

Motivation

Nepal has a population of 27.8 million among which 20% live in urban areas while the rest live in remote villages. It has a diversity in culture, races, traditions and customs which contribute different beliefs in women, men and children about technology and established rituals. Nepal's technology has prospered best through mobile and communication which attach to our lives with health, education and way of living. Today 37% of its total population are Internet Service Subscribers. The international escalation of mobile and computing technology through high performance Android gadgets present a scalable growth in Nepal. With business, education, government and societies encompassing the electronic media, we need the technology of West for Nepal's growth and development. Foreign investors also want to target the 65% mobile users with luxury of information, swiftness in government services, minimum mobility for information movement through advanced mobile apps and quick services. I have been personally inclined to face geographical terrain challenges. Particularly, the diversified availability of resources present their own limitations and market areas at the same time. So, I have been seeking to cultivate a smart cloud of devices to connect everything from social media, politics, government to home and appliances.

The on-demand culture of technology in the field of ICT insisted me to carry out my final year project on "Speech Operated System for Home Appliances". Here I got my chance to pursue on International papers presented by different scholars, students and researchers. Consulting to my university lecturers, I could walk over the real issues faced by local user groups. The insight to see new perspectives of our environment brought on the actual problems related to the targeted population, with their available resources. We learned to see deadlines with new ideas, to optimize the economy of developed prototypes and to ease the accessibility of user. This in advance has allowed to seek my career in ICT. I could see how a small twitch could solve hurdles people face everyday. For instance, a simple dissemination of information in instance of earthquake by collecting raw inputs from different sources into my designed database helped the automatic compilation to desired information format. I helped my colleagues see the ability which was cumbersome with paper compilation. I have presented my ideas to start e-libraries in schools and community centres with Raspberry Pi and remote sensing and GIS abilities by careful photography. Also, the in hand models to use sensors and communication networks to monitor community services like transportation and health has been perceived positively. A new horizon of knowledge in remote-sensing, AI libraries and embedded system designs would help to bring about a dynamic change to the existing system. There is no doubt that upon my return I could serve to the purpose by standing a position in government job or any private sector(as a consultant), so I have chosen this program. With the passage of time, the seeds I have sown here will help it to achieve a new demand at this level.

Relevance to Employing Organization

Office of District Development Committee is a government organization to produce development activities inside the district in the influence of programs set with political groups and general public. It has been introduced to provide e-governance services to its branch offices and public. I was assigned here to implement e-governance issues related to vital-registration, online reporting, creating an ICT-friendly society, assisting in digitization of data etc. I have been working here assessing the ICT (Information and Communication Technology) needs of DDC staffs, presenting the e-literacy needs of general public to government facilities and projecting the ICT infrastructure with mobile apps and electronic devices. It has been a roller-coaster ride with department officers to integrate the e-factors alongside the paper-established system. The activities normally are rustic and swiftness to the transition has been difficult because of the existing resources. The planning is affected in absence of relevant data about general public while the action is not effective in absence of monitoring of public services and the deficit of projecting data for better ideas. It really is about the ability to mix with the population of different ages, organization of existing government and non-government activities to suitable public program and self-discipline to impart them with e-culture.

During my tenure, I was impressed by my colleague who holds the District Government Expert position from LGCDP. He wanted the social mobilization programs to launch in the participation of ICT manpower. Here, I helped them to understand the importance of ICT-tools like website, mobile apps and electronic gadgets for development and promotion of services gained by different user-groups, children's clubs and ward-committee forums. The realization within my intellectual capacity and scope of our knowledge has been crucial. I have deemed the needs of proper remote sensing tools(sensors and AI), convenient custom-developed embedded systems, proper wireless techniques for communication and better leadership roles. Moreover, I believe that an international education will help me form concrete experiments with international community, learn the technological culture of progressing society and understand the international discipline.

The **E-governance** that my organization plans to has been a significant topic of interest. It has its own plans to set up communication infrastructure, build up convenient electronic system designs for child-friendly and environment-friendly governance and proper software tools to mobilize its staffs to whole new level. My job has been too demanding as I at first had to educate the officials to understand the mentioned prospects of governance. Again to form policies and code of conduct rules for each department in the subject has been core job. I, therefore, regard this postgraduate study to be crucial for right course of movement of the institution's action in the future.

Plan of action after return

The last two years of my professional career, mainly in design of software components and decision making of appropriate system hardware have enhanced my knowledge in this sector. At the same time, I have encountered many problems such as, system failures due to limitations of sensors, segmenting population to custom electronic systems, inefficient algorithms due to chaotic range of needs, secluded power efficient system designs, and communication errors in wired/wireless media. Noteworthy, I have realized implementation of the any work very challenging, if not properly analysed and planned, in the developing world. With the help of my superior's experiences and my own knowledge, sometimes I used thumb rule in design and took more factor of safety than mentioned in literature. Therefore, I am optimistic that after completion of the course, I will be able to design and manage such issue properly, using higher level of knowledge gained at your institution. Moreover, there was no ICT infrastructure to induce proper assignments to the governance tasks, which always stimulates my mind in finding scope of the research work on modern infrastructures of ICT, mainly concerning the development of own system choice with required software and selective sensors incorporated within the system hardware. Indeed, I have proposed to my superior for such type of research work that can support in selecting design parameter in the future ICT project and he was asking for more detailed concept in order to move forward. This is an encouraging factor for an enthusiastic and dedicated youth engineer like me for further career development. Therefore, I am confident that I will have diverse opportunities in my organization as well as in other in other organization in the future after completion of this course from your esteemed institution. For the sustainable development of a developing nation, sharing experience of the developed world is always helpful. I am also conceptualizing a plan to transfer the fundamental knowledge of embedded system design and mobile-applications system ware that I will learn at your institution to my subordinates in this organization via various workshops and training. The way of planning and designing, considering time, money and risk that I learn from the program will surely help to boost this organization. I am confident that I would be able to contribute in many ways to increase the quality works after the completion of chosen program by sharing the spectrum of knowledge and information to my superiors, subordinate and crews in the field of design and construction supervision. If modern technologies and proper planning is used, honing of ICT tools and systems will greatly influence the working style and efficiency of tasks encompassed with business, governance and development sectors of Nepal. I will do my best to show how small budget and limited resources and equipment can bring the dramatic changes if used some new skills and effective technologies.

To conclude, what I will learn from the chosen program will be ultimately transferred to my employing organization in technical and managerial way to get success in implementing e-governance and be a leading ICT model in my home country.