.
6. Maximum recruitment and training of Diaspora adjunct professors and tutors be made to compensate for adequate availability of Ph.D. scholars.
7. Maximum incentives be given for the tutors to enrol in Ph.D. programs in reputed distance institutions so they could be retained and their service could be utilized while they are studying.
8. An initiative to provide opportunity for in-service preparation of faculties as part of managing the growth of the institution be taken.
9. Special research and academic programs that are of direct benefit to Nepal be developed in collaboration with diaspora Nepalese with a special focus on

attracting ever more qualified researchers to return to Nepal or contribute maximally from where they are.

More specific recommendations specifically stating the numbers and cost estimates could not be made at the moment unless real statistics are collected. These statistical data should tell us how many students might enrol, how many staff and tutors might be required, what is the initial skill levels and experiences of faculties and what training need there is, where can this need be fulfilled, and so on.

G. Effectiveness Testing (Pilot) Program

Offering a set of small scale programs in collaboration with already reputed open universities would let us test and refine certain critical components of the project, which could help refine the COP and help make recommendations for future refinements. The main objectives of this program are:

1. Verification of the effectiveness and state of various tools, technologies, and delivery methods in Nepal's context,
2. Development and testing of academic programs for understanding what we can and should deliver,
3. Validation of NRN involved academic development for the disadvantaged population,
4. Orienting Nepalese professors, tutors and learners in ODE and developing technical capacity for building academic programs and technical infrastructure,
5. Proving that distance education works and can deliver credible education to people, and popularizing open university in Nepal,
6. Integrating the outcomes into the comprehensive operational plan for the OUN.

This program is more advanced than a pilot program. Here learner would not take untested programs and waste their time, but they actually take a fully accredited, recognized, and already reputed programs from a credible institution. Arrangement for transfer of credits will be made with more than one university before offering such programs. Therefore these programs will meet the following critical requirements:

1. That the programs are useful to Nepalese learners,
2. That they are inclusive,
3. That they do not strand or isolate learners from further advancement,
4. That programs completions will be associated with recognized credentials.

H. Program and Course Development

H.1 Key Features:

Designing curricula and programs, setting priorities, and developing courses take some major factors into considerations. All programs would be designed and developed to have some major features:

1. ensure learner support,
2. enhance skills
3. be modular,
4. be credit-bearing,
5. be recognized and have credential,
6. be appealing to those who take them for non-credit,
7. be fully digital and deliverable over of variety of mediums to factor difference in ICT coverage,
8. permit layered learning strata with entry and exit points in each level,
9. have varieties of assessment and quality assurance measures.

The programs would be developed in such modular succession that a learner could start from very easy to follow level to extremely challenging level in gradual improvement in the degree of difficulty. Successful completion of a series of them within a curricular framework should lead to a certificate, diploma, degree, or advanced degree.

H.2. Participatory Approach to Development:

The curriculum, course and content development process will be a wholly open, transparent and participatory process led by a team of experts. From requirement to the development of the end-product the outcomes would be posted on public online forum where all stakeholders and community of practitioners could provide inputs. All course materials will be written, improved, and quality-assured on a online forums of communities of practitioners. They may apply the following process:

1. Post program needs that have been identified from past deliberations.
2. Develop a system of feedback from wider stakeholder community to know grassroots needs.
3. Draw up course-requirements and receive wider feedback.
4. Develop inventory of externally available content databases, contents, expertise, resources and products and allow stakeholders to add upon it in a open and online process.
5. Identify the gaps between the needs of Nepalese learners and what can be achieved from the available resources.
6. Identify what can be acquired, adapted and developed.
7. Develop the material in a publicly participatory process.
8. Iteratively improve through similar public and transparent process.
9. Allow target population, professional associations, private organizations and higher education institutions to provide feedback in prioritizing the programs.
10. Build inventory of externally available program offerings that could be re-purposed and re-used in Nepal.

H.3. Reward and Recognition of Public Contribution:

A system of reward and recognition of pubic contribution would be developed. The system will be similar to one developed for rewarding innovation. The key features will be:

1. Public access to contributed material.
2. Public participation in content development with a principle that creative contributor is hidden in all of us and that ought to be harnessed to the maximum extent.
3. Public rating and per-reviewed rating of its quality to provide overall rating.
4. Public recognition of contributions.
5. Public reward of contributions.
6. Reward and recognize the contributors impartially so that they would be encouraged to contribute more.

I. Academic Collaboration with Other Institutions

I.1. Collaboration in Comprehensive Planning

Developing a comprehensive operational plan that draws on best practice from leading international open and distance learning institutions that are known for quality of education, student satisfaction and innovation in the use of educational technology. Significant innovation has taken place in the recent history of the Open University

movement, leading to a range of pedagogical models being practiced by different open and distance learning institutions internationally. This variety and experience can inform a substantial advantage in the development of the Open University of Nepal which, with the right resources and support, has the opportunity to draw on knowledge and understanding from the leading institutions to build a prototype for best practice both in the region and worldwide.

I.2. Co-Creation, Co-Development, and Co-Used Programs

The university will collaborate with other international institutions and other universities of Nepal and the world to co-create new programs and co-develop content and other necessary artifacts so that they could be used by all stakeholders. This will help:

1. Reduce duplication of effort among institutions and bring down the cost of education for all,
2. Expand the program offerings at a rapid pace,
3. Ease the transferability of credits among institutions,
4. Integrate efforts with world-wide open education movement,
5. Access to larger pool of resources.

I.3. Collaborative program offerings

A student would have choices of studying programs exclusive to OU or take programs offered in collaboration with other universities:

1. Multiversity Programs: OU and other universities of Nepal could collaborate in such a way that students could take distance or regular courses from different universities and get a degree in programs where such mix is possible.
2. International Programs: OU may partner with universities of other countries to facilitate students to take type of programs offered in universities abroad but are not offered in Nepal or students seek to take programs of other universities for specific reason.

I.4. Credit transfer arrangements with other institutions

Open University such as OU of UK and Athabasca University of Canada deliver programs whose credits are transferable and interchangeable with institutions of higher education across the UK, Canada, USA and Europe. Nepal's OU could emulate these practices and establish exchange and transfer arrangements with other universities of Nepal and universities of other countries. This will:

1. Assure better enrolment of students in all participating institutions,
2. Gives benchmarks for quality mismatches between institutions and basis for developing improvement strategies,
3. Provides greater confidence to prospective students to come to the mainstream of higher education.

I.5. Coordination with Schools

That improvement in public school system is necessary for the improvements in university education, coordination with school education system is an integral component of OU growth plan. Besides more talented youth from lower economic strata come to mainstream of higher education when they are informed of the opportunities, costs, options and ways of financing. In this regard the following measures are recommended:

1. The university will have an active outreach program to (a) facilitate the disadvantaged youth in crossing barriers that impede them from entering higher education, (b) attract bright students towards higher education, (c) for mentoring youth on academic success.
2. The university will provide many foundational courses and entrance examination related courses, online learning courses and bridging courses materials for free to all public schools and with fee to all private schools so that students could be prepared in school system itself.
3. Preparatory and bridging courses may be taken directly from university by paying full fee and full tutoring support by school students and teachers.
4. All high school teachers with Master's Degree may join OU training for tutorship and successful candidates may be tutors to local students in Lifelong Learning and Technical and Vocational streams.

J. Delivery Media and Process:

The aim of the institution is to go fully digital in a short span of time. However, some delivery of paper material may be provided on a cost-recovery basis. The approaches would be as follows:

1. All material including curriculum, reference texts, interactive multimedia learning modules, and any other learning material would be meta-tagged so that it would be recognized for its relevance, target learner-level, age-group, occupation-group, learning-stream, degree of difficulty, public rating, and content type.
2. All open content material would be broadcast over broadband Internet, TV channels, or satellite systems, in a way that it is always flowing in a round-robin basis, which may be filtered and cached by registered devices.
3. Special programs will be installed in end-user devices to automatically catch any material that is relevant to the user.
4. Material may be studied and assignments and student works may be done offline but still be able to upload to the university server time to time through occasional Internet access.
5. Wherever Internet connectivity is available material may also be downloadable just-in-time, just-in-place, and in just-enough quantity.
6. Users may carry material on USB drive or other suitable medium from specific outlets.
7. Printed materials may be ordered from specified outlets, perhaps from private contractors.
8. Lifelong learning series lectures and TV/Radio programs may be broadcast over TV/Radio/Internet channels.

K. New Pedagogical Practices:

There will be significant shift in pedagogical practices in open university in comparison to existing universities. This shift is so significant and unconventional that one may call it an upside-down pedagogy. These shifts will come mainly in the following ways:

1. The students will be able to choose one's own lessons from wide selection of lessons in a course,
2. The students will be able to choose their own courses from wide selection of courses in a diploma or degree,

3. Lectures, texts, and learning materials would be delivered to home and learner learns them while interacting with workplace, nature and society,
4. The traditional sense of homework, advanced understanding, expression of understanding using institutionally recognized words, syntax, and semantics is facilitated in university arranged classrooms and supervised learning settings,
5. The learning materials would be continuously flowing and be automatically tapped and collected by concerned learner in his or her devices,
6. the learner may do his work offline and occasionally synchronize it with the university server,
7. fully mobile learning by use of mobile computing devices and communication technology will be arranged,
8. The laboratories and workshops will also be mobile in a sense that they will be transported on a periodic basis to different nearby communities of the learners.
9. The learner would have a choice of place, pace and time of learning.
10. At Open University we all will be students, we all will be teachers, and we all will be producers of knowledge in a sense that we all are in pursuit of learning and utilizing what we learn for the benefit of the society.

L. Learner Assessment:

Learners will be assessed and their learning achievements will be automatically monitored, and their assignments and writings and academic output would be stored in a server in form of a portfolio, which will be accessible to the students long into the future. This will be a system to reward the progress, catch any fraud, and provide appropriate tutoring and mentoring services to the students.
Learners will be assessed on a modular basis such that credits earned after successful completion of a module could be accumulated over a period of time. All the marks obtained through internal and continuous assessment would amount to 50 percent of the total score.

After completion of a series of modules, there will always be an integrative module that links all modules of a course into a whole and comprehensive concept. Upon completion of this the student will write formal examination on a specified centre. The marks obtained from centre based examination will bear 50 percent of the marks in that particular module. These are initial propositions. However, they will be adjusted and refined over a period of time and be detailed in comprehensive operational plan.

M. Summary

The academic features of the university are similar to many other universities in many ways. However, some of the distinct features of open university compared to the rest are as follows:

1. admission and chance to all and pathway for anyone to excel,
2. formal offering of bridging programs,
3. assessment and recognition of prior learning achievements,
4. just-in-place, just-in-time, just-for-me, just-enough delivery of programs,
5. ability to choose one's own lessons from wide selection of lessons in a course and own courses from wide selection of courses in a diploma or degree,

6. unconventional (upside-down) pedagogy where lectures, texts, and learning materials are delivered to home and learner may learn them while interacting with workplace, nature and society, and the traditional sense of homework, advanced understanding, expression of understanding using institutionally recognized words, syntax, and semantics in university arranged classrooms and supervised learning settings,
7. the learning materials may continuously flow and be automatically tapped and collected by concerned learner in his or her devices,
8. learner may do his work offline and occasionally synchronize it with the university server,
9. fully mobile learning will be supported by use of mobile smart phones and mobile computing devices in general learning and mobile laboratories and workshops for skill development,
10. the software tools and technologies will be open source and free so as to minimize the overall cost of education,
11. the university will be an world centre in open-source content and its lectures, libraries, forums, and conferences will be open to all,
12. it will extend it program to incorporate its diaspora and in technology and knowledge translation,
13. it will mobilize crowdsourcing and mass participation techniques in system design dialogues and content development,
14. it will co-create, co-develop, and co-own knowledge products with other world institutions,
15. it will use mass participation approach in academic product innovation.

VII. Research and Innovation Plan

"*Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand.*" Albert Einstein

A. Introduction

Research and innovation would be a major part of OU activities. In OU, a separate research and innovation division would be developed that would not be impeded by the work of academic schools. The role of this independent research and innovation division would be to let the flame of reasoning be burning at all time. The innovative division should inspire innovation at grassroots level by recognizing that an innovator is a person who opens up a new area of understanding for others. Innovation requires less pressured, patience-driven, and more contemplative environment.

Industries flourish and wealth gets created in societies where ideas are created, then harnessed and translated into knowledge, and the knowledge is put to action. Therefore, knowledge is the ultimate frontier of all actions, and production of knowledge is as important as any other work in a society. If given a special place for creativity and innovation in daily life, a society produces ever larger volume of knowledge, which, if put to good use, can bring ever new varieties in the material, moral, and intellectual prosperity of the society.

While scientists seek freedom of inquiry, public seek right to inquire them for their services to the "public good". While applied science "experts" may want rewards to be concentrated on industrial research, we want to fairly reward all innovators who advance our sphere of knowledge, be it theoretical or practical [Appendix H].

By setting up an independent faculty of innovation, we do not seek to designate specified number of individuals as innovators and expect them to deliver innovation to satisfy our desire for the "new". What we suggest is a system that would harness the innovator hidden in all of us and impartially reward the innovators so that they would be encouraged to innovate more. We want to systematize the compilation, preservation and dissemination of that innovation for the benefit of the society and to further galvanize the innovation. A separate article in Appendix XXI explains this rationale in greater detail.

B. The Innovation Mandate

The innovation mandate ought to be clear because this mission is about developing a comprehensive research university in Nepal, a country that is in its infancy in the field of research and innovation. The following are the recommended innovation mandate the this university:

(1) Continue producing knowledge and inventions even at times the society's ambition and systems encounter unforeseen pitfalls.
(2) Let curiosity, imagination, knowledge and benevolence complement each other.
(3) Ensure that innovators and scientists are democratically accountable to the public.
(4) Ensure maximal public participation in innovation.
(5) Protect dedicated innovators and scientists by freeing them from subservience.

(6) Ensure balance between the production and the consumption of knowledge and innovation.
(7) Cross-pollinate ideas among different fields of knowledge.
(8) Ensure that the fruit of research and innovation may be enjoyed by all.
(9) Ensure that innovators and their works are recognized and rewarded publicly and impartially.

C. Guiding principles

As we have concretely established the principles in the education side of the university codified in its statements like "higher education for all", "removing barriers in access to education", "democratization of education" and "massification of learning", similarly established principles are needed to guide its research and innovation mandate. The following are the key institutional principles by which this division operates.

(1) Special and constitutionally mandated funding of innovative faculty: Of the budget of the university, ten percent will be allocated to research and innovation. This amount may be reviewed and adjusted in the future in the interest of maximizing research and innovation as well as the service to society.
(2) Inter and intra constituency competition: The way political constituencies compete in public for limited resources, the innovative constituencies (various areas of knowledge competing for resources allocated for the innovation) should also be scrutinized by each other in public for winning civic support and, thus, funding for their work.
(3) Inter constituency exchange: The way economic constituencies allow free flow of goods and services across geographical regions, we want knowledge and innovation to flow across the knowledge domains so that vertical barriers would be broken and cross-pollination of ideas would flourish.
(4) Simple accounting scheme: Only simple systems, understandable to everyone, can promote transparency and accountability. The project details, project outputs, ideas, inventions and their associated funding should be all public knowledge. The scrutiny mechanism must be democratic for controlling corruption and misuse.
(5) Society taking custody of invention while rewarding the innovators: All patents should belong to the country, which in return reward the inventors. The innovators should be awarded non-monetary honors as well as rewarded monetarily using a public and transparent process. If international patents are in the best interest of the society, such patenting initiatives should be taken by the country.
(6) The right to be wrong: The innovative faculty shall be granted the right to be wrong as granted to journalists by US Supreme Court in 1964, while making the faculty accountable through other public procedures noted in earlier points.
(7) Distributed governance: There should be an innovation units formally established in every schools and faculty areas. They should be laterally networked through transitive protocols for continuous flow of knowledge and collaboration in the knowledge production activities.
(8) Advancement of Open Education: This way we invest in advancements of all other fields, the open, distance, and lifelong learning must also be advanced. It will be the role of Innovation division to promote research and innovation in these fields, including:
(1) Discovering and refining processes of open, distance, and lifelong learning,
(2) Assessing performance, and ensuring timely evolution of learning models and institutional processes,

(3) Monitoring efficiency and effectiveness of different ICT applications to ensure that technology does not drive decision-making,
(4) Quality and performance testing of online learner services such as knowledge assessment, program planning and peer-to-peer teaching,
(5) System of building and analyzing learner profiles to discover/refine appropriate delivery technologies,
(6) Sustainability and scalability of learning system and of the institution.

D. Principles of Rewarding an Innovator

"Perform action abandoning attachment, being steadfast in neutrality of mind, and impartial in success and failure." The Bhagwad Geeta

A research university should make pursuit of knowledge, learning, creativity, and innovation a part of its culture by putting a system to inspire its members to innovate more. Creative people should not have to toil in areas outside their core competencies for their bodily survival. The institution should establish a culture of contemplation, reflection, inquiry, developing ideas, spreading them rapidly, and recognizing contributions. Such is a way by which a research institution could deliver public good of innovation to the society. Appropriate reward system can encourage innovative behavior, information sharing, and cooperation to help generate more ideas. Appropriate rewards inspire the intrinsic innovator residing in all of us – the thinking humans – to be more creative. Only by rewarding creativity and creative ideas, we may grow more creativity.

While there may be many right ways to reward innovators, the end goal of all is to motivate people in the work of continuing creativity. The ancient wisdom in Geeta says that our virtue is in our ability to impartially recognize and reward the intensity and sincerity of actions and not to reward just the successes or punish the failures. Imagine if we went to a war with rules that condemned the dead and glorified the survivors! When creative minds run in various directions, we never know who stumbles upon what. Therefore, let all sincere seekers stumble upon new ideas while knowing that they will receive evenhanded honor and dignity.

The ultimate reward of an innovator should be the personal satisfaction from the discovery of his or her inner creative potential and in knowing that his or her innovation brought benefit to the entire public, not just to individual profiteers. Although an innovator's best reward is the joy of discovery itself, there is a limit to how far an individual's inner spirit can take if society is not aware and respectful of the contributions of the work of imagination; only a benevolent society can produce benevolent creators and vice versa. A "cut-throat" and selfish society cannot expect selfless service from the innovators.

Reward's inclination should be to encourage not only the innovators but also the teams and communities that are supportive to the innovators. The purpose of reward is also to remove fear of failure from those who tried unsuccessfully and to keep the esteem of every seeker of innovation at high level; therefore, not putting the strain of "victorious deed" and "high quality thought" at the grassroots. It has been an established fact that we could harness ever more ideas from the grassroots through a system of eventful peer recognitions and public recognitions.

E. Ways of Rewarding Grassroots Innovation

"From the Son of Heaven down to the mass of the people, all must consider the cultivation of the person – the root of everything besides." Confucius

Rewarding the grassroots level innovator is the most potent way to develop an innovative society. The sheer numeric volume of the grassroots tells us that the reach of a monetary reward can be severely limited. Therefore, the rewards should be financially light but loaded in meaning and symbolism of solidarity and integrity.

Organizing communion of innovators and successful people from various fields and letting them foster connection would help build esteem, cross- pollinate ideas, spread ideas farther, and elicit more innovation. Rewards, recognitions, certifications, honors, paying back in services and discounts, assurance of archival of innovated knowledge, timely recognitions over delayed big recognitions, and periodic recognition of past contributions may be desirable in inspiring grassroots innovation. Happily associating the innovative ideas with the inventors and letting stories of inventions be spread amount to invaluable recognitions.

Recognition of innovators at their workplaces and communities, their nomination for higher recognitions, and rewarding the innovators along with the teams and communities who promoted such people encourage ideas to be transleted into knowledge, the knowledge into systems and business inventions. An individual innovator may be better rewarded with position promotion and recognition than with money. If "generals" extract most of the benefits disregarding their "soldiers", innovation suffers.

F. Ways of Rewarding Professional Innovation

Grassroots innovation ought to be complemented with institutional and systemic production of knowledge for translating innovations into competitive advantages. As institutional promotion of research and innovation requires transfer of public resources at the hands of knowledge professionals, it demands a system of assuring quality, utility, transparency, and accountability. Big monetary rewards to individuals are often sources of disputes and contentions than solutions but certain level of monetary reward is necessary for advancing the professional work of knowledge. Therefore, institutional funding, research grants, research contracts, and similar endeavors would become integral part in soliciting knowledge production. At the same time the public should have the right to know how they can benefit from, influence on, and contribute to the advancement of knowledge sought by the professionals. Therefore, these endeavors should be presented, defended, and scrutinized in widely viewable public forum involving media.

When an innovator develops immediately profitable idea, we should not only reward the innovator like others but also monetarily compensate for its use for the benefit of society. The use of the invention by the society to generate money without fair compensation to the innovator could discourage the innovator to disclose the invention and hoard it inside him or her unless the person also has entrepreneurial charisma.

G. Ownership of Inventions

The conventional wisdom is that an innovation is owned either through non-disclosure or through patenting by the corporation or individual who obtained the patent. However, this has discouraged the grassroots innovator to bring out inventions for the expenses incurred in the process of patenting and the bureaucratic nature of the process. In a globalized world where the entire world in interconnected, cost of international patents start somewhere from US$100,000, which is a prohibitive amount for any individual and an impossible amount for people of third world countries.

A way to ensure that money does not enslave the ideas and innovative spirit of people would be to bring the ownership of the patents to the country. The country should take the burden of compensating the inventors, and patenting internationally, and making them available to industries so they can bring prosperity to the country. Let people invent for the country and the society as a whole. The four faculties of governance should ensure that people's ingenuity and hard work is not unethically syphoned off to serve a few. In case of a federal form of government, patents may be owned by the central government but each individual state producing inventions may be rewarded through a formula similar to one proposed in the next section.

H. Model for Disbursing Rewards for Research and Innovation

Model for Disbursing Fund for Professional Research and Innovation
This is a mathematical model, which is fully described in Appendix H and briefly summarized in this section. The proposed reward system that attaches payout to innovators based on the score the innovative idea receives in a public evaluation process. The model considers the innovators as performers and the general public and the domain experts as spectators.

The knowledge workers who compete for the funding are required to disclose all the inventions or proposals not only among themselves but also to the public and defend their work under public viewing and professional scrutiny. Eventful public defense would be used to compel the professionals to make the work teachable and fit for spreading the knowledge in the society. They must win the trust of other professional on technical merits and the trust of the public by making the field teachable and knowable. The general public evaluate the works and give one portion of evaluation score and research community members give another portion of evaluation score. The sum of these scores would then be used to determine the reward.

From the sum total of resources received by the innovation division, a portion would be used up for the basic maintenance of the organizational and technical infrastructure, which would be capped at some legislated number, say 20% for the first year. The rest goes to support and reward the endeavors innovation and the work of the innovators. The second portion would be used for two purposes, first to fund the works of knowledge and innovation, the second to reward the innovators for their works of inventions. The proportions at which they will be divided should not be fixed but should be adjusted over the years to meet the need of the society.

The proposals and recommendations for funds are owned by the performers and evaluated by the public and by the seekers of the funds themselves. Fifty marks are allocated as "professional marks" to be given by professionals and fifty marks are

allocated as "civic marks" to be awarded by the public. The total marks equal to the sum of professional marks and civic marks minus the minimum marks required to qualify for the reward. Only those plates obtaining greater than 0 total marks will qualify to receive the fund. Amount sought by the researcher for the work and the actual amount granted are correlated. The fund would then be disbursed by using a parabolic scale. The entire process is described in Appendix H.

I. Summary

The university will develop a research and innovation division separate from academic schools with allocation of ten percent of the university funding to give major emphasis in burning the flame of reasoning at all time. This university will emphasizes on the magnitude more innovative capacity inherent in the whole system compered to the capacity of contracted few. It seeks transparency, public accountability, public evaluation, public recognition, and impartial reward in research and innovation in a way never practised in Nepal before. All this effort is meant to inspire maximum public participation in innovation and maximum cross-pollination of ideas among various disciplines of knowledge. The university aspires that the fruit of research and innovation may be enjoyed by all.

VIII. Library and Content Centre Development Plan

A. Modern Changes in Library Services

Libraries have long played important role in the intellectual development of societies. They especially played critical role in research universities as libraries are the providers of references to researchers and students. Libraries not only provide references from their own collections but also from collections of other libraries around the world. To reduce the cost of having multiple subscriptions of the same journals and magazines for different research and academic communities within one university, single subscriptions are made available to all users through one central library. Libraries help the works of learning, academics, research and innovation in a university.

In Nepal, library uses in university campuses and those in public libraries are going down. This is happening not because people have reduced need for scholarly resources but because people find physical books kept in library shelves to be inconvenient compared to referring into digital books and digital libraries. As Internet is taking away some role of libraries, traditional libraries are turning into archives. All the new information is being produced in digital form and old information is being digitized at a rapid pace. Public information placed at any server in the world is being accessible from any computer in the world. Our institutional libraries have much less relevant and less up to date information on the matters of public interest compared to the Internet and the World Wide Web. Today one does not have to go to Russian Library to borrow War and Peace written by Tolstoy but a person can read it from home, formally, legally and freely. And the information service that internet provides is swift and extensive. Therefore, university libraries are being digitized throughout the world. There is no doubt that the library of the proposed Open University will be a digital one.

Educational institutions and libraries traditionally kept knowledge inside them. In order to get that knowledge, people were bound to formally be part of those institutions. But today knowledge is no longer institutional. It has spread and grown beyond the boundaries of the institutions. Today, everybody owns some knowledge and is allowed to express that knowledge to unknown seekers. Everybody who has means to afford technology and a little will can have access to knowledge. Institutional libraries have now turned like buckets of water in front of the ocean of knowledge that is out there.

Traditionally, institutional libraries such as national libraries, university libraries, school libraries, and local libraries provided large number of books whereas the people were unable to keep large number of books personally. Today, cost of books and information sources is lower while the purchasing power of people and free access to information has grown dramatically. Consequently, personal libraries are larger and access to information is higher than before, and our ability to find information relevant to our need is better than before. The institutional libraries in their traditional mode of operation are being ever less relevant to us not because we are not interested in libraries but because libraries are not interested in us or are unable to adapt to the changes that are occurring in the users.

B. Opportunities for the OU Library

Today young people want an expansive pasture of knowledge accessible through personal gadgets when they want and where they want. Unfortunately, the pasture of knowledge offered by the Internet is comparable to a wild jungle where you are not sure whether your grazing cattle will come back safely or not. Internet has its own kind of limitations. The major limitations are that:

(1) its service is not intelligent enough to tailor to the need, expertise, and intellectual level of the user (it gives a huge and monolith service to all);
(2) although expansive, the information it provides may not be intensive and progressively deep for its users;
(3) it is a major source of information noise, information invasion, computer viruses, and mental stresses;
(4) it does not provide physical venue to produce educational content, debate, collaborate in any professionally assisted environment;
(5) it usually does not provide professional assistance in finding information to catered to personalized learning needs, and in filtering noise from the useful.

Therefore, opportunity exists for the OU library to transform from being a place for collecting, cataloguing and borrowing books, CDs and media to asserting its due space in the digital world to intensively serve their target users. Parents, teachers, educational institutions, and governments would love to see it as portal for access to knowledge that is contained in libraries, research laboratories, schools, universities, professional archives, public institutions, Creative Commons, Wikipedia, open content projects, and other humanitarian initiatives that would have gone through a public scrutiny for their usefulness and authenticity where the vulgar and the noise is filtered out. The information is catalogued such that children, parents, teachers, schools, universities, and the governments could immerse here from their own level without any need to police or be policed. And the opportunity for the library is in providing that space and to guide people in finding the information they need. This is not an easy endeavour because of a number of deep rooted issues including:

(1) the changing behaviour of information seekers,
(2) the pace of growth of extra-institutional information,
(3) growth in information hunger,
(4) unaffordability in collecting vast amount of information sources inside an institutional library, and
(5) invasion of information technology in all aspects of life.

Therefore, to inspire massification of learning in Nepal and to reinvent library services for the citizens, we could take the following initiatives:

(1) A government agency should collect all the old and no longer circulated documents from all public libraries and place them into one “national archive.” This frees up the space of libraries to turn them into centres of learning, cater to the latest user needs, and make them like latest theme parks of specialized information and knowledge. Let all libraries be the place where you can meet other people who are in pursuit of learning like you. Let users exchange ideas and information with one another in such venue.
(2) The state should help the Open University to develop a “national open library” with vast amount of information sources and licensed information contents that are used in education, specialized investigations, research and innovation. It

should then give access to it through public libraries scattered throughout the country. Augment the personal library services by supplementing it with institutionally collected references.

(3) Make terminal libraries in every community, school and college so that no citizen travels far and wastes time and money to access the library resources and no citizen is left out from its services.

(4) In the "national open library" we would establish state-of-the-art cloud computing server and software facilities that allow citizens to take-on collaborative knowledge initiatives, such as developing Wikipedia like encyclopedia of Nepal's indigenous knowledge and of the knowledge of Nepal's indigenous resources in local and international languages. We procure a significant amount of open source information from which the students are allowed to build their own personal information and libraries at no cost. Students would be able to carry and use such library materials offline and use in absence of Internet.

(5) We would replace the state sanctioned standardized textbooks that contain 30-40 lessons in each book with expansive texts containing thousands of collaboratively written lessons of appropriate levels that are properly edited and refined by experts. The approach would be to cover a range of topics that are of interest to learners of different localities of Nepal. We would facilitate local content development process and make it open so that all can learn from one another and proliferate the knowledge building process in Nepal. Learners would choose their own 200 lessons for each subject of each level from the collection and learn from them. In turn, the learners would be freed from from a strict set of state sanctioned lessons that are not in coherence with the interest of learners.

(6) That each user goes to a library with a specific learning objective in mind, library would employ sufficiently trained people capable to channel relevant information resources tailored to that user whether that information comes from inside the library or from the Internet. This would be done to ensure that users are well served even if the library collection is not fully extensive, intensive, or the latest as a standalone institution.

(7) The community and school libraries would not require to hold their own books and hold physical paper books. They could use OU library as long as they have (1) good quality computer terminals or mobile devices, (2) network access to national library and internet, (3) competent library professionals who educate the users and technically help them to access all the books and information materials available anywhere, (4) professionally mandated and compulsory training for each library professional twice a year, (5) user-account and computer software to write, record and gather personalized information, which they could access and use from anywhere and at anytime.

(8) The OU library would collaborate with largest and most extensive libraries in the world in order to make their materials available to Nepalese learners through national library and other public libraries.

(9) The OU library would organize yearly international conference on library sciences to exchange latest ideas and best practices developed in library sciences, and to update Nepalese library professionals.

(10) The OU library would be the venue for not only the reference materials but also for intellectual deliberations, collaborations and as content production and distribution.

Libraries must supplement the service of the Internet as a source of information by becoming more intensive, personalized, and authentic service provider as opposed to mere source of information, which it cannot be as effectively in the presence of ever-expanding world of digital information and the Internet.

The main Internet accessible data server of the university, library resources, learning content management, library services to students, archiving of learning materials and dissertations produced in the university, digitization of Nepal's internal literary resources and indigenous knowledge, intellectual property produced by members of the university, and digital information management are to be strongly integrated. This would facilitate to make the university an active creator of knowledge in collaboration with communities, diaspora population and international collaboration with other libraries and universities.

C. Summary

The OU library is the provider of references to researchers and students. However, with books and vast amount of information have gone public in the Internet, people have started finding it inconvenient to go to library for getting physical books. Traditional libraries are being ever less relevant to us not because we are not interested in libraries but because libraries are unable to adapt to the changes that are occurring in the users. Consequently the the library of the proposed university will be a digital one, national one, with vast collection of Nepal's indigenous content and as a portal to knowledge contained in world's other libraries, research laboratories, professional archives, Creative Commons, Wikipedia, open content projects, and other humanitarian initiatives. The library will give service to individual learners tailor to his or her need, expertise, and intellectual level, progressively taking to deeper levels. The library will also be a physical venue to produce educational content, debate, and collaborate. It would act as a “national open library” with vast amount of information sources and licensed information contents to be accessed through public libraries scattered throughout the country or through personal Internet enabled devices.

IX. Physical Infrastructure Plan

A. Introduction

Securing land, buildings, and physical hardware necessary to make them operational is one of the most fundamental aspect of building an institution. Often lands are granted to public universities by the government before or at the time of passing the act of parliament. The strategy for OU infrastructure has been to use various training and educational facilities of the various ministries of the Government of Nepal to accelerate the process of developing the OUN. Already there are large number of training facilities within Ministry of Education and Ministry of Agriculture and Cooperatives that are dotted across the country.

The open university needs a modern ICT ready central infrastructure to develop, host and deliver programs and render learning support to students over ICT based learning management system. It had been proposed by the OU promoters that IT Park in Banepa (owned then by the High Level Commission for Information Technology and later by Ministry of Science, Technology and Environment) be allowed to be used for building technology headquarters of OU rather than keeping it vacant for decades. That facility had been identified as the best facility to accelerate the launching of an OU by avoiding to construct a new ICT ready large infrastructure. Years of efforts have led to conclude that it would take more time for government to take any firm decision than to build a brand new infrastructure. That 20 ropani land allocated for OU in Dhulikhel is insufficient for developing the central campus, it may be used as a regional campus. The following sections in the physical infrastructures outline how we intend to build the physical infrastructure for the university.

B. Central Campus of the University

(1) The central campus location may be strategically located near a future population centre.
(2) Acquisition of sufficient land (in excess of 1000 ropani) be accomplished for developing a permanent headquarter of the university.
(3) The central campus of the university be developed to have full technological and technical capabilities to support collaborative content authoring, MOOC delivery, cloud computing facility for students to meet their computing needs from their mobile devices and central repository of software.
(4) Central campus be the main venue of training the faculties, staff and tutors.
(5) Central campus be the main venue of administration, student support, counselling, workshops, laboratories, library, content production and distribution facility.
(6) One time grant of sufficient quantity would be required to setup the physical and technological facility of the main campus.

C. Regional Centres of the University

(1) Four centres be made in High Hills strategically selected to concentrate on technical and vocational education closely connected with mountain economy, stone-masonry and rammed earth housing, trail construction, rock mining, pastoralism, high hill agriculture, medicinal herbs, northern-trade, Buddhism studies, and tourism.
(2) Ten centres be made in Mid Hills one each in proposed cities along Mid-Hill Highway to cater to technical and vocational education in foreign language, mid-hill agriculture, agricultural technology, health studies, engineering, rock mining and

processing, rock based trail and road construction, Hinduism and eastern philosophy, and tourism.

(3) Ten centres be made in Tarai along East-West Highway to cater to agriculture, agricultural automation, industry and manufacturing, engineering, southern and international trade.

(4) All these centres be used for Technical and Vocational Education and Lifelong Learning programs which requires physical training facilities, laboratories and workshops.

(5) Necessary building either be built or the training facilities of Ministry of Education and those of Ministry of Agriculture and Cooperatives be acquired or be used collaboratively.

D. Use of Public Facilities

All throughout the nation there are government training facilities and public educational institutions with physical facilities. All the facilities that are underutilized today be allowed to use to deliver OU programs in the following way.

(1) The standard utilization of classrooms, lecture halls and seminar halls of public schools and colleges and those of government institutions and training facilities in a standard day program (9:00AM to 5:00PM) be set as 30 hours per week. Any facility used below this capacity may be utilized for OU programs to raise the utilization level to 30 hours per week.

(2) The standard utilization of laboratories of public schools, colleges, public research institutions, and government institutions be set as 20 hours per week. Any facility used below this capacity may be utilized for OU programs to raise the utilization level to 20 hours per week.

(3) OU may schedule laboratories and classes in the morning, late afternoon, evening hours and Saturdays to raise the utilization level of those facilities.

(4) OU services are considered public good and OU be allowed to utilize those public facilities without paying any compensation to the owning institution in rendering its services except for the consumables that may be required to carry out the programs.

(5) Scheduling of OU programs be done in a way to maximize the utilization of existing public facilities to a maximum extent before any infrastructure specific to OU could be demanded.

(6) The institution owning the venue may utilize OU technology facilities for its training and educational purpose using the same principle of maximum utilization of pubic facilities for public service.

(7) All public health facilities and hospitals be required to accommodate OU students as interns numbering equal or more than 10% of their workforce and one student where there are less than 10 staff.

(8) The utilization statistics of all public facilities be tallied in the country for planning purpose.

(9) During months of holidays in public institutions their facilities are to be used for OU programs.

E. Maintenance and Expansion of Facilities

(1) For all physical facilities there exist, maintenance budget be allocated for their upkeep.

(2) As much as buildings would be maintained all furniture, laboratories, workshops, gardens, and landscapes should be maintained.

(3) For all physical facilities, there must be maintenance plans, and the plans be implemented.
(4) Upkeep of all facilities be looked after by a local governing entity.

F. Summary

Securing land, buildings, and physical hardware for a modern ICT ready central campus and four campuses on high hill region, and ten campuses each on mid hill and Terai are the main components of physical infrastructure plan. The central campus of the university is sought to be developed to have full technological and technical capabilities to support collaborative content authoring, MOOC delivery, cloud computing facility for students to meet their computing needs from their mobile devices and central repository of software. This campus is sought at and around geographic center of Nepal along mid-hill highway. The high hill campuses are sought along large settlement worthy places also strategically connected to Tibet. The ten mid hill locations are sought along Mid-Hill highway and ten in Terai are sought along East-West highway. For the rest, the university will use underused public education, laboratory, workshop and training facilities.

X. ICT Infrastructure Plan

A. Introduction

The Open University mission is embarked in Nepal at a time the country has low budgetary provisions in higher education and people at individual level make one of the lowest per capita incomes in the world. The largest of libraries in the world reside in some other countries, access to technological tools are available somewhere else, and know how to distribute and integrate knowledge products remains somewhere else. Internal public financing ability may be estimated from the fact that Nepal government invested NRs six billion in entire higher education sector in 2012 (source: UGC EMIS 2012) to serve more than 700,000 student enrollments. To compare, one may note that University of Ottawa serving 45,000 student enrollments had a budget of about NRs eighty-five billion ($1b) the same year (source: Annual budget uottawa.ca). Therefore, providing internationally comparable quality education in Nepal is a feat demanding innovative approaches. Building and deploying new ICT capabilities through Open University of Nepal are part and parcel of this approach.

An OU is frequently referred to as "technology made university" because the realization of its massive organizational capacity is possible only by harnessing the power of Information and Communication Technology (ICT). ICT infrastructure is considered as the major enabler for quality education in a modern open university and ours is not any exception. The scalability of OU services is largely achieved by automating the delivery of many services that traditionally required significant human effort and time, such as the delivery of learning content, management of learner portfolio, management of learning activities, and determination of intervention and counselling needs.

We are experiencing that Nepalese people are directly and extensively experiencing the mobile communication devices and services before they experienced any earlier generation ICT technologies. Therefore, there is a strategic advantage in quickly entering into mobile learning with maximum effort because this technology is more space, material, energy, bandwidth and money conserving than all technologies we have seen in the past. Personalized learning, user friendliness, rapid familiarity with technological gadget, and learning on-the-go is more readily achievable in mobile devices. We are at a juncture of skipping paper and move directly into digital future on the strength of the willing penetration of mobile technology and enthusiastic participation of people on it.

The backbone of this service is the Broadband Internet services, data servers, cloud computing services, administrative and financial applications, academic management systems, digital library services, digital content, learning management systems and varieties of software services in the university campus.

B. Thematic Work Areas

The ICT strategy involves the following thematic works:

(1) Access to nationwide Broadband Internet service, satellite telecommunication channels, radio and TV channels.
(2) Defining technical infrastructure requirements, procurement plans and identifying licensing needs.

(3) Coordinating with government, line agencies and service providers to arrange for affordable access to Internet and Intranet, and arrangement of affordable mobile computing devices.
(4) Promotion of mobile learning and mobile laboratories and workshops.
(5) Development of content databases and digital libraries with licensing agreements for database and library access from other institutions of the world.
(6) Implementation of ICT based financial, administrative, skill database, learning and examination management, learner portfolio management, collaborative content authoring, and multimedia content production systems.
(7) System to crowd source for content search, language translation, and content development.
(8) Information security system to establish identity, protect privacy and provide information integrity.
(9) Creation of purchasing consortia for hardware, software and licensing.
(10) Development of human resource capacity on use and support of ICT systems and technologies.
(11) Maximize the use of Open Source software and make OU a centre of excellence in Open Source software product development and research.

C. Broadband Internet Infrastructure

"In 1995, as part of its Information Infrastructure Plan, the Korean government stated its vision for nurturing a knowledge-based economy and identified robust broadband as the first step. ... In 2007, 99 percent of the country's households had access to high-speed Internet. About 90 percent subscribed to broadband, with half enjoying connection speeds of 50–100 megabits per second. Korea was ranked first in the International Telecommunication Union's (ITU's) Digital Opportunity Index that year." World Bank Report on Information and Communications for Development 2009 pp.41 [35]

Open University learning services are of a kind requiring rich human-interaction, speedy flow of data and richly interactive content. Rendering those services requires accessibility and affordability of high bandwidth and highly available communication services, more specifically referred to as Broadband Internet, throughout the country. Without the students throughout the country being able to access and afford the access, it would be impracticable to uphold the ideal of democratization of education and massification of learning in an economical manner. At present, however, the affordable access to Broadband Internet is a paramount impediment for the majority people of Nepal - rural and urban alike. Yet wireless broadband infrastructure is the most effective way to provide access to conquer the 'digital divide' in Nepal.

OU will have Broadband Internetwork in university campuses but providing equitable and affordable access to broader society is an initiative requiring multi- jurisdictional collaboration, which will certainly involve Nepal Telecommunications Authority, Ministry of Information and Communication, and perhaps international telecommunication development agencies and other development agencies. This is a policy issue because affordable and equitable access to broadband Internet is considered as important a service to citizens in the modern economy as water and electricity are considered important. The broadband access to data services will not

only help mass education and training initiatives but also in telemedicine, governance, public services, industry, commerce, work productivity, business and intellectual competitiveness, empowerment women, children, disabled and the marginalized, social development, and ultimately becoming able player in the emerging knowledge economy of the world. This is not just an OU agenda but a national agenda because broadband services lead to richer economy and better human development.

A World Bank study released in 2009 concluded 1.38 per cent added growth in GDP for every 10 per cent increase in broadband penetration, and concluded that "Broadband clearly deserves a central role in national development strategies" [36]. Then the study released in 2012 saw a revolutionary potential in mobile technologies. The report said, 'The mobile revolution is transforming livelihoods, helping to create new businesses, and changing the way we communicate. The mobile phone network is already the biggest "machine" the world has ever seen, and now that machine is being used to deliver development opportunities on a scale never before imagined. During this second decade of the new millennium, maximizing the potential of mobile phones is a challenge that will engage governments, the private sector, and the development community alike [37].'

Today, affordability of smart phones and portable technologies have opened the door for mobile learning and serve increasingly mobile population. As a good coincidence, mobile learning has been found to increase exam scores from the 50^{th} to the 70^{th} percentile and cut the dropout rate in technical fields by 22 percent [38].

Broadband Commission for Digital Development (joint venture of ITU and UNESCO) has set four targets for 2015, (a) each country to have broadband plan, (b) broadband services to be made affordable (<5% of income), (c) 50% Internet penetration in developing countries. In Nepal at the end of 2010, 44% people had mobile cellular subscriptions and 35% population was covered by mobile-cellular network [39] and has surpassed 51% penetration by September 2012 [40] and was reported by Nepal telecommunication Authority to be 74% by October 2013 [41]. However, Nepal fairs poorly when it comes to mobile broadband. Only 0.4% people had mobile broadband Internet subscriptions and only 0.8% people with with mobile subscriptions had subscribed to mobile broadband Internet [42] but that figure is improving rapidly. In this context, "Wireless Broadband Masterplan for the Federal Republic of Nepal" has been adopted by Nepal Telecommunication Authority and a commitment to make broadband access breakthrough by 2020 has been made. We are hopeful that broadband Internet will be available and accessible throughout Nepal within a decade.

The major problem is, therefore, going to be the affordability of access. But for a given infrastructure cost, the cost of Internet access per user can be low if the number of users can be high but more users can afford to use Internet only if the cost was affordable. Today, one third mobile subscribers of Nepal also have subscribed to data access but the vast majority of them use them sparingly and some do not use at all because of (1) the cost barrier, and (2) the lack of applications that are directly tied to their occupation, business, or life. Mass education through OU is an avenue to take useful and relevant application to their lives. If the government and development partners subsidized the Internet cost for OU students by a certain extent and the companies provided reduction of rate for students by some extent, we can make a major breakthrough.

The following recommendations have been made to policy bodies and the government:
(1) Establish formula for subsidizing the broadband Internet access or for allocating fix percentage of bandwidth usage for educational use to facilitate mass education.
(2) Establish a policy by which OU students have access to 500MB per month free Internet bandwidth.
(3) Reform telecommunication sector so as to bring overall communication costs down and Internet access affordable to all.
(4) Provide fiber optic back-haul network to all districts and their strategic points using Rural Telecommunications Development Fund (RTDF) so that the rest of the coverage could be achieved using broadband wireless networks.
(5) Position Open University as the national center for content development and fund content development initiatives.
(6) Align OU with UN Million Development Goal (MDG), especially on Goal 8 to "develop global partnership for development" and especially its sub-goal F of making available the benefits of new technologies, especially the access to and usages of Internet [43]. Government and development partners provide subsidy on smart devices and access, and companies provide discount to all students or at least to public education students.
(7) Implement SAARC agreement of 2009 [44-1] on upgrading of national and regional telecommunications infrastructure.
(8) Implement South Asia Subregional Economic Cooperation (SASEC) Information Highway (IH) Project [44-2].
(9) Become member of Trans-Eurasia Information Network (TIEN3) [www.tien3.net], an education and research network dedicated to dedicated to provide high speed terrestrial Internet access to educational and research communities in the Asia pacific, and provide connectivity to OU.

D. Cloud Computing Infrastructure

Facilitating mass access to learning and democratization of its higher education sector implies that we provide information and learning resources to the masses; provide mass storage of information produced by the masses; provide access to tools and technologies that help the masses to produce knowledge products; offer library services and learning materials as diverse as the interests and capabilities of the masses would represent; empower every learner to become an autonomous learner through appropriate learning support and through platform to support autonomous learning; and provide platform to engage in communities of learning.

Providing these means to the masses of people would not be affordable to one of the least developed nation like Nepal without the use of appropriate technology and novel system. That appropriate technology is considered to be made up of infrastructure for broadband wireless communication, cloud computing, cloud data storage, and mobile learning platform. This section deals with the cloud computing aspect of it.

Maximizing Resource Sharing and Minimizing Resource Waste: Cloud computing is a way of pooling of computing resources and distributing high end computing capabilities to users in a way that the collective capacity of the masses to consume and produce knowledge products is maximized. It makes the total capability of the system to be far greater than the sum of individual capabilities developed

independently. In cloud computing system, the four key resources in computing, namely CPU (Central Processing Unit), memory, storage, and network are pooled by many users in a way that these resources become highly utilized on a shared basis. Consequently, we can afford to build best of the best and most powerful computing infrastructure not possible to build on an individual basis for all.

Even if we were to provide individual machines with huge computational capabilities to each user, the computing capability of nearly every machine will go vastly underused in serving a single user. In a machine with multi-core CPU or multiple computing units, the CPU would be underutilized most of the time. Similarly underutilized would be hard drive and memory throughout the life of the machine. The fiber of a cable or an allocated frequency channel of a communication network may similarly go under utilized by a single user. This results in a tremendous waste of investment when viewed collectively. Cloud computing is a way to eliminate this waste by dividing the CPU, memory, storage, and network capacity into a large number of chunks and letting users have control over those individual chunks and not the whole system. When one chunk each of CPU, memory, storage and network is combined, it represents one virtual computer and the system can serve a large number of end users simultaneously. A single infrastructure could give the benefit of a cluster of a large number of infrastructures serving large number of people as before.

Grassroots Access to High End Computing: A cloud computing system may be understood as a metaphor of drinking milk without raising a cow. If one wants to develop java application, for example, the development platform may be made available to him/her over virtual means. The data centre, data processing, programming environment, and many computing capabilities would be available from the server and directly accessible to the end user through thin client. Even a computer of a cyber café would be sufficient to access state of the art computing facilities. This is equivalent to be able to give highly sophisticated computer to each and every individual, without fear of that computing capacity to go idle or unused. Every individual has an inexpensive device and all the needed sophistication is in some devise elsewhere.

Extending the Virtues of Mobile Computing: Today mobile computing devices are proliferating among the rich, poor, urban, rural, men, women, able or disabled alike. The way to fully capitalize the potential of these devices in learning and productivity is to provide certain underlying and affordable services over Internet and telecommunication backbone. Such a service is possible to be rendered through cloud computing.

Virtualization: Virtualization is a domain of computing that renders services to distant interface devices in a way as if the underlying capability is right there in the device but in reality that computational capability is resident in a much capable device somewhere else. By use of virtualization, low cost end devices could be made to work as if they had high computational capacity, large storage capacity, and big memory capacity. The large computational and storage capacity gets utilized in a way that the "virtual" is nothing but an extension of the real. In a tree metaphor, one can imagine as if the real tree is somewhere in the forest and its offshoots are sprouting from the ends of its roots that are extended far away. When someone writes a program on his end device and gives a "compile" command, the program then goes to a real powerful

computer, gets compiled, and the result appears back on the end device.

Green Computing: Resource sharing and virtualization are the two key capabilities of cloud computing which lends it well for the maximizing both the cost advantage and computational capacity advantage in the overall system. The server side machines may selectively sleep as and when number clients reduce and wake up again as clients become more. This will reduce the carbon footprint of the system. The large computing warehouses located in a few places in the country could serve the entire nation. Consequently, we could avoid transporting large computers, monitors and printers to every part of the country and dumping those machines in the environment when they become obsolete. Through a few large servers and handheld mobile devices or low cost devices with the users, we could meet the computational need of the society. The user device could merely be a TV, display and typing terminal, mobile phone, tablet computer, laptop, desktop, or a sophisticated computer. Resource sharing not only helps bring down the per user cost of computational resources, but also helps to make the world of computing ever greener and, consequently, to realized the dream of building a green university. We could do more computing with less energy consumption in the overall system. That is the power of virtualization.

Multiplier Effect: Another advantage of the cloud computing platform is that the users would have the flexibility of having devices running different operating system and still get the same service. The operating system of the client device would be decoupled with the operating system of the server. On another front, if one would like to stop a task at a particular mark and resume the task at the same state but from a different device and different location it would be equivalent to saving a fine and taking the file with the user on some device such as a USB drive. That means by transporting a file from one place to another one can achieve the same effect as transporting the whole computer. Going a step further, by virtue of copying the stored file in many user devices we can get the effect of making many identical copies of the same computer. Thus we could deploy an identical solution to any number of computers and places with only the effort of copying a file. Say 200 students had to do the same lab but we do not have that many dedicated computer made ready to do the lab. In traditional system it is a costly venture but in a virtualized environment it is easily achievable. By this way creating the effect of having a sophisticated laboratory computer on the hand of each and every student is possible in this system. We do not even need to know whether the end user computer has enough computing capability or not. That is the power of virtualization.
Virtualized computing environment has other technological advantages in restoring perturbed computing environments back to known stable states. It allows us to preserve the state of the memory of a computer. For example, one can capture the state of a computer and go to an entirely new place and an entirely new computer and recover the state at which the computer was at the time of capturing the state. This type of power of recovering the past memory state of a machine is available only to the virtual machine and not to the physical machine. One can send the state of a machine to an expert for diagnostic purpose also.

Gaining Power of both Aggregation and Distribution: Cloud environment has the power to aggregate or integrate scattered knowledge. By that token, it would allow backing up of the individualized data and information of a large number of users into a small number of machines. One computer can do what, for example, fifty main

machines and fifty backup machines could accomplish. Moreover, it would make it economical to make multiple backups of knowledge resources and computing machines. The resources are available over the Internet and what is needed is the state of the session.
By means of cloud computing, highly sophisticated computing capacity could be distributed to each and every individual. This helps us centralize what is economical and efficient to centralize and distribute what is desirable and economical to distribute thus blending the advantages of both centralization and distribution. By that virtue we made it possible to pass the power of computing and information to the masses and in return collect and consolidate the knowledge produced by the masses into a central place. Thus we harness the creativity of every individual while sharing the information and computing capacity to all.

Offering Different Levels of Services: Leading cloud computing service providers offer three categories services, namely Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS), to their consumers. An IaaS allows the user to have command over a remote computer or server. This is equivalent to leasing a physical box from the cloud service provider. The vendor manages the networking, hard drives, hardware of the box, and virtualization of operating system. The user manages everything else. A PaaS allows the user to have command over an application, framework, or tools that are in turn used to build something on. The service provider manages the hardware and virtual system. A SaaS allows the user to concentrate on the business functionality, such as in Gmail or Google Drive, without any need to manage the service. The user can only concentrate on how to use the service for business or personal use, such as use of Gmail or Google Drive. This way, a platform stays on top of infrastructure and software stays on top of a platform. A user may choose the type of control they want.

Offering Rich and Resilient Services: In the cloud computing system, the core computing infrastructure is highly concentrated, service rich, and carefully backed up. Latching on this core from anywhere are the end users through a network infrastructure and varieties of end devices, which also satisfy other personalized and diverse needs of the user. Together, the whole system appears like a powerful and ubiquitous computer that is available everywhere, always, and to all, and that is affordable by all. At any given time many user devices may go up or down, or they may be constantly being replaced but the user's core information would remain safe and user's ability to be served by the system will remain the same.
The central core of the cloud computing system is made to not only to back up the data and information in multiple locations at the same time but also with dynamically running backup systems with always synchronized state machines. They utilize the power of virtual machines that have master and slave servers running at all times in a way that as soon as the master fails, the slaves can immediately elect one of them as a master, which assumes the work of the dead master in a way that the end users would not even notice that the master server was dead. Along with this ability it will have the capacity to grow while in service as living systems of the natural world do have. Thus this will be equivalent to giving a hugely power computer to every remote school and village of Nepal at par with that used by urban and wealthy institutions.

Gaining Equalizer Effect: Cloud computing infrastructure as and when combined with mobile computing has the power of equalizing the access to knowledge and

production of knowledge. Companies like Google use this technology to provide e-mail, e-book, hard-drive, office productivity, maps, and many more productivity services to every citizen of the world for free and thereby empowering a student of a developing country in the same way as one of USA or another developed nation. By use of such infrastructure and platform, we would be able to provide library services, laboratory services, learning management services, collaborative content development services, classroom services, seminar services and many more academic and general productivity services to the people. Therefore, development of the hardware, network, server-side software infrastructure are the key enablers of mass access to learning and democratization of education in Nepal.

Creating International Hub of Open Knowledge: If Nepal can dare to open itself up to the world, it can be the world-headquarter of the open source and open knowledge movement. Consequently, it can attract worldwide investment in this frontier. In becoming the custodian of the world's open knowledge, Nepal can also use that knowledge as much as the rest of the world can. However, a special advantage that Nepal will have is that it can become the hub of the world where top developers and intellectuals of the world would converge and live temporarily or permanently.

E. Mobile Learning End User Infrastructure

Today mobile computing devices have reached to a sophistication level that a mobile device can act as an integrated phone, Internet portal, Internet router, computer, camera, messenger, social networking portal, library, learning gadget, entertainment gadget, gaming device, business transaction portal, data storage, and a utility bank. They are fully multimedia gadgets with full text, data, photo, audio and video capabilities and touch-screen control. The rate at which mobile devices have been adopted by the masses has been so encouraging that everyone who wants to have a mobile device will be able to afford to own one even in a so called poor country, likely before the end of this decade. These devices possess significant capabilities to enhance personal productivity, ability to collaborate with others, and economically or freely access a vast array of tools of knowledge acquisition, experimentation, and knowledge production. By that virtue, mobile devices bear a capability to create a level plain field for all, be they rich, poor, urban, rural, men, women, able or disabled.

Mobile phones costing less than a desk phone a decade ago have more memory, faster processor, personalized database, office automation tools, programming tools accessed over a network, and many more functions that were not commonly available in personal computers of a decade ago. Mobile phones "can now function as a wallet, camera, television, alarm clock, calculator, address book, calendar, newspaper, gyroscope, and navigational device combined. The latest smart phones are not just invading the computer space, they are reinventing it by offering so much more in both voice and non-voice services.[45]" They have empowered users to become content providers on a global scale. Telecommunications, media, and computing services have now converged into one place. Not surprisingly, mobile devices now have pervaded and have transformed the world suddenly, particularly the developing countries.

A 2012 World Bank report was stating that people in "some" developing countries have access to a mobile phone more than to a bank account, electricity, or even clean water. Nepal is one of those countries. Nepal, a country of 28 million people, has

more than 18 million mobile phone subscriptions and 6 million mobile data subscriptions as of October 2013 [46]. It seems smart phones and computers have reached at people's hands before the availability of affordable broadband Internet service. Internet service is far behind people's appetite for using them. Mobile phones have become the information technology entry points for Nepal. People seem to be already proud to own smart phones simply for their usage as mobile phone, gaming device, camera, multimedia player, and other functions. Affordable and high quality broadband connection will be a bonus to them. Even by toiling as lowest paid laborers in other countries, more and more Nepalese households are gaining access to smart phones, undoubtedly the young people. This has taken as a major opportunity for making major breakthrough in education, health, literacy, entrepreneurship, productivity and access to information and knowledge tools for the masses. Moreover, mobile learning has been found to increase exam scores from the 50^{th} to the 70^{th} percentile; it is found to cut the dropout rate in technical fields by 22 percent. There cannot be better news than this for Open University movement. Mobile learning must be the mode of learning of foremost priority in the OU.

In order to facilitate mobile learning plan the following developments are recommended:

(1) Subsidize the purchase of tablet computers that contain most of the official learning content and references, and provide all computing and Internet access needs of the students,

(2) Ensure off-line access to most course materials for which the student is registered.

(3) Ensure abundance of reference material such that student would not feel shortage of material.

(4) Adopt constructivist approach to learning and content development, and thus engage students in mobile based collaborative knowledge production.

(5) Develop off-line e-libraries with massive content availability throughout the schools of Nepal with a provision that OU students also access them through local schools.

F. Mobile Laboratories

The most pressing need for publicly provided science and vocational education is in the rural Nepal. However, there are neither laboratory infrastructures in rural schools and university campuses nor there are high caliber science and technology professionals and skilled laboratory workers. Besides, when we are struggling to offer the basic salary of any science teachers (let alone recruiting competitively of the most qualified people) in rural schools, building good laboratories is a proposition beyond affordability. Even if we were to build such laboratories, they may not be fully utilized due to small number of student population in any one school because rural population is scattered over a large geography.

One way to break the barrier to laboratory access is not only to build and take mobile laboratories to schools and colleges in a rotational basis but also to take high quality mobile education programs. This is the way to meet the challenge in science and technology education, providing equity in scientific, technical and vocational education. These laboratories can take informal technical knowledge and skills into general population. Combined with preparation through open and distance courses, mobile laboratory and mobile education can eliminate significant disadvantages that

rural youth have today compared to their urban counterpart. It can provide schools with educational resources they otherwise lack. Besides, these laboratories could also be made to be differently tooled at different times, and keep on taking varieties of program offerings inside the same big structure.

Mobile laboratories hubs will be created amongst the more than two dozed planned regional learning centers. The labs will take programs that are appropriate for their respective catchment areas. For example, one mobile truck and container could carry physics lab at one time, chemistry lab at another, and biology, carpentry, rock cutting, masonry, crafts, horticulture, culinary, health and other types of labs in other times.

G. Mobile Classrooms

What will compliment other forms of learning would be mobile classrooms. Expert educators capable of educating in different subject areas will travel from one designated center to another to help students of rural and disadvantaged communities. They work in motivational, mentoring, and educational areas to help the students. These prople will teach school teachers and community leaders in techniques to support their local students attending open university programs.

Digital mobile classrooms with teachers, laptops, tablets, smart phones, projectors, software, teaching material, chairs, desks, and diesel generators will be dispatched like mobile laboratories to break the divide in digital literacy in the country. They will provide computer literacy, technology usages, and train to utilize open university programs. We will use also engage Nepalese and international telecommunication and ICT companies and outside agencies to break the digital divide in this manner and espouse confidence among disadvantaged populations to enter into mainstream of education and learning. This apporach of mass education in digital literacy is believed to be more effective than bringing select few for training to the cities who in large part would not return to the villages to serve the disadvantaged population.

The twenty five learning centres planned nationwide will act as the hubs of mobile classroom and mobile laboratory activities. These would be supplementary to the regular student support the university provides through designated tutors and learning management systems. When new programs are developed, the central campus would prepare a team to educate the mobile classroom educators also so that they can be popularizing those programs in the communities.

H. Service Centre Infrastructure

The technology infrastructure of Open University must be vast as compared to conventional universities. Here we tally the major technology infrastructures to be built in an Open University:

(1) Call Center: This is the heart of open university public relation and learner facilitation. From within the country or from abroad the students, teachers, and administrators should be able to convey their educational, technical, technological, and administrative problems to the university 24 hours a day through phone, email, SMS, and Internet voice-video and they must be replied and their questions must be answered immediately and appropriate mentor, tutor, technical support personnel must be found and be engaged with the person as applicable. There may be separate lines for general public, staff and the students or an unified system.

(2) Content Production Center: All interactive learning contents, educational audio, video, radio and television materials will be developed in these studios. This center will facilitate teams subject experts, language experts, writers, copyright experts, education psychologists, audiovisual technology experts, and content development experts work to collaborate for the content production purpose.
(3) ICT Coordination Center: Selection of hardware and software tools, their testing, integration, training would be done here. System of registering personalized learning devices (e.g. smart phones, laptops, and tablet computers) may be registered to give access to university information from here. Encryption and decryption of content to prevent from misuse will also be done from here.
(4) Digital Library and Content Center: Here the paper based educational and administrative material will be digitized, cataloged and collected. Digitized material from around the world will be collected and cataloged. Information available in old formats will be transformed into new formats.
(5) Open Educational Resource Centre: This will identify OER resources from around the world, catalog them, inform about them to all content producers. Carry out research on OER resources and build capacity to produce content from learning communities.
(6) Technology Transfer Center: This center would be responsible for knowledge and technology transfer and translation through face-to-face and technology enabled seminars, conferences, and training of faculty and staff of OU. The goal is to remain up-to-date on scientific and technological developments, and in adopting latest technologies.
(7) Server and Network Center: This is data storage, backup, and recovery facility for the whole institution, remote computing (cloud computing) resource center, and facility for synchronizing with content centers located throughout the country. Students of OU fulfill their computing needs through their mobile devices using web-enabled computing technologies, what we refer to them as cloud computing. This will allow students from anywhere could use computing facility anytime without incurring any software costs.
(8) Satellite Technology Center: This center transmits all learning materials to students living anywhere in the country. It will also be used to teach subjects like Geomatics, remote sensing, and many more studies related to natural resource management and planning.

I. ICT Training of Faculty, Staff and Students:

ICT infrastructure development bears value as and when it could be fully utilized for the success of the university. This means that the faculty and staff must be traind in tools and technologies for maximum benefit. All students entering the university must be trained on ICT skills necessary for their success.

Special training must be provided to staff who have to maintain the hardware and software tools and technologies of the university. They should not only learn how to operate the acquired technologies but must be able to manage, control, upgrade and maintin the ICT infrastructure. The university must have some number of staff with master's and doctor's degrees in software and hardware systems, security, multimedia technologies, interactive content production, learning management systems, database management, digital library management, and data server systems.

Similarly academics and academic programs must be introduced in the university to train future ICT resources for the university and the society in-hose. Bachelor's and

Master's degrees in ICT might be the programs to be started in the beginning as part of producing trained resources in ICT.

J. ICT Infrastructure Sustainability

ICT Infrastructure is one of those type of infrastructure that goes obsolete rather quickly due to advancement in technologies. Therefore, issue of sustainability becomes extremely critical in this frontier. The issues of sustainability must be addressed at organizational, technical, and financial levels.

At organizational level the university ought to ensure that all its units and individuals have access to ICT tools and technologies at all time. As technologies become obsolete and new technologies come to picture they must be available, accessible and usable by the concerned units and individuals. hardware as well as software tools and technologies ought to be repaired and replaced, operating systems be upgraded and software licences be renewed. University must, therefore, establish an ICT Management Centre with competent staff to keep the ICT resources of the university up-to-date. This unit must be engaged in purchasing and installing new hardware and software systems, including educational technologies, so as to ensure that the system remains as homogenous and manageable as possible, and it becomes possible to provide ICT support services throughout the university from this center. Also, it would be possible to ensure that enough skilled staff could be trained, maintained and retained for thwe purpose of management, control and maintenance of ICT infrastructure and information system of the university, and be economical to pay market salaries to the staff. The university would adopt open source solutions as much as possible.

Today, broadband Internet services are too high compered to the average income of the people amounting more than 25% of per capita GNP. However, we expect that within ten years the cost of Interned and necessary hardware and software system would be low enough to be affordable to nearly all people of Nepal. Therefore, we could expect to charge some special fee per student for the maintenance and upgrade of the ICT systems and services. We ought to be able to setup special funds, especially through institutional financing and grants, for the purpose of upgrade and maintenance of ICT infrastructure and services until such self-sustainable stage could be attained.

At the present we ought to train many people in multimedia technologies, especially in animation, simulation, and interactive learning content development. Other set of training need to be in the development of Open Educational Resources and competent participation in open content consortium and open source software movement. However, we expect that within ten years we would have produced enough resources for the university and to export the talents elsewhere. Or, that is the sustainability ambition we ought to have.

K. Summary:

The OU aims to provide internationally comparable education in Nepal by use of innovative approaches and by heavily exploiting the capabilities of ICT. The scalability of OU services is largely achieved by automating the delivery of OU products and services that traditionally required significant human effort and time. Robust Broadband Internet infrastructure and cloud computing infrastructure

combined with mobile personal devices are poised to harness the power of sharing computing resources by large number of users and virtualization of computing platforms. This will help OU attain a powerful environment for collaboration in knowledge distribution, knowledge production, to share common tools of productions. They also help OU realize green computing and, by its virtue, develop a green university. Along with these advantages, this type of system will offer huge savings in the cost of the overall system and will bring down the per student cost of operating the university to a level affordable by nearly all people. The OU aims to quickly enter into mobile learning because this technology is more space, material, energy, bandwidth and money conserving than all technologies we have seen in the past. Personalized learning, user friendliness, rapid familiarity with technological gadget, and learning on-the-go is more readily achievable in mobile devices.

XI. Diaspora Mobilization Plan

A. Introduction

Nepal has turned into a country heavily reliant on remittance, which is private funds transferred from Nepalese living and working abroad. More than 60 percent households are now receiving remittance income, which amounted to 25 percent of national GDP as per a World Bank report of October 2013 [47]. It is said that informal transfers that do not register into government statistics is also significant, not much smaller than the official figure. Remittance helped reduce poverty by 16 percent [48], bring-in new skills, improve literacy and health, raise the status of women, became the lifeline of economy and propeller of burgeoning import. This has also been the accelerator of movement of people away from agriculture and into an economy whose future we can only guess. Questions are already being raised about the sustainability of remittance economy as it relies on sustainability of international labour market. Concern also has been that the remittance money is being used in consumption purposes (78.9 percent) than in capital formation (2.9 percent) [49].

The remittance has propelled people to migrate from the mountains to the valleys, from rural areas to the towns and cities. As workers return home from foreign employment, they need to be retooled with new sets of skills and knowledge for them to be productive. Then there are many highly skilled and educated Nepalese who are migrating to developed nations. Consequently Nepal's diaspora population, the expatriate population abroad and generations born there, is rapidly growing. But the phenomenon of migration itself has drawn so much attention that there is hardly any policy attention and national effort on using migrants and diaspora as agents of transformation. That diaspora are increasingly referred to as transnational communities in sense of being “here” and “there”. Research has identified transnationalism as an engine of development [50]. Consequently, diaspora are now the interest of social science, political science, economics and international relations even in the developed countries, they could be noted by Nepal in that light as well.

Diaspora are now recognized in Nepal for their remittance, financial investments, and creation of business. The diaspora could, however, contribute on many non-monetary sectors limited by our imagination and ingenuity only. We could recognize their utility in cultural ambassadorship, social empowerment, community development, establishment of trade links, scientific development, technical skills development, technology transfer, knowledge translation, and circulation of skills and knowledge. In this particular writing, we set out attention on capitalizing their education, experiences and scholarship in developing the academic, scientific, technical, research, and innovative capacity of Nepal in an institutional, organized, transparent and ethical way.

Nepal's policy makers now ought to not ignore non-financial contributions of diaspora and diaspora-driven initiatives. The non-monetary relationship with diaspora ought to be one of national advantage and productive potential. Clearly defined policies and diaspora aligned development strategies ought to be in place if we are to effectively mobilize our diaspora for national advantage.

"Diaspora contributions are directly related to institutional frameworks, socioeconomic settings, political environments as well as issues of perceptions, images, trust and social identification, in both the home and host country ... to ... effectively facilitate the engagement of diaspora ... to ensure that diaspora are not deprived of the ownership of their contributions. [51]", says a study by IOM.

Although the need for Open University in Nepal was promoted since late 1970s by some Nepalese educators, the university was not established in Nepal for various reasons. Having found out that the planned Open University has not been built, it was in 208 that Nepalese diaspora took this as an opportunity to develop new institutional ways for pouring in diaspora knowledge, skills and innovation in the vocational, technical, academic, scientific and technological development of Nepal. This culminated into engagement with the government of Nepal and signing of Kathmandu Resolution 2010 between NRNA and Government of Nepal. It was then strongly promoted as a diaspora-driven initiative and the diaspora had already envisaged some way to give back to Nepal in knowledge sector [52]. However, as the initiative got elevated in importance, the government saw it as a project that ought to be in its exclusive control. Consequently, the draft Act being proposed to the parliament has neither any mention of current diaspora contributions and nor has any instruments in the bill to mobilize the non-monetary and intellectual engagement of the diaspora. This write up is to exemplify why diaspora could be important in the knowledge and skills sector of Nepal and how the new university ought to harness it for the benefit of Nepalese people.

B. Diaspora in Early Education and Now

As countries of Indian subcontinent were being subsumed by British India, places linguistically and culturally connected to present day Nepal got separated by political boundaries. Thus people who were freely connected previously became the early diaspora. In the last few decade many Nepalese have migrated all over the world in search of education, work, or better living conditions. The diaspora today is more educated, empowered, and ever more conscious of identity. Accordingly its impact on scientific, educational and technological aspiration of Nepal is also shifting.

Education in Nepal became slowly accessible to ordinary people after the fall of Rana regime in 1950. The value of diaspora scholars became apparent as people built schools in various parts of Nepal by bringing diaspora teachers from Banaras, Hardwar, Darjeeling and other centres of learning in India. These diaspora had a significant role in uplifting the state of basic education, and social and political consciousness in Nepal. That was a time when diaspora scholars were happy to return to Nepal as the standard of living in Nepal comparable to neighbouring countries. Today, the situation has changed. The new diaspora is scattered in countries more developed than Nepal. Even those who are now living in India enjoy superior material standard of living and better educational opportunities than in Nepal. In near term, it is unlikely that diaspora Nepalese will return to Nepal, except the negligible few. In this context it has become important to know to utilize the diaspora in Nepal's educational endeavours in entirely innovative ways.

C. Utility of the Diaspora

Tackling the Shift in Society and Economy: Today, material, technology, and information have touched every corner of the world. Technology is not only being

used by people but is also affecting people's attitudes, work patterns, and social dynamics. A person who walked on foot from point A to point B interacted with different sets of people with a different interaction dynamics than today as he uses buses for transportation. Telephone, television, radio, processed-food, and other products of technologies are altering tastes, habits, agricultural outputs, and ways things are done. While the effect of consumptions are altering the face of Nepal, much is yet to be done in producing something tangible to convert import-only scenario into import-export scenario. And that requires a massive effort in knowledge exchange and collaboration with the world.

Closing Educational and Technological Gap: Unlike in the past, people expect employable, professional, and practical skills out of education. Yet offerings made by institutions become obsolete quickly with the rapid advancement of practices, tools, technologies and new knowledge. Consequently, today's student must be in pursuit of lifelong learning to remain afloat in the marketplace. Thus, simultaneously advancing their education and career is a forced imperative for many Nepalese. And meeting such accelerated demand for advanced education from all frontiers has become a monumental challenge to Nepal. Finding necessary budget and full spectrum of highly qualified educators in all required fields is almost impossible without international cooperation in education.

Some decades ago, Nepal had a shortage of teachers in Mathematics, English and Science, but today such shortage has shifted to other emerging fields in which the country holds no indigenous expertise. Therefore, the new diaspora that has gained proficiency in science, technology, and other emerging disciplines holds some keys to meeting that need. And diaspora hold the key to acquiring open-knowledge and technology and building their own new knowledge and technologies. Thus diaspora scholarship is more important to less developed counties than to the developed ones.

Increasing the Size of Our Thoughts: Human mind is always presented with a huge volume of visual, sensual, auditory, and linguistic information. The role information plays in our mind largely depends on the number and types of “problems” it is engaged in solving. The process of solving problems helps our mind to logically connect the information pieces with one another and with the context of the problem, and also to remember it visually and permanently. Information stored permanently in our mind in conjunctions with our problems and their solutions is perhaps the true knowledge that remains in our possession.

The diaspora population faces one set of problems and problem-context at its native place and another set of problems and problem-context in their adopted lands. It also gets to mingle with people who are solving complex technical, scientific, societal, and philosophical problems. Therefore, its approach to problem solving would be largely influenced by a wider context it is exposed with. Therefore, they would have the opportunity to significantly increase the size of their thoughts from what they would have had if they stayed in the first context only.

Possibility for Mass Influence: The diaspora not only gets to travel and observe new places, people and cultures, but also to build knowledge on the foundation that it had built in its native land where they would have spent their formative years. Consequently their ability to synthesize knowledge in their native context and to impart greater influence in their native place would be much greater.

Confucius left Lu (a place in present day Shandong, China) and went around many countries in what is today known as China before returning back to his homeland Lu. Buddha left his birthplace for long before returning to Kapilvastu (a place in present day Nepal) as a monk. Marco Polo traveled Central Asia and China for 24 years before returning to Venice. In all cases, they made impressions more remarkable to their native places compared to other cultures and lands. Marco Polo's influence to Italy has been greater than that to China. Buddhism flourished in Buddha's native land before it spread over the world. Christopher Columbus made admirable impression to Spanish and other Europeans than to the natives of Americas. Today, telecommunication systems allow a person to reach an entire population of a country on a single broadcast. They help us take diaspora expertise in education, research collaboration, decision-support, and information dissemination at an unprecedented scale.

Proving Quality in Education: The level of craftsmanship and intellectual performance of diaspora population directly impacts the perception on the quality of education they receive in their native place. Therefore, the dignity, honour and acceptance of their native institution would be directly tied to the quality and consistency of the performance of the diaspora in their adopted land. It is imperative that the diaspora performs well in new countries. So much so that in the future the first people to take education from abroad in the native institutions should be the diaspora population who are seeking continuing education. They are the one who could popularize home institutions to people around the world through their superior performance in professional accreditation and licensing examinations and work performances.

In sum, the diaspora presents an indispensable utility to the countries of their nativity in the field of knowledge, science, technology and education. And before discussing on how the diaspora potential can be harnessed for the advantages of the developing countries, it is important to discuss the changing context of knowledge acquisition and production.

D. Shift in Knowledge Sector

Moral to Material to Emotional-Equilibrium: While education at one time attempted to create an obedient and moral man, it did not allow questioning of the values that were passed on as "inviolable truths and norms". For example, Dalits were not allowed to study books in Nepal and India. Later education, and that of our time, focused on making us freely thinking and practical people, thereby offering lives of material plenty and intellectual freedom. Yet the material progress could not lead to moral progress and emotional equilibrium. Today humanity is eager for practical, ethical, and emotionally lightened people. And education is the most potent tool to achieve that societal goal.

Oral to Paper to Electronics: While early education relied on oral transmission of ideas. The birth of printing press gave rise to mass publication of books, self-interpreted reading, preservation of intellectual gains, and birth of Enlightenment in Europe and elsewhere. Today many educationally least developed countries are poised to jump directly from oral traditions to electronic transfer and rendering of writings and other knowledge content. On-line and interactive learning tools and techniques

are altering the way teaching, learning, and knowledge production are done. Technology assisted learning is going to be the way of the future.

Preservation-of-Tradition to Reciprocity to Collaboration: For long, education was limited among religious clergies, who worked to ensure strict adherence to traditionally established values. Later students from wealthy families gained knowledge from their teachers in return for secrecy, loyalty, fees, or other in-kind favours to teachers. A teacher was viewed as a source of knowledge and facilitator and manager of learning for his students. In reciprocity, he gained status, wealth, or positions. Today students are increasingly becoming independent learners who collaborate with one another and with the teachers. With massive encroachment of technology and information in daily lives of people, this trend is sure to continue. In such scenario, the role of a student is not only to understand the existing knowledge but also to produce knowledge in the process of learning.

Equality to Disparity to Equality: Some influential ancient scholarship advocated equality of all humans. Hindu text Gita wrote: "The most educated of persons, a cow, an elephant, a dog, or a wretched person, are to be viewed in equal reverence by a learned person.[5.18]" Later we accepted superiority of one species over another, one race over another, one gender over another, and one person over another. Likewise, we went onto thinking that an entrepreneur should be permitted to accumulate any amount of wealth. To ensure that it happened, patenting was introduced to protect intellectual property. Again this has raised a question of ethicality of unlimited accumulation, too far exceeding the contributions made by the individual, and most importantly the ethicality of hiding knowledge. Thus the open source movement was born which is making contribution in flattening the disparity in knowledge by offering free and open source operating systems, software applications, knowledge references, and learning materials. Today, the debate between the worthiness and societal utility of proprietary and patented use of knowledge versus sharing of knowledge continues. New ways are needed to compensate for the purpose served by patenting, knowledge hiding, and contractual thinking so that we could achieve openness and equality in knowledge production and transmission.

Archiving to Translation to Flow of Knowledge: There was a time when we excessively revered knowledge that was already produced and did not care much for its further production and proliferation. In the post printing age, we were busy archiving knowledge in papers and books. Then we emphasized the concept of technology transfer and knowledge transfer, which gained much popularity within different branches of a single organization but could not give the same comfort in inter-organizational and inter-country context.

Recently Canadian Institute of Health Research introduced a new term "knowledge translation" to mean "the exchange, synthesis and ethically-sound application of knowledge—within a complex system of interactions among researchers and users" [search web]. Today we are concerned with how that information from one context can be synthesized and translated into another context in an ethically sound way. This approach also keeps its significance in international collaboration in knowledge endeavours, especially to make education grounded on the learning context of learners of various parts of the world and various parts of the same country and the same economy.

Then important issue immediately associated with knowledge translation is of making public knowledge accessible to people around the world. Concern for the future would be on how we could let the knowledge flow freely for all humanity to enjoy while amply rewarding the knowledge producers.

Memorization to Analysis to Synthesis: There was a time when we used education as a platform for memorizing facts, figures, instructions, and ways. The later focus has been in the work of analysis. Today we are in the age of extreme data collection and extreme data analysis. We are writing papers that refer to a lot of other papers. We are producing too much data, too many papers, and too many books. When a person finds one paragraph worth of useful information, he or she writes a long book with hundreds of pages and hundreds of references to justify the idea and to convince us. It appears as if we were to find an idea the size of a corn kernel, we would not just make popcorn out of it but a huge volume of air. Only through way of synthesizing these obfuscated ideas we will be able to re-construct the corn kernel from the air, will overcome the pain of information overload, and will prevent information from losing its relative value. It is imperative that we enter into an age of synthesis with urgency. In developing countries where most of the population is unable to synthesize higher knowledge, massive support is required in the field of knowledge translation and synthesis.

One-to-one Learning to Mass Learning to On-line Learning: In early days, rich people hired personal tutors to satisfy their learning needs. Then came an age of mass education where the entire young population received compulsory education that was designed, funded and delivered by the state - except some countries. With the advent of on-line learning and distance education, the future of education is once again being altered significantly. The learning of the future would have some significant characteristics like (1) lifelong learning, (2) on-time learning, (3) distance learning, (4) choices in learning, (5) lateral and cooperative learning, (6) personalization in learning, and (7) technology enhanced and interactive learning.

In sum, it could be said that all counties are in need to acquire knowledge from around the world, but such need is far greater in poorer countries. That the income gap in rich and poor countries is too huge for poorer countries to be able to attract their diaspora back, plans and policies to utilize diaspora knowledge and potential should be accordingly developed. The next section delves on the ways of harnessing diaspora knowledge, talent and skills.

E. Harnessing Diaspora Knowledge

When interacting with diaspora population, one can invariably hear one recurring message. "I am willing to give back if conditions are right". They say, they would even return if there exist right opportunities and environment for their return. Then the question comes, how can materially, technologically, and scientifically poor countries create environment acceptable to scientists, technologists, and educators that are habituated to salaries, lifestyles, and intellectual opportunities that are offered to them by already advanced countries? How would we create a condition that is conducive to make it possible to create the condition demanded by the diaspora knowledge producers? These questions are not that easy to answer.

Nevertheless, significant amount of knowledge, education, and skills could be gained if there is an institutional approach and thrust for harnessing diaspora knowledge and

skills. While a separate ministry or agency to look at diaspora matter could be justifiable, the most immediate impact could be realized through open and distance universities and institutionally promoted distance collaboration mechanisms. Successes achieved in small scale collaborations could then give rise to collaborations in more ambitious and complex endeavours. In that light, some potential avenues for harnessing diaspora knowledge and skills are discussed in this section.

Understanding the Search for Unique Advantages: Even the diaspora that has landed in developed countries would be in the quest for specific professional or knowledge advantages over other competitors. He or she has to constantly compete for opportunities. In the process, he or she is in search of an economical access to high quality professional knowledge and education. Therefore, it is in its own advantage to have access to institutions that add unique values to their portfolio. Sometimes, being able to take the same program as one offered at their adopted country but at a much reduced cost can also be of significant advantage. Sometimes, new immigrants would be in advantage to be able to pass adopted countries' professional licensing examinations from their native countries before they make the actual move. Therefore, even the diaspora has much to gain from educational developments in their native places. Given a proper institutional framework, diaspora among themselves can become teachers, students, and facilitators for such causes. In the process the native country can also benefit with the exchange of knowledge.

Offering Access to New Opportunities: Today we are moving from an age of exploration of Moon and Mars to the exploration of DNA and other puzzles of lives. We are more so in search of biological puzzles and biological information than manufacturing of larger and faster rockets. We are moving away from the technology of mass manufacturing to molecular engineering and nanotechnology, away from mass movement of goods and into mass movement of knowledge, from material development into moral development, and from single lab research to collaborative research. Therefore, the quest is on to find knowledge treasures from all cultures, philosophies, and biological matters of the world. Search of cures for diseases, improvements of varieties and nutritional content of foods, and discovery of new synthetic materials are going to be found in species of plants and animals from around the world. Being conversant in both the offering of their adopted places and native places, diaspora are best placed to exploit this unique opportunity in the quest for knowledge and the benefits to be derived from it. Thus countries could offer opportunities for scientific collaboration for mutual benefits.

Letting to Discover the Self: It is often the case that increasing numbers of people are moving from less-urban to more-urban places and more-advanced countries, in search of opportunities. More urban places they move their importance as individuals steadily decreases although their mass identity built by collectively delivering increasing progress becomes greater. A poor Nepali may become advanced Canadian in an expense of his personal identity. "But seated deep inside each of us is a person that is reluctant to accept oneself as an anonymous member of human species." Therefore, the diaspora often ponders on his achievements and losses, and hopes to find his or her lost self in the land that they were attached throughout their formative years. A sizable number might want to compensate for their emotional isolation by becoming a willing participant in ethically doable knowledge endeavours that would be meaningful to the place they left in return for visibility and feeling of importance.

Often television and other media could be utilized to give such forum of recognition and a sense of being counted.

Understanding the Causes of Non-Return: Despite good intentions, it is not practicable for most people to return to their native country. That is due to a number of personal and professional reasons, which include educational opportunities for children, health and medical reasons, issues of building pensionable retirement, opinion of family members, and fear of instability and uncertainty in native land, particularly in case of poor countries. It is so rarely that a professionally established person would give up everything and return. A daring young person in a starting phase of a career is more likely to return for entrepreneurial pursuit than an established professional. Therefore, it is better for a country to make institutions with plans, policies and programs to utilize what the diaspora people know from where they live and what they do without any need to return to their native places. Since all researchers around the world are seeking new opportunity for creative endeavours, being able to inculcate collaboration in problem solving and research should outweigh the issue of physical return.

Presenting Raw Data for Analysis and Synthesis: A country can collect raw data on many frontiers of its society, natural environment, resources, economy, and so on. Such data could be put in a public domain and the diaspora and international scholars could be challenged to do the analysis in the areas of their expertise on those data and publish their findings. This would help to achieve rapid advancement of knowledge. They could also be challenged to synthesize the knowledge from all the analysis that would be done. In the process, the contributors could make scholarly gain of their own; some may even earn high degrees, and professional advancements through such work. Such works would help both the diaspora and the native country.

Presenting Numerous but Small Scale Problems: It is always possible to break large or complex problems into a set of numerous small problems. When sets of numerous but small problems are presented to the diaspora, much could be derived from the collection of individual contributions especially when it comes to the pursuit of building knowledge and education. For example, instead of asking the diaspora to write about the flora and fauna of Nepal, it is possible to select the most common 100 trees, 100 shrubs, 100 grass, 100 insects, 100 animals and so on and put their pictures and videos with empty Wiki-like blank pages with a challenge to the diaspora and international scholars to write about them. Similarly a book can be broken into chapters. A technological problem can be broken into component parts. Curriculum for delivering technical education in health, agriculture, and other areas based on indigenous environment and resources could be broken into numerous learning modules. In a short span of time, a large amount of knowledge could be built in that manner in a transparent and ethical way.

In general many problems can be solved through scholarly collaboration or only by diaspora enthusiasts given such problems are defined clearly. When applying this technique, much knowledge and understanding can be made on the natural and artificial resources of the country. Knowing about what one has is a necessary step in finding what can be done. When possibilities are revealed, there would be scholars from around the world who would be interested in scholarly and other technological collaborations. It is equivalent to building the highly sophisticated Linux operating system by writing its code again and again to the perfection by collaborating

enthusiasts from around the world. An open environment to compete and be recognized for the contribution of solutions can accelerate the contributions. In all this, some institutional approach is required to aggregate the pieces of knowledge and to construct a larger body knowledge that can positively transform the society and economy.

Hiring as Professors, Tutors, Researchers, and Program Developers: Diaspora scholars could be recruited as professors and tutors of distance learning universities and colleges in the areas of their expertise. In doing that they can not only make knowledge contribution to their native place but also earn supplementary income during their spare time. They can also fulfil the knowledge need in emerging areas in which there may be lack of expertise in the country. Besides, a small number of diaspora could return and serve as full-time staff.

The diaspora community could be asked to build programs that other diaspora need. For example, many people of trades and professions with verified skills and licensing requirements in countries around the world could be offered courses and accredited programs, which can also be useful to countries hosting the institutions first in generating income and secondly in educating their own native population in those fields.

Exploring and Connecting with International Scholars: Diaspora scholars could be the best ambassadors for a country in establishing connections for knowledge pursuits. They can help establish connections with professional associations, philanthropic organizations, research institutions, universities and colleges and individual scholars. Such inter linkages can help research and education pursuits including in the establishment of universities, colleges and research institutions.

Collaboration in Open Source Content Development: One of the aim of OU is to provide maximum learning services to masses of people, including the poor and the disadvantaged. This raises affordability issues into picture. One way to make software tools and technologies affordable to people is to use Open Source tools, technologies and content to the maximum extent. To make that initiative work for people of Nepal OU ought to collaborate with international open source and open education movement to make Nepal a training, development and research center for open source software and content development. Considering the escalating cost of content production in developed countries, we expect that we will be able to get significant international funding for this initiative.

Training on Content Development: Open University must development certain courses that specifically train students, faculties, tutors and collaborators in content development. Such course would offer knowledge and skills on content development, content sharing, collaboration, software applications and tools, issues in content development, open source content sources, and associated tools. The emphasis could be in the production of small but interlinked units of interactive and audiovisual learning contents. Usually OU courses are not developed by faculties alone but by group of people having expertise and skill sets in different areas. The training program accordingly specializes people in different areas, such as graphic design, animation, audio-video technology, research in interactive content development, and software tools. OU could harness diaspora youth expertise and foreign volunteers and paid experts to transferring such skill sets.

Crowd Sourcing of Knowledge Translation and Transfer: There is a large Nepalese diaspora population, especially the youth, that is technology conversant and has great access to information including scientific journals and vast library resources besides what is generally available on the Internet. They have access to vast amounts of Open educational resources that are prepared for different audience but have direct learning value to Nepalese learners. The diaspora people are willing to do content search, language translation and content development for Nepal, in an open, transparent, ethical and legal framework of collaboration. Collaboration with NRNA, NRN organizations and grassroots diaspora communities would contribute to this initiative.

The other aspect of this initiative is that there are thousands of Nepalese students, faculties, and scientists that are scattered across the world working in vastly diverse areas. Consequently they have come across many areas of studies that could be of use and importance to Nepal. Harnessing that experience and knowledge is the most appropriate means to expand program offerings in the Open University.

This effort must be integrated with the content library development and content distribution plan in such a way that the material deemed ready for distribution must synchronize automatically among all content servers of the OU and then content relevant to a particular student must be associated with a notification to that student, who can then download that particular content into his or her personal device for offline use.

Utilizing a Common Thread: Solving problems of their native place can sometimes help inspire and unify the diaspora like no other issue. For example, the initiative for Open University of Nepal has noticeably excited diaspora Nepalese because it has great potential to engage them in understanding and solving the educational, research, and technological needs of Nepal, their common binding thread. Many such galvanizing and common issues could be pursued to inspire diaspora contributions.

F. Policy Impediments in Diaspora Engagement

Major obstacles to diaspora engagement have been Nepal's own policy towards the diaspora. Policy makers, the bureaucrats and politicians, openly state, "what have they done?", in reference to the diaspora known in Nepal as NRNs. Obviously what has fallen under the shadow is, "what can they do?" Unless policies, programs, and institutionalized facilities for diaspora engagement are in place, diaspora contributions would not come in impactful ways. The government apparently wants diaspora statistics for policy and planning purpose. But the tragedy is that diaspora are reluctant to give their data to the government that does not have policies and plans to demonstrate and assure their ethical and honourable use. Statistical data collection on individual humans is only smooth and participatory as and when its purpose and honour in both home and host communities is assured and the purpose relates to the aspirations of the participants. The way statistics collection efforts failed due to such drawbacks, the same drawbacks failed the government attempts is selling government bonds to Nepalese abroad. Only countries to succeed in those fronts have been with right diaspora policies and plans.

Although distributed over the world, diaspora remain connected to their communities and remain part of their community of origin. They identify themselves with that place of origin and they feel that they belong there even when they are away. That sense of belonging is the reason why social networks and knowledge networks created with hometown association are found to be effective mobilizers of diaspora for development purposes. However, sentimental attachment alone cannot translate into mutually beneficial relationship. Korean, Israeli, Chinese, Indian, and Italian diaspora were always sentimentally attached with their places of origin but it was only after those countries made special policies, plans and institutional facilities they were actually mobilized in development. India made $69.1 billion software export and provided 2.8 million direct employment in IT industries [Wikipedia] and diaspora mobilization with appropriate government policy and program played a major role in this success. Nepal ought to align its national priorities and development goals and develop plans and institutional facilities if it were to mobilize its diaspora in development.

Politicians, bureaucrats, and foreign missions often court diaspora communities, and Nepalese political groups even have chapters among the diaspora, all cashing on their feeling of belonging and presenting Nepal as the shared common interest of all. If symbolic inclusion matters, it needs to be translated into actual inclusion legislatively and institutionally.

The diaspora came to the Open University initiative with an aim to drive it in a way to impede the brain drain and convert the past brain drain into brain gain for Nepal. What was proposed by the diaspora and accepted by the government in 2010 was a co-development approach, where both the government and the diaspora work together

to mobilize both home societies and the host societies of the diaspora. However, as and when the initiative got some policy prominence, the bureaucratic and political interests sought to sideline the diaspora and keep it fully under the control of itself. Consequently, after more than two crore Rupees of expenditure and two years of time of such control, there is hardly any output to show at a loss to the country and its people. This kind of unilateralism ought to be discouraged and collaborative approach out to be encouraged in a university like Open University.

The Open University initiative could gain significantly with diaspora engagement in co-development model. Firstly, bilateral and multilateral collaborations involving the diaspora could bring extra financial and human resources from developed countries. Secondly, diaspora are the most assured sources of bringing latest technologies and technology transfer skills necessary for the success of the university. Thirdly, the diaspora get engaged in the university programs with external sources of funding thereby bringing advantage to Nepal's public treasury. Fourthly, the university could expand its programs to ever newer technical and vocational areas in shorter span of time. Fifthly, collaborative knowledge production and knowledge translation into local context would help Nepal become knowledge exporting country in a short span of time. Sixthly, diaspora could tutor people of their hometowns and villages much more effectively than someone who had no connection to that land. Seventhly, Nepalese youth working in developing countries in Asia could be retooled and further educated thus increasing their earning potential and enterprising potential upon return through diaspora engagement in the university. Eighthly, it is better that we engage diaspora in such productive areas where they have demonstrated their self-inspired willingness participate and open university is one of those. In sum, diaspora are the most dependable capacity builders in the university and in Nepal's knowledge sector in general.

G. Summary

Importance of diaspora population in the endeavours of knowledge and education is extremely important to Nepal. The country should use variety of means to tap its diaspora knowledge and intellectual capacity as it may be impracticable for them to return to their native country for the purpose of providing knowledge services. That the presence of technology in people's lives has become a matter of fact, all plans in knowledge acquisition, translation, synthesis and production should not ignore the technology equation. At a time the differences in the standard of living between countries are remarkably large, it is prudent to utilize diaspora potential from where they live and from what they do using distance education and distance collaboration approaches fostered through institutions made specifically to foster such cooperation and collaboration. The government policy towards strong diaspora engagement in university initiative must be addressed in the law to be tabled in the parliament. It is recommended that the government take a co-development approach in building Open University in Nepal.

XII. Openness Plan

A. Introduction

Nepal's Open University is only one among hundreds of its kind that have sprung around the world. However, we ought to sincerely question "how open are the open universities?" and "how open ours ought to be?" That is because programmes, courses, and learning materials offered by many "open" universities are open in terms of flexibility in time, place, pace and entrance requirements but they are often as restrictive in access as any other "not-open" universities. If our pursuit is that of openness in education and learning this is an opportunity for our open university to become the model of openness in access, collaboration, and operation in pursuit of massification of learning and democratization of education. If we are true to this mission, we ought to recognize learning as a pursuit of understanding, knowledge and skills, and empower people just for that. Thus we ought to be open in terms of access, time, place, pace, progression, needs and choice to learners, and age, sex, ability and circumstances of learners. We ought to remove all unnecessary barriers to learning to make it accessible to all and not allow it to be on the exclusive control of the "highest bidder", and thus uphold the principle of accepting education as a human right.

Today the openness has evolved beyond accessibility and grown to include the ability to create, rip, mix and burn the open material freely. Thus the open material accessed, reused, revised, remixed and redistributed freely by anyone to anyone. This means not only the content ought to be open but the tools and technologies that allow to adopt, adapt and innovate-upon those content for the advancement of understanding and knowledge, and for improvement of lives. Therefore, our university must take a route of using open source software, open scientific output, open courses and courseware, open educational resources, open learning services (both free and paid), a pursuit to bring those who had missed out the opportunity to the mainstream of higher learning and to propel our society to pursuit of lifelong learning.

B. Openness in Digital Equity

The revolution in information and communication technologies has brought open and distance learning in direct competition with the face-to-face learning. On-line learning has added many new dimensions in learning, including the ability to make meaningful communication with other students, tutors, and practitioners in an online forum. In these forums, ideas and posts of one person are read and commented by many others who are unknown to one another. Learning is enhanced for some through active participation and for others through passive observation of what others do. This has taken learning beyond what the prescribed content was able to. Our notion of providing everything needed to learn to the student was challenged by the ability of student communities to use further resources available online in journals, books, open source tutorials, and variety of other sources. Online students could have access to new resources that would be unknown to the expert course authors. Their questions may be instantly answered through multiple sources such as Google, Wikipedia, answers.com, twitter, facebook and many other resources [53].

A new situation has emerged with this new dimension in learning. This brought a contrast between the learning opportunity and resourcefulness of an unconnected

student with a connected learner. The unconnected learner is going to miss out the opportunities that the connected learner would have. Therefore, the issue of digital divide among population groups has now emerged as one of profound consequence in multiple dimensions of education and learning. The university would have to give heavy emphasis in digital access, digital literacy, and effective learning disciplines in online environment through subsidy in devices and connectivity, mobile digital classrooms, and expanding digital literacy in high schools. As a digitally conversant generation emerges soon, we may shift that focus into new areas.

C. Openness in Educational Resources

There are ten universities and thousands of schools and colleges in Nepal. One could imagine that this body of hundreds of thousand teachers would have authored huge amount of books to overwhelm the learners. But that is not to be so. Nepal's government developed textbooks, written in contract by "chosen experts", and the rest written by enthusiast teachers are so severely limited in their quality, quantity and variety that they are long way away from satisfying the learners of the knowledge economy.

The pool of people and mindset available to the Open University is not different than the one available to other universities. The dream of massification of learning might, therefore, take a long time to materialize if the university were to develop them through in-house authoring and contract authoring. We would simply not have enough human and material resources to produce them at an acceptable pace.

One way to accelerate the process of making learning resources available to the masses of Nepali learners is to adopt Open Educational Resources (OER). OER could be reused, revised, translated, remixed, and redistributed to Nepal and the world under open media policy. We ought use OER to a significant extent and produce byte-sized textual and audio-visual learning materials with open license for mass broadcasting or made available through public libraries to the public. We may however, charge money for the for-profit use of those materials. For-profit institutions may use our materials as a low cost and high quality alternative and use the revenue to further develop such materials.

In a county like Nepal that has no capacity to enforce copyrights even for songs and movies developed at great expenses by private firms, it would be nearly impossible for digital books and byte-sized learning materials produced in large quantities to be monitored for copyright. Even it were to take the proprietary route, Nepal cannot recover the high up-front costs of developing interactive multimedia learning materials. Nepal would face a monumental difficulty in recovering its cost for it has a small population base and for reasons stated above. Instead the country would be better off in soliciting international collaboration in finance and production with other reputed universities, and make the material available for all under open source license for not-for-profit educational use. That is open a huge door of opportunity in providing free and abundant amount of material to Nepali public and for face-to-face classrooms of every public institution. For-profit institutions may use them as cost saving measures.

It is vastly advantageous to let all the material flood freely in the society and let the learning proliferate in the society. Nepal could then aim to become the centre for

producing OER for the world for which many universities and governments of the world would be willing to invest for use by all people of the world and to save public education expenses throughout the world. This will also serve greatly to the cause of social justice and the worldwide "education for all" movement. That Nepal has received much development aid from the world this is a way Nepal can return a favour to the world also.

D. Openness in Science and Research

That this university has to develop capacity in research and innovation sector, it would be prudent again for Nepal to engage in openly research, by which means we openly publish the research findings and be made available free of cost to all with open license. We may similarly publish findings of conferences and workshops for use by the general public.

We have little scientific information and knowledge on Nepal's flora, fauna, and most of the natural resources today. There is much research to be carried out in humanities, social sciences, and natural sciences here. Open research could be scientific and research forum for collaborative development of larger body of knowledge by use partitioned use of shared primary research data and shared problems. Nepalese home and diaspora researchers and scientists could collaborate with research community throughout the world to carry out this task.

Examples of open research initiatives include Open Research Online (ORO) and Open Research Network (ORN), an open collaboration network where academics author articles on the subject areas they know best and are published in related journals if accepted through scholarly peer-review. The network provides free access to the research information and provides platform for scientists and scholars from around the world to collaborate without financial, legal or technical barriers.

E. Openness in Library Services

It would be prudent for Nepal to build one massive digital library mirrorred onto various parts of Nepal and accessible to each and every individual, schools, and organizations through Internet than building separately managed small libraries in each and every community, schools and university campuses. We may also mirror other open libraries and other digital libraries of large institutions in the world with it and make their contents also available to the Nepalese users. A non-profit Open Library project with an objective to provide access to every book ever published through one web page is already under way in the USA. Open Library claims to have 6 million authors and 20 million books and about one million public domain books available as digitized books.

F. Openness in Software Tools and Technologies

Open-source software are extremely crucial for the success of open universities of all developing countries not Nepal alone. Open source computer software are not only distributed free of cost but the creator or copyright holder provides the rights to study, change and distribute the software to anyone and for any purpose. They are very often developed in a public, collaborative manner. Participation of Nepalese researchers and ICT professionals in open source software development would be hugely beneficial to Nepal. A report by the Standish Group (from 2008) states that adoption of open-

source software models has resulted in savings of about $60 billion per year to consumers[54].

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Prominent operating systems of this time like Linux and Android are open source, long serving compilers like GNU C++, browsers like Mozilla Firefox and Google Chrome, office application like OpenOffice, Audio editing software like Audacity, and most importantly Moodle the most popular learning management software used invariably by almost all open universities are open source. There are more than 180,000 open source projects and more than 1400 open licenses available today. Therefore, it is imperative that Nepal's open university goes open source.

G. Openness in System Design and Innovation

For long government officials were considered to be the authorities to intervene the universities if they went "off-track". But such interventionist approaches have not done much more than preserving the status quo and hindering the system from charting unknown courses. Would the ingenuity and will of a few officials who are trained to operate in hierarchical and authoritarian system be sufficient to positively intervene on a system meant to flatten the hierarchies? Would the idea of a few would be more than those of the whole population? Should the university be accountable to the people or the high officials? These are the pertinent questions of our time. We, therefore, take a approach where the whole of public would participate in the reinvention of our institutions through fusion of inter-generational, inter sectoral, inter geographic, international, and inter group dialogues. We engage the whole in the process of discovery, alignment and dissemination of our strengths, formation of new connections, innovation of new strengths, and development of better ways to benefit the society. We take an approach to utilize the total capability to innovate that lies within the whole population and not in few top officials. We galvanize the participation of the public in design of the system and processes and in bringing in new innovations in the university.

Open university will manage its general evolution through feedback control mechanisms built within the system. Change would be thus implanted in the system itself, bringing dynamic improvements in the system. Beyond this, the university will not only open up its products and services to the people but also its internal processes and organizational design. It will periodically make major improvements and innovations in its system architecture and design by involving all the stakeholders - the governors, managers, professors, tutors, administrative employees, students, parents, employers, donors, and the rest of the general public - in an open, collaborative and egalitarian dialogue process. This would bring in major innovations required for the sustainability of the institution and would align the institution with the aspirations of the population.

Such public dialogues in design and innovations would be made possible by face-to-face dialogues and by use of appropriate collaboration and crowdsourcing tools and technologies. We deploy the tools and technologies, train the masses on their usages, and facilitate the participation of stakeholders in the dialogues on design and innovation of the system. We view such public participation of the public as a democratic approach to displace what is obsolete in the system by new innovations.

H. Openness in Preserving and Building-On Traditional Knowledge

"The Creative Commons, with its roots in the open software movement, the literary arts, the open access movement in science and humanities, and in the media, arts, entertainment and communications communities, has also proposed that traditional knowledge is an essential and public source of cultural creativity. [Wikipedia: Traditional Knowledge]" Open University will have a stated policy to excavate, preserve, disseminate and build on traditional knowledge and resources as contribution to the welfare of humankind as way to reciprocate for open knowledge and resources made available by other world institutions to Nepal.

The Open University policy on traditional knowledge would be made after thorough studies on the implications of efforts made in other jurisdictions such as that of the Intellectual Property Rights Policy for Kerala released in 2008. This policy proposes adoption of the concepts "knowledge commons" and "commons license" for protection of traditional knowledge.

I. Openness in democratizing education together

The aim of every university is to inspire a society that is in the pursuit of lifelong learning while facilitating the pursuit of lifelong earning. Our research centers, museums, zoos, national libraries, national parks, monuments, cultural institutions, and social institutions are there to educate us in one or another space. If institutions are there to educate people, and people are there to enrich their lives through learning, we have the opportunity to connect the learners with the sources of learning and the educators scattered all over the institutions. That would be the way to engage the whole society in learning. That would be the way to make learning a joy and a social phenomenon. That would be the way to inspire a society that in in questioning, discussing, generating new ideas, and making innovations.

If the whole society were to stop working, making things and earnings for the sake of learning, that could amount to a disaster. The best learning is that which happens in conjunction with what we do in our lives. Therefore, instead of making the population sit on the desks of classrooms, it would be better that the mobile devices, which have now become as integral to people's lives as clothes, are used as the portal for spreading knowledge and ideas and for building learning around our lives instead of building our lives around learning.

The Open University could collaborate with other research, educational, technological, cultural institutions, and government agencies to bring out vast amount informational, educational and cultural resources to the people. Best of best educators could band together to produce programs to be delivered in Massive Open Online Course (MOOC) platform. Open University has opportunities to collaborate with pioneers of MOOC and similar programs of other countries. Institutions of immediate interest are Open Universities Australia, British Universities that have come together to offer

FutureLearn, Canadian Universities organized under CVU, and similar institutions that are offer learning environments to the masses. Khan Academy, MIT OpenCourseWare, China ORE, EduLanka, Coursera, Udacity, edX, Eliademy and so on are other models of interest.

J. Summary

A university developed in one of the least developed country like Nepal has a great benefit to derive from open education, open technology, open innovation, and open knowledge initiatives of the world. It would, therefore, be advantageous for Nepal to invest in further development and Nepali adaptation of open intellectual products. Despite being a small and developing country, Nepal sends disproportionately large number of its young people into reputed universities of developed countries and these people are fast gaining international experiences and expertise. A pool of talented and enterprising youth is active inside Nepal. Some youth are returning back as entrepreneurs. Through Open University, Nepalese people and the open knowledge enthusiasts of the world could collaboratively conduct research, co-innovate, co-develop and co-use open knowledge resources thereby making savings in production and being able to utilize ever higher quality products and services by all. This is a win-win situation for Nepal and the worldwide collaborators.

XIII. Financial Resources Plan

A. Introduction

Although planning can be of both quantitative and qualitative nature, our intuition often seeks to see numbers in a financial plan. Yet number alone may not reveal the all dimensions necessary to be understood for the establishment and the improvement of the university. Further, quantitative planning would be easier to accomplish when qualitative planning is in place. This document being a building block for the development of a comprehensive operational plan, we focus on looking at financial planning issues more in qualitative terms so as to facilitate choices and preferences than in qualitative terms. The comprehensive operational plan will be able to collect sufficient information for numeric planning and consequently produce a numerically oriented financial plan centered on the main goal of democratizing education and massifying learning.

The whole education sector including the open education is on the flux now due to spectacular new possibilities brought by Internet, technology and globalization. In such times, inherent institutional measures to obtain feedback and devise prompt responses to correct the situation in near real-time have become financially and logistically more practicable than following through a detailed plan as ways of predicting incomes and expenditures. Instruments devised for incorruptibility and for rewarding excellence and efficiency while keeping the financial pot flexible may be more prudent at this stage than being governed by the numbers first. Nevertheless, the hard reality that rests before us is that unless the government is ready to take up such challenge, the mission would have to solicit external funding. In soliciting funding from international institutions, numerically detailed plan ought to be presented for any proposition to be entertained. Therefore, we ought to set numeric targets based on what we know even as to measure our achievements against the objective targets, and to lay bare the structure of our calculations and put our competencies under a litmus test.

Finances of a fully established university are largely determined by factors including, number of students, number of course offerings, type of academic disciplines the university aspires to excel on, distribution of students over those courses, ration of tenured faculties and part-time faculties, mix of research and academics, student-tutor ratio, student-staff ratio, amount of tutoring required for different types of students, time and season of attendance and tutoring, modes of learning, bridging required to make the student an autonomous learner, fluctuations in year round operation, size of the budget, inflation and growth factors, rate of obsolescence of tools and technologies adopted, and many more. Together these factors determine the financial system of the institution. We expect that such details will be provided with reasonable supporting arguments and data in the comprehensive operational plan.

Financial planning of this university needs to also factor the program development, infrastructure development in its campuses, type of technology infrastructures to be maintained in each campus, instruments to be adopted for making mobility affordable, degree to which technological access is provided to learners, extent to which laboratories and workshops would be made mobile, degree to which we inject international academic and technological expertise, and so on. But planning should ultimately lead to maintaining or lowering the cost-per-student and cost-per-unit of

research output by adopting ever innovative mix of tools, technologies, resources, instructional facilities, and research approaches. The end is to make mass higher education undertaking affordable to the taxpayers and students, and profitable to the economic and social well-being of the people. As we have no independent information for running Open University in Nepal to this date, all the planning ought to be based on the expenditures made in other universities of Nepal and that by Open Universities of other countries.

B. Funding of Existing Universities

Per Student Expenditure and Funding

Tribhuvan University, with more than 200,000 students provides a benchmark of expenditures in higher education of Nepal. The following table provides per student costs at various programs as of 2012 with a note that these costs were rising at 20 percent per year rate [55]. TU a public university established for mass education purposed is financed by government grant (85%) and student fees (15%).

Table 1: Cost per student per year for university education in Tribhuvan University 2012

Faculty	Per-student-cost/year (2006-07)	Per-student-cost/year (2011-12)
Medicine	Rs. 253,697	Rs. 586,500
Agriculture and Animal Sciences	Rs. 121,142	Rs. 202,800
Forestry	Rs. 104,960	Rs. 161,281
Engineering	Rs. 55,000	Rs. 95,000
Law	Rs. 30,213	Rs. 45,319
Science	Unspecified	Rs. 35,364
Humanities	Rs. 9000	Rs. 14,000
Management	Rs. 4,674	Rs. 7,012

An extensive report from Tribhuvan University states financial and infrastructure constraints as the major obstacle for its growth and states that it would be not possible for the university to operate on a cost recovery basis [56]. During 2011-12 Nepal had the national budget of Rs 3,849,000 million of which the universities received Rs 758 million. Therefore, the expenditure made in higher education sector is not that strong although Nepal has spent significant amount in elementary education. The following table tells the expenditure scenario in higher education of Nepal [57].

Grants to Universities as a share of GDP(%)	0.28
Grants to Universities as a share of a national budget (%)	1.24
Grants to Universities as a share of education budget (%)	7.5
Grants for higher education as a share of GDP (%)	0.35

Grants for HE as a share of national budget (%)	1.55
Grants for HE as a share of education budget (%)	9.39
Net Public expenditure per student in HE	Rs 14,172.94
Per student subsidy for community campuses	Rs. 3572.39
Source: UGC Nepal	

These data are important in projecting the potential funding per students that can be expected is somewhere near Rs. 10,000 to 20,000 for non-technical education and Rs. 100,000 to 300,000 per student per year in technical education. But the greatest determining factor in public funding could soon be student achievement or graduation rate. Therefore, this must be factored in Open University financial planning. Due to significant dropout and failure rates, the cost per graduate is alarmingly higher that the cost per student. UGC data released on 2013 show that public financing per student is high for Pokhara University, Purwanchal University, and Nepal Sanskrit University ranged from Rs 29,683 to Rs 88,002, but in terms of the number of graduates produced by these universities public expenditure ranged from Rs 59,342 to 636,820.

Public Funding for Capital Expenditure

The public funding that the existing universities have historically received and are receiving is a major indicator on the type of funding the Open University could receive for infrastructure development. The following table shows the capital expenditure grants received various universities during 1999-2003 [58]. This shows that the capital grant a university can receive through regular provision would be extremely small, entirely inadequate to establish the open university. Therefore, the university would have to either receive a substantial and special grant from the government or secure external source of funding for the infrastructure development and maintenance.

Table 3: UGC Capital Grants Received by Different Universities 1999-2003 (Unit Rs)

Name of the University	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
Tribhuvan University	704,691,962	561,145,124	177,059,000	16,410,000	47,770,000
Nepal Sanskrit University	10,000,000	12,100,000	9,375,000	10,300,000	10,300,000
Eastern University	6,000,000	6,500,000	9,750,000	33,600,000	35,600,000
Pokhara University	5,000,000	6,000,000	9,000,000	19,100,000	19,100,000

The bulk of the capital fund the universities received were international. Of all foreign grant received during 1999-2004 by the Tribhuvan University, the bulk was for capital expenditure as shown in the following table [59].

Table 4: Share of Foreign Grants in Capital and Operating Expenses at TU

Expenditure	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005
Capital in %	64.3	68.2	82.1	77.2	78.6	86
Operating in %	35.7	31.8	17.9	22.8	21.4	14
Total Foreign Grant Rs.	1,091,174,000	803,710,000	253,768,000	184,595,000	408,769,000	41,165,000

Because Open University is a technology intensive university it needs to spend substantial initial cost although it would be more economical in the long run.

Arranging for the initial fund is the major challenge it has to meet through multilateral support from the Government of Nepal and various development partners.

Foreign Grants to Existing Universities

There is a history of receiving foreign assistance in higher education projects of Nepal. The Higher Education Project in the early 2000s funded World Bank contributed to significant infrastructure development at Tribhuvan University at Kirtipur, such as the Office of the Controller of Examination, four Research Centres, many other buildings. Institute of Engineering built significant physical facilities under the Engineering Education Project again funded by World Bank. The Teaching Hospital was developed with Japanese assistance. Several technical training and faculty development projects were also internationally assisted. World Bank led and consortium funded Second Higher Education Project (2007-2013) has provided $60 million worth of assistance to reform Tribhuvan University towards financial sustainability, performance formula based funding, quality enhancement measures, gender parity improvement, inclusion of Dalits and disadvantaged groups, and matching grants for infrastructure development funds.

The following table shows some indicator on how foreign assistance has played role in the development of the TU during 1999-2004 period [60].

Fiscal Year	Foreign Grants (Rs)	TU Total Budget (Rs)	%share
1999/2000	1,091,174,000	2,215,124,500	49
2000/2001	803,710,000	2,073,224,300	39
2001/2002	253,768,000	1,990,660,000	13
2002/2003	184,595,000	2,025,154,500	9
2003/2004	408,769,000	2,343,317,500	17.4
2004/2005	41,165,000	1,985,988,500	2.1

Source: CEDA Report

That international partner agencies have been recommending that Nepal build its Open University to expand the reach in higher education under the agenda of "Education for All", "Millennium Development Goal" and other educational plans. Therefore, receiving grants for the purpose of developing open university is the most plausible one among all higher education initiatives taken at the time in Nepal.

Public Funding for Research in Existing Universities

There were four research centres in Tribhuvan University that were funded through block grants. Combined they received Rs 21,639,500 (0.98%) of Rs 2,215,124,500 budget of TU in 1999 [61]. This grant remained stable at the same amount over the years with a provision that these institutes could generate their own incomes or bring in external grants on their own. However, these research centres could not bring in no more than 16% of their budget from other sources. Consequently, a supposed to be a research university with largest student population could not develop any research traction. Considering the Ministry of Environment, Science and Technology is the least funded ministry in Nepal Government, the possibility for receiving substantial research grants within Nepal's internal grants are severely limited.

Externally funded Second Higher Education Project (2007-13) had a component for involving faculty, students and institutions in research. It focused on promoting institutional research policy, strengthening research management capacity, supporting and sharing of research in conferences, training in research methodology, and promotion of research culture. This was based on postgraduate program strength, faculty credence on research, ability to attract young researchers, and merit of strategic plan on research, and merit of institutional management of research. Such initiatives prove that universities of developing countries have some avenues to solicit funding for building research capacity.

Therefore, Open University must first allocate a fixed percentage of its operational budget on research and innovation if it is to develop research capacity in Nepal. Moreover international collaboration in research and, to begin with, international collaboration in research on open source software, open educational resources, and open content would be the most desirable avenue to take a space by the open university in research and innovation. Then it can solicit international assistance in building research and innovation capacity with strong component of engaging diaspora scientists with researchers at home.

C. Scope and Cost of Technical and Vocational Diploma Education

That Nepalese tertiary institutions offer general studies for 86% students and technical education for the rest, there is an acute shortage of technical education. A university like Open University intended to serve the masses of people cannot afford to repeat the same scenario. It ought to provide two year graduate level technical and vocational education to a large student population. This will have an impact on its finances as these programs cost far more compared humanities programs that solely involve theoretical courses.

Senior officials of CTEVT, a public institution funded by the Ministry of Education technical state that the average public expenditure per student per year in technical and vocational programs is Rs 100,000. The Open University budget could be planned on that basis as well. However, the cost of taking these programs through mobile laboratories and workshops could be higher than delivering in limited centers only. For this international experiences and expenditure indicators might be useful.

With the rise of foreign employment, remittance dependence, population depletion in rural areas, and lack of skilled people in nearly every skill sector, awareness for the need for technical and vocational education in Nepal is extremely high. Consequently, the government as well as development partners have taken significant interest in strengthening this sector. Recent report by Council for Technical Education and Vocational Training shows that about a dozen international partners are active in this area [62]. They include ADB, HELVETAS, DFID, JICA, KOICA, UMN, Denmark, India, China and more. This is an indicator that development partners are willing to help Nepal develop technical capacity in Nepal. The university will latch onto this goodwill.

D. Cost of Developing Programs

Cost of programs can be better measured with understanding of per credit hour production of program and later those units could be added for the whole program. That most of our experiences in Nepal have been in developing programs of on-

campus lecture based programs and not that of open university programs, we ought to find some plausible basis for estimating the cost of developing computer enhanced open programs, cost of which again may vary depending on different visions, design paradigms, and development paradigms. However, the general rule of thumb is that open unversity programs in general cost more to produce. Their contents are often developed by utilizing highly qualified experts specifically targeting the specific preferences of individual learners. In case of this university, it is being developed for the people of mobile generations who carry mobile smart phones and other mobile computing devices, enjoy affordable Internedt access, or have provision to pre-loaded learning materials in those devices. The Web, digital resources, social media, and on-line interaction are planned as parts of these programs.

Now in estimating the time and cost, we take here a model devised by one expert [63]. In this way, we estimate 1 hour on-class lecture per week for 15 weeks as 1 credit hour course equivalent. We then assume two hours of out-of-class learning involving reading, problem solving, assignments, and experiences for one hour of lecture. Therefore, some 45 hours of learning material is required for every 1 credit hour course. The faculty member spends about 30 hours outside class time, but it will be required even for open and distance classes. Therefore, we are essentially designing the system for 45 hours of learning. Some experts are estimating that in avarage it takes 18 hours of faculty time in production of 1 hour on-campus equivalent of web-based interactive learning material, thereby demanding huge rise in production of on-line learning material. By that rate it takes 270 (15x18) hours of expert time to convert 15 hours of lecture, without counting the preparation of other 30 hours of further learning. It is likely that developing programs into series of short-segments of complex interactive media, the faculty expert needs to be complimente by multimedia experts. This also does not count the time taken in learning the technology and new learning environment for the first time. Therefore, the initial production cost of programs are very hign in on-line version compared to their on-campur lecture counterparts. However, in the long run, the cost of on-line learnig proves to be significantly lower than its lecture counterpart. given previous studies on the time for development of course materials. One study [64] reports the hours of academic effort required to produce one hour of student learning in different media as follows:

Academic work to produce one hour of student learning

Media	Hours of Academic Effort
Lecturing	2-10
Small group teaching	1-10
Videotaped lectures	3-10
Teaching Text (Book)	50-100*
Broadcast Television	100*
Computer - aided learning	200*
Interactive Video	300*

*Requires support staff as well.

The 18 hour average was estimated from these figures.

Source: [63]

The savings made by on-line courses are often materialized by utilizing the programs thus developed many times, not requiring the faculty experts during the delivery

phase of the program, using specially trained experts in tutoring, letting freed-up faculty members then to concentrate on improvements, maintenance, and new developments of programs. But then there will be extra cost incurred in "recruiting, marketing, and admissions processes and the support processes of counseling, assessment, technology infrastructure, and library resources as well as support for the use of the software and hardware [65]"

Experienced experts from Canada and the USA tell that developing one new course costs somewhere from $100,000 to $1,000,000. Rendering the existing on-campus courses on-line in form of MOOC costs somewhere from $50,000 to $100,000. They are only references and cannot be translated into Nepal at face value. Experiences will tell actual figures for Nepal.

E. Cost of Data Centres

The reach of mobile Internet service is fast expanding in Nepal. However, the cost of the service remains high, beyond reach for majority of mobile phone users. Key players, Nepal Telecom and Ncell, cite high cost charged by foreign companies of Internet data bandwidth and the links to the servers outside the country are mired by data congestion.

OU intends to make access breakthrough for its students, faculties, tutors and staff through its own data centre located within the country. Such centre should also provide cloud computing environment to its members. The cloud services provide access to software applications over the Web, data storage service, conferencing service and collaboration. That Open University ought to be serving not only in all parts of Nepal but also in other countries a cloud computing platform is more desirable than traditional servers.

However, experts are telling that the cloud services could cost $100 per month per user [66]. Spending in excess of $1000 per year by an user is considered a high price for Nepalese users. Therefore, without subsidy or grant this service would not be affordable to Nepalese users for some numbers of years. Despite being expensive at the moment, cloud is becoming the trend and ever more applications are becoming available for the cloud. Assuming 10 years amortization period for data centres and 3 year amortization of servers, a study reported that of the expenses made in data centres 57% is taken up by servers, 18% in power distribution and cooling, 13% in power, 8% in networking equipment, and 4% in other infrastructure [67]. Experts suggest some $10 million would be spent in the first five years of the university at the central campus and $2.5 million for the 24 regional campuses. These numbers will be more detailed in the coming years.

F. Physical Infrastructure Cost

Nepal has one experience of building an exclusive physical infrastructure for promoting information technology initiatives. That was IT Park in Banepa, which has same level of infrastructure as required to run an early phase Open University. Year 2000 cost of that physical infrastructure was Rs250 million or $3 million. Nepal has experienced spectacular escalation of price of land and material in the meantime. Moreover, that infrastructure was built at a time there was no consciousness for green energy and environment and thus had fossil fuel plant to generate needed power.

The White Paper on Open University sets a vision for a green university of the 21st century and generation of green power needed to run its infrastructure. Therefore, hydro and solar energy are considered viable options in Nepal. That Nepal's valleys are densely populated and consequently price of land is high, it is prudent to purchase needed land for the university in the mountains and use solar energy to make the infrastructure energy neutral. In estimating the cost of solar plant, some experts say that it is possible to build a 1MW solar energy plant for $2 million. To make the university energy neutral, we expect that some 10MW power ought to be generated for the Open University within 10 years. This also demands utilization of substantial marginal land perhaps in excess of 200 Ropani. From such generation, integrated with the national grid could be able to sell the excess power in the early years and be energy neutral at some point.

G. Sources of Financing

Reports say that the proportion of government budget devoted for higher education is shrinking while the number of students entering into higher education is burgeoning. The budget share of higher education in the total education budget has been coming down from 23% in 1990, to 12% in 2001, 10% in 2006 and to 9% by now. Included in this funding is a substantial component of external aid and loan from institutions like World Bank in higher education. Most of the physical facilities and research centres of the existing universities have been built through external grants. The open university will be adding new pressure into higher education budget and thus necessitate further need for funding from external sources in the early years. Therefore, this will be the imperative for open university also. In that light, several options for generating funds for the open universities are discussed below.

International, National and Local Grants:

1. National budget allocation should make up two-third operating budget of the university.
2. Local bodies be required to allocate 20% of their education budget on providing scholarship to local poor and disadvantaged who are bound to access higher education from local communities.
3. Local bodies be required to allocate 20% women budget to scholarship for local women who are bound to access higher education from local communities.
4. Bulk of international grants be used to physical infrastructure development, technological development, program and content development, human resource development, delivery-capacity development, and collaboration with other universities.

Consortium Development:

1. Arrangement of funding through a consortium of countries for the first ten years of its operation is more practical than reliance on sole funding from the government.
2. Assembling necessary resources would require a strong government backing and a competent team to work with donor agencies, donor countries, and international institutions like World Bank, ADB, and UNESCO.
3. Estimation of contributions of resources from the government, private contributors, and donor agencies, including land and in-kind contributions will be done after the comprehensive operational plan becomes ready.

Grassroots Resources:

Nepalese people, philanthropists, and the university alumni are the source of long tern contributions besides the government and the students. Mobilization of grassroots resources would be a major way for managing the growth of the university. Nepalese people and the diaspora are considered as the agent of long term long term sustainability of this institution.

1. Mobilization of local resources and local sources of funds be initiated from the start of the project.
2. Local fundraiser and fundraiser in Diaspora communities be started to develop awareness and sense of ownership.
3. Nepalese business community, philanthropists, artists, public figures, social mobilizers, local governments, local communities, teachers, professionals, skilled people and other individuals be mobilized to contribute to the institution in a significant way.
4. University graduates be connected with the institution and develop alumni contributions culture.

Student Fees:

1. Up to one-third teaching expense of the university be covered from student fees.
2. International students pay fees no less than the teaching expenses made per student in the program by the institution.
3. Separate fee be collected and accounted to cover all expenses on instruction unrelated activities such as health, athletics, student activities, excursions, residences, parking and so on.
4. Per-student teaching expense and non-teaching ancillary expenses be calculated and accounted separately.

Endowments and Gifts

Endowments are not kept in general donation category because they often come with some agreements and arrangements in where and how they are spent, how they are invested and sometimes with condition of keeping the principal intact for forever or a minimum amount of time. It has however been found that endowments are often substantial in private institution compared to public institutions. The major factor that discourages public institutions to seek endowment funds is often the government policy to take away the equivalent amount from the university grant if it has received the endowment income from outside sources. This practice has to be abolished and public institutions must not be punished but be further rewarded by the state for attracting endowment funds. In Nepal, the donations and endowments given to the university are not considered tax deductible charitable donations but they ought to be to keep us in same footing as universities of advanced nations.

Open University will strive to have significant amount of endowment to cover portion of the operating and capital expenditure. It may also accept endowments given to run specific programs, build specific kind of infrastructure, provide specific type of financial assistance to students, assume specific type of professorship, specific types of fellowships, or conduct research in specific research areas, as long as they are within the specified mandates of the university. Named professorship endowments

will be encouraged to reduce faculty expenditures and attract best talents in the university.

The university will adopt following policies to expand endowment funds:

1. General endowment money, land or other property donated to the institution without restriction of purpose.
2. Alumni mobilization on endowment generation.
3. Restricted endowment where the donor could choose the fund to be used in targeted discipline or purpose.
4. Endowments for named schools, professorships, fellowships, scholarships, buildings, and so on.
5. Unrestricted and restricted gifts.

H. Cost Estimate for the First Five Years

The cost estimates for establishment and first five years of running of the university have been made based on what was assessed by other experts for small states of commonwealth, some of which are neighbouring countries of Nepal. Although Nepal does not have significant enough technology industries except for import and sales, there is good penetration of technology education in the urban centres of late. As a result some of the human resource needs could be met in Nepal with training.

The following overview of initial capital and running costs estimation has been provided as a preliminary data. Further cost studies would be required to come up with numbers closer to actual. One positive development of late in distance education has been the development of open source tools and the possibility for getting services hosted by large international service providers in the interim for a small cost while Nepal develops its internal capacity. The key feature infrastructure and human resource capacity would be scalable to meet the demand for services. Assumptions made to come with these numbers include, 5 year development period, 5 campuses, US currency, and North American price of materials.

Table 1.0: Physical and Data Infrastructure

Land and building	$500,000
Power Plant	$10,000,000
Data Centre	$10,000,000
Wi-fi Network and End Devices	$ 2,000,000
Subtotal	$22,500,000

Table 2.0: Content Creation and Management

Acquisition of CMS for each site (assume open source system)	$0
Operating and maintenance cost	$1,250,000
Content development team staffing costs	$7,500,000
Subtotal	$8,300,000

Table 3.0: Content Development and Program Delivery

LMS (open source)	$0
Administrative and Student Information Systems	$2,500,000
Staff	$2,800,000
Operating	$1,500,000

Regional call centres to support members and learners	$450,000
Subtotal	$ 7,250,000

Table 4.0: Leadership, Faculty and Staff Development

Orientation to open education tools technologies and processes	$200,000
Leadership development in key sectors	$2,000,000
Technology and administrative training of faculties, tutors and staff	$3,000,000
Subtotal	$5,200,000

TOTAL COST ESTIMATE	$43,250,000

I. Financial Accountability

The open university ought to be an institution that has high degree of financial transparency and public auditing in reference to (1) its mandate of democratization of education and massification of learning mission, (2) its quality performance in comparison to similarly funded other universities, (3) financial efficiency, and (4) academic and research performance. It will strive to become the embodiment of accessibility, efficiency and accountability in the service to the public.

The university will release vital statistics every year to the public and who so ever policy maker needs it. Such statistics would include the fiscal capital and operating budget and expenditures it made, the grants, endowments, donations, and loans it received, number of students it taught, faculties, tutors and administrative staff it had with their separate ratios with students in each school of studies, student satisfaction levels in each demographic group of students, dropout-repetition-and-pass rates in each school and each level, academic achievements of graduates, graduate absorption rate in the market, student satisfaction indicators, average hours spent in learning by different categories of students, fees charged per unit of study, operating cost per student per year, cost per student per degree, cost, availability and use of learning material provided by the university, research output in terms of Master's and PhD degrees awarded, number of publications-inventions-awards on research and innovation outcome, degree of engagement of its alumni in university advancement, public recognitions and blemishes it received, amount of intellectual property generated to the benefit of the public. The university will offer these data in a form easy to understand by all literate public.

J. Summary

Open University is a technology intensive university and is, therefore, capital intensive in the short run. However in the long run it is student intensive as it is envisioned to be the largest university in Nepal within a decade of its establishment. Therefore, arranging financial resources for it are of significant challenge. They are proposed to be met through a consortium, government grants, fees from students, support of local communities, philanthropic contributions in form of donations and endowments.

XIV. Partnership, Partnering Institutions and Their Roles

This is a project of Government of Nepal, Nepalese diaspora and the people of Nepal intended to be made successful through international partnership collaboration.

A. Main Stakeholders

The Government of Nepal, University Grant Commission, existing universities of Nepal, people of Nepal and diaspora Nepali would be the major stakeholders of OU.

Among the stakeholders, Ministry of Education, Ministry of Finance, Ministry of Law, Cabinet of Ministers of Government of Nepal, the University Grant Commission, expert group that drafts the Bill, expert group that provides inputs to parliamentary hearings, the Legislative Parliament, and the President all play vital role in providing the legal foundation to the university. This body controls the wording of the Act and therefore the degree of autonomy, governance, role of state, and types of partnerships that would be feasible.

Once the Act is passed, Ministry of Education, University Grant Commission, National Planning Commission, Ministry of Finance and Ministry of Foreign Affairs would play a major role in enabling the university through state grants and in developing international partnership.

B. Partnership and Partners

National and international partnership and collaboration have been identified as the major ways to overcome resource constraints in establishing ans sustaining this university. Partnership and collaborations are considered the major ways to establish the institution and to take it to the point of sustainability through internal resources of Nepal and the funds the institute generates through its own activities.

We have thus far established partnerships with limited institutions. The Ministry of Education, Non Resident Nepali Association (NRNA), Athabasca University (AU) and Canada Foundation for Nepal (CFFN) have formally resolved to partner. We have a number of institutions from which key officials have issued verbal or written commitments to collaborate. They include International Council for Open and Distance Education (ICDE), International Association of Mobile Learning (IamLearn), Open University (UK), University of Houston System (UHS), California State University (CSU), Open Universities Australia (OUA), Indira Gandhi National Open University (IGNOU), University of Ottawa (UoO), University of Manitoba (UoM), Association of Universities and Colleges of Canada (AUCC), Canadian Virtual University (CVU), and Commonwealth of Learning (COL). However, formal collaboration with these institutions and many more potential partners have not been initiated primarily for not having proper legal foundation of the institution in Nepal became an impediment in making those partnerships effective.

Similarly, through strategic planning meetings, some strategically important partner institutions and stakeholder institutions, and the World Bank (WB), UNESCO, ADB, and international development agencies and foreign ministries of countries including

UK, USA, China, India, Norway, Denmark, Canada, Australia, Japan, Korea and more were identified as potential sources of support.

Private foundations were also identified as potential source of partnership and funding. It was noted that Bill and Malinda Gates Foundation has committed itself to open universities and open education. Carnegie Foundation, Hewlett Foundation, Ford Foundation, Aga Khan Foundation and similar foundations also substantially invest in educational institutions.

C. Roles and responsibilities of participating institutions:

Among the partners, the Ministry of Education Government of Nepal and Non Resident Nepali Association (NRNA) have signed a resolution on October 7, 2010 to partner and uphold the spirit of the MoU signed between NRNA, Athabasca University (AU), Canada Foundation for Nepal (CFFN) in September 20, 2010 to collaborate in the establishment of the proposed Open University. Subsequent strategic meeting of the partners further refined the roles of every partnering institution such that there would be no duplication of efforts and confusion of roles. Here are the roles identified and agreed by all.

1. Government of Nepal

1. Provide prominent leadership and maintain the priority for the program.
2. Provide funding through allocation of budget and provide material and administrative support to implement the terms of signed resolution of October 7, 2010.
3. Provide endorsement to the Secretariat so that it can solicit internal and international funding.
4. Provide legal outlet to conduct pilot project as work of the government.
5. Provide leadership role in mobilizing national and international resources.
6. Provide supporting data and documents necessary.
7. Empower diplomatic missions to represent Nepal in solicitation of international assistance and partnership.
8. Facilitate the work to bring out an Act of parliament for OU.
9. Provide physical facilities and resources for the mission Secretariat from Nepal's internal means.
10. Disseminate information to Nepal's governing organs.

2. University Grant Commission

1. Play role to preserve the autonomy of the university in the Bill.
2. Offer logistic support to convene scholarly interactions on OU.
3. Facilitate collaboration among all universities.
4. Provide funding for pilot study programs and comprehensive operational plan development.

3. ***Political parties in Legislative Parliament***

1. Pass the necessary legislation.
1. Own the project as a major initiative of nation building.
2. Make it a common mission of the nation – a non-partition initiative.
3. Own it as a mission for democratizing education, upholding the value of human equality, delivering social justice, and empowering-agent of human freedom.
4. Provide certain portion of telecommunication bandwidth or certain portion of telecommunication revenue to take education and educational information to people's homes and communities, freely or affordably.
5. Endow strategic parcel of land for university development.

3. Athabasca University

1. Provide mentorship in policies, collaboration, accreditation, quality control and institution design.
2. Partner in planning, program design, content production, teaching, research, and project design and implementation.
3. Write application for the initial round of international funding.
4. Orient/train diaspora and Nepali scholars in OD environment and systems.
5. Establish "Open University of Nepal Trust Fund" for Canadian donors.
6. Provide technical assistance in establishing methodologies, tools, technologies, approaches, programs and system of records.
7. Partner in building learning communities in rural and remote areas;
8. Facilitate partnership with international ODL community.
9. Help generate grassroots funds from Canadian public.

3. NRNA

1. Provide lead role for diaspora partnership.
2. Ensure adequate representation of NRNs in policy making, administration and management.
3. Provide leadership in developing seed funding from NRNA and grassroots NRNs.
4. Providing efficient platform for dissemination of OU programs and information among NRNs.
5. Mobilize and transfer NRN skills, knowledge, technology and resources to benefit OUN.
6. Solicit collaboration in international arena.

4. CFFN

1. Provide technical and academic leadership in partnership with NRNs.
2. Develop background papers, research, data, and expertise.
3. Solicit human, material and academic resources from Canadian sources.
4. Partner in research and academic support.
5. Work as a liaison office of the OUN Secretariat for North-America.

5. Secretariat

1. Coordinate the works of all participating institutions.
2. Integrate works and resources as per institutional plan.
3. Develop infrastructural and academic foundation;
4. Contribute in building legal instruments.
5. Build and manage implementation teams.
6. Keeping assets and records of institution.
7. Periodically inform all collaborators on developments.

XV. Benefits, Opportunities, Risks, and Risk Mitigation

A. Benefits

Nepal stands to benefit in a major way from the establishment of its national open university. This university, built with concerted national effort, helps Nepal:

1. Become producer of knowledge content and provider of distance education, instead of being a pure a consumer of knowledge.
2. Mitigate the problem of access, cost, and quality in mass education.
3. Convert its brain-drain into brain gain by mobilizing diaspora scholarship.
4. Be in the forefront of global collaboration in education.
5. Elevate its tertiary education to world standing.
6. Take scientific, technical and vocational education to people who are left out.
7. Adapt-adopt globally developed open content.
8. Permit the delivery of courses in a variety of formats.
9. Carry quality assurance and accreditation consistent with global standards.
10. Provide enhanced services for experiential and active learning.
11. Collaborate with, and complement the activities of, existing institutions.

B. Opportunities

1. Rendering mass production and mass access of high quality educational material at low cost by using ODE principles, tools, and technologies combined with revolution on computer, Internet, and Web technologies.
2. Giving personalized attention to learners through real-time tracking of their personal preferences, styles and capabilities,
3. Taking educational services to students without requiring them to come to university,
4. Providing flexibility in time, place, pace and duration of learning,
5. Collaborating worldwide in education, science and research,
6. Serving with rich and active learning environment to people of many learning styles,
7. Solving practical problems in the process of learning.
8. Achieving mobility in learning and learning in mobility by use of mobile computers, ubiquitous Internet service and cloud computing.
9. Accomplishing a long promised and never executed mission of the government.
10. Accelerating mass education by harnessing on promised support of ODE by institutions like NPC, UNESCO, WB and other development partners.
11. Bringing to fruition the annually allocated a budget for OU since 2008.
12. Allowing many among more than 3 million youth in foreign employment to continue and complete their education, and participate in lifelong learning, and thus enhance earning and future entrepreneurial prospects.
13. Allowing several hundred thousand school, university and college teachers, government employees to upgrade their education with proper learning support.
14. Mobilizing in excess of 100,000 diaspora scholars working in universities, research laboratories, governments, and professional institutions of industrialized countries in transfer, translation and production of knowledge, technology and skills, and in research and innovation.

15. Benefiting from established success of open universities in rapidly building capacity in expertise, tools, technologies and methodologies.
16. Cashing on the promised technical assistance of internationally acclaimed universities and ODE organizations to synthesize the best and proven practices from around the world and develop model university of the future. (Note: Athabasca University, International Council for Open and Distance Education, International Association for Mobile Learning, Canadian Virtual University, Commonwealth of Learning, Open University UK, Open Universities of Australia, University of Houston System, California State University, Queens University, University of Manitoba, and Indira Gandhi National Open University.)

C. Risks and Challenges

There have been former studies done on risks and challenges in establishing OUs that are of interest to small developing nations. In this space we have tallied the recommendations obtained from one such study done for Commonwealth of Learning(refer the report of reference [17] pp. 6) and through our own deliberations [Appendix L].

1. Social Risks: (a) Resistance for inter-institutional collaboration: due to tendency to defend-autonomy and compete than to collaborate; competition leans on "in-house" business functions but collaboration is needed to face the forces of globalization, turn invasion of ICT to opportunity, achieve economy of scale, share resources, and distribute risks and capital costs. (b) Perception of inferior service by places without a campus, (c) Latent demand for accommodating large numbers of poorly qualified people to gain entry to higher education, (d) Failures in capacity development and increasing dependency on developed world, and (e) "brain drain".
2. Quality Risks: Loss of Quality: (a) not maintaining high quality standards, to the effect of a quick erosion of credibility, (b) not keeping attention to quality at all times, (c) poorly managed accreditation and certification processes, (d) too many offerings from proliferating new institutions to a point of confusion and need for restrictions to all, (c) lack of formal mechanisms of quality assurance in instructional design, learner support systems, protection of intellectual property, and assessment in programs involving the use of ICT.
3. Institutional Risks: (a) lack of administrative and management policies tailored to distance institutions, (b) lack of qualified and trained faculty and support staff for the use of ICT, (c) inability to meet demand for greater access, (d) faculty not seeing content development and tutoring as part of their regular duties.
4. Technology Risks: (a) uneven development of ICT infrastructure, (b) uneven access across socio-economic levels, (c) learning centres not permitting multiple use of ICT (eg. learning, outreach, community information, community use) needed to optimize the cost, (d) ICT utilization costs (appliances, connectivity, and transportation) (e) Poor ICT policies, (f) poorly trained personnel, and (g) improper applications.

Beyond these risks that are common to many developing countries established by research, some specific risks were identified through deliberations on this specific project. They are:

1. Academic Culture: Classroom trained academic community could resist ODE, OU and e-revolution by means of (a) citing loss of eye-contact, loss of realism,

theft, and plagiarism, (b) viewing OU as second rate, "certificate mill", and a threat to the honour and dignity of the existing Nepalese colleges and universities, (c) not embracing modular approaches in course and curriculum development, (d) not accepting the proven effectiveness of computer interactive e-learning, m-learning, self-paced learning, collaborative learning as much as the lecture based learning, (e) not embracing credit for life-experiences, (f) not accepting open entrance, (g) not accepting the change in faculty fabric, (h) viewing ICT as means of entertainment and distraction than as vehicles for high end learning. As a result, there would be a lobby of a section of academicians to oppose the establishment of the OU in Nepal.

2. Political Instability and Lack of Government Support: (a) Changes in governments, ministers, bureaucrats, policies, or priorities can take away government support, (b)Government posing procedural obstruction to building an institution of this scale, (c) Political instability hindering passage of appropriate law and regulations and implementation of government plans and priorities, (d) Long delays in gaining government support for a new initiative.
3. Privatization of Education: (a) Threat to public education due to unchecked privatization of all education from kindergarten to university, (b) erosion of trust in OU citing erosion in public education, (c) engagement of full-time public educators in for-profit education.
4. One Constituency Making Policy for Another: (a) High and middle income group and urban dwellers making policy for the poor and the rural, (b) Those who send their family members to private institutions and foreign countries making policies for the rest, (c) Policies themselves segregating the rich and the poor, (d) disinterest among policy makers in large public education missions like OU.
5. Lack of Experience: (a) Lack of in-house experience in establishing OU, (b) Need to buy significant amount of tools, technologies and expertise from foreign countries.
6. Risk of exclusion: (a) In the early phase small set of programs to a small population group are offered bearing risk for many individuals and groups to have been left out by the program and thus OU be seen as a threat instead of opportunity, (b) failure to build inclusiveness in the early phase.
7. Loss of Momentum: Having been propelled by groups of enthusiasts this project is advancing at an incredible speed at the moment well before the government has fully committed to the mission and before it has provided necessary acts and regulations. People could lose enthusiasm if we cannot maintain the momentum. One may say there is no money but that cannot be true. The money is there, it is just about how we get it and how we mobilize it once we get the money. Nevertheless, the momentum must continue.
8. Money: Money can be a big matter of contention and quarrels. An object that can divide families, can divide organizations and individuals. Therefore, lack of transparency and checks and balances in budgets and their allocation could become risks to this mission.
9. Loss of Team Unity: The team today are working largely in consensus. If teams do not remain sufficiently unified and they head off in different directions, then we may start to get dysfunction or may spread so thin that we may run around a lot without achieving much. When many teams are working but if all are not focused on a single goal or vision, we will have difficulty integrating their outputs. Even when each team produced outputs they may not

converge to the delivery of the larger outcome or overarching goal. Our structure has to preclude any loss of team unity. And we have know that partnerships are better than having no partners. Life will be lonely without partners.

D. Risk Mitigation Strategies

1. Creating transparency in its operation, working closely with the government, and building public support to maintain government support.
2. Open University could align its programs with various government policies and programs not originally created with OU in mind. For example, the government has started to earmark certain percentage of local government budget women, children, youth, Dalit, Janajati, farmers, disabled, and other disadvantaged groups for the purpose of empowering them. Considering that education is the greatest tool of human empowerment, certain percentage of that fund could be used to access OU programs by the intended population group.
3. Studies conducted by international development partners have already identified OU an instrument for bringing access and equity under "education for all" agenda. Therefore, there exists a significant opportunity securing funding for the establishment and early operation of the OU by development partners by aligning OU plan and programs with that of development partners.
4. There are large international philanthropic organizations that could make significant contribution to public education cause like that of OU.
5. OU could collaborate with Nepal Telecommunication Authority and large telecommunication service providers to gain access to a strand of a fible of fibre optic network and a slice of wireless bandwidth for the delivery of its educational programs to the public at a cost affordable to all.
6. OU could collaborate with large producers of mobile computing devices to develop and deliver economical ICT and mobile computing opportunity for Nepalese learners at an affordable cost.
7. OU may partner with GoN to introduce programs where students could do certain amount of public infrastructure work or other value added public service work in exchange of getting money for purchasing Internet access and mobile computing devices for their education.
8. OU can mobilize Diaspora Nepalese living in developed countries to subsidize through institutional channels the education of their relatives living in Nepal or contribute to common scholarship or endowment funds.
9. OU can mobilize Diaspora scholars to provide high end educational service (e.g. curriculum and content production, knowledge translation, training, tutoring, program management, and international liaison) to resident and NRN learners at a minimal cost.
10. OU can partner with the most successful open universities and ODE organizations in the world to acquire and collectively produce OER and in obtaining expertise, technology transfer, and know-how transfer.

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XVII. Appendix A: The First Task Force

The Members of the First Task Force

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XVIII. Appendix B: Members of Early Committees

The Members of the First NRNA Technical Team on OU:

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Dr. Ambika Adhikari,
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Dr. Raju Adhikari

The Members of Open University of Nepal Strategic Committee – formed May 30, 2010

Dr Pramod Dhakal (coordinator),
Dr Ambika Adhikari,
Dr Raju Adhikari,
Dr Drona Rasali,
Devman Hirachan,
Dr. Upendra Mahato,
Gyan Chandra Acharya - Ambassador to UN,
Dr Shanker Sharma – Ambassador to USA,
Dr. Bhojraj Ghimire - Ambassador to Canada,
Yogendra Dhakal - Ambassador to Australia, and
Representative of Ministry of Education, GON

The Members of Open University of Nepal Initiative Steering Committee formed October 2010

Chair: Secretary of the Ministry of Education (Mr. Deependra Bikram Thapa)
Co-Chair: President of NRNA (Mr. Dev Man Hirachan)
Member Secretary: Dr. Pramod Dhakal, (NRNA)
Members:
Joint Secretary of Planning, Ministry of Education (Mr. Janardan Nepal)
Joint Secretary of Higher Education, Ministry of Education (Mr. Mahashram Sharma)
Executive Director of NRNA Secretariat (Mr. Hom Raj Acharya)
President of Athabasca University (Dr. Frits Pannekoek)
High Level Representative of AU (Dr. Mohamed Ally)
Honourable Dr. David Kilgour (Former Minister and longest serving MP Canada)
Hon. Prof. Stephen Lewis (Order of Canada, Distinguished Visiting Professor at Ryarson University, former Ambassador to UN, former UN Special Envoy for HIV/AIDS in Africa)
Representative of CFFN (Dr. Kalidas Subedi)
Representative of CFFN (Dr. Ishara Mahat)
Dr. Bidya Nath Koirala (TU, Nepal)
Dr. Mahabir Pun (Nepal)
Dr. Ambika Adhikari (USA)
Dr. Drona Rasali (Canada)
Dr. Raju Adhikari (Asia Pacific)

Dr. Krishna Chandra Prasad (Europe)
Dr. Kalyani Rai (USA)
Dr. Bidya Ranjeet (USA)

The Members of the First NRNA SKI Task Force
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Dr. Pramod Dhakal - Canada,
Dr. Ambika Adhikari - USA,
Dr. Drona Rasali - Canada,
Dr. Suraj Thapa - Norway
Dr. Hari Dhakal - Norway
Dhruba Subedi - Australia
Roshendra Dhoj Khadka - UK
Pujan Rai - Singapore
Tribhuvan Shrestha - New Zealand
Dr. Krishna C Prashad - Netherlands
Shree Napit - Australia
Dr. Anil Anal - Thailand
Goba Katwal - Australia
Gokul Pokhrel - Nepal
Dr. Kamal Adhikari - Japan
Radhika Sharma

Team Members of First Key Strategic Workshop 2011:
Chief Guest and Keynote Speaker
Dr. Renu Khator, University of Houston
Dr. Fritz Pannekoek, ICDE and Athabasca University
Session Chairs:
Mr. Dev Man Hirachan, President of NRNA
Dr. Upendra Mahato, Non-Resident Nepali Asociation
Dr. Shankar P Sharma, Nepalese Ambassador to USA
Mr. Gyan Chandra Acharya, Nepalese Ambassador to the UN
Paper Presenters and Critiques
Dr. Pramod Dhakal, NRNA, CFFN, Carleton University
Dr. Alok Bohara, University of New Mexico
Ms. Madhavi Karki, Strayer University
Dr. Shiva Gautam, Harvard University
Dr. Mohamed Ally, IFTDO, IAML, Athabasca University
Dr. Ambika Adhikari, NRNAA, Arizona State University
Dr. Carl Stokton, University of Houston
Dr. Mahendra Lohani, Heifer International
Dr. Prahlad Pant, University of Cincinnati
Dr. Drona Rasali, NRNA, CFFN, University of Regina
Dr. Gokul Bhandari, University of Windsor
Dr. Kalyani Rai, University of Wisconsin-Milwaukee
Dr. Mohamed Ally, Athabasca University
Dr. Jeetendra Joshee, California State University
Dr. Nalini Chhetri, Arizona State University
Dr. Nanda Raj Shrestha, Florida A&M University
Dr. Raju Adhikari, NRNA, CSIRO Australia
Dr. Rajendra K Shrestha, NRNA

Dr. Krishan C Prasad, UNESCO-IHE
Dr. Hari Dhakal, et.al. - NRNA Norway
Dr. Kamal P Adhikari NRNA Japan
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SWOT Analysis Facilitation

Mr. Naresh Koirala, Nepal Library Foundation
Dr. Padam P Sharma, Empower Nepal Foundation
Dr. Tara Niraula, New School University
Mr. Ichha B Nepali, NRN-Canada

Facilitation and Communication

Dr. Tulsi Dharel, George Brown College
Mr. Jiwan Giri, Himanchal Educaiton Foundation
Dr. Narayan Pokharel, NECASE
Mr. Ben Wood, CFFN
Ms. Geeta Thapa, CFFN
Mr. Prashanta Dhakal, CFFN
Mr. Govinda Singh Rawat, (Press)

Members of the Strategic Planning Team January 2011:

Embassy of Nepal:

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Mr. Tara Prasad Pokharel (Minister Councillor);

Athabasca University:

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Dr. Pamela Walsh (Vice President of Advancement),
Dr. Mohamed Ally (Director of Distance Education),
Mr. Troy Tait (Director of Government Relations),
Dr. Barbara Spronks (Ex Director of Regional and Tutorial Services),
Ms. Tara Friesen (Manager of Alumni Relations and Philanthropy),
Mr. Iain Grant (Manager, Special Projects);

Canadian Patrons:

Dr. David Kilgour (Steering Committee Member),
Mr. Terry Curtis (CFFN Advisor and former Vice-President of Nortel),
Dr. Ronald Watts (Principal & Vice-Chancellor of Queen's University),
Dr. Kunjar Sharma (Honorary Consul General of Nepal);

Association of Universities and Colleges of Canada:

Mr. Greg Fergus(Director of Public Affairs and International Relations);

OUN Working Team Leaders:

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Dr. Raju Adhikari (Australia, Steering Committee Member),
Dr. Drona Rasali (Team-Canada Lead from Diaspora Nepalese),
Dr. Shiva Gautam (Harvard University),
Dr. Mahabir Pun (Nepal),
Dr. Govinda Dahal (CFFN Deputy Director);

CFFN and NRNA representatives:

Dr. Kalidas Subedi (Steering Committee Member),
Mr. Pradeep Raj Sharma (CFFN Treasurer),
Dr. Ishara Mahat (Steering Committee Member),
Dr. Toya Baral (Research Scientist),

Dr. Shiva Ghimire (Research Scientist),
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Mr. Naba Raj Gurung (NRN-Canada President),
Ms. Radha Basnyat (NRNA),
Mr. Ishwor Dhungel (CFFN),
Dr. Gokul Bhandari (University of Windsor);
Mr. Prashanta Dhakal (Sky Waves)
Benjamin Wood (CFFN)

XIX.Appendix C: Conception of Idea

Usha: A Project on Education

"If your plan is for one year, plant rice. If your plan is for ten years, plant trees. If your plan is for one hundred years, educate your children." **– Confucius, a Chinese Philosopher**

"*Education is the largest single contributor to break poverty, income gap, gender inequality and ethnic inequality, and also to improve nutrition, health and longevity of people*" –declared 2005 OECD Report on Education.

As professed by ancient philosophers and validated by modern scientific research, education is the cross-cutting single contributor to address national development and its sustenance. Despite tremendous economic growth experienced in recent decades across the globe, the disparity in quality of life is also widening. The greatest tool to mitigate this issue with least amount of effort is to promote quality education across the population by removing prevailing and potential barriers. Unlike industrialized countries, developing countries are facing tremendous resource challenges in breaking those barriers.

With more than 80% people living in rural areas and illiteracy being high - rural (52%) , urban (30%), Nepal faces challenges in achieving the United Nation's millennium development goals with regard to poverty, education and health. In this backdrop, Canada Foundation for Nepal (CFFN) in partnership with NRN-Canada and NRNA aims to contribute on rural education through its *Usha* project. This project is committed to work as a bridge for two kinds of people: (i) who are in real need of help and (ii) who are generously looking for opportunity to help them. The aim of this work is to produce educational contents as per accepted curriculum and provide institutional and technological foundation for accessing them.

Our approach is to make institutional arrangement with local, district, and central governments of Nepal and institutions abroad to fulfill the objectives specified above. We use technology for collaboration in content development, and in content storage, synchronization, and transmission. This work facilitates collaboration of teachers, volunteers and people abroad and with those in Nepal. The key benefit is to set up open learning opportunities for Nepali students while remaining in their local villages and also to provide research and learning opportunities for international enthusiasts.

Our emphasis would be on building upon traditional knowledge and skills, experiences of national and international experts and educators in producing educational contents. Among the hundreds of thousands of Nepalese who have migrated to different countries in the world there lies considerable experience in teaching, learning, scholarship and entrepreneurship. The value of that experience is augmented by a strong goodwill and willingness among those people in contributing to Nepal through their expertise. Recent activities and interest of Non-resident Nepalese is a testament to that.

Similarly, large pools of non-Nepalese, who maintain close affinity to Nepal, are willing to lend their support in overcoming the economic and academic gap that Nepal has with the world. As we aim to support fulfilling the millennium development goals, development experts, educationists, educators, naturalists,

conservationists, and many other professionals, have shown keen interest to help Nepal.

We believe that educating one generation of citizens amounts to giving education to many generations. This is because those who are educated put a high premium on the education of their children, and this tendency transfers from one generation to the next. Among all that one earns in life, only education has the power to improve the overall quality of life of individuals as well as the value systems of the society. Knowledge, information and technology also have a vital effect on livelihood. The effect becomes ever more substantive if the education reaches to entire citizenry, preserves traditional knowhow, respects local traditions and cultures, and promotes sustainable development.

CFFN started a range of informal activities in 2005 and was officially registered as a not–for–profit organization the following year. In 2009, efforts are under way to make CFFN a charitable organization aspiring to bring the reach of education to the margins of society and to distant geographies in Nepal. CFFN's motivation is that knowledge and education are the most profound requirements for building a just and prosperous society. We promote critical thinking and scholarly exchanges between Nepal and interested parties from abroad, and incubate research and development with an objective of improving rural education and livelihood. We like to position CFFN as a bridge between those who are concerned about global issues and the most disadvantaged children, women and men of Nepal who lack basic education, knowledge, and capacity to achieve decent-livelihood, innovation and progress. Our programs stem from awareness towards the needs of individuals, families, nations, and the world as a whole.

CFFN has accumulated valuable experience in working with capable people in Nepal and abroad. For a decade, we have also accumulated experience and working-relationships with a number of schools, educators, and parents in the targeted region of Nepal. We have successfully set-up computing laboratories, and have successfully sent international and Nepalese volunteers to rural Nepal. Our activities also include technical assessment, educational assistance, knowledge transfer, training, and research. We are also establishing an early childhood education centre to demonstrate its impact in the educational attainment of rural children. All these activities are performed successfully in collaboration with local educational institutions, local administration, District Education Office and the Ministry of Education.

The associates of CFFN are world-class and reputed people who are committed to achieving and maintaining high level of standards in their works.

CFFN appeals to all interested individuals and institutions throughout the world to join hands to make this noble endeavor an enduring success.

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XX. Appendix D: Report on Athabasca University Visit

Report On the Visit to Athabasca University

Reported by:
Dr. Pramod Dhakal
Meeting Date: 2009 December 05
Report Preparation Date: 2009 December 06
Edmonton Canada

Host Institution: Athabasca University (AU)
Host Team: Dr. Frits Pannekoek – President, Dr. Nancy Parker - Director of Institutional Studies, Dr. Mohamed Ally – Professor and Director of Distance Education, Mr. Tim Slaughter – Director of Learning Services Collaboration, Ms. Linda Bonneville – Manager of Course Development at Centre for Learning Design and Development, Mr. Ken Krawec – Course Materials Production, Mr. Sheldon Krasowski – Quality Assurance and Program Review at Institutional Studies, Nancy Tarrant-Wood – Assistant to Director at the Office of the President
Visiting Organization: NRNA-ICC-Americas, NRN-Canada, CFFN, and NeCASE
Visiting Team: Dr. Arbind Mainali, Dr. Drona Rasali, Mr. Ichchha Nepali, Dr. Narayan Pokharel, Dr. Pramod Dhakal

The broader context

A vast majority of Nepal's population is unable to overcome barriers to higher education despite many development initiatives taken in the education sector. The most affected by those barriers are women, poor, marginalized and rural people. This is despite widespread affinity and awareness on the importance of education among people. It is common for many people to get Intermediate, Bachelor's and Master's degrees through private studies without having any formal mechanism to assist their studies. Our pilot projects in rural schools revealed that the inability to produce, attract, or retain quality educators has been a major hindrance in improving the state of education in rural areas. And, in face of rising emigration, this problem will remain for a foreseeable future. The removal of barriers in higher education is, therefore, an important challenge for Nepal. The good news is that a significant pool of educated and skilled diasporas who have settled throughout the world has a genuine willingness to teach the disadvantaged if they could contribute from their existing locations through interconnected learning mechanisms. Therefore, an institute of Open and Distance Learning (ODL) in Nepal geared for educating the women, rural communities, and the poor is in the interest of both the government of Nepal, NRNA, and the Nepalese people. It is believed that NRNA could lead this effort if the government of Nepal and international institutions come on board to support the initiative. This report is a summary of what transpired towards establishing such an institution of distance learning when a Nepalese Canadian delegation visited and interacted with the pioneers of one of the most renowned institutions of ODL in the world, Athabasca University.

The Journey and Welcome:
We, the five visitors, gathered at Dr. Arbind Mainali's home in the morning of December 4, 2009 and left for Athabasca at 7 a.m. despite severe weather and

snowfall. We reached at Athabasca University at 10 a.m. and were greeted by Nancy Tarrant-Wood. We were taken to a meeting hall where discussions proceeded cordially with the leadership and management team along with breakfast and lunch, courtesy of the university. We left Athabasca University at 2:30 p.m., somehow sooner than expected, to mitigate the risk of driving in severe weather and deteriorated road conditions. We arrived back safely at Dr. Mainali's residence at 6 p.m.

The Discussions:

Dr. Nancy Parker gave an overview of the history and current state of Athabasca University, which is one of the four comprehensive and research oriented universities in Alberta, Canada. As Canada's Open University, it is dedicated to the removal of barriers that restrict access to and success in university-level study and to increasing equality of educational opportunity for adult learners worldwide. It is founded on four key principles: excellence, openness, flexibility and innovation.
The key highlights of Dr. Parker's presentation were as follows:

1. Athabasca University located in a town of about 3000 people has 38,000 course registration and 1400 staff. Founded in 1970, it offered its first distance course in 1973 and steadily built its strength in distance education and emerged as a pioneer and one of the best in the world over the years.

2. AU offers Bachelors, Masters and doctoral degrees fully compatible with other comprehensive universities and fully recognized by the Government of Alberta like other universities in Alberta, and accredited in Canada and the USA like other traditional universities.

3. About 2/3 of its student population is female and vast majority are those home bound mothers and fathers, those who are in need of continuing their jobs, those living in remote communities, and those who have mobility problems in life. Students from small and large institutions also take courses for transfer to their home institutions to complete their programs. Studies of some employed students are sponsored by their employers.

4. Students register from around the country. The largest pool of students is from Ontario, followed by Alberta. This in turn is creating policy dilemma as education is in provincial jurisdiction and students throughout the country are attending a university funded by a province.

5. AU uses technology to its advantage. Open Source Learning Management System (LMS) and Content Management System (CMS) are customized for the university. And ICT, CMS and LMS are not only providing services to AU but also generating revenue through services to others.

6. It offers over 700 courses in many programs including Bachelors of Arts, Professional Arts, Commerce, Science, Applied Science, Health Administration, Nursing, Management, Computing, Distance Education, and more. It uses tests for the evaluation of prerequisite knowledge.

7. Student satisfaction is at 95%, which is 10% higher than the provincial average.

8. AU is the most prized by students for independence (learn and work), improved writing skills, research and development, and self-confidence. It is the least prized by student for mathematical studies, speaking, conflict-resolution, computer skills and appreciation of cultures.

9. All tutors are part-time, academics are part and full time. Tutors are often professors at other universities and industry experts.

10. Tutors and academics can be home-based but all other staff work from campuses.

11. Staff -mix: 13% full-time academic, 9% part-time academic, 28% tutors, 18% professionals, 24% support staff, 2% management and executives, 6% casual. (50% STAFF WORK FROM HOME)

12. Budget/revenue breakdown is as follows: 30% from government grant, 60% from fees, 10% from sales of other products and services. Annual budget is $120m, significantly lower per student compared to traditional universities. About $3m research grant was won in 2008-9.

13. Its services go through seven step iterative processes for continuous improvement and quality assurance: Education Planning, Program Planning, Course Planning, Content Production, Course Delivery, Evaluation, and Revision.

Many helpful materials and books could be found in AUPress.ca, AthabascaU.ca, and also from web sites of COL.org.

The Visiting Team presented introduced the rationale and context of the visit. Each member of the team spoke in the following order: Dr. Drona Rasali, Dr. Narayan Pokharel, Dr. Arbind Mainali, Mr. Ichchha Nepali, and Dr. Pramod Dhakal. Dr. Rasali introduced NRNA and the context for the visit and Dr. Dhakal made a power point presentation on Nepal's current state of education and proposed areas and issues for discussion. The key messages presented by the visiting delegates were as follows:

1. Nepal is characterized by a large rural population with poor access to higher education, large gender gap in tertiary education, lack of resources and infrastructure, lack of practical and technical education, shortage of qualified teachers in the rural areas, overcrowding in lower grades, and low participation at tertiary level education. This warrants the need for open and distance learning to supplement what has been achieved by traditional system.

2. Nepalese government has realized the need for ODL and had allocated some budget in 2008 for establishing such university. NRNA as an association strives to take initiatives in improving access to education in Nepal. Having endowed with rich sets of talented members with world class academic and

industrial experience, NRNA aspires to use these assets to assist the government in establishing an open university.

3. The cream of the crop from Nepal has been spread throughout the globe and the opportunity exists in tapping the diasporas knowledge and skills for uplifting the rural poor through ODL. They amount to rich intellectual source for the production and delivery of educational content.

4. Nepal is a geographically tiny, densely populated, and one of the poorest in human development. As per UNESCO statistics the primary, secondary, and tertiary enrolment is 126%, 43% and 9% respectively. However, only 3% women of tertiary age group take tertiary education, indicating severe gender issues in access to education. Many youth and employed already rely on self studies and "private-examinations" to get tertiary diplomas and degrees due to necessity of retaining jobs or lack of money to attend universities.

5. The best way to solve Nepal's underdevelopment is education. And making pedagogy, technology and institutional system for ODL would be of tremendous impact to Nepal. If there was a mechanism to take and distribute educational courses, we could use diasporas volunteerism to develop and disseminate educational content, a significant gain for a small developing economy. ODL could bring a revolution to the massive population of women, people bound in jobs, farms or family obligations, and those unable to afford higher education.

6. The team's purpose of the visit is to understand the process involved in establishing an Open University in Nepal, mechanisms for and sources of obtaining technical assistance, and various avenues of collaborations. Also it is to explore the possibilities of running joint courses, accreditation and access to each other's resources, strategic planning, research collaboration, and faculty exchange. How could we best achieve technical and physical infrastructure development in Nepal?

7. During NRNA regional convention in May 2010, we intend to have a symposium on ODL and Open University, and we intend to develop a strategic plan accordingly.

8. As an answer to separately asked question of Dr. Mohamed Ally on state of technology penetration in Nepal, Dr. Pramod Dhakal said that radio is the most common, widely available and widely used medium of mass communication, wireless phone has been gaining wide penetration in many areas and is steadily expanding its reach, low speed Internet is available in many towns, and high speed Internet is available in some urban pockets.

Ms. Linda Bonneville and Mr. Tim Slaughter gave an overview of the infrastructure for online learning, and content planning and production process. Key highlights of her information were as follows:

1. Learning is influenced more by the content and instructional strategy in the learning materials than by the type of technology used to deliver instruction. Course design and quality greatly determines the learning outcome. Therefore, proven learning theories are applied and great care is given in preparation of instructional material at AU.

2. A learner distant from a tutor uses technology to access the learning materials and to interact with the tutor and other learners. Best breeds of content management systems (CMS) and learning management systems (LMS) are used to ensure quality and continuity.

3. A number of teams have to work together to meet the pedagogic objectives. The 4 person learning design team, 12 editors, 3 visual designers, 5 copyright-officers, CMS Group, Digital Media Technology Unit, Quality Control officers, and the academic staff, all have to work together to produce a course. The entire process is expensive costing somewhere around $100,000 to $500,000 per course.

4. Copyright is a major issue in content production and requires rigorous work in copyright clearance. The copyright documents must be preserved 10 years beyond the discontinuation of the course.

5. Planning, production in Alfresco, and distribution through MOODLE, copyright clearance, are critical for success.

Dr. Frits Pannekoek, the President of AU, gave thoughtful hints on key opportunities and barriers in establishing an open university in Nepal. Dr. Mohamed Ally, Professor and Director of Distance Education, also provides some important hints in the same line. Key advices provided are as follows:

1. There are about 1200 universities in the world that are involved in distance learning and there is International Council for Open and Distance Education which is supported by UNESCO and the Government of Norway. It is also affiliate member of Southeast Asian Ministers of Education Organization. They are valuable resources for Nepal.

2. China and India are the largest and the second largest open and distance education providers with 3 and 2 million students respectively. They would have interest to commercialize in other countries and there could be interest to take Nepal as a market. Indira Gandhi National Open University is already active in Nepal offering its programs through partner institutions at low-cost, which is possible due to their high volume. Great care must be taken so that frictions are not created between institutions.

3. Most countries are establishing national universities for open and distance learning (ODL) funded by the government. It is understandable that Nepal also takes that route because education is a public good. Although for-profit private schools are also moving to ODL, they may not serve the spirit of ODL. Our mutual spirit is in opening the opportunity for all those who would otherwise be left behind.

4. Athabasca University is considered among the best two in the world. The key reason is its high emphasis in quality control and adoption of transparent quality standards. Its degrees are not dead-end type but they are articulated with regular universities.

5. Exclusive Open University has better chance for success than blended universities. Otherwise resources could be diverted more to traditional infrastructure and technology infrastructure may get low priority. Therefore, it is best to avoid becoming a faculty of extension and source of revenue for the rest of the traditional university.

6. Establishment of quality system is our strength and biggest gain for ODL success is in quality. That is the reason developing a course costs somewhere from half to one million dollars.

7. Infrastructure for ODL could be very expensive. Money is required for putting system in place, do have a course warehouse, course production, technology infrastructure, and radio and satellite systems. Maintaining many regional offices could add up to cost escalation. Therefore, securing necessary funds and government budget is paramount for success.

8. For success, either one must have large numbers of students or should have strong state support. Since volume may not be realizable in Nepal outright, government commitment is essential for securing international support. Government must spell that ODL is in its priority area and is seriously taken as an instrument for public education. Only when there is government commitment, it would be logical for established institutions like Athabasca University of get involved in technical assistance. AU has provided technical assistance to Mongolia, Maldives and Saudi Arabia. It could be there for Nepal as well.

9. Commonwealth of Learning (COL) headquartered in Canada also provides assistance in establishing ODL institutions. Open Universities in Malaysia and Maldives were established by COL, which uses commonwealth term for name sake but has no neo-colonial character. Mozambique joined for the sake of getting help because they felt that commonwealth is less threatening than United States. If desired COL could also assist Nepal.

10. It would be a matter of pleasure to AU if Nepal seeks to model its Open University after AU. AU would be happy to show stage-wise development of computing infrastructure, and to let it start first with international service providers and slowly build its own computer centre and other centres over time.

11. There is substantial international experience with AU that would prove valuable in ODL initiative in Nepal. With two decades of experience in delivering distance education, President of AU Dr. Frits Pannekoek is also the President of the International Council for Distance Education (ICDE). Former Director of Information Resources at the University of Calgary and the chair of a consortium of more than 300 libraries, Dr. Pannekoek is recognized nationally for his leadership in the creation of digital resources and the transformation of academic publishing and is regularly called upon to serve as a provincial and national policy advisor. An author and editor of books on mobile learning, Dr. Mohamed Ally is the past-President of International Federation of Training and Development Organizations (IFTDO), Board Member of Canadian Society for Training and Development, and Founding Director of International Association of Mobile Learning, and has chaired a number of conferences on distance learning. Besides AU at present has earned three Canada Research Chairs, on distance learning, computer science, and indigenous studies. This is a testament of the wealth of experience AU in international and Canadian arena of ODL. There is a number of internationally reputed staff at AU.

12. Since Nepal is entering into ODL, it should jump start from best available technology as much as possible. Nepal should strive for wireless Internet access throughout the country. Village Internet Kiosk and mobile learning devices would be most prized in developing countries. Radio and TV could also play an important role. It would be advantageous for developing countries to go directly on mobile personal devices. The way USAID helped to fund wireless Internet access infrastructure throughout Macedonia, Nepal might also have some opportunity like that somewhere. CIDA is helping to fund the establishment of Open University in the West Indies. Therefore, Nepal could use CIDA and IDRC as potential sources of support.

13. The United Nations and World Bank may provide funding as part of fulfilling their MDG missions. ADB has also been supporting such endeavours. For this the following may be key characteristics that would appeal in Nepal's favour:

a. Strong government commitment to ODL as priority area and allocation of state funding.

b. Collaboration of organized diasporas in content production and delivery.

c. Involvement of capable Nepalese living abroad in execution of the establishment work.

d. Commitment to quality system and transparent quality standards.

e. Partnership with the right institutions.

Conclusion:

The team had an extremely productive visit with leaders and managers of Athabasca University. They have strong commitment to public education and they themselves are part of a publicly funded institution of Canada. Our conclusion is that AU is the right kind of institution to get the technical assistance in establishing an Open University in Nepal and their willingness to be of assistance to Nepal are very strong. The precondition for a formal involvement would be that Government of Nepal shows its full commitment and readiness in establishing such institution in Nepal. Strong support of diaspora Nepalese would prove to be of all the more value in promoting the project and in garnering external support. Given those instruments are in place, it should be possible to harness institutional supports from world bodies to acquire necessary financial support to establish such institution. The diasporas having a strong role in building, managing and operating the university with a backing of government of Nepal would build a strong case for Nepal and better reason for Athabasca University to help Nepal emulate its model in ODL.

XXI. Appendix E: Workshops Organized by Diaspora Community

A series of workshops were held since 2009 to refine the ideas presented in this document. Here these workshops are briefly mentioned for a historic record of initiatives.

1. Athabasta, Canada: December 4, 2009

This workshop along with study tour of Athabasca University (AU) of Canada was held between a delegation of NRNA, CFFN and NECASE scholars and high level management and scholars' team of the AU at the AU facility. Its proceeding has included as Appendix C as a historic activity.

Key Outcome: Development of long running relationship with AU and subsequent exchange of knowledge and experiences between NRNA, CFFN and AU for the establishment of OUN, and subsequent adoption of OUN as a major project by NRNA.

2. SKI Workshop Melbourne, Australia: February 10, 2010

This workshop was held to mobilize Diaspora Nepalese scholars under Skill, Knowledge and Innovation initiative of the NRNA.

Key Outcome: Introduced OUN as a major initiative under Skill, Knowledge and Innovation initiative, where scholars proposed NRN led content production and NRN made Open University for and in Nepal. NRNA President gave first public speech in support of the OUN initiative.

3. Houston, USA: May 28, 2010

This was a major workshop that attracted top Diaspora Nepalese Scholars and high profile institutional personalities, including President of Athabasca University, President of International Council for Open and Distance Education, President of International Association of Mobile Learning, and President and Chancellor of University of Houston System. This workshop arranged very high profile deliberations and made a major influence among NRN community. The thematic paper written by Dr. Pramod Dhakal, Dr. Ambika Adhikari and Dr. Drona Rasali [see Appendix E] later became the most referred and most influential article for popularizing the mission.

Key Outcome: ICDE, IAML, ICDE and University of Houston System, and California State University gave strong word of endorsement and commitment for collaboration in establishing OUN. NRNA general assembly adopted OUN Initiative as the Flagship Project of the NRNA. The same body formed a 11 member Open University of Nepal Initiative Strategic Committee (OUNISC) including of Dr Pramod Dhakal (coordinator), Dr Ambika Adhikari, Dr Raju Adhikari, Dr Drona Rasali, Devman Hirachan (President NRNA), Dr. Upendra Mahato (Patron NRNA), Gyan Chandra Acharya (Ambassador to UN), Dr Shanker Sharma (Ambassador, USA), Dr. Bhojraj Ghimire (Ambassador to Canada), Representative of Ministry of Education, and Representative of AU. A technical committee comprising of Dr Pramod Dhakal, Dr Ambika Adhikari, Dr Drona Rasali, and Dr Raju Adhikari was also formed.

4. Ottawa, Canada, August 09, 2010

This was the follow up workshop to implement the mission set by the Houston Workshop. Key officials of OUNISC, AU, NRNA, and CFFN.

Key Outcome: We resolved to (1) to engage the Government of Nepal in the initiative with utmost urgency, (2) give utmost importance to developing comprehensive

operational plan (COP), (3) to develop a business proposal to develop the COP, (4) to sign a MoU between AU, NRNA and CFFN as a preparatory step to collaborating with GON for OUN. A MoU was subsequently signed up between AU, NRNA and CFFN on September 20, 2010. Then a resoultion was signed between Ministry of Education, GoN and the NRNA on October 7, 2010.

5. Sydney, Australia: September 4, 2010

This workshop advanced OUN agenda in NRNA Regional meet in Oceania.
Key Outcome: NRN Australia became a major and active supporter of OUN initiative. NRNA Regional Coordinator for Oceania became a key advocate of the initiative.

6. Kathmandu, Nepal: October 7, 2010

This was the first assembly of Nepalese stakeholders and representatives of the NRNA held jointly by Ministry of Education and NRNA.
Key Outcome: A joint resolution for cooperation in establishing OUN was signed between the MoE and NRNA in presence of the Minister of Education of GoN and the President of the ICDE. A 21 member OUNI Steering Committee was formed with following members: Secretary of Education (Chair), NRNA President (Co-Chair), Dr Pramod Dhakal (Member Secretary), Joint Secretary Planning MoE, Joint Secretary Higher Education MoE, Executive Director NRNA, President Athabasca University, Director of Distance Education AU, Hon. Dr David Kilgour (Ex Minister Canada and Nober Prize Nominee), Hon. Prof. Stephen Lewis (Order of Canada, UN Ambassador, Special Envoy of UN), two Representatives of CFFN, Prof Dr Bidya Nath Koirala (Educationist). Dr Mahabir Pun (Social Entrepreneur), Dr Ambika Adhikari (USA), Dr Drona Rasali (Canada), Dr Raju Adhikari (Asia Pacific), Dr Krishna Chandra Prasad (Europe), Dr Kalyani Rai (USA), Dr Bidya Ranjeet (USA).

7. Ottawa, Canada: January 7, 2011

This workshop was held after first two meetings of the OUNISC were held that decided that the Secretariat of the OUNISC shall be established at Ministry of Education premise at Keshar Mahal and initial seed funding for the OUNISC Secretariat shall be provided by the Ministry of Education. In this context, representatives of the GoN, NRNA, AU, CFFN, and invited institutional experts held a workshop to develop an interim operational plan.
Key Outcome: Proceedings of the workshop that outlined major activities and outlined the major works for year 2011. It also adopted a strategy to develop a Comprehensive Operational Plan and processes for making application for funding to CIDA. It allso decided to apply for small research funding from Alberta for pedagogical research.

8. Ottawa, Canada, August 01, 2011

The fourth planning workshop on OUN was held in Ottawa between representatives of OUNISC, GoN, AU, NRNA and CFFN.
Key Outcome: Announcement of winning a grant for research on pedagogical model was made here by AU. The workshop concluded that Government of Nepal must invest and commit in no uncertain terms in upfront to this initiative for attracting donors funding and international collaboration.. Before GoN could commit to the project, it would be extremely risky for other partners to enter into a public institution building project in Nepal.

9. Kathmandu, Nepal: October 11, 2011

This workshop was held during 5th NRNA Global Conference in Kathmandu. This had participation of Vice Chancellors of all universities of Nepal, Minister of Education and MoE officials, members of OUNISC, Member of Parliaments, and top

officials of various government and non government institutions and prominent scholars. President of ICDE and President of AU was the Keynote Speaker.
Key Outcome: OUNI received commitment of support for the establishment of OUN by all speakers and members of parliament. This gave a major publicity in support of OUN and generated a huge public support and a psychological momentum.

10. Kathmandu, Nepal: January 04, 2012

This was a workshop on Pedagogical Model for the Open University of Nepal led by Director of Distance Education and project director, and Susan Bainbridge the lead researcher, and organized by the OUNISC.
Key Outcome: This workshop measured cultural inclination in learning approaches, and gave major indicators to concentrate the research on. The research was formally started with the collection of first set of vital data.

11. Kathmandu, Nepal: April 04, 2012

This was an interaction program with a delegation of California State University of USA, led by Vice-President at CSULB. This interaction was on "How to Build a Globally Engaged Open University" and was attended by UGC Chairman, UGC Secretary, Ministry Officials and educationists.
Key Outcome: CSULB officials demonstrated that there is a vast pool of open educational resources to be shared from which OUN could take advantage of. CSULB is ready to offer its services to Nepal if grounds are ready in Nepal for its taking.

12. Edmonton, Canada: May 18, 2012

NRN-Canada and Athabasca University organized a study tours of a delegation of OUNISC and NRN representatives and a followup joint consultative meeting was held in Athabasca and Edmonton one day prior to the start of the National Convention of NRN Canada.
Key Outcome: This meeting resolved to form Open University of Nepal Support Committee – Canada with AU Vice President as Chair, NRN Canada President as Co-Chair, NRNA ICC Regional Coordinator Americas as a member, and representatives of OUN-IDB, CFFN, NECASE, and each Nepalese Community Organizations in Canada as members. This committee would coordinate Diaspora efforts and collaborate with Athabasca University to help launch pilot programs of OUN.

On May 28, 2012, Cabinet of Ministers, Government of Nepal formed Open University Infrastructure Development Board (OUN-IDB) on the Chairmanship of Minister of Education. Nineteen out of 21 members of the OUN-ISC were no longer part of the new structure. The OUN-ISC was let to go dormant to honour the government decision of taking over the OUN initiative. Active contributors of the OUNISC are still helping the initiative in whatever way they can.

13. Kathmandu, Nepal: October 18, 2013

Organized during NRNA 6th Global Conference, this interaction program brought in Nepalese intellectuals and the government. Present in the program were officials of the Ministry of Education including Joint Secretary Mahashram Sharma, Ministry of Science and Technology including Secretary Dr. Somlal Subedi, former Vice Chancellors of the Tribhuvan University and former Chair of University Grant Commission Dr. Kamal Krishna Joshi, Former Vice Chancellor of Kathmandu University Dr. Suresh Raj Sharma, Vice Chancellor of the Nepal Academy of Science and Technology Dr. Surendra Raj Kaphle, Founding President of NRNA Dr. Upendra Mahato, Chief Patron of NRNA Mr. Dev Man Hirachan, President of NRNA Mr.Jiba Lamichhane, prominent education educationists including Dr. Bidya Nath Koirala, Dr. Mana Wagle, Dr. Sudha Tripathi, Dr. Keshav D Khadka, NRNA Advisor and Member

of OUN First Task Force Dr. Drona Rasali, NRNA SKI Task Force Chair and member of the OUNI Steering Committee Member Dr. Raju Adhikari, President of NRN Norway Dr. bishal Sitaula, OUNI Steering Committee Member Secretary and NRNA Project Champion for Open University Dr. Pramd Dhakal, Executive Director of OLE Nepal Mr. Rabi Karmacharya, President of Midas Software Mr. Chhatrahari Karki, NRNA delegates and open university initiative contributors and enthusiasts.

Every speaker of the program identified diaspora as an important dimension in Nepal's development, especially in skill, knowledge, research, innovation and education field, technology transfer field, and expanding collaborations with international institutions. Educating young people in innovative, interactive and technology assisted environment with extensive technical focus and expansion of collaborative horizon were identified as important contribution of the OU. Delay in the passage of the bill was identified as major impediment and current style of operating style of OUNIDB as not conducive for NRN engagement, both situations needing correction. The way West modernized Yog into a marketable commodity called Yoga, we ought to excavate the knowledge and skills that reside amongst us and make them useful to modern context through OU. The OU mission was identified as an agenda of the whole nation and an urgently needed instrument for social equity.

Ministry of Education thanked NRN contributors, committed to table a separate bill for OU in parliament and correct the situation in collaborative front to uphold the spirit of the MoU with the NRNA.

XXII. Appendix F: OUNI Becomes NRNA Flagship Project

Press Release from Workshop on Open University of Nepal in NRNA Regional Conference

Houston (USA), June 02, 2010- Non-Resident Nepali Association (NRNA) through its Houston Declaration released during the 4th NRN Regional Conference held in Houston, Texas, USA on May 28-30 turned the proposal for establishing Open University of Nepal (OUN) into its flagship initiative. The organization made this announcement through its Houston Declaration released on May 29, 2010.

The proposal for OUN was brought forward by Canada Foundation for Nepal (CFFN) led by Dr. Pramod Dhakal through NRNA Task Force on Skills, Knowledge and Innovation (SKI). The original proponents, Dr. Pramod Dhakal, Dr. Ambika Adhikari, and Dr. Drona Rasali, had recommended that NRNA and CFFN join hand with Government of Nepal and international agencies to bring OUN initiative into fruition. Subsequently, NRN ICC accepted the proposal and NRN SKI successfully organized a day-long workshop on Open and Distance Education on May 28, the first day of the NRN conference. The purpose of the workshop was to bring together prominent academics and institutional thinkers to deliberate on the academic, management, and business aspects of creating an Open University for Nepal.

Inaugurating the plenary session of the Regional Conference as well as the workshop by lighting the traditional Nepali *Panus* lamp, NRNA President Devman Hirachan said, "Knowledge transfer is vital to the overall success of NRN movement, as it is a key NRN investment to Nepal for Nepali". "It was identified by the NRNA's Kathmandu Declaration". He added, "An Open University of Nepal is envisioned as the flagship initiative of NRNA to meet the challenges of the knowledge transfer."

Chancellor of University of Texas Systems Dr. Renu Khator was the chief guest of honor, who chaired the main session of the workshop. "We are entering into an era where knowledge is a currency and its supply is ensured by people of knowledge. An Open University can go a long way in promoting varieties of access points and varieties of opportunities for people who are place bound and ability bound." can play ", she said in her remarks.

Dr. Fritz Pannekoek, Chairman of International Council of Distance Education and the President of Canada's Athabasca University said that the emergence of knowledge economy has warranted a massive flux of demand for higher education but the traditional mode of supply of education is inadequate for meeting that demand. Therefore, Open University mode has become a necessity of time. He was deliberating on "Prospects of Open and Distance Education in Developing Countries".

The proponent and the lead of the initiative, Dr. Pramod Dhakal of Carlton University, presented the background and overall framework of the proposed University on behalf of NRNA Task Force on SKI and Canada Foundation for Nepal. His concept was critiqued by Dr. Alok Bohara (University of New Mexico) and Dr. Shiva Gautam (Harvard University) as designated discussants and also from the floor.

Another proponent Dr. Ambika Adhikari (Arizona State University) presented a Pre-Bussiness Plan of the proposed University. Dr. Carl Stokton (University of Houston), Dr. Mahendra Lohani (Heifer International), Dr. Prahlad Pant (University of Cincinnati), NRNA's Chief Patron Dr. Upendra Mahato provided discussants' inputs on his presentation. Nepalese Ambassador to United States Dr. Shankar Prasad Sharma chairing this session said, "Flexibility, affordability, partnership, and cross-subsidy are key components for success of the OUN."

During luncheon, Dr. Pannekoek gave a keynote speech with insights into the making of the University that came out of his long experience as an academic leader of a world class Open University.

Dr. Drona Rasali (University of Regina, Canada) presented the conceptual framework of academic development, contents and delivery for the proposed open and distance University of Nepal. Dr. Gokul Bhandari (University of Windsor), Dr. Kalyani Rai (University of Wisconsin-Milwaukee) and the session Chair Dr. Mohamed Ally (Athabasca University) provided the critique to the presentation.

Dr. Jeetendra Joshee (Dean at California State University – Long Beach) presented a framework of the governance, management and administration for the proposed open University, while the discussants Dr. Nalini Chhetri (Arizona State University) and Dr. Nanda Raj Shrestha (Florida A&M University) provided their inputs.

The session chaired by Dr. Upendra Mahato, Chief Patron of NRNA, focused on Skills, Knowledge and Innovation exchange between Nepal and developed countries. In the session, Chair of SKI Task-Force Dr. Raju Adhikari gave overall architecture of the Task-Force and its role within NRNA. Dr. Rajendra Shrestha deliberated on oils and gas exploration, Dr. Krishna C Prasad deliberated on how double-degree program could be delivered in Nepal in cooperation with UNESCO. Dr. Hari Dhakal concentrated on Health Education and Dr. Alok Bohara on exchange of scholars and scholarship.

In an immediate follow-up to the workshop, the conference extended thanks to International Council for Open and Distance Education (ICDE) and Athabasca University (AU) for pledging their support for the establishment of the Open University of Nepal. We especially acknowledge the Dr. Frits Pannekoek, President of ICDE and AU and Dr. Mohamed Ally, Founding Director of International Association of Mobile Learning for helping NRNA and Canada Foundation for Nepal (CFFN) for their unwavering guidance and support for the cause of OUN. The offer of support received from University Houston through Chancellor Dr. Renu Khator, Senior Vice President Dr. Carl Stokton, and Associate Vice President Dr. Mrinal Mugdh, and that of California State University Long Beach and UNESCO-IHE, Institute for Water Education for their interest and offer of support for OUN extended through Dr Jeet Joshee and Dr Krishna Chandra Prasad were duly acknowledged.

A OUN Strategic Committee (OUSC) was formed to take the recommendation of the workshop for further action. The committee has 11 members Dr Pramod Dhakal (coordinator), Dr Ambika Adhikari, Dr Raju Adhikari, Dr Drona Rasali, Devman Hirachan, Dr. Upendra Mahato, Gyan Chandra Acharya - Ambassador to UN, Dr

Shanker Sharma – Ambassador to USA. Dr. Bhojraj Ghimire - Ambassador to Canada, Yogendra Dhakal - Ambassador to Australia, and Representative of Ministry of Education, GON, were slated to be contacted for inclusion in the committee. The technical committee will comprise of Dr Pramod Dhakal (coordinator), Dr Ambika Adhikari, Dr Drona Rasali, and Dr Raju Adhikari.

Finally, a team of facilitators Dr. Mahendra Lohani, Mr. Naresh Koirala, Dr. Narayan Pokhrel and Mr. Ichchha Nepali conducted a Strengths, Weakness, Opportunities and Threats (SWOT) analysis on the Open University of Nepal as a NRN initiative.

XXIII. Appendix G: A Diaspora Proposal

A Proposal for an Open University of Nepal for Providing Higher Education to the Rural and Marginalized People

Dr. Pramod Dhakal, Dr. Ambika Adhikari, Dr. Drona Rasali[1]
CFFN, NRN-Canada, NRN-USA, NRNA

1. Background:

Since 1951, when the country was first opened to the outside world, Nepal has made impressive strides in the education sector. The literacy level in this period has climbed from a rate of less than five percent to almost 60 percent today, with youth literacy of 85 percent for males and 73 percent for females as per UNDP data for 2007. Nepal now boasts of eight universities and more than thousand colleges. The most impressive feat is perhaps, the proliferation of higher professional education, which is buttressed by almost 20 full-fledged medical colleges and hundreds of engineering colleges. Further, in the information technology (IT) sector, the Nepali Diaspora is thriving visibly in the international job market, particularly in North America and Australia. For the relative small population size of the country, the number of Nepali IT professionals in North America compares favourably with their South Asian counterparts, except for India.

However, in the midst of these dramatic achievements, women, rural, poor and marginalized groups in Nepal have only limited access to educational bonanza that the urban and relatively well-to-do families have enjoyed. Literacy rate among women still hovers around 45 percent; and higher education access to most rural and marginalized groups remains a distant dream. Most of the universities and colleges are concentrated in and around urban centers, and mostly cater to those who can afford.

More than 80 percent of the Nepalese population lives in rural and remote areas, where insurmountable barriers exist in accessing higher education. UNESCO data indicate that Nepal has a mere nine percent tertiary education attendance of age adjusted groups, a low number compared to educationally advanced countries. Further, the attendance of women in tertiary education is reported at a dismal three percent. The educational figures for the rural and the marginalized population would be even lower.

Within South Asia, Nepal has the highest Gini Index (47.3)[2], a measure of economic inequality. Also, the percentage of females among professional and administrative workers in the country is low at 20 percent. [3] These wide inequalities are indicators

[1] Dr. Pramod Dhakal, the Executive Director of CFFN, Canada and Associate Researcher at the Carlton University, Ottawa is an NRNA International Coordination Council (ICC) representative from Canada. Dr. Ambika P. Adhikari, a Faculty Associate at the University of Arizona, USA is the NRNA ICC Regional Coordinator for Americas and is a former president of NRN National Coordination Council of USA. Dr. Drona Rasali, who holds an Adjunct Professor position at the University of Regina, Canada is the NRNA ICC Deputy Regional Coordinator for Americas and is an advisor to NRN-Canada. They constitute the initial proponent core team (Dr. Dhakal is the lead) of NRNA towards developing an Open University in Nepal in collaboration with the Government of Nepal, global NRNs and international donors.

[2] The Gini index lies between 0 and 100. A value of 0 represents absolute equality and 100 absolute inequalities). Data source: World Bank; Nepal Human Development Report 2009.

[3] Nepal Human Development Report 2009, UNDP.

of serious inequities among various groups within Nepal, and are major factors in gravely impeding Nepal's efforts for a rapid economic development.

In Nepal, 38 percent students drop-out before completing Grade 5. Among those who do not drop out, the repeat rate is as high as 20 percent. Among those failing Grade 10, close to 90 percent do so in English, Math, or Science, indicating that the science and math education needs to be strengthened. Only a paltry nine percent of youth enter into tertiary level education.

Government of Nepal (GON) and major donor agencies have identified an Open University as a possible means to provide mass access to tertiary education. In this connection, Nepal became a signatory of SAARC Consortium on Open and Distance Learning (SACODiL) in 1999, making a commitment to build its own Open University. Subsequently, GON has been working on the establishment of an Open University, but the progress is hampered by the inadequacy of human, educational and financial resources.

As GON has already completed the background work and set the establishment of such a university as a priority, Nepali Diaspora can readily make use of the findings from demand analysis, and market and feasibility study that have been conducted for such a university.

A group of concerned Non-Resident Nepalis (NRN) academics and professionals have also realized that the open and distance education program as the most effective means in taking tertiary education to the rural areas of Nepal. Subsequently, Non-Resident Nepali Association (NRNA) in alliance with Canada Foundation for Nepal (CFFN) has brought forward an initiative to support the GON build an Open University of Nepal (OUN). The proposed OUN includes the following major objectives.

1. Close the gap in higher education demand, currently unmet by the combined capacity of all the institutions, through open and distance mechanisms.

2. Take tertiary education to the rural, remote, and marginalized people of Nepal, especially women and *Dalits*, who are practically confined to the villages due to family obligations, social challenges, and financial constraints.

3. Provide opportunities for teachers and government employees who are unable to advance their education, skills and careers while living in rural and remote places, or to those who are unemployed.

4. Provide a mechanism to continue education for the youth who take temporary or permanent employment in foreign countries.

5. Advance a computer-based education to rural Nepal that relates to health, social-systems, productivity, economic improvement, and sustainability disciplines.

Thanks to modern advancements in communication technology and the remarkable successes achieved by many institutions in distance education, it has now become possible to close the knowledge gap between the poor and the rich at a more accelerated rate than ever before.

2. Unique Opportunity for an Open University of Nepal:

The problem of education in Nepal's rural areas has been exacerbated by the ten year long armed-conflict that ended in 2006, and the situation remains difficult by the ongoing post-conflict instabilities. It is hard to find qualified people to work in rural and remote areas of the country. This situation is aggravated by the fact that those with the most knowledge and skills move to cities and increasingly to foreign countries.

The rural and other marginalized groups often languish in poor prospects in rural hinterlands. Some seek low paying foreign employment, particularly in the Middle East, Malaysia and few other global labour markets. On the other hand, the affluent families can afford to send their children to Nepal's urban centers and even in developed countries. In fact, while the disadvantaged communities in Nepal are deprived of educational opportunities and suffer massive unemployment, the outflow of the students from the Nepali middle class has seen a drastic rise in recent years. For instance, according to the Institute of International Education in the USA, in 2009, the number of Nepalese students ranked 11th among international students in the USA. And, the arrival of Nepalese students was 30 percent higher in the country in 2009 compared to the number in 2008. Similarly, some 8,000 Nepali students are reported to be leaving for Australia each year. Most of the Nepali students arriving in countries like USA, Australia and Canada often end up living there permanently, thus creating a shortage of trained manpower in Nepal.

For the above reasons, unlike in neighbouring India and China, Nepal faces critical capacity limitations in building a world-class Open University, mainly due to the shortage of qualified human resources within the country. On the positive side, however, at present, there are a sizable number of highly qualified academics and professionals among Nepalese Diaspora, who are eager to help their motherland. Having benefited originally from the Nepal's investment in public education and having had a first-hand experience of her needs, many of them are also eager to give back to the native land. Several members of this Diaspora group have themselves experienced the hopelessness caused by poverty, have walked barefoot to attend schools in the mountains and plains, and have faced acute shortage of books and other educational facilities when they pursued their education in Nepal. As many of them have succeeded in obtaining world class education in spite of these insurmountable barriers, they understand the pain and frustrations of the rural poor and marginalized groups and their struggle for education, and know that success is still possible. Because of these reasons, they are well suited to help education in Nepal through open and distance learning and support the neediest groups.

The expertise, experiences and knowledge base gained by the Diaspora members can be a great asset to support a distance learning program in Nepal. This human resource coupled with the high level of international good-will that Nepal enjoys, can be a winning combination to garner and mobilize both financial resources and human capital towards such efforts.

Harnessing the knowledge contribution from the critical mass of Nepali Diaspora and international contributors for building an Open University requires considerable organizational ability, management expertise, and collaboration and coordination skills. In partnership with GON, an innovative approach is required to take pedagogy, technologies, and instructional systems from distance places to rural and marginalized people of Nepal.

3. The Mission:

The mission of the proposed OUN is to mobilize the NRN skills, knowledge, experiences and affinity to Nepal is to establish an internationally recognized

institution of quality higher education for the remote, rural and marginalized population in Nepal.

How can such a sophisticated mode of delivering education be taken to remote locations in Nepal where people still struggle to have enough food and clothes and to own even a radio? Is there a scheme of transition for people to have distance learning infrastructure and human resource? Or will it remain as a distant dream until every family has personal computers and high-speed Internet? How can tools and techniques tested for colleges and universities of advanced nations be extended to reach the population of one of the poorest countries in the world?

That is where the task of capacity-building and finding novel approaches comes in. That is where the role of institutional collaborations and international partnerships, becomes important. That is where the formal and non-formal approaches have to meet in a unique way.

We are passing through a resourceful time in technological advancement and world-wide human cooperation. A vast number of first generation NRNs, living around the globe with advanced education from world class universities and with intimate knowledge of rural as well as urban needs of Nepal, could be mobilized to create knowledge network where they do not have to give-up their locations, jobs, and personal-wealth in participating in this endeavour. Further, international donors can assist the rural poor to own the laptops as are being created by MIT, and which are being funded by UN agencies to help students in the least developed countries.

4. Academic Development

Traditionally, education in Nepal has been based on memorization of lessons and rote learning, borrowed from the 19th century Britain and India. Conventional teaching has focussed more on theoretical principles and abstract concepts, rather than their applications for building practical skills useful for real life. In Nepal, most vocational and employable programs, like engineering and medicine, are generally affordable only to the rich and upper middle class. There is a serious need for inexpensive but internationally recognized quality education particularly in professional fields.

Those NRNs who possess an intimate knowledge of education system both Nepal and the outside world are well positioned to help Nepal in this regard.

A mechanism of delivering multi-disciplinary education can help the graduates in the rural area act as civil, mechanical, or electrical engineer, economist, banker, entrepreneur, and environmental scientists to build critical rural infrastructure locally. For instance, the graduates of the proposed Open University should be able to team up and build a 10 Kilo-watt power plant right where they live and work. Similar needs exist in the areas of health, agriculture, and natural sciences.

The following disciplines and subject matters can become the initial academic programs of the OUN.

1. Education, distance education and early childhood education,
2. Health sciences, health administration and management,
3. Engineering sciences, information, and technology,
4. Planning, administration and management of rural economy and institutions,
5. Agriculture, environment and sustainable development,
6. Entrepreneurship, collaboration, and business development,
7. Mathematics, natural sciences, social sciences and philosophy.

5. Getting There - A Business and Management Plan:

The core proponent team is currently exploring all frontiers to learn how to provide technical and financial support to Nepal in establishing an OUN. The following four areas are critical in this regard:

I. *Content Production*: The proponent team has carefully reviewed the remarkable advancement that many successful institutions (e.g. Athabasca University in Canada and Drexel University in the United States) have made in developing curricular contents that are highly suited for distance learning, and also have accumulated a long experience in repeating that success. The team is interested in realizing how the talented NRN teachers could translate their knowledge into distance learning contents. Technical assistance will be needed in translating knowledge contributions into learning modules and programs.

II. *Making Leaning Affordable*: Many institutions are able to produce successful outcomes in educating working professionals while keeping the programs affordable to the learners. They are achieving this by collaborating and partnering with employers in subsidising the learning programs through innovative programs that are beneficial to the university and employers. This model would prove most suited to Nepal's situation to prepare underemployed rural, remote and marginalized youth for potential careers in teaching, government and private sector jobs locally. The proposed Open University can benefit from financial help from potential employers. Many internationally funded rural development projects in Nepal send a large number of their employees annually abroad for in-service education and training. This potential resource can be kept inside the country, if a quality and affordable education can be provided for their project employees locally.

III. *Helping Students Obtain Remote Learning Equipments*: OUN students will need computers and access to internet, and electrical power at home or in convenient locations to make remote learning possible. International financial support from the UN and other international agencies should be mobilized to help the potential students get resources to access the distance learning modules. However, through university endowments and local investments, it should be possible to generate enough resources to make such programs sustainable beyond the initial international support.

IV. *International Assistance and Funding*: Considering that the immediate prospect for developing such institution solely from internal resources of Nepal is limited, OUN needs to generate assistance from international community, such as UN, multilateral, and bi-lateral agencies and private foundations. OUN can benefit from NRN community, and public and private sectors in Nepal. OUN can create a Global Public and Private Partnership (GPPP) program with interested agencies which can support in content and program development, and also in business development aspects of institution building. Many in the Diaspora are well placed to mobilize international

funding for the various component of the OUN. A strong and unyielding support from GON and local partners will be a key ingredient to enable the proponents of this university to more effectively organize international resources for this cause.

V. *Developing a University Governance Framework*: The modality of the proposed Open University is likely to be inter-jurisdictional having affiliated units within and beyond Nepal's borders. For example, some Diaspora groups may be its teachers and program developers. The governance system of the proposed OUN will have considerable complexities. Serious deliberations are needed to develop the governance framework of such an institution. Another question is how to advance research and innovation in the OUN without compromising the objectives of creating a building a village-oriented, affordable, and applied program. OUN needs to review successful models in developing the framework of governance.

6. Conclusions

The rural and other marginalized people in Nepal, and particularly women and *Dalits*, face serious barriers to higher education. This not only has compromised the wellbeing of the affected individuals and limited the potentials of the disadvantaged communities, but also has seriously hindered the efforts of Nepali government to promote socio-economic development.

NRNA and CFFN seek to support the establishment of an Open University in Nepal that will greatly enhance the access to higher education for the rural and marginalized people of Nepal. This initiative seeks to capitalize the opportunity created by Nepal Government's own plan to establish such a university. Thus, basic demand analysis, political and educational need assessment, and national priorities have already been made by the government, and a need is well established for the creation of such an institution. As the Nepali Diaspora has also reached a critical mass of well educated, resourceful and interested individuals for such an endeavour, this proposed program by Canada based CFFN and global NRNA is timely and the goals are achievable. This proposal needs a strong collaboration among the interested NRNs, Nepali Government, world-class open universities and international funding organizations. The initial proponent team consisting of NRNs from Canada, USA and Australia will attempt to mobilize the wider NRN community to support this vision. Through the Knowledge, Skills and Innovation Exchange (SKIE) task force, this initiative has already been endorsed by NRNA.

The proponent core team is seeking to build a collaborative platform and mobilize initial financial, technical, educational and human resources to take this program forward.

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Please visit an informational website http://openu.cffn.ca that is currently evolving and learn more about our mission. The proponents look forward to having cooperation and participation from many generous individuals and institutions for educating rural and marginalized people of Nepal.

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XXIV. Appendix H: The Governance of Innovation

The Law of Rule: The Governance of Innovation

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Abstract

A futuristic and sustainable system of governance must have four independent faculties: Legislative, Innovative, Executive, and Judicial. Of the four, the role and workings of the three have become a common knowledge for they existed in the industrialized West and copied by the rest of the world for some time. The governance of the innovative faculty is the subject of interest of this article. The role of the innovative faculty is to expand the sphere of innovation and knowledge for our collective prosperity. The key element of the governance of innovative faculty has been identified in this paper as: 1) transfer of jurisdiction of innovation from executive to an independent one, 2) the presence of intransitive Power Relationship between legislative, innovative, executive, and judicial faculties, 3) special and constitutionally mandated funding of innovative faculty, 4) inter and intra constituency competition, 5) inter constituency exchange, 6) simple accounting scheme, 7) society taking custody of invention while rewarding the innovators, 8) the right to be wrong, and 9) distributed governance, as the key elements of the governance of innovation. The innovative faculty should inspire innovation at grassroots level as well as professional level. The paper also proposes methodologies to reward those endeavors and resulting innovations.

Introduction

"We can't solve problems by using the same kind of thinking we used when we created them." **Albert Einstein [1]**

Is there a way to avert recurring losses of human knowledge, inventions, and civilizations? An earlier article by the author, "the fourth faculty of governance", focused on that subject, where it was proposed that a new faculty of governance, the innovative faculty, should coexist as an independent entity along with the currently established legislative, executive, and judicial faculties, in order to avert the eventual collapse of a civilization. Then questions followed on how such fourth faculty might be governed. This necessitated the writing of this article, which also attempts to answer: Who is innovator? Who governs innovation? Where are the means to support it? How do we benefit from it?

Before answering these questions, let us revisit the rationale for the four faculties of governance. We, as humans, live with myriads of worldly desires, which can be broadly grouped into four areas: ambition, justice, system, and innovation. Our ambition feeds our urge to be a leader, an executioner, or a successful person. Such ambition is what makes us build countries, army, industries and trade. Our ethical and compassionate self seeks justice and wellbeing for the whole of society, thus making us build safety nets and security apparatus including police, courts, and jails. Our attachments to comfort and familiarity seek to repeat proven techniques through systems and institutions. And our innovative self seeks to discard the obsolete, invent

the "new" and explore beyond the present. An independent faculty is proposed for innovation so as to pursue, develop and disseminate universal knowledge, science, creativity, and innovation. We, therefore, seek to give dignified treatment to our never-ending thirst for knowledge, learning, and innovation while letting our industrial and productive sphere to thrive in its usual space. We seek to free the innovative faculty from the subservience of the market and the executive faculty because their innate nature is not innovation. And, we want to do this while keeping the innovative faculty within the framework of democratic accountability.

Therefore, suggestion for an independent faculty of innovation does not seek to designate specified number of individuals as innovators and expect them to deliver innovation to satisfy our desire for the "new". What we are suggesting is a system that would harness the innovator hidden in all of us and that impartially rewards the innovators so that they would be encouraged to innovate more. In the process, we aim to systematize the compilation, preservation and dissemination of innovation for the benefit of the society and to further galvanize the innovation.

Who is innovator?

An innovator is a person who opens up a new area of understanding for others. An innovator is not an organization – a non-thinking entity that is a by-product of human hands and minds at work, although its culture can have strong influence on an innovator. Nevertheless, the ultimate innovator is a human mind at work while an organization being an institutionalized system for "production" of something. A human can be both the producer of the goods and services from what is innovated and the inventor of new processes, systems, goods and services. However, producer and innovator are distinct entities even when acting on the same field. They tackle the field from different perspectives. Invention is strongly rooted in individual humans while the production is strongly rooted in social group of humans. Production can be maximized by properly engineering the social environment of a workplace that involves implanting of peer pressure and expectations on obedient and organized minds. However, innovation is maximized in less pressured, patience-driven, and more contemplative environment by intensifying understanding, outlook and actions primarily due to individual's liking of the field. Therefore, the true innovator is in all of us if we are pursuing a field due to our inner liking and if there is a reward in becoming an innovator.

Why industry is not the right caretaker of innovation?

"Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand." **Albert Einstein [1]**

Today industry has been made to act as the caretaker of innovation because of our tendency to lump an entrepreneur with an innovator. An entrepreneur develops successful enterprise to produce and market new goods and services based on what is invented. In contrast, an innovator invents the "new", irrespective of whether it translates into an enterprise. Even within a single person, the entrepreneur faculty is strongly correlated to industrial application of the "known" and the innovator faculty is related to science and inquiry in search of the "unknown".

A sustained progress of a society can only be possible when curiosity, imagination, knowledge, benevolence, and ambition complement one another. Curiosity is more *intense* in the presence of imagination; imagination is more *productive* in the presence of knowledge; knowledge is *useful* to society in the presence of benevolence. Without having any knowledge of its existence, Marie Curie discovered radium because of her pursuit of inquiry. Having domain knowledge was useful for the discovery but was not the cause of the discovery. Subsequent knowledge of radium was put to use to make bombs against the imagination of Madame Curie due to omission of benevolence from the equation. Therefore, progress, or lack thereof, is as an outcome of interplay of different human qualities. A simplified understanding can be that:

Curiosity seeks to question all,
Imagination seeks to see all,
Discrimination seeks to differentiate all,
Knowledge seeks to know all,
Ambition seeks to profit from all,
Benevolence seeks to love all.

Progress, therefore, is the growth in the aggregate sum of the production of all these qualities. Often one quality can be used as input to produce another. This can be explained to a logically inclined person through examples of relational equations as follows (note that the sub-fields and sub-steps of entrepreneurship field are summed up in one step because this article's focus is in the production of knowledge):

If f(x) = y, where x is independent variable and the output y is dependent on x:
In Inquiry field: f(curiosity) = imagination ---------- (i)
In Innovation field: f(imagination, discrimination) = idea ------ (ii)
In Methodical field: f(idea) = knowledge ---------- (iii)
In Entrepreneurship field: f(knowledge) = money ----------(iv)

The knowledge subsequently expands the field for the inquirer to see ever more things not seen and contemplated before – leading to more inventions. This iterative cycle of knowledge endeavors in the end expand the total depth and breadth of the field thus leading to continual progress.

A casual reader who does not have much time to contemplate in these relational domains may know that industry's core competency is to put the knowledge into action so as to produce goods and services, which in turn would bring money to our treasury. Therefore, knowledge is the most dominant input when it comes to industrial production. "All actions attain their consummation in knowledge" [2]. This is to say that all actions acquire their highest fulfillment when they unite with the knowledge. Industries flourish and wealth gets created in societies where ideas are created, then harnessed and translated into knowledge, and the knowledge is put to action. Therefore, knowledge is the ultimate frontier of all actions, and production of knowledge is as high in importance as any other work in a society. If given a special place for creativity and innovation in daily life, a society produces ever larger volume of knowledge, which, if put to good use, can bring material, moral, and intellectual prosperity to the society.

It is possible that an inventor can be inspired to enter into entrepreneurship seeing potential to profit from the invention. Then at that point the person, as an entrepreneur,

goes into the fold of industry, the rightful domain of the entrepreneur. If the innovator enters into system development, then he would be in the domain of knowledge.

The limitation of industry sponsored innovation is that it would not support any endeavor of innovation unless it increases the market share and profit for the sponsoring business. Majority of path breaking inventions, however, do not come not because an industry wants but because the *thinking mind* stumbles upon something new. Consequently, many inventions come ahead of time for extracting monetary rewards or whose applications cannot be found out right. Such inventions can only be preserved and advanced by an inquiry driven society and not by an industry whose mandate is to generate profit and do it "now", which it should.

Industry's primary focus cannot be in fundamental research because it is naturally inclined to the field of *application*. However, industry appreciates applied research, which can in retrospect advance knowledge including in fundamental science. Nevertheless, industry's treatment to innovation is similar to its view towards a commodity. Industry does not support a quest of knowledge not because of inquisitiveness but because of necessity to make profit. And market driven governments allocate disproportionately large amount of resources to high profile and capital intensive fields like military, nuclear, and space while marginalizing other fields thereby inviting a threat to balanced and sustainable development. For example, since World War II, increasingly large numbers of scientists are drawn by defense industry reaching 30 percent by 1970s and 33 out of 2000 institutions of higher learning today draw 50 per cent of federal science funding in the USA [3]. And this trend continues despite the fact that most revolutionary innovations in history have not been the product of vast capital investments. The most revolutionary scientists like Newton, Darwin, and Einstein never drew large research grants.

On the contrary no tool is a safe tool or no invention is a safe invention because the safety of the tool or invention depends on how one applies it. That is the reason the invention and production should belong to separate faculties related to one another by an intransitive relationship [4], explanation of which is beyond the scope of this article. If both innovation and industry belonged to the same faculty, we would have no checks and balances. And all abuses of power come into existence and system's transparency disappears where checks and balances are missing.

What is wrong with our innovation policy?

Today we are practicing privatization of the collective (the production) and collectivization of the private (the innovation). Consequently, the heads of organizations are considered individually powerful and paid hundreds of millions of compensation while the intellectual property contributed by the scientists, engineers, thinkers, and inventors belongs to the collective – the organization. And because the organization is private, the intellectual property indirectly belongs to the private "owner" but not to the actual creator of that property. Therefore, we are creating two classes of people: the "owner" and the "creator", where creator is owned. And the society as a whole is incurring a heavy cost in protecting the "owner" by forbidding anyone else to use the intellectual property. We are thus over glorifying expertise, which is "a procedural knowledge whose sphere of application has been mystified by those enjoying exclusive access to that knowledge" [5]. We have misunderstood value

of the potential innovator residing in the hearth of all of us and converted ourselves into mere consumers.

Today, knowledge is becoming increasingly inaccessible to the public and to the "competitors". This is the division between those who have exclusive access to knowledge and those who have not. In doing so, we are isolating the knowledge domains while assembling increasingly integrated and complex products. The resulting system of production is immensely interdependent spanning vast geography, while creating expertise silos that are deliberately disconnected. Consequently, we are creating a world that is prone to spectacular failures when some of these crucial silos fail due to unforeseen circumstances. We are, therefore, slowly choking our capacity to deliver "public good" through knowledge on the name of protecting the profitability of the corporations. Besides, an individual innovator today either is subservient to a corporation or is not rewarded adequately for the innovation unless the invention generated immediate profit through entrepreneurship, a less likely prospect for most innovations.

To what end should we govern innovation?

The primary aim of having the innovative faculty is to continue producing knowledge and inventions even at times the society's ambition and systems encounter unforeseen pitfalls. Such condition can only be satisfied when curiosity, imagination, knowledge and benevolence complement each other, which, by the way, may not always be true. In bringing benevolence into picture, we have to introduce accountability in the faculty of knowledge. The interest of the society in sustaining the progress would, therefore, be served well if the innovative faculty is governed under the framework of a democratic accountability with maximal public participation while giving respectable room to prosper for dedicated innovators and scientists.

Since society as a whole is the beneficiary of philosophical and scientific inquiries, learning, and innovation, it must have a direct responsibility in its governance. The society as a whole must claim the innovation from the stranglehold of the big government and big businesses while remaining within constitutionally enshrined checks and balances. Steve Fuller, an American philosopher, said, "Science itself should be governed by the principles scientists use to govern their inquiries into the nature" [6]. Thus the innovative faculty should be governed with an intention of bringing general enlightenment in the society. Its objective is to make things demystified and transparent.

While we want innovators, scientists, philosophers, and thinkers to be freed from the subservience to the executive and legislative branches, we want them to be fully accountable to the people. While we want people of knowledge to take us to the depth of their disciplines, we do not want to produce vast amount of "output" that is not going to be read again, simply on the name of our endless desire to innovate; we want a balance between the production and the consumption of knowledge and innovation. While we respect the knowledge possessed by successful people in their own field, we acknowledge that the very same people may not have sufficient knowledge in fields other than their own. While practitioners of a field may want to have an exclusive access to certain knowledge from the rest of the society to protect their expert status, we as members of society want cross-pollination of knowledge so that fruit of ever more innovation may be enjoyed by all. While established institutions may want

research and innovation to remain in their exclusive domain, we may want research and innovation to spread in the society. While innovators want their work to be recognized and rewarded, we want to know what it would do for the society. While experts seek ever larger funds for ever more specialization in their fields, we may want to maximize overall benefit to the society. While scientists seek freedom of inquiry, we seek right to inquire them for their services to the "public good". While applied science "experts" may want rewards to be concentrated on industrial research, we want to fairly reward all innovators who advance our sphere of knowledge, be it theoretical or practical.

How to govern the innovative faculty?

A constitution with four faculties of governance is a document to be developed through intensive public discourse. What is to be presented here is a brief protocol deemed necessary in such a system. The detail discussion of each element is beyond the scope of this article. These elements are discussed here briefly.

1. Reconfiguration of Power: The governance of knowledge production and innovation is to be transferred from the executive faculty, which is holding the power at present, to the proposed innovative faculty. The executive faculty is responsible to utilize the innovation for advancing the industries and enterprises in the country along with all other role it plays now.
2. Intransitive Power Relationship: The relation between legislative, innovative, executive, and judicial faculties should be such that each of them is independent of the other in its own designated domain but not in any other domains. Consequently, each branch is powerful and powerless at the same time depending on the context. The power dynamics of the four faculties is thus balanced in such a way that no one faculty is free to operate beyond the boundaries set by the constitution. And all branches must be directly accountable to the people. In today's Nepal for example, only the legislative branch is ratified directly by the people and the judicial and executive are essentially on the hands of the political party that controls the legislature. Each faculty publicly scrutinizes the allocated budget based on the designated scope of governance, which must be accountable to the welfare of the public.
3. Funding of Innovative Faculty: The mechanism of allocating the budgetary resources of the legislative and the judicial faculties in the contemporary governance should be applicable to the innovative faculty for its proper functioning. In this model, for all faculties of governance, the executive faculty proposes a rational budget, which gets to be thoroughly and publicly debated by all the concerned faculties. This budget will be passed only after its ratification from each faculty: executive, legislative, judicial, and innovative.
4. Inter and Intra Constituency Competition: The way political constituencies compete in public for limited resources, the innovative constituencies (various areas of knowledge competing for resources allocated for the innovation) should also be scrutinized by each other in public for winning civic support and, thus, funding for their work. People with knowledge must be able to speculate, challenge, and cross-examine the claims in open forums. The return of investment to the society should also be scrutinized and defended similarly. The innovative faculty must accept intuitive appraisal of performance as accepted by other faculties, especially the legislative (and executive in some countries).
5. Inter Constituency Exchange: The way economic constituencies allow free flow of goods and services across geographical regions, we want knowledge and

innovation to flow across the knowledge domains so that vertical barriers would be broken and cross-pollination of ideas would spread.

6. Simple Accounting: Only simple systems, understandable to everyone, can promote transparency and accountability. The competing constituencies and interest groups should gain funding through public and democratic process. Similarly the project details, project outputs, ideas, inventions and their associated funding should be all public knowledge. The scrutiny that the competing constituencies do on each other and public judgment should be the democratic mechanism for controlling corruption and misuse.

7. Reward to Own: All patents should belong to the country or the state, which in return reward the inventors. The innovators should be awarded non-monetary honors as well as rewarded monetarily using a public and transparent process. If international patents are in the best interest of the society, such patenting initiatives should be taken by the state or the country. The philosophy of and procedure for rewarding the innovators is proposed in subsequent sections of this article.

8. Right to be Wrong: The innovative faculty shall be granted the right to be wrong as granted to journalists by US Supreme Court in 1964 [7], while making the faculty accountable through other public procedures noted in earlier points. However, this rule shall apply to those who strictly remain in the field of knowledge and innovation, and not in enterprise or other domains.

9. Distributed Governance: Only way the governance of innovation can be durable, resilient, and transparent is by not letting it become one “super tree” covering the entire country. Instead it should be created in the form of a forest consisting of trees of many species and many trees of the same species with a provision of independently producing seeds. Therefore, there should be an innovative faculty formally established in every local government and these faculties should be laterally networked through transitive protocols for continuous flow of knowledge and collaboration in the knowledge production activities.

Why should we reward an innovator?

A thoughtful society should put people's imaginative spirits to use in serving society's interests. It should make pursuit of knowledge, learning, creativity, and innovation a part of its culture. This is because, if the people who have useful imaginative power are not rewarded, their self-esteems will be adversely affected which hampers the production of innovative ideas. On the contrary, if the creative people were given genuine respect and honor, they would be inspired to innovate more. Moreover, creative people should not have to toil in areas outside their core competencies for their bodily survival.

The cultural aspect of innovation deserves a special emphasis. One of the most successful companies of our time, Google, requires that engineers spend one fifth of their time working on any idea of their choice. These ideas need not to be related to Google's business. Many innovative products and services such as Gmail and Google News were born out of this culture and the Google is one of the most innovative companies of our time, as a result. Therefore, culture of brainstorming, developing ideas, spreading them rapidly, and recognizing contributions can help us harmoniously bring ever more public good while reducing discontent and friction in the society [8]. Therefore, an innovative society should be devoted in organizing such work structure which can give adequate room for innovation to flourish. Unless we

can dedicate concrete time to contemplation, reflection and inquiry, we will find myriad of excuses to not innovate - blame it on important responsibilities!

Appropriately designed rewards convey a message that sharing our innovative ideas helps us prosper together. They encourage innovative behavior over excuse, spreading of knowledge over hiding of information, and cooperation over selfishness. They help everyone to participate and submit more ideas, and encourage those who innovate. Appropriate rewards inspire the intrinsic innovator residing in all of us – the thinking humans – to be more creative. Only by rewarding creativity and creative ideas, we may grow more creativity.

How should we reward an innovator?

"Perform action abandoning attachment, being steadfast in neutrality of mind, and impartial in success and failure." **The Bhagwad Geeta [9]**

Every aspiring society should develop its own incentives package for rewarding its innovators. The incentive package needs to be developed while giving considerations to the cherished values of the society through intensive public debate. Such debates would reveal that there would be many ways to reward the innovators. Despite variances in the possibility of means, the end remains the same. The end is that the innovators are adequately motivated in the work of continuing creativity, and the innovative potential of everyone is maximally utilized for building an ethical, united, harmonious, and prosperous society. The ancient wisdom in *Geeta* says that our virtue is in our ability to impartially recognize and reward the intensity and sincerity of actions and not to reward just the successes or punish the failures. Imagine if we went to a war with rules that condemned the dead and glorified the survivors! When creative minds run in various directions, we never know who stumbles upon what. Therefore, let all sincere seekers stumble upon new ideas while knowing that they will receive evenhanded honor and dignity.

The ultimate reward of an innovator should be the personal satisfaction from the discovery of his or her inner creative potential and the benefit his or her work brought to the public. Let the discoverers feel that it is in their self-honor to be able to give something to the community that has provided them belonging, dignity and security. Let our best reward be the joy of discovery itself and the subsequent propulsion from the domain of desires to the domain of inner happiness. However, there is a limit to how far an individual's inner spirit can take if society is not aware and respectful of the contributions of the work of imagination; only a benevolent society can produce benevolent creators and vice versa; a cut-throat and selfish society cannot expect selfless service from the innovators.

Reward's inclination should be to encourage not only the innovators but also the teams and communities that are supportive to the innovators [10]. The purpose of reward is also to remove fear of failure from those who tried unsuccessfully and to keep the esteem of every seeker of innovation at high level; therefore, not putting the strain of "victorious deed" and "high quality thought" at the grassroots. It has been an established fact that we could harness ever more ideas from the grassroots through a system of eventful peer recognitions and public recognitions.

The purpose of the remainder of this writing is to propose a method for rewarding innovators and highlighting some responsibilities of the society towards the innovators. Given the need that all innovators should be rewarded, some distinction is sought between a grassroots innovation and institutionally funded contractual innovation on how we treat them.

Grassroots Innovation

"From the Son of Heaven down to the mass of the people, all must consider the cultivation of the person – the root of everything besides." **Confucius [11]**

Rewarding the grassroots level innovator is the most potent way to develop an innovative society. The sheer numeric volume of the grassroots tells us that the reach of a monetary reward can be severely limited. Therefore, the rewards should be small and financially light but loaded in meaning and symbolism of solidarity and integrity. Organizing communion of innovators and successful people from various fields and letting them foster connection would help build esteem, cross- pollinate ideas, spread ideas farther, and elicit more innovation. Rewards, recognitions, certifications, honors, paying back in services and discounts, assurance of archival of innovated knowledge, timely recognitions over delayed big recognitions, and periodic recognition of past contributions may be desirable in inspiring grassroots innovation.

The sense of transfer of innovative culture to future generations and anticipation of being referred and being referred would also help maintaining inner happiness and motivation of the creative minds. The society should, therefore, happily associate the ideas with the inventors and let stories of inventions be spread so they amount to invaluable recognitions. Let system encourage the contributors of ideas, knowledge, and creativity to be recognized at their workplaces and communities. Let them be nominated for higher awards and recognitions. At a higher level, the system should recognize and reward the innovators along with the teams and communities who promoted such people because a team is often required to translate ideas into knowledge, the knowledge into systems and business inventions. An individual innovator may be better rewarded with position promotion and recognition than with money. Organize competitive knowledge fairs to bring together innovative social capital and cross-pollinate creativity. But this cannot happen in an unfair environment where the "generals" extract most of the benefits disregarding their "soldiers".

Rewarding for best rated ideas should not be introduced until the culture is advanced and a fair system of rating and rewarding is developed; or else people may be discouraged to bring out their ideas in fear of failing. Only those ideas that required substantive funding for further development should undergo competition for the acquisition of public resource. However, at such point the whole team or community would be behind the innovators.

Professional Innovation

A society inclined to harness all the grassroots ideas and integrate them with broader body of knowledge to expand the sphere of total knowledge, must take additional measures on top of grassroots innovation. They must adopt institutional mechanism to advance higher learning and systemic production of knowledge. Further, the society may have a need to give extra attentions in areas of knowledge that help it harness benefit from its natural potential and realities, which are called competitive

advantages by the economists. It would, therefore, mean that public resources would be put into action through the hands of knowledge professionals. Consequently, the issues of quality, utility, transparency, and accountability come to prominence with the introduction of professionalized sector of knowledge domain.

Big monetary rewards to individuals are often sources of disputes and contentions than solutions, and therefore are generally better avoided, even in the world of professionals. However, money is a necessary commodity in advancing the professional work of knowledge. Therefore, institutional funding, research grants, research contracts, and similar endeavors would become integral part in soliciting knowledge production. For these endeavors drain public purse, there should be public accountability in what is being done with that purse and, therefore, a fair and transparent mechanism to evaluate them. Public should have the right to know how they can benefit from, influence on, and contribute to the advancement of knowledge sought by the professionals. Therefore, these endeavors should be presented, defended, and scrutinized in widely viewable public forum involving media.

Although rewarding innovation is our primary focus, we should also acknowledge a domain of compensation in its own right. When an innovator develops immediately profitable idea, we should not only reward the innovator like others but also monetarily compensate for its use for the benefit of society. The use of the invention by the society to generate money without fair compensation to the innovator could discourage the innovator to disclose the invention and hoard it inside him or her unless the person also has entrepreneurial charisma.

To foster production of knowledge for public good, we seek to minimize the financial or legal censorship on inquiry by other faculties of governance but we strongly seek public accountability in inquiry. We want to take the pursuit of inquiry and knowledge at every part of society than concentrating all our resources and efforts in heavy duty centers filled with designated knowledge producers who are neither scrutinized by nor accountable to the public. American philosopher Steve Fuller quotes another philosopher Feyerabend to argue against grand scale inquiries in saying that science in the spirit of inquiry can only exist where people can “freely and publicly cross-examine each other’s claims” [12]. If inquirers are seeking public resources on the name of advancing public good, let them defend to the public how their work would be of value so that public could decide if it grasps on their competitive advantage or delivers public good.

Who owns the invention?

The conventional wisdom is that an innovation is owned either through non-disclosure or through patenting by the corporation or individual who obtained the patent. However, this has discouraged the grassroots innovator to bring out inventions for the expenses incurred in the process of patenting and the bureaucratic nature of the process. In a globalized world where the entire world in interconnected, cost of international patents start somewhere from US$100,000, which is a prohibitive amount for any individual and an impossible amount for people of third world countries.

A way to ensure that money does not enslave the ideas and innovative spirit of people would be to bring the ownership of the patents to the country which made the

invention. The country should take the burden of compensating the inventors, and patenting internationally, and making them available to industries so they can bring prosperity to the country. Let people invent for the country and the society as a whole. The four faculties of governance should ensure that people's ingenuity and hard work is not unethically siphoned off to serve a few. In case of a federal form of government, patents may be owned by the central government but each individual state producing inventions may be rewarded through a formula similar to one proposed in the next section.

Is there a model for innovation reward?

Since the notion of innovation is to flourish a broad based innovative culture, it is assumed that all non-monetary or minimally monetary instruments for promoting pursuit of inquiry in the broader society are taken care of. Also it is assumed that the system of harnessing ideas and innovations and translating them into systemic and publicly accessible body of knowledge is in place. Now, we enter into this monetarily intensive part of the innovative faculty. What is proposed here is a system of evaluation and reward mechanism, which is intended to intrigue our collective deliberation and to serve as a benchmark for developing ever better schemes for rewarding innovation.

This is a mathematical model of reward system that attaches payout to innovators based on the score the innovative idea receives in a public evaluation process. The model has two actors: the performers and the spectators, and three major instruments: the pot, the plates, and the ladle. These items are described below.

The Spectators

The spectators are the general public evaluating the works of the performers which are presented, scrutinized, and defended in front of them. They would come from all background as the general public would. Each member of the public is allowed to give up to a maximum of 50 points to the work in the evaluation process. The knowledge workers vying for the reward are accountable to these people.

The Performers

The performers are the knowledge workers competing for the funding. They would come from all fields of knowledge. They are required to disclose all the inventions or proposals not only to themselves but also to the public. And in the public forum they are required to scrutinize each other in front of the spectators and defend their own work. Eventful public defense make the professionals to also work on making the field teachable and not just going into the depth of the field without regard for the value of spreading the knowledge. Thus they may win the trust of other performers on technical merits and the trust of the public by making the field teachable and knowable.

The Pot

The pot is the sum total of resources the faculty of innovation can garner from the department of finance of the executive faculty. Of the acquired resource, part of it would be used up for the basic maintenance of the innovative faculty's organizational and technical infrastructure, which would be capped at some legislated number, say 20% for the sake of example. The rest goes to support and reward the endeavors innovation and the work of the innovators. The rest will go for two purposes, first to

fund the works of knowledge and innovation, the second to reward the innovators for their works of inventions. The proportions at which they will be divided should not be fixed but should be altered with time to meet the need of the society. Let that work go to the hand of scientists, philosophers, politicians, and public. This article is not about that division.

The amount of money allocated for innovative faculty by the executive would end up in the pot as follows:

$P_t = P_a + P_p + P_r$ ---------- (v)

Where,

P_t = Total capacity of the pot, which is the fund allocated by the executive for the innovative faculty,

P_a = Size of administrative pot, which is the fund allocated to maintain administrative infrastructure of the faculty,

P_p = Size of performing Pot, which is the fund allocated for support the knowledge work, research and development,

P_r = Size of reward Pot, which is the money allocated for giving reward to what has already been innovated.

These allocations are done through public debate. I have a tentative value beginning with an allocation of 20% fund for administering, 60% for performing, and 20% for rewarding inventors.

The Plates

The plates are the proposals and recommendations that are owned by the performers and evaluated by the public: the performers and the spectators. The proposals or recommendations are thoroughly scrutinized by the competing performers and defended by the owners. In the end the each performer gives marks to other's plates up to 50 marks, which are averaged out and stored as "professional marks" for each plate. Similarly the spectator public gives to each plate up to a maximum of 50 marks, which are averaged out and stored as "civic marks" for each plate. The marks are averaged out for each plate and placed in the plate as civic score. The result of the evaluation would be that each plate would have received total marks equal to the sum of professional marks and civic marks minus the minimum marks required to qualify for the reward.

$Mt = Mp + Mc - Mq$ ---------- (vi)

Where,

Mt = Total marks ($0 \leq Mt \leq 100$); all negative mark plates are dropped off,

Mp = Professional marks given by the performers ($0 \leq Mp \leq 50$),

Mc = Civic marks given by spectators ($0 \leq Mc \leq 50$),

Mq = Minimum marks required to qualify for reward (a fixed number decided before hand collectively, say from the range: $25 \leq Mm \leq 75$)

Only those plates obtaining greater than 0 total marks will qualify to receive the reward. Now each plate is given a number of tokens based on a parabolic scale as defined as follows:

$T = S^{Mt} - 1$ ---------- (vii)

Where,

T = Number of tokens issued to the plate,
S = Steepness, which decides how linearly or steeply top and bottom performers are differentiated (1 < S < 1.2),
Mt = Total marks obtained from the previous equation.

The Ladle

The ladle is the measure to scoop the right amounts of gravy from the pot and to pour into the plates that qualified for the gravy and arrived with the tokens assigned to them. The right amount is determined using a reward formula that takes the tokens earned by each plate as the input. The reward formula is as follows:
At the time of distribution of the gravy from the pot, each plate will receive a quantity dictated by the number of tokens it contained using the formula built in the ladle in the normalized scale of 0 to 100.

$$Rn = Rq + m * T$$ ---------- (viii)

Where,
Rn = Reward assigned to a plate in a normalized scale in the range of 0 to 100,
T = Number of token as calculated previously,
Rq = Minimum reward a qualified plate (with marks reaching Mq) receives in scale of 0 to 100 with initial suggested value of 20,
m = The slope of the line used to convert Rg into actual money; this slope is calculated as follows:

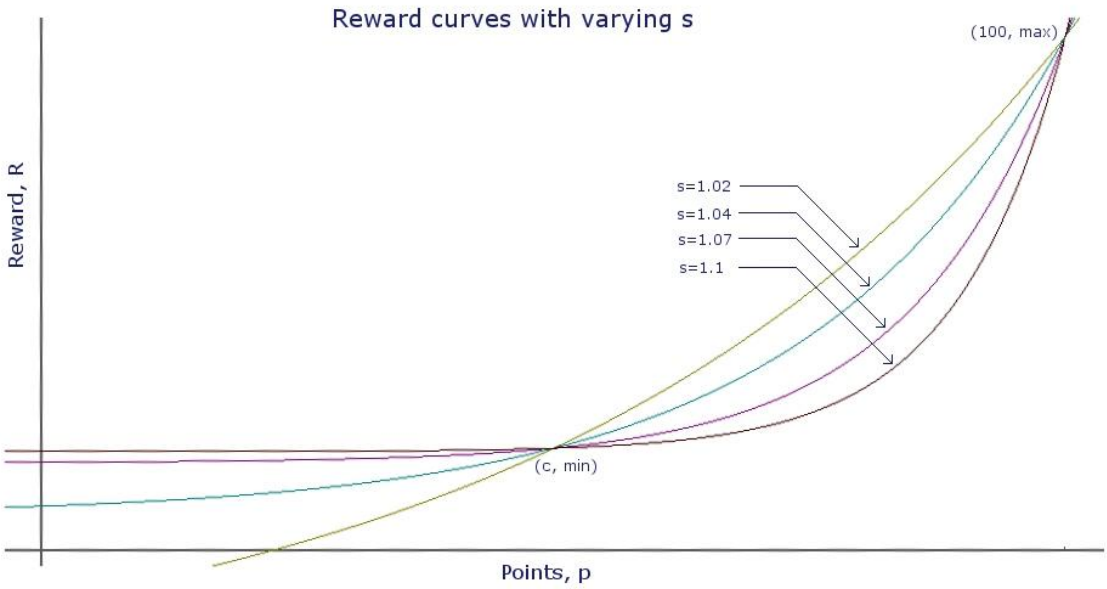
$$m = \frac{Rh - Rq}{S^{(100 - Mq)} - 1}$$ ---------- (ix)

Where,
Rh = Highest (maximum) reward, which is usually 100, but the logic allows it to be more or less,
Rq = Minimum reward of any qualifier as explained before,
Mq = Minimum marks required to qualify.

Substituting m in Equation (viii) from the value of Equation (ix) and T from Equation (vii) leads to:

$$Rn = Rq + \frac{Rh - Rq}{S^{(100 - Mq)} - 1} * (S^{Mt} - 1)$$ ---------- (x)

The plot of normalized reward (Rn) in relation to Mt (the total marks obtained above cutoff point) for a proposed value of 20 for minimum reward (Rq), 100 for maximum reward (Rh), 50 as minimum marks required to qualify (Mq) is shown in the following diagram for varying values of S from 1.02 to 1.1. Please take R in the diagram as Rn, P in the diagram as (Mp+Mc), c as Mq, min as Rq, and max as Rh.



Finally, the gravy is translated into actual money ($) using the following formula,

$$Rg = \frac{Pr}{\sum Rg} * Rn \quad \text{---------- (xi)}$$

Where,

Rg = Reward grant, the actual dollar reward issued to the plates,
Pr = The total size of the reward pot in dollars,
Rn = Normalized reward Rn of equation (viii) which is in the range of 0 to 100.

Finally, each qualified innovator team goes home with the reward of Rr for the betterment of his community and inspiration of the innovating team.

Is there a model for innovation funding?

The process for funding of an innovation would be done in a similar fashion as the reward except when converting the dollar amount. Because the dollar requirement of projects are met through a different pot, performing pot Pp, and rating received are combined with the funding sought to come up with the final funding using yet another formula (which is modified from (xi)) as follows.

$$Rg = \frac{Pp}{\sum(Rn*Rp)} * (Rn * Rp) \quad \text{---------- (xii)}$$

Where,

Rg = Reward granted, the actual dollar reward issued to the plates,
Pr = Total size of the reward pot in dollars,
Rn = Normalized reward Rn of equation (viii),
Rp = Proposal amount, the amount of reward sought in the competing proposal.

Note to the Reader

Now that you have spent time in reading this proposal, it has become possible for you to know the normalcy or poverty of the ideas presented in this paper, a product of

years of contemplation. You might have come up with your own ideas and if you bring them to the fore through as simple an act as sending feedback, we may advance our ideas for our collective benefit. If we were to develop a culture of sharing knowledge, we would prosper collectively. Joseph Badaracco, Professor of Business Ethics at Harvard Business School, says, "Hoarding knowledge ultimately erodes your power. If you know something very important, the way to get power is by actually sharing it" [13]. Thus let us share knowledge and help each produce more knowledge!

Conclusion

Expansion of the sphere of innovation and knowledge is vital to our prosperity, for which governing an independent faculty of innovation separate from the legislative, executive, and judicial faculties has been proposed through this article and the article on which it has been founded. The key element of the governance of innovative faculty has been identified in this paper as: 1) transfer of jurisdiction of innovation from executive to the an independent one, 2) the presence of intransitive Power Relationship between legislative, innovative, executive, and judicial faculties, 3) special and constitutionally mandated funding of innovative faculty, 4) inter and intra constituency competition, 5) inter constituency exchange, 6) simple accounting scheme, 7) society taking custody of invention while rewarding the innovators, 8) the right to be wrong, and 9) distributed governance as the key elements of the governance of innovation. The innovative faculty should inspire innovation at grassroots level as well as professional level. The paper also proposes methodologies to reward those endeavors and resulting innovations.

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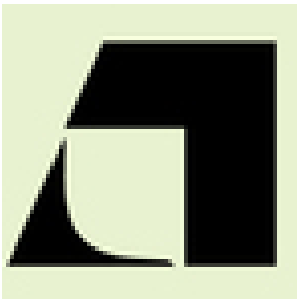
(Dr Pramod Dhakal is a former faculty member of Tribhuvan University and holds a Ph D in electrical engineering. He is Executive Director of Canada Forum for Nepal (www.cffn.ca) and International Affairs Coordinator of Non-Resident Nepalis Canada (www.nrn-canada.org). He lives in Canada and can be reached at pdhakal@gmail.com)

XXV. Appendix I: MoU Between AU, NRNA and CFFN



Governing Council
The Athabasca University
Athabasca, Canada

International Coordination Council
Non-Resident Nepali Association
Kathmandu, Nepal

Executive Board
Canada Foundation for Nepal
Ottawa, Canada

MEMORANDUM OF UNDERSTANDING
"MOU"

Between
The Athabasca University Governing Council
And
Non-Resident Nepal Association International Coordination Council
And
Canada Foundation for Nepal

Background

The Athabasca University Governing Council (hereinafter AU) is Canada's leading open and distance learning university. Non-Resident Nepal Association International Coordination Council (hereinafter NRNA) is a global organization of Nepalese Diaspora committed to streamlining their energy and resources for the transformation of Nepalese society. Canada Foundation for Nepal (hereinafter CFFN) is a non-profit organization registered with the Government of Canada, and dedicated to mobilizing resources in Canada for improving the lives of Nepalis through the light of knowledge and education.

Goals

AU, NRNA and CFFN (hereinafter "parties") recognize the value of international co-operation and seek to further the development of the Nepalese education sector in the following ways:

- Develop plans and seek funding for the creation of the Open University of Nepal (OUN) based on the model of AU, Canada's Open University;

- Work together as the major partners to implement OUN plans;

- As part of this implementation, parties will discuss adaptation of AU courses and processes deemed by the parties to be desirable and applicable to the OUN;

- Explore opportunities for the training of OUN faculty and staff in open and distance education;

- Other roles of the parties and OUN activities may be organized from time to time, as may be mutually agreed.

Financial Considerations

Financial arrangements and details for the activities undertaken by the parties pursuant to this MOU shall be determined by the parties, and shall be in writing and signed by all parties. This MOU does not impose any financial liability or responsibility on either organization with respect to the costs or expenses of the other.

Confidential and Proprietary Information

Prior to the exchange of any information between the parties of a confidential or proprietary nature under this MOU, the parties as organizations will each execute and deliver to the other a mutually agreeable confidentiality and non-disclosure agreement.

Publicity

All publications and publicity, regardless of media, originating from a party making reference to other parties with respect to this MOU require the expressed written consent of the other parties prior to being issued.

Administration

Each organization has assigned an individual authorized to be responsible for the administration and evaluation of this MOU as follows:

For AU:

Dr. Frits Pannekoek
1 University Drive
Athabasca AB Canada T9S 3A3
Tel: 1 (780) 675-6104
Fax: 1 (780) 675-6450
fritsp@athabascau.ca

For NRNA:

Mr. Dev Man Hirachan
President, NRNA
FNCCI Building
Pachali Shahid Shukra FNCCI Milan Marg, Teku,
PO Box 269, Kathmandu, Nepal.
Tel: (+977-1) 4215247/4262255
Fax: (+977-1) 4262255
Email: dmhirachan@gmail.com

For CFFN:

Dr. Pramod Dhakal
Executive Director, CFFN
33 Bellman Drive, Ottawa, ON K2H 8S3
Canada
Phone: +1-613-596-6692
Email: pdhakal@cffn.ca

Any notices or approvals required to be given by parties as organizations under this MOU will be sent to the others by registered mail, email, facsimile or by personal delivery to the above organizations.

Term, Renewal, Termination and Amendment

This MOU shall become effective on the date of signing. Any other MOU entered into between the parties is hereby revoked. The organizations plan to review this MOU after one (1) years of inception, and thereafter at three-year intervals. Any party may opt out of this MOU at any time by mutual consent or notice in writing given to the other party at least 15 days in advance. This MOU shall only be amended or extended in writing upon the mutual consent of the parties.

MOU Status

This MOU specifies general areas of cooperation and merely sets out the general basis upon which the organizations intend to proceed.

This MOU is a non-binding agreement between the organizations and does not commit the organizations to enter into any binding or legal arrangements or agreements.

If and when the organizations mutually agree to develop and implement any activities mandated under the MOU, such details will be set forth and agreed upon in separate legally binding agreements. Any further activities agreed to and developed by the parties will be set forth and agreed upon in schedules attached and forming part of such agreements.

Dated this ____day of _____, 2010.

The organizations have executed this MOU as of the date first written above.

THE ATHABASCA UNIVERSITY GOVERNING COUNCIL	NON-RESIDENT NEPALI ASSOCIATION INTERNATIONAL COORDINATION COUNCIL	CANADA FOUNDATION FOR NEPAL
_____	_____	_____
Dr. Frits Pannekoek **President**	**Mr. Dev Man Hirachan** **President**	**Dr. Pramod Dhakal** **Executive Director**
Date:_Sept 25, 2010___	**Date:_Sept 24, 2010_____**	**Date:_Sept 21, 2010__**

XXVI. Appendix J: Resolution between MoE and NRNA

A RESOLUTION

This resolution may be cited as the "Resolution on Initiative for Open University of Nepal 2010."

WHEREAS, the Ministry of Education (MoE) of Nepal has long proposed a publicly owned Open University of Nepal (OUN) as an instrument for taking higher education to all citizens regardless of socio-economic or ethno-geographic conditions; a policy for establishing OUN has been in place since the Seventh Plan and has been in existence for more than two decades; MoE has prepared a bill to this effect for submission to the cabinet;

WHEREAS, in its pursuit for supporting Nepal's development, the Non-Resident Nepali Association (NRNA) has proposed to collaborate in establishing the OUN, the MoE welcomes this engagement and supports the proposition;

WHEREAS, the participants of this program are the representatives of various stakeholders who look forward to a rapid spread of higher education, research, development and innovation throughout Nepal while recognizing that Nepal faces a problem of various geographic and socio-economic barriers hindering access to higher education for the people, especially in remote, rural and marginalized populations;

WHEREAS, this assembly recognizes the possibility of turning problem of out-migration of educated human resource into a source of knowledge, education and innovation;

THEREFORE, be it resolved that this assembly honors the Nepalese scholars, policymakers and ministry officials who have long advocated an open university in Nepal and drafted a bill to advance this issue; we recognize the parliamentarians and intellectuals/experts who initiated the effort, and all political parties who are in a process of endorsing it;

This assembly recognizes the contributions of Nepalese Diaspora (NRN) scholars and NRNs who, through the Canada Foundation for Nepal (CFFN), NeCASE, NRN-Canada, NRN-USA, NRN-SKI and NRNA, galvanized support and developed the environment of collaboration with Athabasca University (AU) and International Council for Open and Distance Education (ICDE), contributions of Houston and Ottawa conferences and their outcomes, works of NRNA Open University of Nepal Strategic Committee (OUNSC), and enduring personal contributions made by Dr. Pramod Dhakal;

This assembly warmly welcomes Dr. Frits Pannekoek, President of ICDE and AU, recognizes the stellar contributions made by AU towards this initiative, welcomes the announcement of support made on behalf of ICDE, welcomes the offer of technical collaboration from AU, and thanks the entire AU family, which has been working with NRNA and CFFN since 2009;

The assembly welcomes the Memorandum of Understanding reached between AU, NRNA and CFFN;

The Initiative will be advanced through partnership and collaboration between MoE, NRNA, CFFN, AU and other worthy partners;

This assembly endorses the Steering Committee (See Appendix A) formed in chairmanship of Nepal's Ministry of Education that includes representation from the government, NRNA, CFFN, AU and Nepalese and NRN scholars, and international personalities, as a mandated body for advancing the Initiative to create necessary conditions for establishing a publicly owned, NRN supported, Open University of Nepal;

The Initiative shall work towards building technical and collaborative foundation for subsequent establishment of OUN, and the resources, know-how, and other instruments developed by the Initiative will be transferred into OUN as and when the legislative instrument for doing so will be ready;

The Initiative for OUN is based on the principles that: universal access to education should be available to all, regardless of citizens' position in the socio-economic strata and geo-ethno locus; education programs and services should meet national and international standards; collaboration, resource sharing, efficiency, choices and innovation in education should be encouraged for sustainable growth of the institution;

Therefore, this assembly held in Kathmandu on October 7th, 2010 agrees that GoN and NRNs shall unite hands and create a resource synergy to advance the Initiative for Open University of Nepal and extend collaboration with mutually identified worthy partners;

Each individual present today at the program is assumed to be a supporter of this collaboration; And

The following signature of endorsement has been signed in the presence of Hon. Sarvendra Nath Shukla, Minister of Education, Government of Nepal, and Dr. Frits Pannekoek, President of ICDE and President of AU on this 7th day of October, 2010 in the City of Kathmandu, Nepal.

For Ministry of Education	For Non-Resident Nepali Association
(Signed by Janardan Nepal,	(Signed by Dev Man Hirachan,
Joint-Secretaty)	President)

Appendix A: Members of the Steering Committee of the Initiative for the Open University of Nepal

Chair: Secretary of the Ministry of Education (Mr. Deependra Bikram Thapa)

Vice Chair: President of NRNA (Mr. Dev Man Hirachan)

Member Secretary: Dr. Pramod Dhakal, (Coordinator of NRNA Open University of Nepal Strategic Committee, Member of NRNA-ICC, Executive Director of CFFN,)

Members:

Joint Secretary of Planning, Ministry of Education (Mr. Janardan Nepal)

Joint Secretary of Higher Education, Ministry of Education (Mr. Mahashram Sharma)

Executive Director of NRNA Secretariat (Mr. Hom Raj Acharya)

President of Athabasca University (Dr. Frits Pannekoek)

High Level Representative of AU (Dr. Mohamed Ally)

Honourable Dr. David Kilgour (Former Minister and former longest serving MP of Canada)

Hon. Prof. Stephen Lewis (Order of Canada, Distinguished Visiting Professor at Ryarson University, former Ambassador to UN, former UN Special Envoy for HIV/AIDS in Africa)(TBC)

Representative of CFFN (Dr. Kalidas Subedi)

Representative of CFFN (Dr. Ishara Mahat)

Dr. Bidya Nath Koirala (TU, Nepal)

Dr. Mahabir Pun (Nepal)

Dr. Ambika Adhikari (USA)

Dr. Drona Rasali (Canada)

Dr. Raju Adhikari (Asia Pacific)

Dr. Krishna Chandra Prasad (Europe)

Dr. Kalyani Rai (USA)

Dr. Bidya Ranjeet (USA)

Appendix B: Members of the National Advisory Board of the Initiative for the Open University of Nepal

Dr. Tirtha Khaniya (Member of National Planning Commission, Nepal)

Vice-President of University Grant Commission

Ambassador to UN (HE Gyan Chandra Acharya)

Ambassador to USA (HE Dr. Shankar P Sharma)

Ambassador to Canada (HE Dr. Bhoj Raj Ghimire)

Ambassador to Australia (HE Yogendra Dhakal)

Ambassador to Germany

Ambassador to United Kingdom

Representative of Ministry of Finance

Representative of Ministry of Law

Vice President of High Level Commission for Information Technology (Mr. Manohar Bhattarai)

Vice Chancellor of Nepal Academy of Science and Technology (Dr. Surendra Raj Kaphle)

Vice Chancellor of Tribhuvan University (Dr. Madhav Prasad Sharma)

Vice Chancellor of Kathmandu University (Dr. Suresh Raj Sharma)

Vice Chancellor of Pokhara University (Dr. Keshar Jung Baral)

Chief Patron of NRNA (Dr. Upendra Mahato)

Dr. Mana Wagle (Education Expert, Nepal)

Dr. Bishwa Nath Prasad Agrawal (Nepal)

Dr. Hridaya Bajracharya (Nepal)

Dr. Madan Pariyar (Nepal)

Dr. Sujan Acharya (Nepal)

MP Gagan Thapa (proponent OUN Bill)

MP Rabindra Adhikari (proponent OUN Bill)

MP Keshab Nepal (proponent OUN Bill)

(Others to be identified to ensure inclusion, representation from different sector of society)

XXVII. Appendix K: The Concept of Open University

खुला विश्वविद्यालयको अवधारणा
केशव अधिकारी

औपचारिक शिक्षा अन्तर्गत शिक्षालयको चार दिवारी घेराभन्दा बाहिरबाट उच्च शिक्षा प्रदान गर्ने विश्वविद्यालयलाई खुला विश्वविद्यालय भनिन्छ । औपचारिक नीति, नियम वा बन्धनमा नरही सीमित पूर्वाधारहरूका आधारमा र पूर्व शैक्षिक योग्यताको पूर्वाग्रह नराखी विश्वविद्यालय शिक्षा प्रदान गर्ने संस्थालाई खुला विश्व विद्यालय भनिन्छ । निष्कर्षमा भन्दा खुल्ला विश्वविद्यालयमा औपचारिक विश्व विद्यालयमा जस्तो शिक्षक -प्राध्यापक) र विद्यार्थीहरू जम्मा हुनु पर्दैन । औपचारिकमा जस्तो प्रवेश परक्षिा, कक्षा- कार्यक्रम र परीक्षा कार्यक्रमहरू पनि हुँदैनन् । यस धारणा अनुसार देशको कुनै स्थान विशेषमा खुल्ला विश्वविद्यालयको प्रशासनिक भनव राखिएको हुन्छ । त्यस भवनमा विभिन्न विषयका विज्ञहरू बसी शिक्षण सामाग्रीहरू तयार पार्दछन् । त्यसरी तयार गरिएका पाठ्य सामग्रीहरू विभिन्न तहस्तर) का हुने गर्दछन् । ती पाठ्यसामग्रहिरूलाई व्यक्तिले चाहेअनुसारको ठाउँमा पठाइन्छ । यस्ता पाठ्यसामग्रीहरू आ-आ ँना मागअनुसार घरघर मै मगाएर स्व. अध्ययनबाट शिक्षा उपार्जन गर्दछन् । यो एक प्रकारको दूर शिक्षण व्यवस्थापन हो । यस्तो विश्वविद्यालयमा भर्ना हुन र शिक्षा हासिल गर्न व्यक्तिलाई कुनै पनि प्रकारको बन्देज राखिएको हुँदैन । विभिन्न युवा तथा वयस्कहरूले आ-आ ँना कामका समय बाहेक आफूले चाहेका विषयमा डिग्री प्राप्त गर्न सक्दछन् । विद्यार्थीको आ ँनो सक्रियता, सिकाइको गति र सिकाइप्रतिको इच्छा अनुसार यसमा शिक्षा हासिल गर्ने गरिन्छ ।

खुला विश्वविद्यालयको धारणा सबैभन्दा पहिले बेलायतबाट भएको पाइन्छ । सन् १९५० को दशकबाट नै ब्रिटिश ब्रोडकास्टिङ कर्पोरेसन-बीबीसी)र शिक्षा तथा विज्ञान विभागले बेलायतका प्रौढहरूलार्य शिक्षित तुल्याउन सञ्चार माध्यमहरूको उपयोग गर्न थालिसकेका थिए । र पति यस माध्यमले विश्वविद्यालयको रूप नै धारण गर्ने कार्यमा खास कदम भने चालिएको थिएन । सन् १९६२ मा बेलायती सरकारका विपक्षी नेता हेरोल्ड विल्सनले हवाई र गृह अध्ययन विश्वविद्यालयको अवधारणा जनतासमक्ष ल्याए । चुनावी अभियानका समयमा बेलायतका सम्पूर्ण युवाहरू -जो काममा लागेका छन् । का लागि फुर्सद्का समयमा अध्ययन गरी डिग्री प्राप्त गर्ने अवसरका लागि खुला विश्व विद्यालयको व्यवस्थापन गर्ने चुनावी घोषणाले यसको स्थापना भएको पाइन्छ ।

विधिवत रूपमा बेलायतबाट सुरु भएको खुला विश्वविद्यालय अहिले विश्वका विभिन्न मुलुकहरूमा शिक्षा प्रदान गर्ने कार्यमा जुटेका छन् । खुला विश्वविद्यालयको सञ्चालन आज अति प्रभावकारी रूपमा जापानमा सञ्चालन भएको मानिन्छ । बेलायत भारत, श्रीलङ्का तथा देशहरूमा समेत यस किसिमको शिक्षा व्यवस्थापन भएको पाइन्छ ।

खुला विश्वविद्यालयमा अन्डरग्राजुय कार्यक्रम, पोष्ट ग्राजुयट र एसोसियर कार्यक्रमहरू सञ्चालन हुने गर्दछन । यसको शिक्षण पद्धतिमा डिग्रीहरू प्रदान गर्दा क्रेडिट आवर का आधारमा प्रदान गरिन्छ । अन्डर ग्राजुयट कार्यक्रम अन्तर्गत गत बी. ए. र बी. ए. अनर्स सरहका प्रमाणपत्रहरू प्रदान गरिन्छ । साधारण बी. ए. क लागि ६ क्रेडिट र बी. ए. अनर्सका लागि ८ क्रेडिट आवर्स -घण्टा) अध्ययन गर्नुपर्ने व्यवस्था गरिउको छ । एक वर्षे क्रेडिट कोर्स अन्तरगत विद्यार्थीले ३२ साप्ताहिक एकाइ अध्ययन गर्नुपर्दछ । एक एकाइको अध्ययनका लागि १२-१४ घण्टाको अध्ययनको आवश्यकता पर्ने गरी शैक्षिक सामाग्रीहज्ञको निर्माण गरिएको हुन्छ ।एक क्रेडिटको अध्ययनका लागि १ वर्षको आवश्यकता पर्ने व्यवस्था गरिएको र यो व्यवस्थानुसार बी. ए. तहको प्रमाणपत्र प्राप्त गर्न ६ वर्ष लाग्ने देखिन्छ । यसको व्यवस्थाअनुसार एउटा व्यक्तिले बढीमा २ क्रेडिट सम्म लिन पाउने व्यवस्था उल्लेख छ । जसअनुसार बी. ए. साधारण गर्न ३ वर्ष लाग्ने जुन औपचारिक विश्वविद्यालयीय प्रणाली छ त्यो भन्दा खास अन्तर -समयको) नहुने देखिन्छ ।

खुला विश्वविद्यालयले पोस्ट ग्राजुयट कार्यक्रमलाई अनुसन्धानात्मक कार्यक्रम मान्दछ । यस कार्यक्रम अन्तरगत बी. फिल., एम. फील र पी. एच. डी. डिग्रीहरू प्रदान गरिन्छ । यस्ता डिग्रीहरू विद्यार्थीले अध्ययन पूरा गरी शोधपत्र प्रस्तुत गरेपछि मात्र प्राप्त गर्दछन् । शोधपत्र प्रस्तुत गर्नु अघि निर्धारित क्रेडिट विद्यार्थीले पूरा गरेकै हुनुपर्दछ । यस तहका लागि तोकिएको क्रेडिटलाई अनुसन्धान क्रेडिट भनिन्छ । विद्यार्थीले तोकिएको क्रेडिट पूरा गरे गरेनन भनी जाँच्नका लागि परीक्षाको व्यवस्था गरिएको हुन्छ ।

खुला विश्वविद्यालयमा गरिने शिक्षण पद्धति मुख्य गरी छापा सामग्री र त्यस अन्तरगत पत्राचार पाठ, निर्दिष्ट पुस्तकहरू, सिफारिस सामाग्रीहरूका आधारमा सञ्चालन हुन्छ भने सञ्चारमाध्यमलाई प्रभावकारी बनाउने उद्देश्यले वा सञ्चारमाध्यमलाई पनि प्रभावकारी शिक्षण माध्यमका रूपमा लिइन्छ । यस अन्तरगत रेडियो तथा टेलिभिजनको स्थान मुख्य रहन्छ । यसरी रेडियो तथा टेलिभिजबाट पत्राचार सामग्रीहरू वितरण गरेर विवरण प्रसारण गर्दा पनि विद्यार्थीलाई

अप्ठ्यारो पर्ने भएकाले यसका लागि व्यक्तिगत, सामूहिक, टयुसन वा व्यक्तिगत वा समूहिक परामर्श अथवा समर विद्यालयको व्यवस्थापन गरिएको हुन्छ । यस्ता समर विद्यालयहरूमा सार्वजनिक विश्वविद्यालयका प्राध्यापक र विशेषज्ञहरू पनि उपस्थित भएर समस्या समाधान गर्दछन् ।

कार्य तथा मूल्याङ्कनका हकमा विद्यार्थीले आफूले प्राप्त गरेको पाठ्यसामग्रीका आधारमा के कति ज्ञान र सीप हासिल गरे भन्ने जान्नका लागि धेरै क्रियाकलापहरू गर्नुपर्ने हुन्छ । यस्ता कार्यहरू खास गरी लिखित हुने गर्दछन् । सबै क्रेडिट आवर पूरा गरिसकेपछि तोकिएका स्थानीय अध्ययन केन्द्रहरूमा ३ घण्टे लिखित परीक्षाको योजना गरी बाह्य परीक्षकद्वारा परीक्षण गरी नतिजा प्रकाशन गरिन्छ । नतिजा प्रकाशन पश्चात तोकिउको अवधिमा तोकिएको स्थानबाट प्रमाणपत्र वितरण गर्ने गरिन्छ र आवश्यक प्रमाणपत्रहरू विद्यार्थीलाई घर घरमै उपलब्ध गराइन्छ ।

खुला विश्वविद्यालय स्थापनाको अवधारणा विकास भएर स्थापना हुन सके नेपालका हरेक दुर दराजका युवाहरूले धन र श्रम खर्चेर सहरी क्षेत्रमा वैरिनु पर्ने र सहरी क्षेत्रमा जनघनत्व बढाएर वातावरण प्रदूषणको मात्रा बृद्धि गर्नुपर्ने अवस्थको अन्त्य हुने थियो । त्यसको अलावा कुनै उमेर र स्तरका मान्छेहरूले पनि खुला विश्व विद्यालयमा अध्ययन गरेर लाभ उठाउन सक्ने थिए । हाम्रो देशमा स्थापना भएको प्राथामिक रेडियो दूर शिक्षा कार्यक्रमले दूर दराजमा रहेका शिक्षकहरूलाई रेडियो तालिम कार्यक्रमबाट धेरै फाइदा पुगेको छ ।

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XXVIII. Appendix L: Report of the First Planning Meeting

Summary Report of the Planning Meeting
January 7, 2011
Ottawa, Canada

Open University of Nepal Initiative Steering Committee
Ministry of Education, Keshar Mahal, Kathmandu, Nepal

Venue: Association of Universities and Colleges of Canada, Ottawa

Participants:
Embassy of Nepal: Dr. Bhoj Raj Ghimire (Ambassador), Mr. Tara Prasad Pokharel (Minister Councillor)
Athabasca University: Dr. Frits Pannekoek (President of AU and President of ICDE), Dr. Pamela Walsh (Vice President of Advancement), Dr. Mohamed Ally (Director of Distance Education), Mr. Troy Tait (Director of Government Relations), Dr. Barbara Spronks (Project Development Consultant and former Director of Regional and Tutorial Services), Ms. Tara Friesen (Manager of Alumni Relations and Philanthropy), Mr. Iain Grant (Manager, Special Projects) Skype
Canadian Patrons: Hon. Dr. David Kilgour (Steering Committee Member), Mr. Terry Curtis (CFFN Advisor and former Vice-President of Nortel), Dr. Ronald W Watts (former Principal and Vice-Chancellor of Queen's University), Dr. Kunjar Sharma (Honorary Consul General of Nepal) Skype
AUCC: Mr. Greg Fergus (Director of Public Affairs and International Relations)
OUN Working Team Leaders: Dr. Pramod Dhakal (Member-Secretary OUNSC), Dr. Ambika Adhikari (USA Steering Committee Member) by Skype, Dr. Raju Adhikari (Australia, Steering Committee Member) by Skype, Dr. Drona Rasali (Team-Canada Lead from Diaspora Nepalese, Regina) by Skype, Dr. Shiva Gautam (Harvard University) by Skype, Dr. Mahabir Pun (Nepal) by Skype, Dr. Govinda Dahal (CFFN Deputy Director)
CFFN and NRNA representatives: Dr. Kalidas Subedi (Steering Committee Member), Mr. Pradeep Raj Sharma (CFFN Treasurer), Dr. Ishara Mahat (Steering Committee Member), Dr. Toya Baral (Research Scientist), Dr. Shiva Ghimire (Research Scientist), Dr. Bharat Shrestha (Research Scientist), Mr. Naba Raj Gurung (NRN-Canada President), Ms. Radha Basnyat (NRNA), Mr. Ishwor Dhungel (CFFN), Dr. Gokul Bhandari (University of Windsor) by Skype
Technical and Logistical Support: Prashanta Dhakal and Benjamin Wood

After welcome remarks, introduction to the mission and a round table introduction of participants the preliminary planning meeting was held in two stages, the first to set the vision, mission and goals, and the second to understand the business structure, business opportunities, and approach to business development, develop the roles and responsibilities of participating institutions and individuals, and to develop a

preliminary plan of action. His Excellency Nepalese Ambassador to Canada Dr. Bhoj Raj Ghimire was the chief guest of the program. Part I of the program was chaired by Dr. Frits Pannekoek, moderated by Dr. Pramod Dhakal, and summarized by Dr. Pamela Walsh. Part II of the program was chaired by Dr. Pramod Dhakal and moderated and summarized by Mr. Terry Curtis.

PART I: Strategy

This session started with Nepalese Ambassador's remarks on behalf of the Government of Nepal. He acknowledged the Kathmandu Resolution and formation of Steering Committee as notable progresses in the mission. He said that establishment of the OUN has been one of the priority initiatives of the GoN since the 1990s. The government is about to table a Bill in the parliament and is willing to mobilize budgetary resources as well as to solicit international resources. The Diaspora response in fund raising is also encouraging and mobilization of diaspora intellectual and material resources is a strong component of this mission. He thanked NRNA, CFFN and Athabasca University for helping build the momentum.

Chair of the session Dr. Frits Pannekoek stated that OUN has been one of the most exciting projects and it will be the first Open University in a developing country to be starting from scratch and the first to engage diaspora in its creation and development. He was absolutely convinced for the cause from the Houston conference of May 2010 for its uniqueness of offerings and powerful consensus found among Nepalese on the matter, and fusion of passion, novelty and aspiration. He, therefore, believed that the project will set an international standard and the resources will be found from anywhere in the world.

Dr. Ronald L Watts, Professor and Vice Chancellor of Queens University, Mr. Greg Fergus, Director of Public Relations at the Association of Universities and Colleges of Canada, Hon. Dr. David Kilgour, former Minister and Member of Parliament of Canada, and participants from the Nepalese Embassy, AU, NRNA, NRN-Canada, AUCC, CFFN and other Nepalese scholars individually noted this enterprise as exciting and to do whatever they can to help.

Vision, Mission, Values and Goals:
The participants then focused on aligning the stakeholders on common vision, mission, goals, and values. It was recommended that participant also give further comments in writing within the next seven days. Wider circulation of the vision, mission, goals and values developed during the session and incorporation of written comments provided by the participants and by the wider reviewers were recommended as an important exercise. Such exercise was also identified as the power behind many of the funding applications and moral support.
This university is about cashing on the latest development in mass access to technologies and commitment to build prosperity through knowledge by removing the barriers in the access to learning. Such barriers faced by people today include the barriers of readiness, circumstances, and income. Nevertheless, this would not be an university for the poor but one to harnesses the excellence of every human being, to lift the spirit of all humans. It will be unique, captivating and inclusive of all. In this spirit, the floor passed the following motion, "The vision, mission, goals and values of

the OUN shall be circulated to a wider mass and they will be submitted to the steering committee after incorporating all suggestions".

The Vision
"Igniting the spirit of learning and harnessing the excellence in every human being for building an intellectual, prosperous, sustainable, and always-learning society"

Mottoes
1. The University for All of Us
2. Through the Light of Knowledge, ignite the excellence in all
3. Democratization of Education and Massification of Learning

Mission
Establishing a comprehensive research university of open learning to
1. take university to people's homes and communities,
2. achieve excellence in education, research, innovation and lifelong learning,
3. bring marginalized people into the mainstream of education by removing barriers to learning including those of of distance, time, money, circumstances, exclusion, disabilities and readiness,
4. connect learners and their learning needs with global sources of knowledge.

Goals
Our goals are:
1. to take university to people's homes and communities over a robust technological foundation,
2. to remove all barriers to learning opportunities including those of income, circumstances, geography, and readiness by mode of open learning,
3. to meet informational, educational, technical and vocational needs of people by connecting learners with sources of knowledge and skills that may be found anywhere inside or outside the country,
4. to convert the raw knowledge and skills found in the nature, society and culture into formal knowledge by means of distributed knowledge production, co-development and collaboration,
5. to continue educating and training youth that take foreign employment by facilitating lifelong education and learning,
6. to convert brain drain into brain gain by mobilizing diaspora people in education, research and transfer of knowledge and skills,
7. to offer a learning system that scales to rising enrolments and efficiently adapts to population movement,
8. to build economies away from big cities by directly entering into knowledge economy through education, transfer of skills and entrepreneurial knowledge,
9. to become the model open university of the 21st century.

Values
Our values are the basis for our actions. We, therefore, set some principle values against which our actions and integrity will be tested.
Ethical values: These are the values that put limit to our actions and bind our ambitions. They set some boundaries that we would not cross at any cost. These are the values we must live by.

1. Equality: We practice inclusion, fairness and justice, and adhere to the principles of universally accessible public education by removing barriers for all in access to education
2. Honesty and respect: We earn credibility and trust through fair and transparent actions and mutual respect
3. Commitment to excellence: We are committed to be accountable to our words and actions and demonstrate excellence in them
4. Green: Our University will be one of the greenest institutions of higher learning in the world

Inspirational values: These are the values that inspire us to cross all limits and reach new heights not reached before.

1. Learning: We aspire to build a society devoted to lifelong learning with insatiable curiosity
2. Creating: We aspire to create knowledge, skills and technologies, including exploration and utilization of indigenous know-how
3. Collaborating: We actively collaborate to provide best possible education and to innovate for better solutions
4. Quality: Our products, services and people will be internationally known for excellence in credibility, quality and reliability
5. Sharing: We value in translation and transfer of knowledge and openly sharing our knowledge will all in the world.

Current Structure of the OUNI:

1. National Advisory Board: It involves personalities from many fronts like diplomatic missions, various organs of government, prominent educationists, planners, and politics. It is mandated to provide advice to the Steering Committee. Its role is to help identify any potential problems in planning and operation, and to provide input for setting right priorities and bringing ideas for improvement.
2. Steering Committee: This is the body created with oversight power for the operations of the OUN initiative. It is chaired by Secretary of the Ministry of Education. Day to day operation will be carried out by an executive committee formed under the steering committee and led by the Member Secretary. They all report to the steering committee through OUN initiative Secretariat. Currently there are four working committees.
3. Institutional Structuring Sub Committee (ISC): Formulating legislative, regulatory, and legal instruments is the work of this committee. This committee works with the government, legislators, and policy makers of Nepal so as to inspire the development of legal and legislative instruments in Nepal that will help us build the kind of institution we aspire. It is chaired by Dr. Raju Adhikari.
4. Resource Mobilization Committee (RMC): Harnessing Diaspora and international resources and business development is the mandate of this committee. The team members of this committee may not necessarily be academicians. It is chaired by Dr. Ambika Adhikari
5. Academic Development Committee (ADC): Development and delivery of pilot and full-fledged academic programs. This team will be in most part be that of academicians and educationists. It is chaired by Dr. Drona Rasali.
6. Academic Infrastructure Committee (AIC): Develop telecommunication, computing and information infrastructure for the delivery of the university

programs. This team will in large part be made up of experts in computing, communication, information and technology. It is chaired by Dr. Mahabir Pun.

Partnership:
On partnership, funding opportunities, and approaches to funding application, the meeting came to accept the position of AU that this is a project of Government of Nepal and Nepalese diaspora. The Athabasca University (AU) would like to see itself in an advisory and facilitating role. Partnership with the Association of Universities and Colleges of Canada (AUCC), and as this is a networked education project the Canadian Virtual University (CVU) was identified as valuable. If CVU is involved in any funding application, it will naturally involve all the 14 universities in Canada engaged in distance education. In partnership formulation it boils down to (1) what are the rules? (2) how could we maximize our strategies? (3) how could we mobilize all the information required to prepare the application? Our approach is, "Be flexible and be urgent! Do not setup a barrier inadvertently!"

CIDA was identified as a potential funding agency to OUNI. It was decided to make an application. Alternatives from Diaspora community initiated project, bilateral and multilateral partnership project, University Partnership Program in which AUCC, AU and CVU could work together were suggested as alternatives. In the past, we trained people of many developing countries and the trained people ended up staying in Canada. This is a unique situation where we are now able to train the residents of Nepal at their own places and we can train Diaspora community that will contribute back to the country of their origin. Our case here is very strong. The vision of the Diaspora engagement is very strong.

Bill and Malinda Gates Foundation has committed itself to open universities and open education. That is the direction the foundation took last year. The trick however is to get an invitation. Fortunately, this project has that required appeal because it involves Diaspora, it involves people, it involves government, and it involves new ideas. Anybody who can give us a senior audience with Bill and Malinda Gates Foundation, Carnegie Foundation, Hewlett Foundation, Ford Foundation, Aga Khan Foundation and similar foundations could be very important for this project. These agencies these days work together than competing with one another and often large projects are developed in an invitational basis. The total amount of money we are seeking in not beyond any one of their capacity. It is the excitement we can create about this project which will make it happen.

There are other opportunities within Canada because a lot of this work involves mobile learning. Therefore collaborating with telecommunication companies, such as RIM, is also a good idea. There is also a learning company headquartered in UK and whose branch is here in Canada which could be very interested to be part of this. Commonwealth of Learning is also another potential partner.

UNESCO is also another source of funding. UNESCO is actively promoting Open University programs and is providing a platform for resource sharing among universities. UNESCO could be an important partner agency as they are actively engaged in the massification of learning. UNESCO can open doors of agencies and governments and it has a convening power to bring a number of partners together. They can bring donors together and ask how they think about this project. Therefore,

any connection with UNESCO, whether through government or individually, is worth utilizing.

Application Readiness:
The meeting identified following area for readiness for application:

1. Robustness: all committees prepare programs and activities, risk, and financial requirements.
2. Segmentation: Separate pilot projects and comprehensive business plan.
3. Expertise Pool: Contingent of people with specified input roles for grant writer to consult.
4. Availability: Be able to go through a number of rush-rush and wait-wait periods.
5. Risk Strategies: Teams identify potential risks and risk mitigation strategies for their groups. ISC identifies: legislative and regulatory risks, risks in vision, mission, goals, time of Act passage, structural loopholes in current legislative/regulatory instruments. RMC identifies: sources of matching funds and in-kind contributions, diaspora contributions and diaspora who have connections with other contributors, area experts, people who network. ADC identifies: courses, delivery methods, costs, academic infrastructure requirements, learning models, accreditation processes. AIC identifies: learning centre locations, costs, unit costs of types of works, existing infrastructure, needed infrastructure, and technical specifications.

Interim Legal and Institutional Instruments:
Interim institutional and legal instruments are needed to launch the Phase I activities in a robust environment where we could operate smoothly, gain the confidence of the learners, and maintain momentum that has been built. The Kathmandu agreement made as per the resolution of October 7, 2010 has been that we continue the work as a project until the day the legislative instruments are ready. The mission of the project is to give birth to a university and the mandate is such that, as and when the legislative instruments for the university become ready, all the works of the project will be transferred to the university.

Because pilot academic programs are likely to be launched in the interim phase, instruments are needed to fully protect the learners. This will be accomplished in collaboration with a fully degree granting university like AU in issuing formal and accredited certificates and diplomas to the learners. This means that we will have the capacity to deliver accredited quality programs to the learners. AU will act like our interim accreditation body so students will obtain necessary certificates and diplomas from a recognized institution.

Our intermediate steps are:

1. Establishment of the Secretariat at the Ministry of Education
2. Legal recognition of OUNI from government
3. OUNI Bank Account with charitable status.
4. "OUN Trust Fund" at Athabasca University for international fund collection
5. Arrange academic development, delivery, and certificate issuance in collaboration with AU.

Long Term Legislative and Legal Instruments:
Recently, a bill in relation to Open University of Nepal was submitted to the parliament. However, having flooded with proposal for more than a half dozen new universities in the last two years, the legislators have decided that an umbrella act be passed that should govern all universities of Nepal. A bill to that effect has been prepared and the MoE has submitted it to Prime Minister's office for cabinet approval before it could be submitted to the parliament. The Umbrella Act also includes a provision for an Open University. Task is before OUN initiative in three fronts: (1) to work on the Umbrella Act for improvements in its wording and intents so such that it would lend to autonomous operation and incorporation of professionalism as aspired by modern institutions - and submit recommendations to that effect, (2) to make necessary public and institutional highlighting of its urgency so the bill could move through the Cabinet and then the Parliament on a priority basis, and (3) to recommend regulations and rules to be further built under the umbrella act so as to achieve the stated goals in quality, autonomy and professionalism.

At present, the work is moving slowly primarily for the reason that for more than six months the legislature has not been able to form a government. It is expected that once the government is formed, it is likely that the Umbrella Act of the university will be among the top priority projects of the government and its passage is likely. It may take a few months from the time of formation of the government. That the fate of so many universities is hinged on the umbrella act there might be greater push for its passage even from other corners. The OUN Institutional Structuring is to work with other stakeholders of Nepal for the passage of the bill and the formulation of other regulations and administrative procedures.

Roles and responsibilities of participating institutions:

1. Government of Nepal

1. Provide prominent leadership and maintain the priority for the program.
2. Provide funding through allocation of budget and provide material and administrative support to implement the terms of signed resolution of October 7, 2010.
3. Provide endorsement to the Secretariat so that it can solicit internal and international funding.
4. Provide legal outlet to conduct pilot project as work of the government.
5. Provide leadership role in mobilizing national and international resources.
6. Provide supporting data and documents necessary.
7. Empower diplomatic missions to represent Nepal in solicitation of international assistance and partnership.
8. Facilitate the work to bring out an Act of parliament for OU.
9. Provide physical facilities and resources for the mission Secretariat from Nepal's internal means.
10. Disseminate information to Nepal's governing organs.

2. Athabasca University

1. Provide mentorship in policies, collaboration, accreditation, quality control and institution design.
2. Partner in planning, program design, content production, teaching, research, and project design and implementation.
3. Write application for the initial round of international funding.
4. Orient/train diaspora and Nepali scholars in OD environment and systems.

5. Establish "Open University of Nepal Trust Fund" for Canadian donors.
6. Provide technical assistance in establishing methodologies, tools, technologies, approaches, programs and system of records.
7. Partner in building learning communities in rural and remote areas;
8. Facilitate partnership with international ODL community.
9. Help generate grassroots funds from Canadian public.

3. NRNA

1. Provide lead role for diaspora partnership.
2. Ensure adequate representation of NRNs in policy making, administration and management.
3. Provide leadership in developing seed funding from NRNA and grassroots NRNs.
4. Providing efficient platform for dissemination of OU programs and information among NRNs.
5. Mobilize and transfer NRN skills, knowledge, technology and resources to benefit OUN.
6. Solicit collaboration in international arena.

4. CFFN

1. Provide technical and academic leadership in partnership with NRNs.
2. Develop background papers, research, data, and expertise.
3. Solicit human, material and academic resources from Canadian sources.
4. Partner in research and academic support.
5. Work as a liaison office of the OUN Secretariat for North-America.

5. Secretariat

1. Coordinate the works of all participating institutions.
2. Integrate works and resources as per institutional plan.
3. Develop infrastructural and academic foundation;
4. Contribute in building legal instruments.
5. Build and manage implementation teams.
6. Keeping assets and records of institution.
7. Periodically inform all collaborators on developments.

6. Parliamentary Outreach Group in Canada

To generate Canadian political and governmental support for the initiative and as a stepping stone in developing an international consortium, Dr. David Kilgour, who is also the Steering Committee member, was requested by the floor to develop Parliamentary Outreach Group in Canada in collaboration with Canadian parliamentarians. His ability to reach out to members of various political inclinations in Canada and his international recognition were well recognized by all and he accepted the responsibility. He accepted the role to work towards building international support.

Team for Business Development in Canada and USA:

Mentoring and advice - Dr. Frits Pannekoek, Mr. Terry Curtis, Dr. David Kilgour, Dr. Ronald L Watts

Coordinator of Comprehensive Business Plan Development Team: Dr. Mohamed Ally

AU contact person for pilot academic program: Dr. Mohamed Ally

Coordinator of Grant Application Development Team: Dr. Pamela Walsh, supported by a grant writer and chairs of the sub-committees
Liaison to Government of Nepal: Dr. Bhoj Raj Ghimire, Mr. Tara Pokharel
Government Liaison in Canada and socialization of OUN concept: Mr. Troy Tait, Dr. Ambika Adhikari
NRNA Contacts: Dr. DAmbika Adhikari (Resource Mobilization, lead-contact), Dr. Drona Rasali (Academic Developent), Dr. Mahabir Pun (Adacemic Infrastructure), Dr. Raju Adhikari (Institutional Structuring), Dr. Shiva Gautam (Pilot Program Execution)
NRN-Canada Contact: Mr. Nava Raj Gurung
NRN-USA Contact: Mr. Raj Timsina
Lead Team Ottawa and CFFN Contact - Dr. Govinda Dahal
CFFN liaise with NRNA, NRN-Canada, NRN-USA, and other Nepalese associations in North-America - Mr. Ishwar Dhungel, Dr. Kalidas Subedi, Dr. Bharat Man Shrestha
OUN liaison with AU - Dr. Drona Rasali, Dr. Govinda Dahal
Providing charitable mechanism for donationng - Mr. Pradeep Sharma, Dr. Shiva Chandra Ghimire
Business Plan Development - Dr. Ambika Adhikari, Dr. Shiva Chandra Ghimire, Dr. Ishara Mahat, Dr. Toya Baral, Dr. Kalidas Subedi
Fund Raising and Fund Collection - Ms. Tara Freisen, Ms. Radha Basnyat-lead, Mr. Robin Pudasaini
Research and Publication - Dr. Drona Rasali, Dr. Govinda Dahal, Dr. Gokul Bhandari, Dr. Kalidas Subedi, Dr. Ishara Mahat, Dr. Shiva Ghimire, Mr. Ishwar Dhungel, Dr. Toya Baral, Dr. Bharat Shrestha

Session Summary:
Dr. Pamela Walsh summarized the session by saying that (1) the/ vision, mission, values and goals will be finalized after further feedback from participants and then receiving feedback from wider circulation; (2) it should reflect that OU is about removing barriers to education; (3) OUN is not exclusive to a group even though it makes special role in serving the underprivileged and marginalized groups; (4) we are to submit a funding application to CIDA within two months; (5) we pursue multiple sources of funding by dividing the larger problem into exclusive components; (6) we identify many non-governmental foundations as potential sources of funding including Bill and Melinda Gates Foundation, Hewlett Foundation, Ford Foundation, Carnegie Foundation, and Aga Khan Foundation; (7) We connect to them through people who have links; (8) Legislative instrument and interim endorsement of Secretariat from the government are important and we set to get them, asking the government to take the lead role; (8) we clarified the roles and responsibilities of all collaborating entities, (9) "Phase I" is the impending phase of the initiative, which will do pilot study of academic program; (10) we decided to launch "instructional design" program from AU as part of the Phase I initiative, (11) we set up a team to take up different roles; (12) we decided that Steering Committee has played and will continue to play an important role and its ccountability instruments will be built swiftly.

Session Chair Dr. Frits Pannekoek closed the session with satisfaction with the session outcomes and to now focus on actions, to get the resources, and to get the job done. He said that we are now ready to move on to the action phases of the initiative.

If we let a lot of time lapse, while we have many energetic people around eager to be involved in a hundred and one things, it would be a loss for the project. Therefore, it is important that we keep the momentum going, move forward quickly, and ride on this incredible wave of energy. Therefore, in building consensus and moving forward quickly, he expresses his preparedness to devote his energy and of Athabasca University.

PART 2: Business Development and Planning

The Part II of the meeting was chaired by Dr. Pramod Dhakal, Member-Secretary of the Steering Committee of the OUNI and was moderated by Mr. Terry Curtis, Advisor to CFFN. This part concentrated on developing action plans.

Developing comprehensive business plan:
The business plan development involves three constructs: top, middle and detailed. The top level construct sets vision, mission, goals and strategies. There we determine leadership and direction. At the middle level we develop business plan where we try to identify how many ways a project could fail, and what should be done to manage the program successfully. We determine what are the costs, how the budget would be acquired and allocated, what measures are taken to control the cost, who are the people who would implement the plan, in what stages/phases the plan will be delivered, and what matrices will be used to measure the performance. At the bottom level, we break the program into a set of projects and we integrate the project's outputs to ensure the expected outcome. Here we focus on how we would develop the comprehensive business plan. The comprehensive plan ought to have the entire structure of the university and structure of its programs along with details on how we achieve them.

For business plan development, we need to collect inputs from studies, surveys, thought leaders, subject matter experts and strategic direction. There may be many individuals and teams providing the inputs. And we will use a team of faculties or experts to integrate all the inputs together and yield a comprehensive business plan. The business plan will provide the architectural view of the institution or a blue-print of the institution. It will tell how the university will look like, what will be the faculty structure, how will be the records kept, how will the students be admitted, what kind of degrees and what kind of courses be offered, and who plays what role. Although a team of expert may develop the plan, we will likely have a paid author to write down the plan. And the process of developing business plan could very well be funded by one of the funding agencies, or so will we solicit.

Sometimes in the past the hiring of experts for business plan development was almost mandatory but that situation is no longer imposed now. Nevertheless, we are better off to assign the task of business plan writing to a consultant.

If we ask some external person or agency to write the business plan, the entity to whom the integration team should report to would be OUN Secretariat. The Secretariat should ensure the right operation for the initiative, including the business plan development. The body to put the stamp of approval to the business plan will be the Steering Committee. By this approach, the Member Secretary would be the one to whom the integration team or the business plan development team will report to and

Steering Committee is the one to whom the Member Secretary will submit the business plan for obtaining the stamp of approval.

The meeting then turned into selection process of the author. This responsibility was handed over to the business plan development lead of the Diaspora Nepalese team. The team has chosen Athabasca University to provide assistance in developing the business plan based on the experiences of the institution and the experiences gathered around the world. Based on this selection process, we sought an expert from AU to lead the effort and Dr. Mohamed Ally was recommended as the expert to lead that effort. Mohamed Ally has accepted the offer if that will be acceptable to the Secretariat and the Steering Committee. Dr. Ally has six years of experience as Director of Distance Education at AU, other senior administration experience of Open University at AU, technical expertise in instructional design and entire view of a successful Open University, and successful international experiences, he has been considered as a right person to do the job.

The participants agreed that a business plan will be developed under Dr. Mohamed Ally's leadership and authorship by no later than December 2011 because of the pace at which this project is developing. His team has to be identified before the time application for funding to develop the business plan is submitted to a funding agency. Here, the entity who makes the application could be different than the person who becomes the business plan author and the funding application author. AU will hire an outside expert as an author of the applications. AU team will then provide the support service in securing the grants.

That this document is going to be four to five hundred pages long, the effort required is substantial and the team requirement is also stringent. There must be an expert in open education in the team but development is certainly a team approach and assembling a right team is a critical responsibility. All the participating institutions have to help the chief integrator to assemble the team together by pulling wide spectrum of expertise. Therefore, we decide that the integrator along with the help of one or two other people assemble the required team to develop the business plan. The business plan will arrange the total goal to be accomplished by the execution of a combination of projects. Consequently, we might have different project lead and team depending on the particular expertise requirements, availability, and other needs.

This will be a full time work for the duration as it is a heavily involved process to do this well. Along with Phase I pilot work, we have to do field work and incorporate the pilot studies results in the plan. Which locations we will choose? How will we choose? What our measures of success are going to be? And building such information resources requires a team. Involvement of at least one reputed university of Nepal, and also people from other universities or industries is required in the team. We have very little time but we have enough contacts that we should be able to build the team quickly to meet the needs of the funding agencies' interests.

Experiences from CIDA have been that they give funding for pre-feasibility and feasibility studies. Here we have already determined that it is feasible. Other countries like Nepal have already done, GoN has studied this for some time, and it has been a priority initiative of the GoN for some time already. Therefore, we will go straight for business plan or implementation plan. However, we are in need to test the feasibility

of certain components within the larger plan. And we will have to approach fund in this respect. We need to find if DFAIT will find this kind of work and we should also seek through US Trade Department, which gives up to three-four hundred thousand dollars for export promotion intended to initiate some long term business involvement in developing countries.

Experience of leading the business plan development effort for the establishment of a large college has been that there was a team lead, a writer, and a large contingent of contributors from different fields of expertise with about twenty members, including experts from industry. Then we were able to prepare it in under three months working 18 hours a day. A difference there was that we were not doing that for funding. Here also, we may assemble team members with international experience, Diaspora experts, experts from inside Nepal, and with right combination of people we may be able to develop the plan reasonably quickly. It is doable but all members do not come as one team but as combinations of a number of sub-teams working in different aspects. It might be a good idea to have a writer besides the integration lead.

We will need and use the following support structure in business plan development:

1. International and national experts in feasibility studies of certain components
2. Diaspora scholarship and government sources for background papers, pre-business plan, government documents, and references
3. Identification of potential funding sources
4. Letter of support from Government of Nepal
5. Grant proposals development team
6. Preparedness for comprehensive as well as piecemeal approaches to comprehensive business plan development depending on funding arrangement

The conclusion was that the business plan will be developed under the leadership of lead integrator, and Dr. Pramod Dhakal at the Secretariat will lead the review body, and the Steering Committee will be the approval body of the business plan. Estimated effort will be 60 person months. For an eleven months cycle we might need 5 to 6 people working full time for this purpose.

Business Plan Implementation:
Following an approved business plan, we need an implementation organization. The deliberations made in that regard in the previous sessions would then have to be accordingly reviewed and adjusted accordingly to fit into the approved business model. The organizational structure development is now put under one of the sub-committees. That all committees today are running in volunteer efforts, it would be important that they be tuned or remodeled once budgetary capacities for various activities are developed. The executing structure thus and then formed should ultimately give rise to an institutional structure of the actual university.

The business plan will also outline how the staff composition will grow over time. The dream team project of today has thus evolve into university project and it should blend into a university structure. Therefore, business plan must outline the structure of the university and its growth plans accordingly and in reasonable detail. However, it is likely that OUN will have significantly different structure than regular universities. And it will not only be influenced by the general nature of ODE but also from what Nepal wants, what are it short-term and long term priorities.

Grant Applications – Roles, Responsibilities and Timelines:

1. Core team: Pamela Walsh (lead), chairs of four sub-committees, Troy Tait (liaison to agencies)
2. Information inputs for grants writer
    a. Each committee outlines:
        i. Activities
        ii. Rationale
        iii. Resource requirements
        iv. Expenses and the run-rate in cash and in-kind (expenditure/month)
        v. Risks and risk Mitigations
    b. Deadline - January 15, 2011
3. Gathering of all input data for write up - January 30, 2011
4. First completed draft of application - March 30, 2011
5. Submission of Application to CIDA - April 20, 2011
6. Arrangement of base expense (in case of not having any grants) - January 30, 2011
7. Submission of Application to Wild Rose Foundation - January 30, 2011
8. Guidelines for calculating in-kind contributions (by Pamela Walsh) - January 15, 2011
9. Tallying of in-king contributions of until now and of first 12 months by each participating institutions - February 15, 2011

Notes:

1. The amount of fund request should be staggered over at least two years to not unproductively burn it suddenly.
2. Diaspora contributions, along with initial GoN contributions will be used as seed fund.
3. Mr. Terry Curtis to provide an expense template that lets us help determine what kind of expenses we usually incur (that shows expense categories from a business perspective) - the actual cost are place dependent.
4. Determining tuition fee should be part of the revenue and expense calculation. It should tell whether we use Euro centric model or North-America centric model or some other model in fee structuring?

Direction for the pilot program:

The pilot programs are in the OUNI plan because through them we want to test, refine, and recommend certain critical components of the project. Participants concluded that this pilot program be named "Program Phase I", with a rationale that we are not doing all of this to test if it works but to orient Nepalese professors, tutors and learners in ODE and for fine-tuning of learning system. We have no plan to turn back. However, individual academic modules or courses would still be pilot. We may actually drop courses or modules that are not effective in the context we will be working on. It is also important for a learner to feel that it is not a waste of time, he/she is actually taking a fully accredited and recognized course from a credible institution.

The main objectives of this program are:

1. Verification of the effectiveness various tools, technologies, and delivery methods,
2. Reliability and effectiveness testing of various academic courses,

3. Validation of NRN involved academic development for the disadvantaged population,
4. Developing technical capacity for building academic programs and technical infrastructure,
5. Proving that distance education works and can deliver credible education to people,
6. Integrating the outcomes into a larger business plan for the OUN.
7. "Train the trainer".

When we do a pilot program, the participants are the students who would be needing certificates at the end of the program from a recognized institution like AU, TU or KU. This arrangement is a precondition for running a successful pilot program and three issues are to be sorted out at the time being: (1) deliverable programs, (2) delivery techniques and modalities, and (3) certification and recognition of student success.

In all pilot programs, we will have to take care of some critical requirements like:
1. That the programs are useful to Nepalese learners,
2. That they are inclusive,
3. That they do not strand or isolate learners from further advancement,
4. That programs completions will be associated with recognized credentials.

Mode-Modalities of Content Delivery:
Many mode modalities of communication were discussed and their potential were weighed. It was decided that we determine the right combination for Nepal through testing and further consultations. Especially the following modes were discussed:
1. Internet based course access directly from AU servers,
2. Internet connected resource/distribution centres and USB drive based distribution,
3. Self-synchronizing Internet connected servers connected to broadband Intranet,
4. Television and satellite communication,
5. Mobile phones, paper based references material, and resource centre access to computer,
6. Laboratories for experiment, training, and development.

Certain satellite TV stations are already willing to collaborate with OUN in educational content delivery.

Certification and Accreditation:
In Phase I we will launch programs accredited by AU so that the students obtain necessary certificates and diplomas from a recognized institution. We will also make agreement with major universities of Nepal in such a way that our students could transfer their credits to programs of those universities. That will appropriately protect the learner by not limiting his or her growth and prospects. These agreements will be made well before launching the programs on the ground.

Program Risks:
The consensus created among participating entities is so great that there is synergy, momentum, and enthusiasm at the moment. Unless some care is taken in maintaining and strengthening this, it could spell detriment to the project. The meeting identified

the risk of exclusion, loss of momentum, money, loss of government support, loss of quality, and loss of team unity as major risks to the program success.

Coordinating activities in Nepal and abroad:
Our contributors are scattered and we will have to cope with 12 hour time difference between Kathmandu and Athabasca. Therefore, we will have to increasingly rely on asynchronous mode of communication. But a process will be ever more important. Thus the participants agreed upon processes, tools and data for the operation of the project.

1. Steering Committee Meeting: Every two months.
2. Time for meetings:
    a. Worldwide team: 7:45AM Kathmandu Time (2AM, UTC/GMT)
    b. Nepal-Americas: 7:45AM Kathmandu Time (2AM, UTC/GMT)
    c. Nepal-Westward-up to-Europe: 13:45PM Kathmandu Time (8AM, UTC/GMT)
    d. Nepal-Eastward-up to-Australia: 13:45PM Kathmandu Time (8AM, UTC/GMT)
3. Use of Open Source Project Management Tool
4. Document Management:
    a. Google Docs for almost all shared documents
        a.i. Minutes of the meetings
        a.ii. Documents under review
        a.iii. Approved documents
    b. AU to recommend other open source document sharing tools
    c. Note: All Google Documents are stored in either servers in USA or servers owned and operated by a US company, US government can inspect, shut-down any document through decree; Google Doc is not as innocent as it sounds to be.
5. Online Conferencing
    a. Skype (preferred)
    b. Illuminate (backup)
    c. Toll-free North America Phone Number from AU (secondary backup)
    d. AU to suggest alternate Open Source conferencing tool
6. Calendar sharing
    a. Google Calendar
7. Mailing System:
    a. Gmail, or any other mailing system of choice
8. Group Mailing List
    a. Steering Committee: ounsc@googlegroups.com
    b. Canada: oun-canada@googlegroups.com
    c. OUN-ISC: ounisc@googlegroups.com
    d. OUN-ADC: oun-adc@googlegroups.com
    e. OUN-RMC: oun-rmc@googlegroups.com
    f. OUN-AIC: oun-aic@googlegroups.com
    g. General (announcement only): openunepal@googlegroups.com

Session II Summary:
Mr. Terry Curtis summarized the session outcomes as follows:

1. The Management Team and Structure: The Steering committee and the sub-committees reporting to it form the current management and leadership structure.
2. We agreed on a team to develop a business plan and the leader of the integration team.
3. We identified some potential sources of revenues.
4. We identified some and got commitment from sub-committees to submit their requirements.
5. The budget will be developed over a series of iterations.

Ambassador Dr. Bhoj Raj Ghimire thanked Dr. Frits Pannekoek for his vision, commitment, and dedication to the cause. He thanked Dr. David Kilgour for his active participation and taking a major commitment. He thanked Mr. Terry Curtis for so politely obtaining answers from participants on complex issues through series of well calculated questions. He thanked all participants for making the meeting a success.

Session Chair Dr. Pramod Dhakal closed the session stating that the meeting had been remarkably productive and the proceedings of the deliberations will be prepared and shared to all participants and to the Steering Committee and subcommittees, and be made available online. He said that the road ahead is long, challenging and exciting. He believed that the proceedings of this meeting will be the best among all the meetings and workshops done for OUNI until this time. All tasks have deadlines and we want to meet those deadlines. That is how we will reach to our cherished goal. He thanked all for their intellectual and any other form of contributions.

Acknowledgements:
This planning meeting was made possible due to stellar contribution of a number of individuals. Among them is Ambassador Dr. Bhoj Raj Ghimire and the strong support of the entire team at the Embassy of Nepal, especially that of Mr. Tara P Pokharel, are duly acknowledged. Dr. Ghimire's contributions to pre-planning meeting with CIDA and his hosting of dinner at his residence for the Athabasca University team are also acknowledged.
The untiring support and commitment of Dr. Fritz Pannekoek, the President of the Athabasca University and President of International Council for Open and Distance Education (ICDE), has been a major force in making this planning meeting a success. Bringing half a dozen high level officials to Ottawa for this meeting, and committed participation by other officials all day long through teleconferencing, was a major undertaking for the university and a demonstration of the exemplary level of commitment to the initiative. Athabasca University is also appreciated for hosting the lunch and snacks for participants.
The support from entire Athabasca team has been exemplary. Especial thanks go to Dr. Pamela Walsh, Vice-President of Advancement, Mr. Troy Tait, Director of Government Relations, for making most of the logistical arrangements for of the meeting. Special thanks to Dr. Walsh for her great role in making the pre-planning meeting with high level CIDA officials a success and more specifically for agreeing to take a lead role for preparing the grant proposals. Special thanks to Mr. Troy Tait for personally attending the meeting even in the midst of mourning for a family member, especially for agreeing to lead the role to build government relations. We acknowledge exceptional support and more specifically for agreeing to take the lead role in developing the comprehensive business plan for the OUN by Dr. Mohamed

Ally, Director of Distance Education. Special thanks to Ms. Tara Friesen, Manager of Alumni Relations and Philanthropy, for committing to help OUN initiative in fundraising in Canada. Thanks are due to Mr. Iain Grant, Manager of Special Projects, for setting aside an entire day for participating in the meeting. Dr. Barbara Spronks's contributions in providing inputs to development of funding proposals and Ms. Gail Brenan's prompt actions in arranging the meeting are acknowledged.
Mr. Terry Curtis is acknowledged for his great advices on how to develop a comprehensive business plan development. Dr. David Kilgour is acknowledged for his inputs to the discussion and agreeing to lead the initiative to create parliamentary support in Canada, and agreeing to help in international consortium building are also duly acknowledged.
Acknowledged are Mr. Greg Fergus and AUCC for providing conference venue and equipment logistics, entire CFFN family and NRN participants for their valuable inputs, logistical help and their help in meeting preparation for the meeting, and Dr. Mahabir Pun for enduring from the distance, Mr. Bemjamin Wood for technical support and Mr. Prashanta Dhakal for sponsoring the breakfast and providing logistical support.
This report was prepared by Dr. Promod Dhakal, Member-Secretary of the OUN Initiative Steering Committee.

XXIX. Appendix M: Report of OUNI Interaction on NRNA 5th World Conference

Report of the Stakeholder Interaction Program

NRNA 5th Gobal Conference
Open University of Nepal Initiative Steering Committee
Hotel Soaltee
October 11, 2011

Report on the Program
A half day interaction among the key stakeholders of the proposed Open University of Nepal was held on October 11, 2011 at Hotel Soaltee, Kathmandu during 5th NRNA Global Conference. The program was chaired by the Chair of the Open University of Nepal Initiative Steering Committee Mr. Shankar Pandey. Chairman of the University Grant Commission, Dr. Ganeshman Gurung was the Chief Guest and Keynote Speaker in the program was the President of the International Council for Open and Distance Education and President of Athabasca University, Dr. Frits Pannekoek, and NRNA Regional Coordinator for North-America Dr Ambika P Adhikari moderated the program. Participating in the program were stakeholders from various sector including Members of Parliament including Hon Agni Sapkota, Hon Pari Thapa, Chief Advisor the Prime Minister Mr. Devendra Paudel, Chairman of the National Planning Commission Mr. Deependra B Chhetri, Vice Chancellor of Tribhuvan University, Vice Chancellor of Nepal Sanskrit University, Vice Chancellor of Pokhara University, Vice Chancellor of Poorvanchal University, Vice Chancellor of Mid-Western University, Vice Chancellor of Far-Western University, Vice Chancellor of Lumbini Bauddha University, Vice Chancellor of Agriculture and Forestry University, Vice Chancellor of the Nepal Academy of Science and Technology, Vice Chairman of the High Level Commission for Information Technology, Ex Vice Chancellor of Yribhuvan University, Prof Kedar Bhakta Mathema, Secretary of Minister of Education and Chair of OUNISC, Member Secretary of the OUNIST, Official Representatives of the Ministry of Foreign Affairs , Official Representative of the Ministry of Finance. Also present were NRNA representatives including the President, executives, Presidents of NRNA-NCCs , renowned academics, active contributors of the initiative, and other distinguished stakeholders of the proposed Open University of Nepal. About two hundred people participated in the program.

Welcoming the participants Dr. Pramod Dhakal, the Member Secretary of the OUNI Steering Committee and NRNA Project Champion for the OUN stated that we are plunging into the establishment of this important institution decades after other countries have done so. Fortunately, many technological breakthroughs came to us in the last two decades that bear the potential to transform how we are delivering and how we are acquiring formal knowledge to the population. That we are late, we have the opportunity to learn from others' successes and failures. That we are late, we would like to collaborate with the best open universities in the world and with the best and foremost institutional experts in the world. While providing access to higher education to working population, remote and marginalized population, disabled people, and access to ever newer fields of knowledge at ever faster pace is important for the development of Nepal. Additionally, Nepalese youth are going to other countries in unprecedented numbers as workers and immigrants. Emerging from this are new opportunities and challenges in utilizing the knowledge of the diaspora professionals and educating youth who are working in other countries. Being technologically made, OUN will be the major driver of higher education in these frontiers. Quoting Mahabharata, he said that "A worthy mission that is equivalent to a tree having small roots and huge fruits must be started swiftly and all obstacles to its way must be removed." He concluded saying the OUN is a worthy mission and one of very high value to a mountainous and diverse country in transition trying to catch up with other nations, we must start it swiftly and urgently. He urged the higher authorities and the parliamentarians to remove all obstacles to it as swiftly as possible.

UGC Chair Ganesh Man Gurung set the program in motion by thanking the Ministry of Education and NRNA for making a formal OUNI steering committee to advance the mission to establish a long overdue Open University of Nepal. Because it is a good idea and because it is timely and appropriate, he predicted its grand success. Also he stressed that the strategic document prepared for the purpose should be shared with the UGC as it is an important stakeholder and it is the agency which set up a

committee of experts and released a report on 2066 Shravan 16 recommending the establishment of the Open University. We must ensure that this proposed institution directly benefits remote and marginalized population groups, women who are working home, employed people who cannot attend regular classes, people in foreign missions, police, military, and civil servants, people working in countries outside Nepal and people who are disabled. This institution must be of global concern in pursuit to addressing the mobility of our population. That it is a novel mission with unforeseen challenges, joint efforts from inside Nepal and outside Nepal are desirable for its success. He thanked NRNs for the love of their motherland.

On behalf of the Skill Knowledge and Innovation Task Force of the NRNA its Chair Dr. Raju Adhikari mentioned that Dr. Pramod Dhakal has been the engine of this initiative and it terms of NRN involvement in the proposed OUN, we are not [articipating with any business or profit motives but with a desire to serve Nepal in an innovative way and a motive to establish a world class university of the 21st century in Nepal. This will be a university with flexibility in entrance and high rigour in exit. Not only the people living in Nepal but also those who are working in places like Middle East, Malaysia, Korea and beyond can participate in this university. This makes it exciting from NRN perspective and that is the reason why this is a Flagship Project of NRNA. And we are here to collaborate.

Chairman of the National Planning Commission Mr. Deependra B. Kshetry stated that OUN is an important mission for the country. And focused his comments in a few areas where this mission should pay attention to. One, distance learning is usually constrained by the availability of technology in remote areas, timely delivery of learning material and learning support, and availability of adequate financial and other resources. Two, attention of Open University must also fall on the educational needs of a major population sector, which is made up of 4.9 million secondary school age children who are not attending secondary schools. Three, with increasing charm of private schools, people who are attending Government Schools are increasingly getting ever poorer education in general and a way must be found to bridge the knowledge gap between the private and public graduates so that both can be competitively take university education. Four, there is an increasing tendency to leave the country for higher education, so the OUN must find way to keep more students in Nepal by creating equal opportunity for quality education and width and depth of knowledge acquisition. Five, more than 92 affiliate colleges of foreign universities are already operating in Nepal; OUN must provide quality education so as to reduce the outflow of money to foreign institutions. Six, OUN must provide vast array of choices in knowledge areas to learners. Seven, there are only pockets of Internet access that also not affordable to all so affordable access to Internet throughout the country is an important area to address. Eight, OUN could first deliver education to Nepalese workers abroad where there is good access to Internet. Finally he expressed his pleasure in noticing that OUN activities are picking up and thanked Dr Pramod Dhakal for his exemplary contributions. He expressed confidence in that OU will introduce an additional dimension to Nepalese education.

Member of Parliament Hon. Agni Sapkota stated that education is the backbone of development and change. He said that his party, UCPNM, emphasized on the political revolution in the past but balance is needed on educational, cultural and social changes also. In a context where it has been late in establishing an Open University, we appreciate the work of this initiative even when we as political change-agents have not been able to do enough. We, the people of Nepal, have been in a climate of struggle for eight decades. We have knowledge and skills but not needed refinement and needed certificates. Consequently the energy and vitality of youth are dampened. We wish for OU mission to spread the message of hope among those youth. We want OU to play important role in agriculture, commerce and social changes of Nepal. He expressed full commitment of his own and his party's in passing the necessary bill for the university and to provide other needed support. Finally, he expressed pride in seeing Nepalese intellectuals who have returned to Nepal with a worthy mission to uplift Nepal. Dr Ambika Adhikari added that higher education is becoming increasingly more important in the world economy. That is why nations are giving special importance to it, and there are more than 4000 degree granting institutions of higher learning in the USA alone. In lack of education and training, earning of our people in low even when they get jobs in the Middle East. Statistics have shown that university degree can enhance the earning potential of an individual by 2 to 5 times. OUN could complement the work of other university in this population sector and in taking education in working populations inside Nepal. Depending on personal situation, other universities' students may transfer into OU and OU students may transfer to other universities. That is the model we want to adapt here. That our mission is an additional frontier in institutionalizing the changes that have taken place in Nepal, through

intellectual empowerment of the marginalized people, we are encouraged to receive political support for the bill that is pending in the parliament.

Giving Keynote speech Dr. Frits Pannekoek, President of ICDE and President of Athabasca University, stated that he is an ardent supporter of OUN mission and of Nepal. He was persuaded by an NRN delegation that came to his university and he hoped that this mission could become one of the key initiatives of the ICDE. He finds concerns everywhere regarding whether an Open University a real university and whether it offers credible and quality education. The answer, he said, was Yes. Form the time of establishment of the university, it must work with other universities to ensure that it is equal to others, and education must be attached with life so that population itself adopts it as worthy. In Alberta Canada, students take courses at Athabasca University and University of Alberta as wherever it is convenient and their courses are transferable. Professors from both universities work together to help the working people who face obstacles in attending regular classes. And in professions, things are changing so fast that an accountant, doctor or a professional need to catch up with the changes all the time and lifelong learning has been the interest of our time. AU has an open admission policy with a minimum requirement set on English and Mathematics proficiency to help bring general population to come to the mainstream of higher education. And despite open admission policy, the university does not want students to fail and, therefore, we have intensive student support and flexibility in time to complete a course and a degree. The success of this approach is exemplified in the fact that AU has the largest nursing and architecture programs in Canada. Dr. Pannekoek said that limit is your imagination. That OUN is the first to invent itself in the era of mobile learning, it has the possible to architect itself as the leading edge open university of the 21st century. We at ICDE and AU are committed to provide our support. It was in that light, AU and NRNA have submitted a proposal to CIDA to develop a pilot project and a comprehensive operational plan for the proposed OUN. He expressed strong commitment in support of OUN on behalf of his institutions and wished success for the mission.

Chairperson of OUNI Steering Committee and Secretary of the Ministry of Education, Mr. Shankar Pandey, expressed his pleasure to chair this gathering of distinguished personalities. He thanked these distinguished scholars for elevating the importance of the mission and took their exemplary participation as an indication of success of the mission. He cited that the Distance Learning Division of NCED at Ministry of Education has long been involved in teacher training in distance mode and the government has adopted the agenda of OUN in policy and through budgetary provisions. He thanked NRNs for pushing the government and making the government work with NRNs for the good of the country. That is why the office of the Steering Committee was established inside the ministry premise. He thanked Dr. Pramod Dhakal for sacrificing his other commitments and giving full time attention to this mission. He thanked Dr Ganesh Man Gurung for speaking on behalf of the mission and on behalf of the remote people, Mr. Deependra Kshetry for his commitment to the mission and Hon. Agni Sapkota for speaking for educational and social change to uplift the status of remote population as a compliment to the political change. He thanked Dr. Frits pannekoek for his unflinching support to the mission and for delivering insightful keynote speech. Finally he addressed to the Members of Parliament to help pass the Higher Education Act (aka Umbrella Act) from the parliament and asked to correct whatever portions seem necessary. Thanking all the participants of Session one, he closed the session.

The second session had the same participants as in Session I, whereas the session was Chaired and moderated by the Chair of the University Grant Commission and all the vice chancellors of the universities were the panelists. The opinions of the panelists are summarized in this report.

Long time promoter of public education and former Vice Chancellor of Tribhuvan University Prof Kedar Bhakta Mathema expressed diaspora engagement in education and commitment of diaspora scholars as an opportunity for Nepal in instilling critical thinking into academic programs. He saw Open University as an opportunity to promote student centered learning and learning centered pedagogy, a refreshing change to current rote learning practices. He urged the government to take it positively and open up the collaborative front. He also urged that these discussions ought to enter at a much deeper in the mode and modalities institutional operation and international collaboration than the discussion on whether we need an Open University.

The Vice Chancellor of the Tribhuvan University, Dr. Hira Bahadur Maharjan, said that despite being an urgent necessity OUN could not be established in Nepal. Despite efforts made since the 1970s, it has already been late today. He advised that the operational plan of the OU must contain a framework on

who contributes how much and ways to address the educational needs of the poor and marginalized people, of those who have been deemed as unqualified but want to be qualified, of those affected by the war, and to reduce the burden on other universities who are forced to cater to absentee students along with full time students in the same batch. He suggested Nepal to not copy any model but to make its own model and not establish OUN for profit but for the service of the people by taking education not as a business but as a social responsibility. This is important because today education has turned into business where only those who can afford buy it and other are being marginalized. Therefore, OUN must be for all and not just only for some. He is pleased for the fact that this mission has been led by renowned personalities.

The Patron of NRNA ICC Mr. Bhim Udas spoke on behalf of NRNA (as the President could not be present due to some technical difficulty). He also repeated that it has already been late to establish the OU in Nepal. He requested the parliamentarians to pass the bill that in tabled in the parliament. We have been bringing people in many other projects but it has been difficult to bring scholars to this projects from NRN community. NRNs are trying to bring skills and knowledge in Nepal but it has not been easy due to internal environment of Nepal. Given appropriate internal environment we could bring magnitude more skill, knowledge and innovation productivity from smaller investment than elsewhere. When the government, UN and other agencies need scholars and experts the government could also make a policy to utilize NRN scholars and experts. Le OUN be a stepping stone towards attract NRN scholars to work for the development of Nepal.

Vice Chancellor of the Agriculture and Forestry University, Dr. Kailash Nath Pyakurel, said that he is not well versed on OU. Once its model and concepts come to the population then it will be respected in light of them. He thought that it would be difficult to teach technical programs like agriculture in an OU as there is nothing like "private agriculture degree" obtained in a self-learning environment. Therefore, it remains to be seen whether it would be practicable for delivering the most important education - the technical education like agriculture and medicine programs - in OU. Similarly, it is yet to be seen how its quality will be controlled, whether it is free or takes fee, whether the elite captures its resources despite drawing them to the institution on the name of the poor, how it ensures fair access to all, and so on. The UGC seems to be in the shadow in the initiative, its role must be highlighted. In another note, we know the least about the Umbrella Act, which should be clear. We ought to know whether universities will be autonomous or not. Because of this lack of clarity, perhaps the act should be broken and a separate OU act should be passed. Further, in a situation where it takes one year to appoint a Vice-Chancellor, it is hard to imagine that a university bill will be passed quickly. He also pointed out that cheating and plagiarism has been endemic in Nepal. In such circumstances, how are we going to trust any exam that is not closed.

Vice Chancellor of the Lumbini Bauddha University, Dr Tri Ratna Manandhar, appreciated the NRN initiative on OUN. He warned that it takes time to do things in Nepal, it is only a good beginning. He suggested that this OUNI body should organize an academic conference for the OUNI separately because what works abroad does not work here and some serious deliberation is needed to do things here. Therefore the part and role of the academicians must not be forgotten. He pointed that if entry requirements are removed there will be management problems, recognition problems, and manifold complexities in the institution on establishment phase. Similarly, examination system is also an issue, whether it would be regular, private, closed book, open book, remote examination, on-site exam and so on. On infrastructure side, he suggested that it is not right to think that OU is no expensive. Our visit to IGNOU and OU of Pakistan revealed that they need extensive manpower and technology infrastructure, and consequently substantial investment. Even the physical facilities are extensive. They print and produce books on demand in minutes not hours. He also cautioned that if OU turns out to not live up to its expectations, others, including TU and other universities, should be allowed to run distance education. Today TU has so many faculty members in campuses and program offerings where there are no students in the classes but students are enrolled so as to appear in private exams. This situation must be corrected through distance education. On the legal front he cautioned that Umbrella Act is trying to give government control over universities. If it is passed university autonomy will vanish because, for example, it is suggesting that Minister of Education be the Chair of UGC. Although the Umbrella Act is necessary, he suggested the law makers to look at it and make necessary changes.

Vice Chancellor of the Far Western University, Dr Jaya Raj Awasthi, said that in Nepal we are already using self-study as a recognized mode of education and students are already obtaining degree by appearing in private examinations. IGNOU and many other foreign institutions are running their

distance programs through private companies here and Nepalese money is flowing out. Therefore, he is for establishing an OU in Nepal. The OU can develop its own programs and also offer other programs in collaborations with other universities in Nepal and abroad. So collaboration with established and emerging universities both is important. He welcomed the NRN initiative and participation for he saw opportunity in bringing technology to Nepal and using technology in learning environment. He stressed that, to make OU programs effective, the learning operation modality, accreditation modality for Nepal and international carryover of degrees, and quality instruments must be well established before offering the programs.

Education expert Dr Mana Wagle stressed that they ran around in the past to the point of exhaustion. Many exercises were done in the past and they have been brought to the point of exhaustion in the past. OUN continues to be in the agenda seriously since 1993 but to no avail. Today TU, KU and PU have been running open mode programs already and these programs could be assets for the OU. However, they cautioned that the Steering Committee secretariat being housed in the Ministry of Education may not be that good an idea for the success of the mission. They thought that NRNs better brought their expertise through an independent channel. We could reach out to people through technology and we do not need as much building infrastructure. He stressed that one OU is urgent for Nepal as they have been saying for long. He said that there is broad support for this. On Umbrella Act, he asked that there must be deliberation at UGC or else the status of UGC may be lost.

Education expert Dr Bidya Nath Koirala said that it is already late to establish an OU in Nepal. OU is urgent because our existing system is inefficient; of 100 students that Join Grade 1 less than 30 reach SLC, of those less than 30 percent join university, and then there is heavy dropout rate within the university. Somehow, these people that are lost from the education system must be brought back to the mainstream of education. But that can be done through a new way. The tragedy, however, is that we think that "we know" and "people don't". But is reality people have intellect, knowledge, sources and resources but what is missing is the system to interlink them to extract the knowledge, to authenticate it, and to formalize it. Today, we have no system to educate the farmers and workers, so even from welfare perspective OU is necessary. An unemployed youth had studied yesterday's knowledge and is going to get the job of tomorrow and he cannot attain it without upgrading his education, therefore the need for OU. We have a need to consolidate FM radio channels, Cable and satellite television channels and Internet to run 24 hour educational channels. We are in need of OU to provide lifelong learning and profession upgrade to teachers, police and numbers of professions limited only by imagination.
Dr. Judy McDonald of University of Ottawa said that there are many areas of health research where we can collaborate between Canada and Nepal. For example, Nepal can be an deal country to carry out research on work performance and altitude, trekking, tourism, high endurance work, and many more areas. Given enough common interest in research, many research collaborations could be done between educational institutions of these countries.

Dr. Bishal Sitaula a NRN scholar and professor said that OUN and subsequent international collaboration in education and research is possible if it comes from within Nepal and there is solid foundation built here. For collaborative success we need to establish a consortium of scholars where we do learning - not earning, and we work for being and not for having. Networking and collaboration is the way to succeed in this age of interdependence among countries. Networking for knowledge is a desirable avenue. Look at India, its diaspora is playing major role in its science and technology sector, its Ministry of Foreign Affairs is active in reaching out its diaspora. That the West has focused excessively on material achievement, the new paradigm of survival will be "survival of the wisest." Let OU be an agent for achieving that.

Vice President of NRNA, Mr. Jiba Lamichhane, said that Nepal could seek two type of investment instruments among NRNs, one is financial and the other is of knowledge and skills. OUN initiative is an example of knowledge investment. NRN scholars are doing an excellent job. We want to clarify that we are not here to open any NRN university, we are trying to help establish a public university. We are here with offer of knowledge, skills, and expertise to compliment. Help from all is needed. We wish success for OUN mission.

President of NRN-Canada Dr. Binod KC said thanked Athabasca University and its President Dr. Frits Pannekoek for collaborating in this initiative with NRNA for OUN initiative. We thank AU for donating 20 laptops for OUNI and those laptops are arriving here in Nepal. We have started collecting

funds in Canada and NRN-Canada's Dr. Pramod Dhakal is here and we are behind him. NRN Canada is leading this effort in Canada.

Well known philanthropist Dr Mahabir Pun said that when we work each of us must think that "I am going to pass through this world only once!" Then we can succeed. For any OU like educational initiatives, IT infrastructure and its affordable access in rural areas is a must. Nepal Wireless is working in this area and has connected more than 50 communities, as many schools and ten learning centres of 13 districts but that is not enough. Learning is difficult to be facilitated without being to connect with tutors through Internet. Therefore, we need extensive funding in taking affordable connectivity access to rural communities.

Mr. Prashanta Dhakal and Mr. Ben Wood of CFFN Canada developed a short low bandwidth video in a mathematics module as a demonstration on how we can develop low bandwidth audio-visual learning materials for a Internet bandwidth scarce country like Nepal. This video is archived along with other documents from this conference. These youth contributors stated that many many Nepalese youth living abroad and in nepal could take part in knowledge content production for OUN given that there is proper environment to utilize well in Nepal.

Dr. Soorya Lal Amatya, former Registrar of the Tribhuvan University stated that OU could not be established for this long because it could not become a priority of the government. There is not much backing from the lawmakers and academics outside OU movement. If established, OU will be the largest university in Nepal. Today all eight other universities combined are far smaller in student population and output than Tribhuvan University alone. As and when OU happens, all the private exam attending students of TU can attend OU and TU can focus on full time students and thus take a step towards strengthening its quality. Have great quality, the need for OU is great.
Member of Parliament Hon. Pari Thapa said that the program gave some important insights into the mission. That the steps taken are early ones and much has yet to be done, it would be beneficial to share the vision, mission, and goals to a broader mass, including to the parliamentarians. Anf of all, let this be a public institution and not a centre of issuing licencing for colleges as the universities have turned into today. He pledged support from his side in passing the act for the OU.

Journalist Shambhu Pokhrel stated that old people, and people with old thinking, are responsible for creating problem in TU, which is unable to control the quality and has turned into undisciplined institution. That is the reason OU is needed. That TU offers degrees to students who do private study of an one year program for a month and appear in the examination, why cannot a student finish one year program in six months of intense study through OU? In his opinion it should be possible. He put a question on whether the Internet access be provided through the university itself or through other agencies? If it is provided through other agencies, how could we address the problem of inequity in access among population groups?

Mr. Bidesh Mani Ghimire appreciated the mission and asked the pursuers to avoid government interference in Vice Chancellor selection and political party interference on teachers, staff and student activities of the university.

Technical and vocational education expert Dr. Poorna Kanta Adhikari stated that we are sending 5 year old to schools and 16 years old to universities but as they come out they are coming out without any marketable skills. That is why what we deliver on the name of education must be rethought. It must in fact be able to make the person capable to deliver value to the self and to the society. The proposed university must play a role in addressing the real needs of society through its programs and to close the gap between Kathmandu and the remote places. He wished success for the mission.

Woman scholar and entrepreneur, Ms. Manju Mishra, said that woman's educational needs must be given priority by this university. Some unidentified participants stated that the more disadvantaged and remote the population group is the more need for technical education would there be. Advantaged and privileged population group can well benefit from theoretical education also.

Senior professor Dr Shreeram Upadhyaya was very upbeat with the work of the mission and said that positive things are coming to Nepal. He asked the minister, the ministry, and the members of the parliament to positively lobby to the parliament for the passage of the bill. Mr. Shree Sharma stated that this kinds of activities are useful to put pressure on the government.

NRNA Skills, Knowledge and Innovation Task Force Chair Dr Raju Adhikari stated that we are entering into unconventional modes so we will be doing wider consultations in developing our operational plans. NRNA Deputy Regional Coordinator Dr Drona Rasali stated that although fees may be reasonable TU still caters largely carers to richer population. There are 13% Dalits in general population but only 0.7% Dalits attend TU. Therefore OU is needed to address the gaps. In doing this, we are gong to use credence and competence model in the OU not any favouritism r disfavour. We are not starting from nowhere but from some credible national and international experience. This mission will be one of economic and social transformation.

Mr Janardan Nepal, spokesperson of the Ministry of Education expressed the view that the program was encouraging. Ministry and NRNA took bold step in entering into partnership and the mission is heading in the right direction. All the participants were thanked for their participation and input by the session chair.

XXX. Appendix N: Report of OUNI Interaction on NRNA 7th Regional Conference

Report on the Program on Open University of Nepal Initiative
NRNA 7th Regional Conference
Sydney Australia
August 31, 2012

Chaired by Hon. Minister of Education Dinanath Shanma and Co-Chaired by Founding President of NRNA Dr. Upendra Mahato, this program on Open University of Nepal Initiative was one of the major highlights of the NRNA Regional Conference 7th Regional Conference in Sydney, Australia. The main program of 2012 August 31 was participated by the leaders of the NRN Movement including President Jiba Lamichhane, NRN delegates, Minister of Industry and Trade Hon. Anil Kumar Jha, Nepalese Ambassador to Australia Rudra Nepal and Nepalese Honorary Consuls, Vice President of Athabasca University Dr. Pamela Walsh, Professor of Monash University Dr. Ray Ison, President's Representative of Open University Australia John Coates, Joint Secretary of Ministry of Education Mr. Mahashram Sharma, President of FNCCI Bhaskar Rajkarnikar, prominent delegates of Nepalese business community, OUNIDB Member Secretary Kamal Dhakal, and NRN proponents and members of Open University of Nepal Initiative Dr. Pramod Dhakal and Dr. Raju Adhikari.

Speaking in the program, Vice President of Athabasca University (AU) Canada, Dr. Pamela Walsh, said that the collaboration for the Open University of Nepal Initiative began after high level delegates of NRNA visited Athabasca University in December 2009 and the relations flourished since then. Her message to the participants was that education accessible only for the wealthy would not bring necessary change in a nation. Therefore, democratization of education is a necessary part of nation building and prosperity and Open University of Nepal is a mission that will bring remote and marginalized population into the mainstream of higher education and lifelong learning. Having being started at the mature phase of Internet revolution and technology revolution, the proposed Open University in Nepal is positioned to become the flagship of the New Generation of Universities. In making of this the Government of Nepal would have an important role to play as it ought to be a publicly funded university. Athabasca University will be proud to partner in the mission and facilitate in the international arena so that Nepal could adopt the best tools, technologies and practices from the world. More specifically, Nepal will have many opportunities to do things differently than many established universities. At OUN we have the opportunity to adopt the best pedagogical (teaching and learning) model, the best technology, the best quality assurance practices, and the best of research and innovation in the world. However, we do not aim to copy a specific model but to develop our own by learning from their lessons from and drawing the strengths of the world's best institutions. We are here to start afresh in view of what unfolding in the 21st century learning systems. We have this opportunity to make OUN a scalable institution that can serve from a small to a very large student population. We have the opportunity to mobilize the intellectual capacity of the Nepalese diaspora in building its capacity and in making OUN readily accessible to all citizens in a short span of time. Here we have this ambition that is required to convert this vision into a reality. Finally she expressed AU commitment to work with the partners.

Dr. Frits Pannekoek, the President of Athabasca University and the President of International Council on Open and Distance Education (ICDE) conveyed his best wishes for the success of the OUN mission and express full commitment of support on behalf of AU and ICDE. He expressed his pleasure in knowing that active involvement of the diaspora in the education of the people of their native country is a new dimension to be added in the university movement and OUN will set an example. He said that we will partner with the best institutions in the world to make OUN a model university. He said that we will start a pilot program by the end of 2012 and also said that Vice President Dr. Pamela Walsh and Director of Distance Education Dr. Mohamed Ally are two important people assigned from AU to the OUN mission.

Director of Finance at Open Universities of Australia Mr. John Coates gave a glimpse of how their institution runs ODE in Australia. He said that OUA was established after Paul Keating became Prime Minister of Australia with an election promise to establish it. Today, 20 best universities of Australia are collectively offering more than 400 programs to students through the OUA. In it, the OUA provides administrative services, student recruitment, student services, mentoring, and learning support while

the universities develop programs, set fees, take examinations, and provide the degrees to the students. OUA takes certain percentage cut of the student fees for the services. In the end, these degrees and the degrees provided to full-time students are equivalent and convocation of students are done by degree granting universities. He noted that the growth in enrolment in exponential and technological foundation is the key to its success. The difference is that OUA programs have open access to anybody. The OUA offers not courses but what they call units from a pool of universities and the students could mix and match them to develop their own learning path towards a degree. Now movement of students is towards programs of institutes like TAFE because it is hard to get a job with BA degree but is easy with TAFE degrees as it is technical. Finally, he said that OUA is ready to collaborate in OUN initiative in whatever technical and expertise area both parties deem suitable for collaboration. He advised that it is better to get going and making mistakes than forever waiting to do the right way.

Dr. Ray Ison, who is the Chair of Sustainability at the Open University, UK, and Professor at Monash University, spoke on the issues of sustainability. He stated that lately the governments throughout the world are cutting down higher education budgets while at the same time more students are taking higher education. Consequently, there is a problem of maintaining quality and increasing enrollments, which is difficult to achieve. With such moves, universities are backtracking from their social missions of wellbeing and transformation of society in general and taking shapes of business houses. In developing countries, diaspora can play vital role in institutional sustainability but institutional model has to be designed as such to put together distant resources to deliver quality education, a significant challenge. The learning systems must be designed accordingly and in the end they must meet the stated social objectives.

In view of Dr. Ison, the idea of transformation is at the heart of systems, which have inputs, transformation-process, feedback (monitoring and evaluation) system, and the output as in any control system. A learning system consists of a social process, which cannot take place in isolation. Consequently, there is no pouring in of knowledge but only self-willed acquiring from a social or natural context. In accordance with the change in our understanding learning metaphors are also changed from container, conduit, control, war, to dance-ritual. An OU opens up to people who have missed out. Therefore, it uses a system of learning with two way feedback, virtual learning environment, learning management systems like Moodle, and social media in an attempt to be effective and scalable. The dance-ritual is the one we want to achieve.

Open Universities are also evolving, said Dr Ison. In the first phase they used one way delivery (the container metaphor) and they could not scale for large enrolment. In the second phase (post 1989), they used feedback system (control metaphor) and consequently could scale up. Today, is a time of massive funding cut and OU are struggling to find new ways. OUN is here to use "Phase 3 learning system", which is founded on the concept of self-organization, progressive emergence of novelty, and learning through self-organization. Thus we use this Canadian innovation called "self-design", meaning purposeful design for individuals and families. They use social value principles, self-organization, and adaptive learning in the learning system design. For example, OU UK that had long associated itself with the BBC to give televised delivery of education to British people is now bound to adopt mobile phone and other technologies to render education in a soft social environment. In this regard, UNISA is a good model, perhaps exceptionally well suited for Nepal.

Dr Ison said that we are changing the earth and its social environment. Consequently, traditional approach of invest and innovate does not work now. In a new context we ought to enter into new institutional design paradigm to adapt into local context, to build common understanding, and to mobilize population - including the diaspora. Therefore, he recommended to design first and choose later and to use feedback mechanism for evolution to changing environment. He suggested to conceptualize an OU in the "Hub and Spoke" institutional model (Note: This means that the university manages small number of large facilities called hubs that are well resourced and they manage farther nodes connected through spokes (formal links) to make efficient use of scarce resources, benefit of sorting, quality control and consolidation but in the expense of flexibility of a fully distributed system where each node is free to operate with large degree of freedom. However, the learning model would still be using network of relation of people.) He also suggested it to become a national initiative and complimentary to other universities with focus on lifelong learning rather than being competitive. On another note, he said that Open Basic Schooling and Open Higher Education combined together will bring the best results than OU in isolation. Other approach is to develop two year OU program to let

students move to other universities for the third and fourth years. That is a way to flexibility in the education system.

Mr. Kamal Dhakal, Member Secretary of the OUN Infrastructure Development Board, explained the composition of the development board and stated that the board has a formally established office, a bank account, and budget allocated from the government and the UGC. He said that their mandate is to build infrastructure for a publicly owned university that would address the educational needs of the remote and marginalized people including farmers and workers. Today in TU, there are 600-700 students enrolled in a program and only 50-60 show up in the classes but all appear in the examination. These non-regular students do not get any learning support from the university. Therefore OU is necessary to serve those students. He also informed that the government is about to grant substantial land and buildings to the mission. He said that international scholars will be heavily involved in generating academic infrastructure, technology transfer program content, financial resources, and technology infrastructure and more activities. We can improve much productivity in Nepal with small injection of skills, said he.

President of NRNA Mr. Jiba Lamichhane expressed his happiness in knowing that the Government of Nepal has taken strong ownership to this initiative. He said that NRN friends have worked hard to raise the profile of this initiative and have made significant contribution in acquiring necessary expertise and in developing institutional relationships with world class universities and organizations. He thanked high officials Athabasca University, Open Universities of Australia, and Open University UK to announce pledge for collaboration in the establishment of OUN to share their expertise and experiences. He pledged that NRNA will be supporting the mission and will work as a willing partner to make it a success.

Joint Secretary of the Ministry of Education, Mr Mahashram Sharma, stated that OU initiative has been on of improving the image of NRNA among Nepali people. He acknowledged the contribution of NRNs and NRNA on behalf of the Ministry of Education. He also said that the ministry is about to provide land and building to the OU and activities are intensifying within the ministry as well. This initiative has brought some new insights including (1) diaspora engagement in education and research, (2) collaborative engagement of international scholarship, and (3) development of institutional architecture that would be fitting to Nepalese context. He expressed happiness in seeing engagement of international scholars and institutional thinker in the mission. Mr. Sharma added that although Nepal has achieved high enrolment rate and gender parity in early years of schooling, this parity and participation falls steadily and becomes significantly weak in the university level. Therefore, the ministry hopes to bridge that situation and achieve mass access to higher education through OU, which they want to be focused and relevant to Nepal's ground realities. He thanked everyone and pledged further cooperation in the future.

NRNA SKI Task-force Chair Dr Raju Adhikari stated that OU is the flagship initiative of the NRNA and, therefore, NRN commitment to it is strong. NRNA played a strong role in building partnership with great institutions like Athabasca University. He hoped that in the coming days NRNs will be able to play ever more critical roles. Because economic prosperity cannot sustain in itself without intellectual prosperity, OU mission and roles of NRNs will become important in coming years. He said that NRN friends are ready for the necessary challenges.

Dr. Hom Moorti Panta and economist and scholar working in Canberra Australia considered the currently envisioned concept of OU as revolutionary and a product of non-linear thinking. However, as revolutionary is this concept he cautioned it not just to create "Confucian Knowledge People" but degrees that people and employers can understand and utilize to solve real life problems. He emphasized that technical skills required in the emerging economy are rigorous and university education cannot remain exclusively theoretical as it was the case in the past.

Dr. Pamela Walsh stated that technical education has been successfully delivered through Open Universities. Canada's Athabasca University has the largest Nursing Program in the country and these programs are certified nationally and internationally, and that is all accomplished without having a big lecture hall. Young people could become engineers, nurses and entrepreneurs through OU education.

From the audience, Journalism student at Queensland Institute of Technology, Mr Bharat Raj Paudel admired Dr. Ison's presentation and stated that there are more than 8000 journalists and more than 300

community radios in Nepal. With such numbers, journalists and media houses should be engaged in the OU movement. He further added that many universities have opened in Nepal in recent times but they are unable to run properly but instead they appear to be barely functioning. Therefore, OU mission must distinguish itself and be able to establish how it is going to be different. In that way, he also suggested as its solution a journalism program where speaking and writing skills are the key technical assets and it is possible to develop them in open learning environments. Such programs can also generate revenue for the university.

Another participant stated that teaching in Australia has changed substantially over years. Today more than 50% students have Facebook, lectures are delivered live on the Internet, students can attend them from anywhere as in an OU. Despite the fact that Nepali people are hungry for knowledge, people over forty years of age have no place to go for it. This should be an opportunity for an OU to take education to these people through Internet and other media.

Dr Atma Ghimire of University of Western Sydney questioned about the state of ICT penetration, the availability of bandwidth, state of digital literacy in Nepal. Without them, he said, only the elite with ICT will enjoy the access and rest will remain deprived.

Babita Shrestha from McQuire University thought that technology penetration is at its infancy in Nepal and OU concept is too far ahead. He thought that Nepalese youth are not even aware of Internet and have no necessary skills to utilize it and asked to factor this situation into account. And she asked to innovate programs and tools especially to capture the drop-outs and left-outs.

Another participant sought to know how would it be possible to integrate OU programs with those of other universities. How universities running in different models would fit into one framework?

Dr. Pramod Dhakal spoke with confidence that OU is a technology made university and technology is at its backbone, and ICT access is at the heart of it. He thought that we are limited by necessary law and national will than technology. If only legal and administrative barriers are removed, it would be practicable to provide Internet access not only in every home of Nepal but also on its terraces and forests. He added that utility is a greater motivator of learning to use technology than availability of training programs. Mobile phones has direct utility for all and hence even the illiterate learnt to use them. Today, illiterates people have learnt how to use Skype, Viver and other features of smart phones just through the curiosity that spreads in a social space. Therefore, given ICT access and programs that address the need of individuals, motivation to cross the digital hurdle will come to the society. He also said that OU and other universities could be fit into one national framework of education by means of establishing student transfer, credit transfer schemes, establishment of common quality assurance scheme, common program accreditation authority, and OUA style offering of other universities' programs through OU. He said. "We should not wait to do rice farming until we complete our knowledge about rice. We should learn about rice while planting and eating it. We will have better crops of rice over theyears as our understanding rises. The same way works for the OUN."

Co-Chair of the program Dr. Upendra Mahato started with a lighthearted joke. He said, "I am from a village and I have to explain Open University to my villagers. What is OU? I would say, OU is like an Open Pocket. When you have no money you leave your pockets open. But when you have you keep them closed!" He indicated that OU is a vehicle to take education to all people. He said that if there are billions of dollars in the world to through in Afghanistan, there certainly are dollars to through in Nepal's OU. And OU will be a success if it can deliver commercially useful education to people. Recalling 2003, he said that Minister of Communication took in excess of Lakh Rupees to issue a mobile telephone access, today people are having free SIM to have telephones in their pocket and telecommunication revolution has arrived in Nepal. He predicted that 3G/4G mobile services will be available throughout Nepal withing few years. But the heart of OU should be built in the principle that the children of the rich and the poor should grow up together ans study together, and only then it will bring good to all people. On behalf of NRNA, he expressed confidence in the establishment of OU in Nepal. He thanked Ministry of Education and the Minister for their special efforts. Finally, he said "Every successful person is crazy. And that there is group of crazy people amongst us that this mission is becoming successful!"

Two MoU were signed in this program. One was between the OUNIDB and the NRNA, which spelled that these institutions will collaborate in the areas of (a) academic, technical and scientific expertise; (b)

financial and in-kind resources; (c) expertise and resource of international organizations and philanthropists; (d) technological and institutional arrangement for Nepalese Diaspora and international scholars to render academic and technical services to OUN while being in Nepal and/or abroad; (e) other areas the parties may identify and agree from time to time. The other between the OUNIDB and the Athabasca University, which spelled that the institutions will collaborate in the areas of (a) academic, technical and scientific expertise; (b) financial and in-kind resources; (c) expertise and resource of international organizations and philanthropists; (d) business plan development and implementation using best practices found anywhere, including those in AU; (e) technological and institutional arrangement for international scholars to render academic and technical services to OUN from anywhere and anytime; (f) adaptation of AU programs, processes and courses that are applicable to OUN; (g) training of OUN faculties and staff in academic and administrative areas; (h) other areas the parties may identify and agree from time to time. The MoU also stated that a special unit will be established in OUNIDB to carry out functions stated in the documents.

AT the end of the signing of the documents, NRNA President Jiba Lamichhane said that one important part has been completed with this signing of the documents. He expressed strong commitment on behalf NRNA to contribute with hearts, words and deeds together. He said the NRNs will help the initiative with utmost eagerness.

Closing the program, Hon. Minister Dinanath Sharma termed today's event as an important and stainless beginning for the cause of OU. He assured the audience that OUN will be exceedingly successful and thanked the role of NRNA towards materializing this national institution. He thanked Dr. Pramod Dhakal for his strong role in making this happen. He said that OU should contribute in technical, vocational and general eduction. That nine universities together could not reach to the villages of Nepal and citizens are short of getting opportunities, the scope for OU is wide. Withing ten years OU can have a million students enrolled in it. Of 900,000 students that study Grade 10, only 200,000 pass SLC. Those who could not cross the SLC barrier and those who crossed but could not join colleges are waiting for some meaningful knowledge and useful technical-vocational skills from the OU. And similarly waiting are those working in the Middle East and elsewhere.

Minister Sharma also stated that the government spends more than 16% of its budget in education, which is significant. The government is going to increase the investment in the coming years, and besides the private sector is also investing much. However, questions have been raised on the efficacy and quality of education and we ought to change this scenario. Our future emphasis ought to be on technical and vocational education, and on quality education.

Minister said that OUNIDB shall develop physical infrastructure, technological infrastructure, curriculum and content for the proposed OU. The government is working towards issuing a 35 Ropani parcel of land and eight buildings of ETC Dhulikhel and the IT Park that has building and 240 Ropani land for the OU. The government will be arranging any necessary physical facility for the purpose. He stated that he is trying to allocate 5 Crore Rupees for this year and assured that the money will not be an impediment. "You just do the work, you will not be impeded by lack of money because we aim to establish the largest and the most important university for Nepal through this mission", said he.

Taking example of Mahabir Pun and reach of IT into some remote villages through his effort, Minister recalled that villagers are doing business through Internet, they are buying and selling buffaloes on the Internet, and illiterate women are communicating through Skype. That digital age is already knocking our doorstep, he saw great scope for IT empowered education.

Finally the Minister said that Dr. Pramod Dhakal put a lot of effort and persevered hard. He government will not disappoint people like him. He promised that he will send his team throughout the world. He will empower it to make the OU mission a grand success.

In sum, the OUN session became the most inspiring element of the NRNA 7th Regional Conference in Sydney and inspired many NRNs. The comments received after the program were overwhelmingly positive. The delegates of NRN-Australia, NRN-Newzealand, NRN-Japan, NRN-Korea especially expressed their desire to positively contribute to the mission.

XXXI. Appendix O: MoU between OUNIDB and AU

MEMORANDUM OF UNDERSTANDING

between

The Open University Infrastructure Development Board of Nepal

and

The Athabasca University

on

Open University Development in Nepal

Whereas, the Government of Nepal (GON) has formed an Open University Infrastructure Development Board (OUN-IDB) as an institution to establish a publicly owned Open University (OUN) in Nepal for making higher education accessible to all;

Whereas, the Athabasca University (AU) is a leading open and distance learning university of Canada and has been collaborating with Nepalese Diaspora for providing support to establish OUN;

Whereas, the parties look forward to promoting higher education, research, development and innovation throughout Nepal while recognizing that various geographic and socio-economic barriers continue to hinder access to higher education, especially among remote, rural and marginalized populations;

Whereas, the parties emphasize that education programs and services should meet national and international quality standards and achieve efficiency in delivery of education through collaboration, resource sharing and innovation;

Whereas, the parties recognize the possibility of mobilizing the best available academic, technical, managerial and leadership capabilities available within Nepal, among Nepalese Diaspora and in the international arena to make OUN one of the best institutions;

Now, therefore, the parties reach the following understandings:

Article 1
Definitions

Unless the subject or the context requires otherwise, the following terms shall have the following meanings for the purpose of this Memorandum of Understanding (MoU):

(a) "Party" in the case of OUN-IDB refers to the Open University Infrastructure Development Board of Nepal located in Kathmandu, and in the case of AU refers to the Athabasca University located in Athabasca, Alberta, Canada; and "parties" refer to both parties.

(b) "OUN-IDB" refers to the Open University Infrastructure Development Board of Nepal.

(c) "AU" refers to the Athabasca University located in Athabasca, Alberta, Canada.

Article 2
Areas of Cooperation

The parties will cooperate on the following areas for the benefit of OUN:

(a) academic, technical and scientific expertise;

(b) financial and in-kind resources;

(c) expertise and resource of international organizations and philanthropists;

(d) business plan development and implementation using best practices found anywhere, including those in AU;

(e) technological and institutional arrangement for international scholars to render academic and technical services to OUN from anywhere and anytime;

(f) adaptation of AU programs, processes and courses that are applicable to OUN;

(g) training of OUN faculties and staff in academic and administrative areas;

(h) other areas the parties may identify and agree from time to time.

Article 3
Financial Considerations

Financial arrangements and details for the activities undertaken by the parties, in respect of the implementation of this MOU will be determined by the parties in writing. This MOU does not impose any financial liability or responsibility on either party with respect to the costs or expenses of the other.

Article 4
Confidential and Proprietary Information

Prior to the exchange of any information between the parties of a confidential or proprietary nature under this MOU, the parties will each execute and deliver to the other a mutually agreeable confidentiality and non-disclosure agreement.

Article 5
Publicity

All publications and publicity originating from a party making reference to another party with respect to this MOU will require the expressed written consent of the other party prior to it being issued.

Article 6

Management and Administration

A special unit will be established in OUN-IDB to execute the functions under this MOU. Any notices or approvals required to be given by a party under this MOU will be sent to the other by a registered mail, email, facsimile or delivery in person.

Article 7
Term, Renewal, Termination and Amendment

This MOU will become effective upon endorsement by OUN-IDB as well as by the concerned authorities of GON and the competent authority of AU. The parties may review this MOU after one (1) year of its commencement, and thereafter at every three-year intervals. Any party may terminate this MOU by mutual consent or notice in writing given to the other at least three months in advance.

Article 8
Status

This MoU specifies general areas of cooperation and sets out the general basis upon which the parties intend to proceed. The activities will be detailed out and mutually agreed for implementation.

The parties have duly signed this MOU on 31 August 2012 in Sydney.

THE ATHABASCA UNIVERSITY

_____

Per: Dr. Frits Pannekoeks
President

THE OPEN UNIVERSITY INFRASTRUCTURE DEVELOPMENT BOARD, NEPAL

_____

Per: Kamal Dhakal
Executive Director

Witness

.....
Mahashram Sharma
Director General, Department of Education, Nepal

XXXII. Appendix P: MoU between OUNIDB and NRNA

MEMORANDUM OF UNDERSTANDING

between

Open University Infrastructure Development Board of Nepal

and

The Non-Resident Nepali Association

on

Open University Development of Nepal

Whereas, the Government of Nepal (GoN) has formed an Open University Infrastructure Development Board (OUN-IDB) as an institution to establish a publicly owned Open University (OUN) in Nepal for making higher education accessible to all;

WHEREAS, in its pursuit of contributing to Nepal's development, the Non-Resident Nepali Association (NRNA) has shown interest to support the GoN's initiative the GoN's initiative for establishment of OUN;

WHEREAS, the GoN/Ministry of Education (MoE) and NRNA signed a joint resolution for collaboration on establishing OUN and formed a Steering Committee in October 2010;

WHEREAS, the parties emphasize that education programs and services should meet national and international quality standards and achieve efficiency in delivery of education through collaboration, resource sharing and innovation;

WHEREAS, the parties recognize the possibility of mobilizing the best available academic, technical, managerial and leadership capabilities available within Nepal, among Nepalese Diaspora and in the international arena to make OUN one of the best academic institutions;

Now, therefore, the parties have reached the following understandings:

Article 1

Definitions

Unless the subject or the context requires otherwise, the following terms shall have the following meanings for the purpose of this Memorandum of Understanding (MoU):

(a) "Party" in the case of OUN-IDB refers to the Open University Infrastructure Development Board of Nepal located in Kathmandu, Nepal; and in the case of NRNA refers to NRNA International Coordination Council located in Kathmandu, Nepal; and "parties" refers to both party.

(b) OUN-IDB refers to Open University Infrastructure Development Board Nepal until the time the Open University of Nepal is legally established as an autonomous public university.

Article 2
Areas of Cooperation

The parties will cooperate on the following areas for the benefit of OUN:

(a) academic, technical and scientific expertise;

(b) financial and in-kind resources;

(c) expertise and resource of international organizations and philanthropists;

(d) technological and institutional arrangement for Nepalese Diaspora and international scholars to render academic and technical services to OUN while being in Nepal and/or abroad;

(e) other areas the parties may identify and agree from time to time.

Article 3
Management and Administration

A special unit will be established in OUNIDB to carry out functions under this MOU. Any notices or approvals required to be given by the parties under this MOU will be sent to the others by a registered mail, email, and facsimile or by personal delivery in person.

Article 4
Obligation of OUN-IDB

Under this MoU, the OUN-IDB will:

(a) make necessary endeavours to legally establish OUN as an autonomous public university;

(b) set up a dedicated endowment fund and account for OUN in which NRNA, its partner organizations and individuals could directly send financial contributions; that will be channelled to OUN through GON's set legal procedures;

(c) facilitate to expedite legal, institutional and personnel support for OUN;

(d) recommend for exemption of custom duties on equipment and supplies imported for the use of OUN by NRNA, its sister organizations, and partner institutions;

(e) create an equal opportunity for Nepalese Diaspora to contribute to academic, administrative and management functions of OUN as resident Nepalese, in a manner not inconsistent with Nepalese laws;

(f) allow academics and professional experts to render services to OUN physically or virtually from Nepal and abroad and be financially compensated as per contracts made between OUN and the contributors;

(g) recognize NRNA as a partner organization for establishing OUN;

(h) support NRNA's efforts to mobilize agreed international funding, in-kind support and expertise for the development and operation of OUN.

Article 5
Obligations of NRNA

Under this Agreement, the NRNA will:

(a) allow NRNA and its sister organizations to send assistance to OUN through NRNA without service charge;

(b) keep record of all contributors and contributions made to OUN through NRNA in order to ensure transparency;

(c) facilitate NRNA's partner organizations to participate in the formation of their OUN Support Committees throughout the world and collaborate in the area of their own interest and expertise;

(d) assign dedicated focal person(s) from NRNA to keep contact with OUN-IDB to deal with NRNA on OUN matters;

(e) channelize OUN messages and updates over NRNA organizational networks to Nepalese Diaspora;

(f) collaborate with national and international organizations in the agreed matters for channelling academic, financial and in-kind resources to OUN;

(g) mobilize international funding, in-kind support and academic expertize in the development and operation of OUN;

(h) actively participate in committees and subcommittees formed within OUN-IDB.

Article 6
Entry into Force, Duration and Termination

This MOU will become effective upon endorsement of OUN-IDB after obtaining appropriate authorization from GON and completing formalities of NRNA including its registration. The parties may review this MOU after one (1) year of its commencement, and thereafter at three-year intervals. Any party may terminate this MOU by mutual consent or notice in writing given to the other at least six months in advance.

The parties have duly signed this MOU on 31 August 2012 in Sydney.

The Open University Infrastructure Development Board of Nepal

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Per: Kamal Dhakal
Executive Director

For Non-Resident Nepali Association

……
Jiba Nath Lamichhane
President

XXXIII. Appendix Q: Report on OUNI Program from 6th NRNA Global Conference

Report on Interaction Program on Open University of Nepal
2013 October 18
NRNA Skills Knowledge and Innovation Task Force
NRNA 6th Global Conference
Hotel Soaltee Crown Plaza, Kathmandu

Organized during NRNA 6th Global Conference, this interaction program brought in Nepalese intellectuals and the government. Present in the program were officials of the Ministry of Education, Ministry of Science and Technology, Patrons and President of NRNA, former Vice Chancellors of the Tribhuvan University and Kathmandu University, Vice Chancellor of the Nepal Academy of Science and Technology, prominent education experts, educationists, NRNA delegates and open university initiative contributors and enthusiasts. Political parties were not invited at this time because the election for the parliament was already announced for November 19, 2013 and potential participants were already busy in election campaigns.

NRNA Advisor and member of the OUNI core team Dr Drona Rasali welcomed all the participants on behalf of NRNA and expressed happiness in seeing prominent personalities present in the program. He said that MoE and NRNA entered in the agreement to collaborate in establishing a world class open university in Nepal and our activities were significant and we were informed and engaged well. NRNs had collaborated with the Athabasca University of Canada and were ready to launch some pilot programs but the ground here could not be ready. From NRNA side, he expressed that the communication and collaboration after the formation of OUN Infrastructure Development Board could not be satisfactory. He stressed that this situation be corrected and the original spirit of collaboration be maintained. NRNA would like to launch a pilot program within a few months but it is the responsibility of the government and the OUNIDB to ready the ground situation.

NRNA SKI task Force Chair Dr Raju Adhikari welcomed the participants on behalf of NRN SKI Task Force, which is working to make knowledge investments in Nepal. That Nepal is in need of both capital investment and knowledge investment NRNA took a direction to focus on these both since its 4th global conference. The idea of knowledge investment was well received by the media as well as the general public. Now NRNA is in a process of forming a SKI permanent committee. He sought participation of NRNA in science, technology and education policy bodies of the government. That educating young people in innovative environment is important we seek to collaborate in innovation and education. Therefore, on top of engaging in Open University initiative we are registering Nepal Science Foundation to initiate science initiatives. We can play important role in international networking at a time foundation is ready in Nepal.

Dr Pramod Dhakal gave a context for the human and technological context of the OU initiative, a glimpse of its development in the last four years, and review of the strengths and weaknesses of this mission. The full text of which is available separately. He identified that Nepal's villages are characterized by migration of youth to foreign countries for employment. Young women are consequently home bound looking after the farms and children. An Open University is a must to address the educational needs of this young population. And the way by which OU can help them is through a technological platform that allows collaboration of people in knowledge production and distribution over Internet based communication medium. That motivated NRNs to collaborate with GoN for the establishment of OUN. However, an attempt to pass a bill could not succeed before the dissolution of the parliament due to inner dynamics of GoN, UGC and existing university leaders. Dr Dhakal stated that this mission gathered momentum on the basis of mass mobilization and grassroots support but after the formation of OUN Infrastructure Development Board the mission become budget centred and distanced itself from the grassroots and its tie-up with the NRNA movement also weakened. It has made us realize that budget and employees alone cannot accomplish this types of complex missions. On the positive note, however, separate budget item has started to flow from the government for the OU and there is a legal entity to receive it and spend it. This gives legitimacy and government ownership to the mission. However, for NRNA contributions a separate entity to manage it might be a way than a government run entity for the purpose of accountability, transparency and in having ability

to channel the resources in focus areas. Perhaps it is prudent to compliment this mission from an independent forum.

Dr Mana Wagle, member of the OUNIDB showed disappointment in the fact that the efforts to establish the OU are two decades old but it could not be materialized till now due to the internal reasons - be they of the government, UGC, scholars or NRNA. It became like a child without a proper gender and became an orphan. No political entity took courage to lift this cause up and we have this situation. So much talk has been stayed at the level of talk on it that it has become like "Emperor's new cloth." NRNA started in 2010, we said to NRNA that it will be difficult and is has shown up. The biggest gap here is the policy gap but MoE could not push the bill for the OU. Therefore, unless the legal basis for it could not be created it is not going to be possible to open OU.

Using the metaphor of a married daughter gone away from parents and how she remains connected to her motherland and how she gets pinched by an treatment like an outsider by siblings, Dr Sudha Tripathi lauded the NRN efforts on OU. The arranged setup in Nepal in her opinion has been not conducive for NRN engagement, which is a matter of frustration. Perhaps we are slow to accept and we have to open up our mind. Although we are there in the board, we get to know its happenings only at the time of signing papers. Perhaps political interests are interfering every sphere of Nepal. Although knowledge is important in accomplishing a mission, also active commitment and devotion into the cause are other factors that are also important but are mission in our context. NRN friends went around and learned some extra, and are now willing to invest their knowledge in Nepal and that we all must welcome you.

By saying "20 years on our own life may not be much, but 20 years on all other people's lives is much", Dr Bidya Nath Koirala started in a somber note to not five up in all discouraging circumstances. NRNA has provided some extra impetus on OU mission and for that he expressed thanks to NRNs. We committed ourselves at our level and NRNA has been carrying forward along with international organizations, which is helpful. We have a culture of philosophy, culture of self-study (Swadhyaya), and culture of reflection, which is worth exemplifying through Open University. The technology of the West has been attached with the society and the masses of people and our technology has been attached with individual self. Therefore, we need to utilize Western technology in this mission, and NRNs could be important assets in this regard. Our people possess significant amount of practical knowledge but we have so far been unable to translate into formal and recognized knowledge and skill sets. It has been not so long that Banmara entered in Nepal's landscape but people have already found medicinal utilities of it. Therefore, there is a niche work area where OU can make impact in the society. Whereas in the West they have been able to convert their primitive ideas into formal fields of studies, we are not being able to do so. Finding Yog, the West has already modernized into a marketable commodity called Yoga but we are unable to grasp its utilities beyond old prescriptions. Therefore we have opportunities. We have opportunities to convert Tharu Thala, hill Kachahari, Newar's Dabali into reading circles of our people. We can use TV and radio channels into 24hour radio and television in education. One can do PhD in an traditional blacksmith shop. Therefore, there are a lot of unseen opportunities in Nepal. All universities must focus on helping build OU than trying to start their own open programs. We can connect all universities, we can network people and ideas, as an alternative way of taking open education to people.

Urging to ask OU as an opportunity, Dr Bishal Sitaula of former president of NRN Norway asked to excavate the knowledge that resides amongst us. We need to mobilize change networks of youth that finds the latest happenings of the world. Whether NRNA is registered or not, all the knowledge that all Nepalese scholars possess remains valid and useful. With OU as a vehicle it will be possible for diaspora children to come to Nepal to study for a semester, which is beneficial to both Nepal and the diaspora children through outside exposure. That this mission is inching ahead in all difficult circumstances, he expressed thanks to Dr Pramod Dhakal for his efforts.

Former Chairman of the University Grant Commission and former Vice Chancellor of Tribhuvan University Dr Kamal Krishna Joshi said that the major problems of higher education in Nepal are, quality education and the access to it by the masses of people. Open University comes to picture integrated with these issues. We have experienced that quality costs money and when government cannot give that money that has to be recovered by tuition fee from the students making it unaffordable to many. At present in Nepal the quality and access are found to have inversely proportional relation. At present TU has 350000 enrolments, down from 400,000 some years ago. There has been complaints

that it could not deliver quality education. In presence of OU and if in case quality delivery couldbe achieved through it, it is hoped that it would be possible to improve quality in TU. At the time there was SAARC interest in common open university, SACODIL was formed but Nepal could not make headway in establishing its own Open University due to lack of government interest. Therefore, the major factor has been the lack of political interest in OU. All interests are stuck on elementary education. By law, the government has to take suggestion from the UGC when opening a new university but if positive suggestion is not given pressure is applied or bill for a new university is passed in the parliament anyway. Therefore, where there is no rule of law, sometimes it is excessively difficult to things and sometimes unexpectedly easy. However, if we are committed to open OU, it might not be that difficult to get the law passed from the parliament. Likely we will not have to wait 18 years but we have to take political commitment from major parties. The NRN interest in establishing OU in Nepal is laudable but it must be a non-profit institution. Perhaps NRN delegation should go to all political parties to get political commitments, which will compliment our efforts.

NRN Patron and past president Dev Man Hirachan said that OU has been heard for years. It is great that this OU phrase came out and become popular in NRN community. There is a Japanene saying that tells that it takes 50 years to raise a man and 100 years to raise a tree. This OU mission is also like that. That we are in the mission, we must not give up. From NRNA he stressed that government, NRNs and scholars should unite for this cause. With commitment and with "can do" attitude only we can do it. Whatever we dream and whatever mission we take, we must give all 24 hours available to us in it. With that approach we will be able establish OU. Committed friends brought this idea in 2009 but today this is getting prominence. That we are in an age of knowledge economy and we are here to invest skills and knowledge in Nepal, we need help from all stakeholders of Nepal.

That each person wants to be rich is the dream of each person, be it financially, culturally, intellectually, or any other way, said Founding President of NRNA Dr Upendra Mahato. He said that it has been so long since we talked about OU but it has not materialized as yet. However, why developed countries are developed today is due to knowledge. Unless we invest well in temples of knowledge our country cannot come to the forefront of development. Money and monetary investment is important but it not the only import thing. We can bring money but with knowledge, ideas, and plan, and ideas we can bring more and we can make our achievements durable. Money can be brought from outside but the brain to utilize that money wisely, efficiently and productively cannot be brought from outside. But out top brains of NRN are in disposal of Nepal. Therefore, we must seriously invest in temples of education and OU is the need of the time and way of the future for Nepal. That our people are toiling in other countries, we can make them earn more and our country could be developed. Perhaps the government and NRNA will take priority in this matter. The NRN work will build up confidence in Nepalese youth. He requested teachers and professors also to focus on the pure cause of education. We as NRNs also should consult with political parties to raise OU issue. Together we will build OU.

Mr Rabi Karmacharya for OLE Nepal spoke that he perceived application of knowledge as more important that knowledge by itself. He said that improvement in school education is as important as higher education. We also have to weigh how much vocational educational and how much other education is needed. Renowned universities of the world are opening up their works in open forum and may be we can use those resources and make impact on local needs, local resources and local productivity through appropriate programs without worrying whether the government lets us open OU or not. Today, those who have money have access to higher education already. But access to higher education is dampened for the poor due to poor base in school education itself. Therefore, we must raise our children from school level itself to learn in collaborative, learner-centric, personalized-pace learning environment not only as a structure but as a mindset prepared for it. So we must prepare them as real learners of the future.

Mr Chhatrahari Karki of Midas Software spoke on his private efforts in developing interactive audiovisual learning materials for up to Grade 10 based on the curriculum prescribed by the Ministry of Education. We are seeing ever more opportunity for the introduction of interactive audiovisual based self-learning material in education because Nepal has an unstoppable trend for out-migration of educated people. The question is who will go to rural schools as teachers when capable people are heading to foreign countries? But education for the people has to be improved, even for rural people. Ten years of experience of Mr. Karki has taught him that interactive learning materials are instruments to fill that human resource gap and do more. Lately, they have seen ever more opportunity in non-formal education sector where people are seeking practical courses on many areas of interest like

farming, first aid, preventive health and so on. We have developed capacity in Nepal on audiovisual learning material production and we are already developing them for universities in contract basis. Because Open University is technology based university, we need technical capability but fortunately we carry such capability in Nepal.

Vice Chancellor of Nepal Academy of Science and Technology Dr Surendra Raj Kaphle reminded his suggestion given in a program in relation to OUN three years ago that you should take the same approach as taken by the Tribhuvan University in its starting days. We studied in Trichandra but obtained degrees from Patna University of India. Today also Open Universities are operating in Nepal in different disguise or formally. Therefore, a way to accelerate OU establishment is to let those who have made themselves known as educationists to be in the forefront and advance the agenda. Our problem today in research has been lack of experience and out-migration of people. We have already fallen back in science, so we need to develop forums to cash all Nepalese scholars scattered throughout the world. Only if we can expand the network we could do good for the nation.

Member Secretary of the University Grant Commission stated that institution are born when things from all direction fall in place. Taking example of a degree program established for the Nepal Army, he said that synchronizing activities of various agencies. May be NRNs have not reached to the right place also. OU is an agenda of the whole nation but we have not been able to execute. We have to think that there are people resisting it for NRN is leading the effort and that is the politics of Nepal. However, if we properly coordinate we could make a breakthrough. We need substantial resources, let us identify what NRN can offer in knowledge front and resource front. Nevertheless, OU is most urgent for social equity. He gave example of his classmate Harka Bahadur who is working as a porter, he pleaded that our responsibility is in places like that. We invite NRN friends to come to the UGC with tangible model for collaboration, UGC is there to do all from its side.

Joint Secretary and Spokesperson of the Ministry of Education Mr Mahashram Sharma thanked Dr Pramod Dhakal and Dr Raju Adhikari for their presentations. On behalf of the Ministry of Education, he thanked NRN contributors for building pressure for the Open University and expressed pleasure in seeing OU as an important agenda in NRNA forum. He said that the Ministry has taken this issue with priority. We could not make breakthrough for OU in the past and suggestions came in favour of moving forward without waiting for legal outlet. He appreciated the spirits of NRNs to make Nepal prosperous in all fronts including economic, educational and cultural fronts. Our commitment is far advanced since the time of tenth plan and it is time to build pressure on political leadership, especially in light of the fact that many other universities were established after the OU agenda was brought to the table. The passage of the Umbrella Act was also blocked by educationist gentlefolks who lobbied hard against it. He, therefore, pleaded with the intellectuals to let the OU bill be yielded. That the MoE was forced to table a separate bill for OU and has prepared such bill today, he showed confidence that this bill will pass. In relation to the MoU with the NRNA, he recognized that there have been problem in the Board in keeping up the stated spirit but he said that such situation is being corrected and we will be working together. He said that all movements are in positive direction and OU will be established after all because we all have owned it. He thanked NRNA once again.

Secretary of the Ministry of Science and Technology Dr. Somlal Subedi said that he appreciated that NRNA has picked up the cause of Open University, science and research. The agenda of Open University is on the table of the Ministry of Education and being a past Secretary of that ministry and having helped in advancing the agenda then, he expressed solidarity in the cause. From the Ministry of Science and Technology he expressed his willingness to coordinate among various agencies for collaboration. He said that the major area of collaboration with NRNA may in the area of information, communication, development of diaspora expert profile, research capacity building, helping prevent Nepal from being a technology dump-site, and sharing knowledge. In terms of OU, he recommended to ensure that roles are not overlapped with other universities to avoid counter lobbying. Also outsourcing and contract employments are also important to avoid some unfortunate situations faced by other universities.

Summing up the session, the former Vice Chancellor of Kathmandu University and Chair of this program stated that needs for the OU have been assessed repeatedly. For long it has been difficult to work and study in rural areas and even for urban employed and Open University was identified as a necessary instrument to address the situation. Government plans and policies have also stated to open the OU. That action speaks louder than the words but government that has said it is necessary is

perhaps holding it up. This agenda does not have to wait for the passage of the constitution. He said the gathering of this program has prominent people from many walks of life who can influence the cause of OU. He urged the participants to go with the mindset that they have responsibility to make a breakthrough for the OU. We need action first and we need extra resources in the start up phase. Although we need external help but our main initial resources must come internally. We can in fact start from small number of programs. Also a comprehensive operational plan for the institution that clearly states the role of the NRNA, UGC, government, and people seems to be late in the making already. If it was there, all roles would have been clear and many confusions would have been avoided. Although OU could not be established earlier, there is no benefit in dwelling on that issue but the benefit is in making the plan ahead. That Athabasca University has already committed for support, we are unable to seek extra-financial support and the support of the expertise. We must seek mentor-ship only and we must understand that one university cannot financially help another university. In this regard, NRNA can play role in creating some fund to bring in such expertise. Therefore, we must start the collaboration soon. Also we should not be seeking outside experts only, we must first utilize our own expertise, which is found in respectable level now. We have to change our expert seeking character although we indeed need expertise in specific areas such as how to well run an OU, how to accredit, how make transfer arrangements. Therefore, we must not only talk but do preparation on such matters. We must not let anything block the establishment of the OU. We should not consider the establishment as an achievement but to make a well run and good university. All concerned agencies must help. Although UGC has not blocked it, may be it has not played enough of a facilitators' role. If so we must correct it. Ministry of law may have to play in facilitating the law making process. Ministry of Education should play its role. Rich NRN friends could contribute financially and also intellectually. He showed that OU mission will be successful and we must try to bring law through Ordinance and quickly.

Finally Dr Raju Adhikari thanked all the participants for providing valuable feedback and suggestions and promised that the team will take all the suggestions and act accordingly. He apologized for not being able to give time for prominebt personalities present in the program. He promised that the OU and NSF platforms together provide wide enough platform to include most endeavours of mind including education, innovation, science and technology and NRNs will strive to advance these agendas with utmost importance.

XXXIV. Appendix R: Report on Meeting between NRNA ICC and Minister of Education

Report of the Meeting Between the Ministry of Education and NRNA on Open University of Nepal

2013November 24
MoE, Singha Durbar, Kathmandu

Participants:
Ministry of Education: Hon. Minister Madhav Prasad Paudel, Secretary Narayan Gopal Malegoo, Joint Secretary Mr. Mahashram Sharma
NRNA: President Shesh Ghale, SKI TF Chair Dr. Raju Adhikari, OUN Project Champion Dr Pramod Dhakal, Executive Director Rajesh Shumsher Rana

(Note: This meeting was held in two segments, once with the officials and the other with the minister because the Cabinet Meeting of the day took longer to complete. This report sums up both.)

Dr Pramod Dhakal initiated the talk by giving brief synopsis of the project. His major points were that NRN motivation in this mission has been with a belief that OUN is an important instrument for the transformation of Nepal. NRNs concluded that, being a technology made university, an OU can lend a technological and institutional platform for transfer of knowledge, research collaboration, program development, professorship, tutorship, and studentship among people leaving in distant places. Young people who go to other countries can continue their education and engage in lifelong learning process. Experienced people, diaspora youth and the general mass can participate in Wiki-style, networked, and collaborative knowledge production and in the generation of innovative ideas. Therefore, engaging diaspora scholars and international institutions in the whole process of institution building can magnify our capacity to develop a model university for the 21st century. NRNs can be academics, ambassadors and students of OUN. The OUN can be a good platform to develop networked and cloud computing infrastructure in Nepal and to develop skill inventory of scholars in Nepal and abroad. That the government is in control of the project, we have to identify ways to advance institutional collaboration with NRNs in this meeting.

Joint Secretary Mahashram Sharma who was a contributor to the initiative from the beginning was then asked to brief the government position to the newly elected President of NRNA. Mr. Mahashram Sharma thanked NRNA for pushing this agenda. In his view, NRN push helped the mission to mature to this stage. He said that this work moved forward after the signing of an MoU between the NRNA and the Ministry of Education. That set a direction for partnership and we sought technical support and collaboration with NRNs and international institutions. The Umbrella Act was advanced in the Legislative Parliament to give legal ground for establishing the OU. Later the formation of OUN Infrastructure Development Board was done as an instrument to continue that effort and consequently MoUs with NRNA and Athabasca University were signed in NRNA Conference in Sydney in 2012. However, we faced some obstacle in passing of the bill first due to the resistance of existing universities and later due to dissolution of the parliament.

Mr. Sharma added that since then a parcel of land has been allocated to OU in Dhulikhel and a new bill exclusively addressed to OU has been drafted and is being sent for comment to University Grant Commission and Ministry of Law. Some work has also been done in developing curriculum outline for some early programs. Nevertheless, we are going to advance this initiative by engaging the NRNs. He also stressed that now it is not going to take a long time to establish the OU. There is not deviation in this front.

Then Secretary Mr. Narayan Gopal Malegoo added that they NRN engagement in the project has been inspiring. At the Ministry they have already started to count OU along with other nine universities. Despite taking long effort, an exclusive bill for the OU is drafted and is going to be submitted to the parliament. Only after the passage of the bill other activities could pick up significantly. Major obstacle in the mission has been that the institution has to be build in accordance with one law or the other and its absence has been a major hindrance. We have been thinking to take the bill also to the President to activate it through ordinance.

Dr Raju Adhikari said that OU and Science Foundation constitute major NRN initiatives in skills, knowledge and innovation front. Dr Pramod Dhakal has been here for long but the government has not been able to define a clear role for him and he is not paid for his work. We entered into the initiative with a great interest to partner in knowledge and technical expertise and we are in need of a suitable platform, and OU is supposed to be one of that.

Responding to Dr Adhikari's query, Mr Sharma said that MoE and NRNA will collectively develop collaboration modalities. We will be working in a line to give defined roles and responsibilities to Dr Dhakal.

Mr. Shesh Ghale said that his backgroung is also education and he would have a keen interest in the OU. He also said that there will be some additional support from him and NRNA on this. What he wanted in the OU mission was to have clarity on how the need of vocational education and of general higher education would be balanced presented through a comprehensive business plan of the institution. He expressed confidence to the project on behalf of NRNA.

Honourable Minister Madhav Paudel expressed congratulation to the newly elected NRNA executives under the leadership of Mr. Shesh Ghale. He said that the bill is going to be taken to the Cabinet of Ministers swiftly and will be discussed there and expressed his confidence in passing thhrough the cabinet before Tihar festival. He also said that although he is new to the Ministry, all works are carried out in an institutional basis and all stakeholders have support to the OU. Because OU is the demand of the day, we will advance it forward to the parliament. That land is allocated and separate budget is allocated for the OU it is an important development. We are in front of an election of the parliament and passing the bill through Ordinance is not practicable at this very moment. But he expressed full confidence in establishing the OU and expressed confidence in that there will be strong collaboration between MoE and the NRNA. Because human capital development is a high priority agenda of the government, we are committed to the OU.

The meeting concluded with a mutual understanding for strong collaboration between MoE and NRNA on Open University Initiative.

XXXV. Appendix S: Report on Meeting between NRNA ICC and Minister of Education

Report of the Meeting Between the Ministry of Education and NRNA on Open University of Nepal

2014 March 13

MoE, Singha Durbar, Kathmandu

Participants:

Ministry of Education: Hon. Minister Chitra Lekha Yadav, Secretary Narayan Gopal Malegoo, Joint Secretary Mr. Mahashram Sharma

NRNA: President Shesh Ghale, OUNI Task Force Chair Dr Pramod Dhakal, Executive Director Rajesh Shumsher Rana

A meeting on Open University of Nepal Initiative was held between the Ministry of Education (MoE) led by Hon. Minister Chitra Lekha Yadav and the Non-Resident Nepali Association (NRNA) delegation led by President Shesh Ghale at the office of the minister on March 13, 2014. The purpose of this meeting was to review the Open University of Nepal Initiative that was launched in October 2010 with signing of an agreement of cooperation and collaboration between the MoE and NRNA. The collaboration that was progressing at a spectacular pace in the beginning had dampened over time due to various unforeseen circumstances. Re-inspiring NRN engagement meant that the pace of progress be respectable enough to explain it to the people, and our outlook on collaboration and co-development needed to be reviewed and accordingly improved upon.

Mr. Shesh Ghale opened the discussion by stating that NRNA is seriously committed to the Open University of Nepal Initiative and his delegation was here to understand the commitment and position of the government. Minister Chitra Lekha Yadav said that she holds the mission of establishing Open University as one of utmost importance. She thus invited the Secretary and Joint Secretary (Planning) into the meeting to make the discussions more informed and officially facilitated.

Mr. Ghale said that years have passed since this joint mission was launched in 2010 but it has been difficult for us to convince NRN enthusiasts that the pace of progress in this mission is acceptable and that it is inclusive of the NRNs. Looking at the current draft bill we cannot see any signs that the government is committed to the collaboration and co-development with NRNA as envisioned in the agreement and it fails to include even the word diaspora, fails to set any objective of harnessing the diaspora strength, and fails to recognize the efforts and contributions made by the diaspora in promoting the mission.

Ministry of Education Secretary Mr. Narayan Gopal Malgoo said that this initiative has been a priority agenda of the ministry and the ministry officials are committed to bring necessary law into effect. Dr. Pramod Dhakal also has seen the developments of the initiative closely. Comments and consent on the draft bill have been already

received from University Grant Commission and the Ministry of Law. The ministry can give the final touch, get it approved by the cabinet, and table it to the parliament. We at the ministry accept and recognize the role of NRNA. With regards to making changes in the bill to include NRN suggestions, we could do to an extent it does not delay the tabling of the bill.

Mr. Ghale said that it has been difficult to find room for seriously engaging NRN skills, knowledge, research and academic capacity in the institutional development of the university. The Bill drafted by the Ministry of Education is the instrument where room for NRN participation in academics and governance, especially in Senate and Academic Council could be ensured. We are not talking about inclusion of NRNA office bearers but of diaspora scholars. This should lead to NRN engagement in faculties and management. Otherwise, NRNs will ask us, "to what end was our engagement meaningful?" We sent here Dr Pramod Dhakal, a person with recognizable capabilities and abilities to engage himself in multinational space. He has completely committed himself to this mission for years and has produced tangible output for the mission. As yet we see that somewhere there is failure to recognize those contributions not only of his but also of NRN efforts in general.

Mr. Ghale mentioned that "A White Paper on Open University of Nepal Initiative" seem to clearly emphasize the importance of vocational education and have developed space for technical, vocational and academic learning. This is a significant contrast from Nepal's existing universities, which largely provide theoretical education in rote learning environment. Technical, vocational, and entrepreneurial education is a kind of space where NRNs can inject new dimensions. Our diaspora carries significant technical and entrepreneurial capabilities worth utilizing in Nepal. At present, our people lack various trade skills and go to other countries as unskilled labourers for work. Also what we lack is a system of a continuum of technical and academic learning having many entry and exit points. People exit with certain level of technical skills, work for some time and re-enter for further advancement at different times. People who develop their skills and academics in such environment are found to be highly independent, research and innovation oriented, and entrepreneurial whereas more of students produced by our system in Nepal earn degrees successfully and seek job but lack other qualities to succeed better in the workplace and market. We seek to introduce critical-thinking, entrepreneurial and research dimensions in this university.

Mr. Malegoo pointed that education based on foreign curriculum is already being offered in Nepal through private colleges with affiliation with foreign colleges and universities. There is a board chaired by the Minister of Education to evaluate the merit of applications and approve such foreign affiliations. Once approved, most monitoring would be done by the affiliation giving university and we also do some. He also emphasized on the importance of developing unique curriculum for Nepal to make our students find work in the country. He stated CTEVT as an important step to that. He mentioned that CTEVT has its training centres in 40 districts and is offering technical and vocational training at various levels. We have to take these programs to levels comparable with the world.

There are three types of migrant youth in Nepal, said Mr Malegoo. The first type of youth is the product of affluent schools going to OECD countries for education and eventual migration. Second is youth who is educated a level lower than the first and goes to Middle-East, Malaysia and Korea as a labourer. The third is the most disadvantaged one who goes to India. The first challenge is how to retain those youth

who go away for higher education by offering the quality education in Nepal and use them for Nepal's development. The second challenge is to make our youth skilled so that they do better when they go abroad or if they stay here. Therefore, skills, employment and education are major issues at present. Technical and vocational education has been identified as important and efforts are underway in collaboration with Ministry of Labour. As far as NRN support through Open University is concerned, we are willing to understand those options while first priority belonging to finding the legal outlet.

Dr. Pramod Dhakal added that a large contingent of educated Nepalese is abroad. It is clever and advantageous to utilize the potential of that population. Research findings have shown that diaspora are major forces in the development of home countries and more significantly in academic, scientific and entrepreneurship space. It has been found that diaspora Indian scientists make up 40% of all scientists of Indian ancestry. Nepalese case is not significantly different as Nepal is sending extremely talented youth abroad and opportunities are created there. World bodies have already recognized diaspora as major opportunities in the space of development. He added that Open University is a major institutional instrument to mobilize that talent because in it the diaspora do not need to come back physically to participate in academics, research and innovation. Their knowledge can be directly rendered from abroad to here in Nepal. On the flip side, our youth who go to Korea or Middle-East can carry their classes with them and continue studying while they are there. That is why Open University is of major interest to diaspora Nepalese. We, therefore, request that the Ministry of Education carefully look at our requests for modification in the current draft bill.

Dr. Dhakal continued saying that our interest from the beginning had been to develop the Comprehensive Operational Plan. We prepared the White Paper as a major step to accelerate that work. Unfortunately, our work was sidelined after formation of the Open University Infrastructure Development Board, which has "put the cart before the horse" by giving precedence to programs over the plan. Although it is possible to burn the budget in programs in the absence of any plan, it is not the right way to develop any institution of great significance. Situation has developed to be so difficult that although this white paper was developed by the Steering Committee, we have been distributing the white paper not on the name of the Steering Committee and that also without putting the logos of the collaborating institutions. A historic document of this kind should not face this fate. Some correction is, therefore, necessary on what has happened. The Board has not produced something worth showing to the people of Nepal after burning 3-4 crores whereas we did not burn a penny of public fund in producing something substantial, worthy enough to show to the world as a tangible output.

Mr. Malegoo asked if the White Paper contains any plan on how it mobilizes the diaspora. To his question Dr. Dhakal said, yes and claimed that not only that it also covers areas of academics, research, technology, physical infrastructure, governance and more. Dr. Dhakal further added that this document is very close to becoming a comprehensive plan. What are missing at the moment are financial analysis of different components and work breakdowns for which we ought to inject some specific expertise. Mr. Malegoo also asked if the White paper was prepared by NRNs and Dr. Dhakal answered yes.

Mr. Malegoo asked what, besides representation, are the top concerns put forward by

the NRNA in the letter prepared for the Minister. Dr. Dhakal said that other issues are of not marginalizing past work, giving higher precedence to the plan than the programs, and incorporating our suggestions for changes to the bill. If the Ministry finds it difficult to develop the plan, NRNs will do it but to do that the Ministry should give us the mandate. Without comprehensive operational plan, no great institution would like to put funds on the mission.

Mr. Ghale emphasised that NRNA representation in general and in academic governance of the university, and the recognition of the past work are of paramount interest to the NRNA.

Joint Secretary Mr. Mahashram Paudel then spoke on the issue as a high level ministry official who has been involved on the initiative from the beginning. He said that the agreement between the Ministry of Education and the NRNA was reached when Hon. Sarvendra Nath Sukla was the Minister. At that time Athabasca University of Canada was already brought on board by signing a MoU. NRNA interest played a significant role in accelerating the work. We then signed a Resolution between the MoE and NRNA and formed a Steering Committee in presence of Minister Shukla and the President of Athabasca University. The Steering Committee office was subsequently established at Keshar Mahal and the work gathered momentum. However, when Hon. Baburam Bhattarai was the Prime Minister, a problem arose on how to give some outlet in absence of a law to establish the Open University. Forming a Development Board was considered as a possible alternative in absence of the bill and the Board was formed. But in the aftermath of the formation of the Board, it started producing some new documents that did not take the past works, agreements and aspirations into account.

Regarding the concern on whether the past work will really be ignored, Mr. Sharma said, "I as a person responsible for planning, and in presence of our Secretary, would like to assure that Ministry will not move ahead by ignoring the past work done by the Steering Committee, Dr. Pramod Dhakal, and the NRNA. Those works were carried out in joint initiation with the Ministry of Education and we are conscious of it. That such a wonderful document (White Paper) has come from NRNA as part of this initiative, we appreciate the work." He also thanked Mr. Shesh Ghale for taking strong and renewed interest after becoming the President of NRNA. He assured that the Ministry will honour all the works carried out in joint initiation of MoE and NRNA. Even after this, when Hon. Dinanath Sharma was the Minister, MoUs were signed with NRNA and Athabasca University by the Infrastructure development Board of which Mr. Sharma was also witness. However, in the period from that time and now Dr. Pramod Dhakal's talent and time was not utilized well despite the fact that NRNA had sent him as a contributor with high aspirations. It was a weak aspect of what happened in between and the Ministry is going to correct such situation. We will combine the work of the Steering Committee and the Infrastructure Development in the days ahead along with focusing on the law. Ministry of Education is clear on the matter that we will uphold the spirit of our agreements and move ahead in that spirit. Dr. Pramod Dhakal had come here with some vision and conviction and when they could not be implemented, the situation has turned a bit unexpected. We assure, however, that the future will be different.

Mr. Shesh Ghale said that he has now been convinced that both sides are now in the same line. That a valuable talent like Pramod Dhakal has been here for the service of the mission, why not use that for a meaningful purpose, even in other useful areas?

NRNA takes this matter with utmost gravity and he as a President of NRNA takes this matter seriously and seeks recognition of Dr. Dhakal's work and that of NRN campaigners because their work is associated with the recognition of NRNA. Mr. Sharma agreed with Mr. Ghale's assertion.

Mr. Ghale said that Nepali diaspora is already mature in academics, research and entrepreneurship. He sees that maturity as something good for the future of the collaboration and for the future of the institution. He said that we could review our past performances and move ahead by correcting what is not fitting to our aspirations. Mr. Sharma added that the Infrastructure Development Board could not create environment of contribution but Ministry has been aware of this and not in any way interested to undermine the spirit of collaboration.

Mr. Ghale added that NRNA made a thorough review of its past initiatives and their alignment with the goals of NRNA. The review found the Open University Initiative as one that matters for the skill, knowledge and innovation transfer agenda of NRNA. Consequently a separate Open University Initiative Task Force has been created for the purpose and Dr. Pramod Dhakal has been made the Chair of it. He is mandated to drive the global effort of NRNA on this matter. NRNA is ready to create an office in Kathmandu dedicated to the mission. To that effect we seek to report the progress every three months to the NRNA. Mr. Sharma added that Ministry had given an office space to Dr. Dhakal and the Steering Committee, but when the Infrastructure Development Board was brought into that office the new Director could not honour the past commitments, which were historically at work. "We will not let things continue that way. We will recognize the works of the Board as well as the Steering Committee", said he. Mr. Ghale added that MoE and NRNA interest have converged and expressed satisfaction on that matter.

Dr. Dhakal said that the diaspora effort is motivated to positively contribute to Nepal and is in no way motivated to profit from the mission. "We brought international institutions into partnership with that spirit. However, when agreements get signed and not get honoured, our credibility becomes questionable. We are at loss on how would we explain the situation to universities like Athabasca University. Open Universities Australia, Open University UK, University of Houston System, California State University and many more universities came to commit to collaboration with us but they could not be converted to instruments for producing tangible outcome due to weaknesses on our part. That should not have happened. We ought to not repeat that type of mistakes", said he.

Speaking about the function of a public university, Mr. Ghale gave example of Australia to emphasize that not only a public university but any university ought to serve the goal of uplifting the whole of society including those who are left behind. He said, "Although I entered into education as a business person, my interests have also turned into the spirit of taking education as a social good and not so much as a commercial service as I am coming to more mature ends of it. At Open University we may have to generate funds and may have to derive profits but they would be for the purpose of infrastructure and program expansions. Such profits are put back in the system rather than being taken away by individuals. Protocol of setting up any type of university in Australia ought to be community interest and must protect the interest of the public, interest of the academic freedom, and allow public in the command of its governance. Even in private university, owner must let outside scholars to be in majority of the senate, which is mandated to uphold the interest of the public and not

of the owner."

Stressing on the matter of public interest, Dr. Dhakal added that commercially established colleges may give high quality education but that would be for the population that is affluent. Even when we are bringing programs of foreign universities to Nepal, we have not been able to offer them to broader population of Nepal. There is an issue of affordability and entry barriers. Thus the burden of educating the masses, which is on the shoulder of the government, has not been lessened by the private colleges. Therefore, Open University is an important public mission. Mr. Malegoo agreed and stressed that such is the view of the government in taking this agenda as one of priority. Most of our high education facilities are concentrated in Kathmandu now and remote regions are underserved. We want to utilize Open University to correct that situation and provide affordable and quality education to even the margins of society. Open University will create a base for systematically address the issue of access equity.

Mobile communication and Internet has reached even to the remote parts of Nepal although some issues of affordability remain, said Mr. Ghale. Nevertheless, we need not bear the burden of legacy. We have an opportunity to take off from the latest and greatest of technology. Mahabir Pun has already demonstrated in various pockets of Nepal that it is possible to create Wi-Fi networks everywhere. Using those technologies, Open University can take off rapidly. As far as physical buildings are concerned, opportunities for using existing school and training centre buildings are unfolding with the depleting rural population and rapid urbanization. Mr. Malegoo, agreed. Mr. Ghale thanked him for listening to NRN concerns with interest.

Along the end, Mr. Malegoo summed up the discussions. He stated that Mr. Sharma has already well-articulated the history of triumphs and issues of the mission. He then went on saying that NRNA and Ministry of Education have worked together in the past to advance this mission. NRNA organized Open University program separately giving special importance during the NRNA 6th Global Conference in Kathmandu. NRNA has also prepared a White Paper on the matter to present what needs to be done and how it needs to be done. They have discussed with different stakeholders and have incorporated their ideas in the paper. This should prove good input to the Ministry. Further, we are at the stage of bringing out a law for the Open University. A draft has been prepared and concerned stakeholders have provided their inputs, the last being that from University Grant Commission. We are now in a stage to give it a final touch, obtain cabinet approval, and table to the parliament. Once the legal foundation will be established, Open University could then function. As far as NRNA suggestions for improvement in the bill are concerned, they have been presented in the letter addressed to the minister. We will be taking those suggestions seriously. The initiatives that have been taken by NRNA are helpful and supportive to the Ministry. We acknowledge that our diaspora has been assimilated with the latest and quality technologies, quality education, and quality training and skills, which they can bring to Nepal with ease. We have interest to take that as an advantage and utilize those capabilities and possibilities for Nepal. As much as NRN friends are enthusiastic for the mission, we are also supportive with same enthusiasm. As far as the priorities are concerned, the first one is to make the law. We have been in touch and Dr. Pramod Dhakal is here representing the diaspora. He returned from Canada and has been dedicated to this mission right from the beginning. He is also in a Board formed for the purpose of the infrastructure development.

Dr. Dhakal added that we are not speaking for the benefit of NRNs but for the benefit of the people of Nepal. Open University and diaspora engagement in that university are important opportunities for Nepal. We ought to learn from Korea, which consciously brought back all Korean diaspora for lifting up its academic, scientific and entrepreneurial power. India and China are strategically utilizing their diaspora to leverage their development. Nepal can do it as well because a significant number of talented Nepali youth are settled abroad today. Therefore, we ought to open our hearts not only towards diaspora Nepalese but to people of the world. If top scientists or academics of any country are willing to work in Nepal we must be able to bring them in. With such openness towards intellectuals of the world, we will be able to not only build good Open University but also bring honour and dignity to the people of Nepal.

In the end, Minister of Education Chitra Lekha Yadav summed up by quoting a book written by a Korean author. In the book, the author has stressed that education has the greatest role in the development of Korea. The author has raised three points: "Love Heaven, Love Humanity, and Love Your Nation!" Loving heaven makes you stop from doing imprudent things, holds you from falling into temptations for doing bad things, and inspires you to do what is good. Loving humanity makes you do things that are centered for the betterment of humanity as a whole and not just centered for oneself. Loving the nation is given the highest importance for that propels them to seek excellence in whatever they do.

As far as Open University is concerned, Minister Yadav said that it is becoming ever more important in the globalized context. That we are not in a situation to stop our people from moving, working abroad and emigrating, it is prudent that we capitalize that situation to bring in best of technologies and to mobilize best of minds. Therefore, we have taken NRN engagement in Open University as very positive. We will also look at the NRN representation in the senate and academia. We are committed to involve in the process of establishing the university and we will work together. We do not see our diaspora as foreigners but we say "living for the sake of Nepal!" We have to do a lot for our nation.

Finally, the meeting closed with handing over of the NRNA letter and a copy of the Kathmandu Resolution 2010 to the minister and by taking a group picture.

XXXVI. Appendix T: MoU between MoE and NRNA signed on June 10, 2014

A Memorandum of Understanding
between
Government of Nepal Ministry of Education
and
Non-Resident Nepali Association
for
Establishment and Operation of Open University

WHEREAS, the Government of Nepal, Ministry of Education (hereinafter referred to as "MoE") and Non-Resident Nepali Association (hereinafter referred to as "NRNA") have been working together for the establishment and operation of an Open University in Nepal since 2010.

WHEREAS, Government of Nepal formulated in 2012 the Open University Infrastructure Development Board Formation Order and established the Open University Infrastructure Development Board (hereinafter referred to as OUIDB) with aim of accelerating the establishment of Open University and Article 13 of the OUIDB Formation Order authorizes the MoE to issue directive to the OUIDB for achieving that aim;

WHEREAS, Government of Nepal has given principle approval for preparing a draft of Open University Bill, and that Bill is in the process of being tabled as the Open University Bill, 2071 in the Legislature Parliament;

WHEREAS, Government of Nepal has been invoking the existing legal provisions to permit independent non-governmental entities in offering higher education programs accredited by Nepalese and foreign universities;

WHEREAS, the MoE allows NRNA to bring in the higher education programs recognized and certified by internationally accredited institutions and to offer them to Nepalese learners as part of capacity building for Open University of Nepal under the Open University Educational Program Management and Operation Sub-Committee (hereinafter referred to as OUPMO) to be constituted within OUIDB;

NOW, THEREFORE, MoE and NRNA have agreed as follows,–

1. In accordance with the spirit of the "Resolution on Initiative for Open University of Nepal 2010" and the Memorandum of Understanding signed between the OUIDB and NRNA in 2012, MoE endorses the proposal of NRNA to bring in and offer the open and distance education programs recognized and certified by internationally accredited institutions and offer them to Nepalese learners as part of building capacity for Open University.
2. (a) The MOE will constitute the OUPMO as a technical committee to work on behalf of MoE and NRNA to carry out the activities for the establishment and operation of Open University as follows,–

a. NRNA Representative to OUIDB - Coordinator
b. Chief of Higher Education Section, MoE - Member
c. Representative of University Grant Commission - Member
d. Chief of Foreign Aid Coordination Section, MoE - Member
e. Chief of Legal and Judgment Implementation Section, MoE - Member
f. Three Technology or Institution Building Experts as nominated by OUPMO - Member
g. Three representatives nominated by NRNA - Member
h. Undersecretary, OUIDB - Member-Secretary

(b) The chief of the Planning Division of MoE and the chief of Higher Education and Educational Management Division MoE will act as Ex-Officio Advisors of OUPMO.

3. The Terms of Reference of the OUPMO will be as follows:
    a. Develop White Paper and Comprehensive Operational Plan for the establishment of Open University and operation of OUPMO;
    b. Obtain affiliation of well-known universities for OUNIDB's academic, technical and vocational program offerings;
    c. Adopt, develop and adapt innovative higher education programs and contents in collaboration with concerned national and international agencies and institutions;
    d. Offer academic, technical and vocational programs to learners in different fields;
    e. Recommend curriculum, programs and budget to OUNIDB for approval;
    f. Recognize and recommend for determination of equivalency of different degrees of the open universities accredited to it;
    g. Recruit, develop and manage academic and technical human resources.
    h. Manage outsourcing of services;
    i. Manage technological, infrastructural and financial resources for the implementation of programs;
    j. To take necessary actions to arrange for land, physical infrastructure, and technology infrastructure necessary for the operation of OUPMO;
    k. Formulate task forces as necessary for the executions of its responsibilities;
    l. Open and operate separate sub-account as per Financial Procedure of OUNIDB (Section 9, Article 3(4)).

4. Responsibilities of the MoE will be as follows:

a. Provide built up building infrastructure for the launching of programs.
b. Provide public grants for infrastructure and program development.
c. Monitor and evaluate the effectiveness and efficiency of the programs.
d. Facilitate foreign aid mobilization.
e. Manage special funds to provide scholarships for the remote, disadvantaged and marginalized population groups to implement policies of inclusion and mass access.
f. Formulate policy and legal framework for the Open University.

5. Responsibilities of the NRNA will be as follows:
    a. Provide infrastructure for the launching of programs and operate diaspora collaboration and philanthropy mobilization center at the OUPMO;
    b. Mobilize technical human resource for the implementation of higher education programs through OUPMO;
    c. Mobilize skills, knowledge, innovation, and financial resources of internal and diaspora Nepalese for the implementation of the programs;
    d. Mobilize external technical and technological assistance to OUPMO;
    e. Coordinate and channelize necessary foreign development support with the prior consent of the Government of Nepal;
    f. Support faculty and program development for OUPMO;
    g. Facilitate for the arrangements of affiliation and technical collaboration with foreign universities;
    h. Mobilize internal, diaspora and international volunteerism, student exchanges, faculty exchanges, and collaboration for technology transfer and advancement of academics, skills, knowledge, research and innovation.
6. Responsibilities of the OUNIDB will be as follows:
    a. Approve the recommendations and propositions of OUPMO;
    b. Construct and develop physical infrastructure to establish Open University;
    c. Approve curriculum, programs and budget submitted by OUNIDB;
    d. Prepare and implement code of conduct;
    e. Arrange for physical and financial resources.
7. This MoU will become effective on the date of its signing and remain valid for five years from the date of signing and may be amended or extended with the mutual consent of MoE and NRNA.
8. Any further activities developed by or agreed to between the MoE and NRNA will be set forth in schedules to be attached to this MoU and will form an inseparable part hereof.

In witness whereof the MoE and NRNA hereto have signed this MoU by their respective duly authorized official in presence of Hon. Chitralekha Yadav, Minister of Education, Government of Nepal on this 10th day of June, 2014 in Kathmandu, Nepal.

On behalf of MoE:

……
Mahashram Sharma
Joint Secretary
Ministry of Education

On behalf of NRNA:

……
Shesh Ghale
President
Non-Resident Nepali Association

Witnessed by:

……
Chandra Kumari Thapa
Acting Member Secretary
Open University Infrastructure Development Board

……
Dr. Pramod Dhakal
Chairperson
NRNA Open University Task Force

XXXVII. Document Revision History:

Version #	Date of Release	Author	Remarks
1	2009-12-17	Dr. Pramod Dhakal	Prepared on Behalf of CFFN, NRN-Canada and NRNA as a Concept Paper
2	2010-02-05	Dr. Pramod Dhakal	Re-formatted for formal submission (File name: OU-20100205-CFFN-NRN-AConceptPaper-and-Proposal.doc)
3	2010-12-10	Dr. Pramod Dhakal	Added Suggestions from Workshops of Louisville, Houston, and Ottawa, Kathmandu, Sydney, Seoul
4	2011-12-30	Dr. Pramod Dhakal	Added Suggestions from Ottawa Workshop, and series of other workshops
5	2012-05-25	Dr. Pramod Dhakal	Added Suggestions from Kathmandu, Athabasca, and NKHSS Workshops
6	2013-01-10	Dr. Pramod Dhakal	Added Appendix E: Workshops Organized by Diaspora Community, Appendix F: Flagship Project Press Release Appendix G: A Diaspora Proposal, Appendix I: MoU Between AU, NRNA and CFFN, Appendix J: Resolution between MoE and NRNA
7	2013-03-30	Dr. Pramod Dhakal	Corrected misalignment in reference numbering, expanded content of Appendix B
8	2013-12-05	Dr. Pramod Dhakal	Added Appendix L to R, and revised first chapter to incorporate recent developmments.
9	2014-03-15	Dr. Pramod Dhakal	Added Appendix S.
10	2014-06-16	Dr. Pramod Dhakal	Expanded Chapter on ICT Infrastructure and Added Appendix T
11	2014-06-18	OUNIDB	Adopted the Document as Official; the version is marked as Release 1.0

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