

**National Conference on Use of ICT in
Rural Nepal: Influences of Technology**

**In Conjunction with the Results Dissemination
Workshop of the Use Models of Technology**

March 22-23, 2012

E-Proceedings

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Background

There have been several initiatives in the national and local level in establishing tele-centers or community e-centers. Over time, many of these centers have permanently shut down, some of them running in a very low profile, others are heading towards closing down, whereas there are a few performing brilliantly well with good success stories. While the government and non-government agencies have compiled statistics on the active and non-active status of the tele-centers, there have not been any efforts towards gathering data on the possible problems, challenges faced and/or success stories on changes that would have been brought about by the introduction of technology in the lives of the people in the sites. It was under this backdrop that conference was organized.

In the conference, we invited the relevant stakeholders of IT, namely, policy makers, implementers, fund raisers, users and site managers in one place and let them share their experiences, success stories and cases of failure. This document is an attempt to capture the proceedings of the two day conference in the form of e-proceedings, a compilation of the presentations and talks made in the different sessions accompanied by relevant pictures, summary notes and remarks for each session as well as the presentation of the articles on stories of change, which was an open call for submission to interested authors as part of the conference. We received as many as six articles on stories of change. The good part of it is that all six real characters from the stories of change, who we have termed as “local ICT heroes”, made it to the conference from their respective home towns and shared their stories comprising both pain and triumph in person to the participants. The conference saw the participation of around hundred participants from different spheres. There was an overall active participation in all the sessions of the two day conference. The attendees and participants were seen to be vibrantly discussing and sharing their knowledge and views about ICT, the latest status in Nepal and how it could be further improved and leveraged. The conference gave the opportunity to meet with people, who, despite being located in the same city, had been communicating virtually through emails and other social networking media in the Internet.

Conference Schedule

Below, we provide the schedule of the conference.

Day 1, March 22, 2012

Registration & Tea - 9:30 A.M – 10:00 A.M

Opening – Inaugural session

Welcome note by Mr. Kanak Dixit, Director, Language Technology Kendra – 10:00 A.M – 10:10 A.M

Talks (4 presentations) – Moderator: Mr. Kedar Sharma

**Talk 1: (10:10 A.M - 10:40 A.M) - Mr. Mahabir Pun, E-Networking Research and Development (ENRD)
Connecting the villages of rural Nepal to the Internet through Nepal wireless Project - Experience, Challenges faced and Road ahead.**

Talk 2: 10:40 A.M: 11:10 A.M - Mr. Rabi Karmacharya, Open Learning Exchange (OLE)
Use of E-Pustakalaya – A Digital Library, Integrating Digital Materials to Enhance Classroom Teaching and Learning

Tea break (11:10 A.M - 11:30 A.M)

Talk 3: 11:30 A.M - 12:00 P.M - Prof. Pat Hall, Language Technology Kendra

Languages and writing and computers in the development of Nepal

Talk 4: 12:00 P.M - 12:30 P.M - Mr. Bal Krishna Bal, Kathmandu University

On Localization, Natural Language Processing Tools and Use models of Technology for increasing the use of ICT in rural Nepal

Lunch - 12:30 P.M - 13:30 P.M

Results Dissemination Workshop

Moderator: Mr. Kedar Sharma

Project Introduction, Design, Objectives - Mr. Bal Krishna Bal (13:30 P.M - 13:50 P.M)

Ethnographic framework - observation parameters, social scientists' perspectives on the Project

Mr. Deepak Aryal and Shamik Mishra (13:50 P.M - 14:20 P.M)

Technology Deployment and Use in the site - Manager's perspectives

Mr. Prakash Gurung, Head, Himalayan Milan Secondary School, Tangting, (14:20 P.M - 14:35 P.M)

Technology Deployment and Use in the site- Trainer's perspectives

Mr. Sangam Bhusal, Teacher, Himalayan Milan Secondary School, Tangting, (14:35 P.M - 14:50 P.M)

Technology Deployment and Use in the site - User's perspective

Students, Himalayan Milan Secondary School, Tangting, (14:50 P.M - 15:00 P.M)

Question Answering Session (15:00 P.M - 15:10 P.M)

Tea - 15:10 P.M - 15:30 P.M

Stories of Change (about 4 presentations) - Moderator: Mr. Rajendra Poudel

Technology Influences and the Stories of Change - Experiences sharing session, Meet the local heroes (15:30 P.M - 16:30 P.M)

Changes brought about by use of digital library in classroom teaching learning

Mr. Gokul Prasad Aryal, Head, Laxmi Ni Ma Vi, Hetauda, Makawanpur, (15:30 P.M - 15:40 P.M)

Sharing the story of change

Mr. Kajiman Shrestha, Head, Keshavtar Higher Secondary School, Tanahun, (15:40 P.M - 15:50 P.M)

Reaping the benefits from ICT-integrated classes in shared-model environment.

Mr. Laxmi Kanta Mishra, Head, Siddha Beni Ni Ma Vi, Belbas, Tanahun, (15:50 P.M - 16:00 P.M)

Sharing the story of change - the story of a mathematics teacher turned computer operator

Mr. Narayan Adhikari, Himalaya Secondary School, Tolka, Kaski.

Question Answering Session (16:00 P.M - 16:20 P.M)

End of Day 1

Day 2, March 23, 2012

Tea - 9:30 A.M - 10 A.M

Stories of Change (about 4 presentations) - *Moderator: Mr. Shamik Mishra*

Technology Influences and the Stories of Change - Experiences sharing session, Meet the local heroes (10:00 A.M - 11:00 A.M)

Effects of using local digital content in classroom teaching learning.

Ms. Sangyani Thapa, Program Focal Teacher, Navin Pra Vi, Khanalthok, Bhakunde, Kavre (10:00 A.M - 10:10 A.M)

Sharing the story of change

Shivaram Bhatta, Rasuwa, Dandagaun (10:10 A.M - 10:20 A.M)

Promoting women literacy with the help of ICT

Ms. Poonam Rana, Program Focal Teacher, Pancha Ni Ma Vi, Baijalpur, Kapilyastu (10:20 A.M- 10:30 A.M)

Sharing the story of change

Mr. Tek Bahadur Pun, Salija-2, Okhreni, Parbat, (10:30 A.M - 10:40 A.M)

Question Answering Session (10:40 A.M - 11:00 A.M)

Tea - 11:00 A.M - 11:20 A.M

Parallel sessions:

1) Parallel session 1: How to make the unsustainable sustainable? Sustainability issues on ICT Deployment and Use

11:20 A.M -12:20 P.M

Moderator: Mr. Kedar Sharma

Panelists: Mr. Tikajit Rai – Magnus Consulting Pvt. Ltd., Mr. Binod Dhakal – Computer Association of Nepal (CAN), Mr. Ananda Raj Khanal, Nepal Telecommunication Authority (NTA), Mr. Krishna Prasad Bhandari – Nepal Telecom.

2) Parallel session 2: Dreaming the ICT enabled rural Nepal: Defining each of our roles.

Moderator: Mr. Rajendra Poudel

Panelists: Dr. Bharat Pahari, Dean, Institute of Engineering, Pulchowk, Mr. Deepak Shrestha – Subisu, Mr. Pavan Shakya – Worldlink, Mr. Manohar K. Bhattarai – former vice chairman former HLCIT, Nepal

10 mins for presentation to each panelist followed by 20 mins of question answering session at the end.

Lunch - 12:20 P.M - 13:20 P.M

Parallel sessions:

1) Bridging the Digital Divide: Tools and Techniques for tangible solutions - 13:20 P.M - 14:20 P.M

Mr. Bal Krishna

Moderator: Bal

Panelists: Mr. Subir Bahadur Pradhanang (FOSS Nepal Community), Mr. Dibyendra Hyoju (Madan Puraskar Pustakalaya), Mr. Ganesh Shah, former-minister, Ministry of Science and Technology, Mr. Upendra Aryal- Equal Access

2) Use of Nepali Unicode: Challenges, Opportunity, Emerging trends - 13:20 P.M - 14:20 P.M

Moderator: Mr. Deepak Aryal, Mr. Shamik Mishra

Panelists: Mr. Kedar Sharma, Mr. K.P Dhungana – Blogger and President of Online Bloggers Association, Mr. Vinaya Kasajoo – Information Commission, Prof. Madhav Pokharel – Tribhuvan University, Central Department of Linguistics.

10 mins for presentation to each panelist followed by 20 mins of question answering session at the end.

Tea - 14:20 P.M - 14:40 P.M

Closing ceremony

Summary of the Conference and Workshop proceedings - **Mr. Bal Krishna Bal (14:40 P.M - 15:00 P.M)**

Token of appreciation awarding to speakers, authors, local heroes, participants by **Prof. Yogendra Yadava and Mr. Kamal Mani Dixit (15:00 P.M - 15:10 P.M)**

Closing remarks - **Mr. Kamal Mani Dixit (15:10 P.M - 15:20 P.M)**

End of Day 2

Conference Dinner

Conference Proceedings

In this section, we present the conference presentations and talks, the pictures taken as well as the notes on the individual sessions.

Day 1 (March 22, 2012)

Registration



Figure 1: A glimpse of the registration session



Figure 2: Participants at the registration session



Figure 3: Mr. Kanak Mani Dixit giving a welcome note



Figure 4: A participant from the conference

Inaugural session

In his welcome note, Mr. Kanak Mani Dixit, the Director of Language Technology Kendra, gave a brief introduction to the many works that Language Technology Kendra as an institution has been pursuing in the field of Localization and Information Communication Technologies. He also remembered how the necessity of cataloguing books and collections of Madan Puraskar Pustakalaya had led to the invention of the Devanagari Nepali Unicode. As of today, the foundation led by Nepali Unicode has opened enormous doors of opportunities for Nepali Language Computing. Mr. Dixit concluded his speech by welcoming all the participants, speakers, panelists, the local ICT heroes and wished the conference a success.

Talks session

After the welcome note from Mr. Dixit, the Talks session took place. The session was moderated by Mr. Kedar Sharma. There were altogether four talks arranged in this session, which included a talk from Mr. Mahabir Pun, the Magsaysay awardee, Mr. Rabi Karmacharya, the Executive Director from Open Learning Exchange, Nepal, Prof. Patrick A.V. Hall from the Language Technology Kendra, Nepal and Mr. Bal Krishna Bal, Assistant Professor, Kathmandu University.



Figure 5: Mr. Mahabir Pun giving his talk



Figure 6: Mr. Rabi Karmacharya giving his talk

Mr. Mahabir Pun in his talk shared his experiences on connecting the rural villages of Nepal to the Internet through the Nepal Wireless Project. He informed that as of 2011, a total of 125 villages in 13 districts of Nepal have been connected to the wireless network. The clients of the network are mostly schools, health clinics, hotels, individuals and community centers. He also talked about Nepal Research and Education Network (NREN), its primary goal being to maximize the benefit of the Information Communication Technology (ICT) to the rural population. The other topics covered in his talk included the different technologies that have been or could be potentially deployed in the rural areas of Nepal like Tele-medicine, Tele-teaching etc. The presentation slides of Mr. Pun's talk is available at http://ltk.org.np/downloads/Mahabir_Pun_Talk.pdf

Mr. Pun is currently the President of E-Networking Research and Development(ENRD), Nepal. He also is an active member to several other organizations like the Nepal Wireless Project, Nepal Research and Education Network among others.

Mr. Rabi Karmacharya started his talk by providing an introduction to E-Pustakalaya. Mr. Karmacharya shared the primary goals of the E-Pustakalaya being to promote the reading culture among students, to encourage the students to carry out independent research, to provide the tools necessary for students to explore and learn among others. The major benefits of the E-Pustakalaya are the possibility of sharing the same resource material to limitless number of users, easy access to thousands of books and learning materials among others. Mr. Karmacharya informed that there are already over 3000 books and other learning materials as part of E-Pustakalaya. He said the challenges are mostly non-technical and the most challenging seemed to be motivating the teachers to adopt the new mode of teaching and learning. The future plans of E-Pustakalaya as shared by Mr. Karmacharya are focusing more on content, both gathering and in terms of developing useful and relevant materials and expanding the reach to more and more sites. The talk was concluded by a demo on the use of E-Pustakalaya in the sites. The presentation slides of Mr. Karmacharya's talk is available at http://ltk.org.np/downloads/OLE_Nepal_LTK_Conference.pdf

Mr. Rabi Karmacharya is currently the Executive Director of the Open Learning Exchange (OLE), Nepal.



Figure 7: Prof. Patrick A.V. Hall giving his talk



Figure 8: Mr. Bal Krishna Bal giving his talk

Prof. Patrick A.V. Hall in his talk focused on how languages have influenced computing. In this regard, he gave a short overview of the history of how and for what purpose computers were first brought to Nepal. With the invention of some hack fonts, Nepali began to be possible to type in computers, display and print but still a full-fledged use of the computer for processing Nepali text had not been possible until the Nepali Font Standardization Project which helped to develop Unicode compliant Nepali fonts and keyboard driver software (Nepali Unicode Romanized and Nepali Unicode Traditional). Prof. Hall further added that quite a few Projects came to Nepal basically focused on Localization. These Projects include NepaLinux, MS Windows Localization, development of Natural Language Processing(NLP) utilities like the Spell checkers, Text-to-Speech, Nepali Dictionary, Corpus Development etc. Clearly, the need to incorporate Language in Technologies has been felt and realized by all. With the recent changes in Nepal, languages have become a prominent issue and a matter of identity. There is a growing demand of wanting to have the technologies developed for each set of languages, the only question remaining how to do it appropriately and amidst the current technological constraints. Prof. Hall concluded his talk by saying that it would be important to empower the different languages with the emerging and ever changing technologies and hence language technologies are certainly areas of not just national importance but carrying global significance. The presentation slides of Prof. Hall is available at http://ltk.org.np/downloads/languages_writing_development.pdf

Prof. Patrick A.V. Hall is currently the Scientific Advisor to the Language Technology Kendra.

Mr. Bal Krishna Bal in his talk focused on the consolidation of the three components – Localization + Natural Language Processing + Use Models in an effort to make the sustained use of ICT possible and at the same time to address the sustainability of any ICT initiatives. Mr. Bal started his talk by giving an overview of the major Localization Projects and Initiatives followed by the discourse about how NLP applications could complement Localization. Bringing into light the third component, i.e., Use Models, he explained how without a properly designed or homeworked Use Model, all efforts on Localization and

NLP could result in vain. Mr. Bal ended his talk by providing few examples of technologies whereby the three components were possibly incorporated. The presentation slide of Mr. Bal is available at <http://ltk.org.np/downloads/Use ICT Rural Nepal talk localization Nepal.pdf>

Mr. Bal Krishna Bal is currently Assistant Professor at the Department of Computer Science and Engineering, Kathmandu University, Nepal. He is also associated with the Language Technical Kendra, Nepal, where he holds the position of the Chief Technical Officer.

Results Dissemination Workshop

After the talks session, there was a break for lunch after which the “Results Dissemination Workshop” took place. The workshop was moderated by Mr. Kedar Sharma. The main objective of the workshop was disseminating the information and the results of the Use Models of Technology Project executed by the Language Technology Kendra with the support provided by International Development and Research Center (IDRC), Canada.

The session was opened by Mr. Bal Krishna Bal, who gave an introduction about the Project, its objectives and the design. Mr. Bal started his presentation by stating that deployment of ICT and establishment of ICT centers had been a popular practice in Rural Nepal. He further added that while it was certainly a welcoming endeavor but the crucial aspect remains to be addressed- “How to ensure the sustained use of the site?” Mr. Bal then elaborated the Use Models of Technology Project which had been launched with one of the primary goals of investigating the sustainability issues hovering around the deployment of technology. Sustainability in this respect has to be understood both in terms of financial support as well as technological support required. He informed that the Project was launched in a relatively remote site – Himalaya Milan Secondary School, a community run school in Tangting village, Namarjung VDC, in Kaski District, Nepal. Mr. Bal further elaborated that the general objectives of the Project were to examine the process of learning technology across different end-user groups thus investigating the effective mechanism for transferring the knowledge and technology skills among the end-users of non-uniform capacity and skills. Another equally important objective of the Project was set to assess the impact of the introduction of technology in the individual and social lives of the end-users. He also informed about the different activities conducted as part of the Project, which basically included Lab setup and technology deployment, trainings (both Trainers’ Training and End-users’ Training) and the evaluation modes. Mr. Bal further shared that the Use Models of Technology in case of the Project site was not something that was prescribed or planned in advance. Rather, it was an outcome of the local engagement. Mr. Bal’s share of the presentation slides for this session are available at <http://ltk.org.np/downloads/Use Models of Technology Project Presentation.pdf>



Figure 9: Mr. Bal Krishna Bal at the Workshop



Figure 10: Mr. Deepak Aryal and Mr. Shamik Mishra

The presentation on the Introduction, Design and Objectives of the Project was followed by the presentation by the social scientists of the Project – Mr. Deepak Aryal and Mr. Shamik Mishra jointly. The presentation was structured in the following manner with an Introduction about the site followed by baseline data and statistics about the performance of the students by gender and castes. They also shared the theoretical framework followed for conducting the ethnographic study or observation on the use and perception of technology, the framework being – “Cultural Capital”. Under this framework, it is assumed that the success of all school education depends fundamentally on the education previously acquired in the earliest years of life. The social scientists informed that their scope of study basically involved finding out the preliminary response of the students to the introduction of technology, determining whether the learning curve of ICT was different or the same as in the case of conventional classroom teaching and learning and finding out whether the introduction of ICT would be in surprises in terms of performances (the less performing in usual academics brilliantly performing in terms of ICT use, the high performers in usual academics continuing to hold the grip in ICT as well and so on and so forth). The Research Methodology followed in the Project as shared by Mr. Aryal and Mr. Mishra were – Preliminary Survey, Participant Observation and In-depth Interview. The Preliminary Survey served as a baseline study and revealed that not considering a few exceptions, most of the students had no prior experience of computer use.

The Participant Observation was basically used for gathering qualitative data on the students’ performance, their levels of participation in the training and use sessions etc. The social scientists further informed that three different patterns of learning were observed among the students. As per the patterns observed, students have been basically categorized into three respective groups:

Group 1: These are the bright set of students who were relatively quick to grasp the computer lessons, are quite interactive in the computer classes and they are the ones doing well in regular academics as well.

Group 2: These are the average students, usually less interactive in the class, but who have shown more enthusiasm and learned faster in the computer classes and their performances found to be better than expected by their teachers.

Group 3: These are below average students, who are mostly from the Dalit community and some female students who are poor academically, are very passive in the classroom, who, however, have displayed enthusiasm for computers, and look forward to learn more.

The preliminary results show that disparities in the perception and learning of ICT exist but this does not necessarily follow from the usual academic performance metrics or anticipations. There is plenty of rooms to hope that the academic performances can be improved with the introduction and subsequent use of ICT.

The researchers concluded their share of talk by conferring that in order to come up with a sound conclusion in terms of proving or disproving the many assumptions and hypotheses of the Project, the observations have to be followed up for a longer span of time, more research on the possibilities in aiding the fast and quick learning of technology would need to be done and most importantly quantitative studies would need to be carried out with different samples and locations to gather empirical evidence for or against ICT as an effective tool in bridging the gap in terms of attaining the education.

Mr. Aryal and Mr. Mishra's share of the slides are available at http://ltk.org.np/downloads/Use_of_ICT_at_Himalaya_Milan_School.pdf



Figure 11: Mr. Prakash Gurung at the Workshop



Figure 12: Mr. Sangam Bhusal at the Workshop



Figure 13: Mr. Amar B.K. at the Workshop



Figure 14: Miss Srishtee Gurung at the Workshop

After the above presentations, Mr. Prakash Gurung, the Head Master of Himalya Milan Secondary School, Tangting shared his perspectives as a Manager about the Technology Deployment and Use in the site. His talk was followed by that of Mr. Sangam Bhusal, a science teacher from the same school. Mr.

Bhusal shared his views as a Trainer in the project. Two other students, respectively, Mr. Amar B.K. and Miss Srishtee Gurung also shared their impressions and experiences as users. The case studies of at least two people – Mr. Sangam Bhusal and Mr. Amar B.K. would be included later in the “Stories of Change” section.

The session was concluded by a short 10 minutes Question Answering session.

Technology Influences and Stories of Change – Experiences sharing session. Meet the Local heroes.



Figure 15: Mr. Rajendra Poudel at the Stories of change session



Figure 16: Mr. Kaziman Shrestha at the Stories of change session



Figure 17: Mr. Narayan Adhikari at the Stories of change session

The final session for Day 1 was the “Technology Influences and Stories of change – Experiences sharing session. Meet the Local Heroes”. This session was moderated by Mr. Rajendra Poudel. The four local heroes presenting in the session were respectively, Mr. Gokul Prasad Aryal, Head, Laxmi Ni Ma Vi, Hetauda, Makawanpur, Mr. Kaziman Shrestha, Head, Keshavtar Higher Secondary School, Tanahun, Mr. Laxmi Kanta Mishra, Head, Siddha Beni Ni Ma Vi, Belbas, Tanahun, and Mr. Narayan Adhikari, Himalayan Secondary School, Tolka, Kaski.

The two local heroes, Mr. Aryal and Mr. Mishra represented the sites of Open Learning Exchange (OLE) whereas Mr. Shrestha and Adhikary represented the sites of E-Networking and Research Development (ENRD). The OLE local heroes basically shared their experiences about the changes that were brought

about after the deployment of the mini laptop under the One Laptop Per Child (OLPC) program and the E-Pustakalaya, which provided student friendly teaching and learning materials whereas the ENRD local heroes shared their experiences about the changes that were brought about after the introduction of ICT in their personal lives as well as in the society. The details of the presentation slides of the OLE local heroes are available at http://ltk.org.np/downloads/1-Gokul-Prasad-Aryal_Makwanpur.pdf and http://ltk.org.np/downloads/2-Laxmi-Kanta-Mishra_Tanahu.pdf. Similarly, the stories of change of Mr. Kaziman Shrestha and Mr. Narayan Adhikari are included in the Stories of change section of this document.

The session was concluded by a short 10 minutes Question Answering Session.

The end of the session marked the conclusion of Day 1.



Figure 18: Group picture of the participants – Day 1



Figure 19: Group picture with student volunteers, Kathmandu University

Day 2 (March 23, 2012)

Technology Influences – Stories of change, Experiences sharing session (Meet the Local heroes)



Figure 20: Ms. Sangyani Thapa at the Stories of change session



Figure 21: Mr. Shivaram Bhatta at the Stories of change session



Figure 22: Ms. Sujata Regmi at the Stories of change session



Figure 23: Mr. Tek Bahadur Pun

The first session of Day 2 was again the Stories of change session. This session was moderated by Mr. Shamik Mishra. The four local heroes presenting in the session were Ms. Sangyani Thapa, Program Focal Teacher, Navin Pra Vi, Khanalthok, Bhakunde, Kavre, Mr. Shivaram Bhatta, Rasuwa, Dandagaun, Ms. Sujata Regmi, Nepali Teacher, Pancha Ni Ma Vi, Baijalpur, Kapilvastu and Mr. Tek Bahadur Pun, Salija-2, Parbat.

The two local heroes, Mr. Aryal and Mr. Mishra represented the sites of Open Learning Exchange (OLE) whereas Mr. Shrestha and Adhikary represented the sites of E-Networking and Research Development (ENRD). The OLE local heroes basically shared their experiences about the changes that were brought about after the deployment of the mini laptop under the One Laptop Per Child (OLPC) program and the E-Pustakalaya, which provided student friendly teaching and learning materials whereas the ENRD local heroes shared their experiences about the changes that were brought about after the introduction of ICT in

their personal lives as well as in the society. The details of the presentation slides of OLE local heroes are available at http://ltk.org.np/downloads/3-Sangyani-Thapa_Kavre.pdf and http://ltk.org.np/downloads/4-Sujata-Regmi_Kapilvastu.pdf. Similarly, the stories of change of Mr. Shivaram Bhatta and Mr. Tek Bahadur Pun are included in the Stories of change section of this document.

The session was concluded by a short 10 minutes Question Answering Session.

Articles on Stories of Change – Case Studies of Local heroes

Article 1

Mr. Shivaram Bhatta

Rasuwa, Dadagaun

Author: Mr. Rajendra Poudel

Edited by: Mr. Shamik Mishra



33-year-old School Teacher Mr. Shivaram Bhatta touched a computer mouse for the first time during a 15-day training program provided by the High Level Commission for Information Technology (HLCIT) in 2007. He recalls, “the first challenge for me was to control computer mouse over mouse pad, and the second challenge was to control its pointer”. While the mouse pointer was dancing all over the screen, Mr. Bhatta was joyfully trying to keep it in under control, despite the cramp he felt in his arm and body. Thus began his journey towards adopting the information technology. Because of his dedication and efforts, he has been able to lead ICT revolution in the Rasuwa district in a relative short time.

In 2007 July, ENRD and HLCIT provided two PCs and a photocopier to run a tele-centre there. A ray of hope for the community people peeped from the horizon. But the locals found the management of the tele-centre a bit challenging as they not only did not have any infrastructure to host the computers, but also lacked the know-how to operate a computer. So the villagers decided to run the computer center in the local school. A committee was formed to run the center but still there was the problem of skilled manpower. The committee appointed a computer operator on the salary basis. But the hired operator did not happen to be competent enough. So villagers thought they might need a certified computer engineer to properly run the computer center, which was again not possible. Because, first they could not afford to hire such human resource, second, even if they managed the fund, a computer engineer would not be

available in that remote village. This situation obliged Shivaram to participate in the training himself and fill the gap of human resource.

Shivaram says of the training, “Most of the trainings given in the cities seek to cover as much topic as possible within a short time period. But this becomes very hard for people like us who have not been initiated to the computers”. According to him in the 15-day-training, the syllabus attempted to cover from the basics to Operating system installation and Local Area Network (LAN) management. It was tough to catch up on the content with such wide scope. Although lodging for the trainees was provided by the organizers, Shivaram went to stay with his brother who had computer in his room so that he could practice the topics of the afternoon class at night. This choice turned out to be beneficial for him. The training was useful to grasp the basics, including typing of the Nepali Unicode in Romanized Layout. Furthermore, it also trained on various troubleshooting related to computer. Shivaram’s performance made the villagers gradually realize that a computer engineer is no required to operate and maintain a tele-center. This has added more responsibility on him and he hence he also gives more time for the tele-center. After his successful training, the centre was running well with some of the students learning computers. But the committee was in financial crisis after six months of establishment because the number of students in the computer class was decreasing. The committee then decided to run the tele-center under the management of school and Dandagaun HSS started to manage the centre. Mr. Bhatta was already appointed as the Manager of Dandagaun Telecentre and he started to work there in his extra time as a volunteer.

Later, he was selected as the master trainer in Pan Localization Project Phase II. 30 members from different categories were trained on computer. Basically most of the students are using it for their study purpose. He also got content management system and blog setup training from Madan Puraskar Pustakalaya (MPP) and ENRD. This gave him various ideas on the importance of Internet.

Mr. Bhatta then pondered over the next step to connect internet with the center. At the first stage he started to test if UTL phone service can work for them or not. He talked with several people in ENRD and HLCIT and according to their advised he installed UTL internet service in school. Students, teachers and villagers were happy to know that they can access internet in their own village. HLCIT also has supported by paying the internet fee for three months. But speed of internet was too slow and it could not really address the problems of the villagers. Earlier, Mr. Bhatta had visited Nangi, a village in Myagdi district in western Nepal, where Nepal wireless had connected internet to the villages and people were using it. He harbored similar dream for his village. But it was not easy for him. It is because just recently villagers had started on computer and the villagers did not understand the values and important of connectivity. One

day there was a VDC meeting in village where he shared about story of Nepal wireless to the VDC people and others. He explained how internet had helped people in Myagdi district and how people were enjoying it. He also explained the same to district development committee people.

One day he intended to visit ENRD office at Lazimpat and tried to explain his dream for connecting his school with wireless network. That day was great coincidence for him because he met Mr. Samal Dimdung from Satdobate of Nuwakot district and a neighboring village of Dandagaung. Samal is a network technical expert and he was also thinking to connect his village with wireless network. They both chatted for hours and made a plan to submit proposal to ENRD. Being a Network Engineer Samal designed a network diagram describing how it can be connected to their village from Kathmandu. The diagram was shared among VDC members of five VDCs located around the border of Nuwakot and Rasuwa. This encouraged all the villagers. Later, Samal had to leave for the United States for personal reasons. But in the meantime, Samal had conveyed a fair amount of the technical ideas to Shivaram. Now, Shivaram was entrusted with this responsibility. Since it was not possible for him to handle all the work by himself, he requested villagers for a team to build and install wireless network. Each VDC allocated Nrs. 50,000- 1,00,000 for this project, with active support from ENRD and the work moved ahead.

After two years of hard work Shivaram together with other villagers could access wireless internet in his village. After this network now there is a tele-medicine project in Nuwakot with the support of ITU under ENRD.

Now Shivaram Bhatta is actively involving to make the network sustainable. He said “The penetration of telecommunication in remote villages somehow has provided GPRS internet service and voice connectivity. But the need for connectivity in villages is for supporting people on income generating ventures, improving education and providing quality health service, for which GPRS is not a solution. So the only way ahead is expanding the broadband wireless network in the village.”

After seen all these result in villages these days he is getting many opportunities in his personal life too. He was selected as a consultant to provide service for District Development Committee, Rasuwa for the preparation of 3-year Capacity Development Plan integrating with ICT. Moreover he worked as a consultant for the Study and Revision of Organizational Structure of DDC, Rasuwa.

According to him, he is busy nowadays for lobbying Child Friendly Classrooms using ICT's in rural schools. He is visiting and convincing the related authorities for equipment support. Mr. Bhatta is also

planning to buy an LCD Projector, a Laptop and a Camera to use for students. He has collected some useful contents from web as he says.

His family has supported him very much in all this. His school being one hour walking distance from his home, Shivaram has to walk two hours each day while commuting. He has taught his wife to operate computer. She also helps him to get the exam papers typed. Their son, a six-year-old boy, also loves to make some paintings on the computer. Now he feels proud and said “I am fully satisfied with my work, and it is not my ending point but also departure point for the next step to build a digitally supported society in Rasuwa and neighboring districts”

As the school was upgraded to Higher Secondary level, he has got the responsibility of as the Head Teacher. As a Principal he has to manage, supervise, and monitor many different issues and activities. He is trying to collect some digital packages to assist his students and has also made some progress on it. When he visits Kathmandu, he wanders in search of any academic software or content that can be applicable to students, teachers as well as community people.

Article 2

Tek Bahadur Pun

Salija-2 Okhrenei, Parbat

Author – Mr. Rajendra Poudel

Editor – Mr. Shamik Mishra



38-year-old Tek Bahadur Pun was surprised with the mysterious box and very eager to know how it functioned inside. He thought there must be ‘wheels and pulleys’ similar like a wrist-watch. But once he saw inside the casing of a PC he was even more surprised because there were only few cards and a board. Mr. Tek Bahadur Pun saw computer for the first time six years ago, when he was invited as a participant in computer training in Nangi.

Being a government-school teacher he has many other responsibilities but somehow managed time to learn IT. He thinks it as not an extra burden but instead feels using computer gives him extra energy.

Whenever he feels tired and bored with his own work he likes play with the computer so he can forget all the tiredness and get refreshed.

Together with computer Mr. Pun has learned the skills of fixing wireless network, computer hardware and basic applications running in the computer. He believes due to his ‘weak education background’ and ‘slow mind speed’ earlier it was rather difficult for him to understand the concepts of computer and wireless networking. However, Tek Bahadur now regularly fixes computer and wireless network related problems not only in his village but other villages at a day’s walking distance. He always encourages others to learn computer and related technology. But he is worried as well as surprised with his colleagues – teachers in his schools and other neighboring schools- who show little interest in learning computer, despite the increasing relevance of computers. He argues, even the few computers in the school have not been properly used utilized by all. So he believes the problem is not fewer number of computers but his colleagues’ lack of interest in learning that is the bigger problem. After all, he says the teachers often pass their time talking or discussing other things, while the computers in the lab remain unoccupied.

In a question “why he learnt computer?” – Actually at first time he learned it because it was new and the experience was amazing to him. Initially, he did not believe that it would be such important and useful for his daily life. But these days he cannot remain far from computer and internet to the extent he cannot imagine his life without computer. He opines new generation folks must learn computers to be able to catch new opportunities. Being a teacher he finds computer as a very important tool for preparing teaching materials in Power Point slides, preparing questions for the school exam, keeping school financial records and communicating. All these facilities have made an impact upon his lifestyle and personal behavior. Before computers, he would just potter around, wake up late and sleep early. However, these days he wakes up early to finish household chores as well as farm related works, so that he can save time to use computer. At home, he works till late evening to wrap up pending work, and this has improved relation with his wife and other family members. On the other hand because of e-mail, chat and facebook he is regularly connected with his friends, relatives and neighbors.

In other queries about support from his family and colleague for this work, Mr.Pun says he is getting wonderful support from his wife and family members. His colleagues respect and admire his contribution. In school he maintains all the computers and helps other colleagues to prints school exam paper, teaching materials. Now he is the pioneer of computer use and related technology in his school and village.

However, while learning the computer he had faced some financial problems. He hopes to someday capitalize on his hard acquired knowledge and skills. His dream has not materialized till now as there are

not any individual or user in his village who has computer at home. Also, there is no private computer training center, where he could join as a trainer. If the prospect does not fructifies he plans to set up his own computer training and support center in his village or at Kusma bazaar, the headquarters of the Parbat district.

Article 3

Amar Bahadur BK, Grade VII, Himalaya Milan School, Tangting

Author- Mr. Shamik Mishra

It was past 10 in the morning, and our 4th visit to Tangting. The weather was great, Annapurna II and the Lamjung mountains were glistening majestically under the soft winter sun. We had disembarked from the bus and just started walking towards Tangting village, the project site. We received a 'Namaste' from a boy with his *Doko* (a basket made from bamboo stem, used to carry loads on the back, harnessed on the carrier's forehead with a belt made from local rattan fibres), bare feet exposed through the slippers in the cold of January. By now our team not only knows the route well enough, but we have also become fairly known by the people of Tangting, as *Gura* (teacher in Gurung) that teach computers. More often than not, the few people we meet on our 4-hour hike happen to be those we know personally, so our journeys are pleasantly punctuated with the exchange of Namastes and *sanchai hunuhunchha?* (How do you do) But it was a more personal greeting, for the boy was Amar BK, a 13-year-old Dalit student studying in Grade Seven at the Himalaya Milan School (HMS). To be more precise he was one of our own students, whom we had taught the basics of the computer a month ago.

We asked where he was headed with a *Doko*, after all it was a school day. With a little reluctance he replied that he had come down to carry the baggage of some the visitors who were on their way to Tangting. Though it must not have been a pleasant thing for him to bunk classes and do the job of a porter, while his other friends were learning new things in the school, from his resigned demeanour we could see that it was a routine affair for him.

After we had climbed more than half of the way, a powerful hailstorm forced us to take shelter at a *Dharmashala*, a low shed built to provide temporary shelter in village routes. The storm was strong enough to render our raincoats and umbrellas of little use. We had been waiting for an hour for the storm to abate when we again saw Amar. This time his *Doko* was full of baggage, and despite the storm, fully drenched, he was carrying on towards the village. Amar gave us a sheepish smile when he saw us sheltering from the rain. While it had rained in Tangting, the surrounding hills in the higher altitude had

received considerable snowfall. That evening in the village, computer classes for the evening had to be cancelled due to the inclement weather, but we again met Amar, at the porch of a nicely located village house of Mrs Karna Gurung, senior CMA at the local health post, and one of our students from the community at the computer class. Mrs Gurung had invited us for a gathering, and haggard looking Amar had rushed there to take her to his house some 15-min climb further up in the village as his sister-in-law was in labor pain.

Initial Survey

- Name: Amar Bahadur BK
- Age: 13 years
- Class Ranking: Nine
- Ethnicity: Dalit
- Parental Occupation:
 - o Father: Works as a laborer in a Gulf country
 - o Mother: Does some subsistence agriculture (a polite term for being unemployed)
- Total no. of members in the family: Six
- There are cell phone users in the family, has taken photographs, played games in it.
- Never Used a Computer, has not heard about internet

Observations I

Very first week in the Computer Class

- Amar preferred to sit on a computer at the corners of the classroom where it is difficult not only for him to reach out to the instructor, but also for the instructors to reach him.
- On the first day it took him around five minutes to even hold a mouse properly. Must have taken a while before he could move it to serve his purpose.
- He asked questions with great reluctance. For instance, during the Nepali Unicode Romanised typing, he would first stare at the chart hung in the classroom depicting the keyboard layout for several minutes, and only asked if he did not understand it, while the other students would ask promptly and rarely bothered to look at the chart.
- Likewise, when asked to type whatever they liked, stories, experiences, anything, he wrote a note thanking his parents for sending him to school, and that he had to work harder to progress in life.

Observations II

After one month in the computer class

- He had learned to type Nepali Unicode on the Libre Office Writer, play audio-visuals, operate a compact digital camera, and see images on flicker.com.
- He was not only regular during his routine computer classes, but also sneaked in at other times whenever he could.
- His regular teachers told us that in the evenings he did not leave the classroom till it was past 8 pm in the evening and time for other teachers and community members.
- In the interview with us, he said that earlier his dream had been to become a cattle farmer, now that he was doing nice in computer, he wanted to learn more and become a computer tutor and run a desktop service in the village.
- Amar still has not been able to open his facebook account. Grade-sevens are still waiting for their turn. Moreover, he wants to talk with his father working in the Gulf over Skype. Which we hope he will be able to realize soon.

Article 4

Sangam Bhushal

Science Teacher,

Himalaya Milan Secondary School

Tangting, Namarjung VDC, Kaski

Permanent Address: Phalebas, Devasthan, Parbat

Author – Mr. Shamik Mishra

Based on an interview taken with Mr. Bhusal by Mr. Mishra.

The first time I ever heard about computers was from senior friends from my village who had gone abroad for work. When they used to say that in developed countries all the works are done by computers, I used to ponder about how a computer would look like and how it would carry out works. Being interested in computers from those days, I used to ask them many questions regarding it, and from them I

had gathered that a computer looked like a television set. My curiosities only rose and I would dream of the day I would see a computer up close. During that time, when I must have been in grade VI or VII, we heard that someone from Kathmandu donated two computers to our school. I used to ponder about how developed Kathmandu must be and that the people living there must be knowledgeable about everything and use computers a lot.

Our teachers kept the two donated computers at the principal's office. We used to bend our necks from the windows to catch a sight of those computers. For several days there used to be a regular crowd of friends to see the computers. One day, the accounts officer of our school turned on the machine, but it did not boot. We heard that it would require someone from Kathmandu to fix the problem. Later, it was known that the machines that had become inoperable had been repaired and donated to school. However, those conked machines were enough to fire our imagination regarding the computers. Before long, the regular school curriculum again took center stage, and computers only remained in our imaginations. Three years after that, after giving my School Leaving Certificate (SLC) exams I was free for several months, and the theme of computers emerged once again. For the first time a computer training institute had opened in our village which I eagerly joined. The institute had only two computers. It had two instructors- a computer tutor and the proprietor of the institute. Our first lesson was to switch on the computer. Then we practiced on 'Typeshala' and other type-tutor software. However the most we enjoyed was playing games. Whenever the tutors would not be around we used to start the games! Mario was the first computer game I played and perhaps the most played by me. Among friends we used to compete on who could reach the higher stages of the game. Mostly, I used to learn by carefully listening to what the tutor said, and observing how he does. Now, becoming a teacher myself, I feel the children learn more quickly by letting them observe me than by asking them to do this or that.

In those days I used to think the virus that caused disease in humans and a 'computer virus' were similar. It was only later that I came to know that a computer virus is actually a program. I got initiated in the internet through mobile phone. Even downloading ringtones used to be an act of joy. Among friends, we used to discuss anything new that we came across. I have come to realize that friends & acquaintances and interactions with them also play a crucial role in any learning process.

My exposure to information technology started more properly after I joined the Himalaya Milan Secondary School, in Tangting village, Kaski, as a science teacher. The internet connection at the school is through NTSAT, a satellite phone and internet connection- a payable service- provided by Nepal Telecom. Social networking sites have been the biggest draw. I think if utilized properly and explored

judiciously, the internet is a very powerful resource at our disposal. Alongside regular education, it is very important to impart knowledge about information technology and internet to the students.

Tangting village has taken a huge leap forward since the project by Language Technology Kendra (LTK) started at our school since October 2011. We have been able to train the students from grade VI to IX. Apart from the students, all of our teachers have now been initiated to computers. Our Head Teacher has made it mandatory that all the teachers write our leave applications through email! Not only the students and school staff but several of the community members have also shown a strong interest in learning computer, for example the medical staff of our local health post, the lady from the post office, the chairman of the school management committee among others. Mrs Karna Gurung, the health-post staff has even started looking for funds to have a computer and internet connectivity at her office. She says it will help her keep updated records of the medicines, equipments and other medical supplies as well as communicate with potential donors abroad. I along with my senior colleague Mr Dilli Jung Gurung have been entrusted to teach computer, internet and other related stuff.

About teaching computers to students, one thing I have found is that they seem to enjoy the computer lab more than the classroom. We run the computer labs in the mornings and evenings, i.e. before and after the regular school. During daytime I teach science. Some of the students are so eager to learn that they enter the lab as soon as it opens and leave only after the lab is closed. Being a science teacher, I find the computer classes very helpful in the teaching my subject. For instance, I have shown my students several youtube videos to explain various topics.

In my opinion, this is the age of information technology. Without computers we would be like blind. Whatever I know about computer hardware it has been self-taught. So far, I have not had the opportunity to take any formal training. However, I got to learn a lot when the trainers from the LTK visited our school. I kept asking them questions whenever I could. During the training, after a full-day of learning, computer, internet, networking etc again used to come in my dreams. I think to learn technology one need not learn by rote, a strong interest in the subject is enough.

Article 5

**Naryan Datta Adhikari,
Himalaya Secondary school, Tolka, Kaski.**

Author – Mr. Rajendra Poudel

Editor – Mr. Shamik Mishra



A mathematics teacher, Narayan Datta Adhikari of Himalaya School was very happy when villagers nominated him as a computer operator and gave him this added responsibility. Since Mr. Adhikari was not a local resident and was there on temporary posting initially the locals were pondering to select a permanent teacher who also happened to be a local resident to be trained as a computer operator by the ENRD staff. It was understandable for the villagers to worry about the high possibility of non-local teachers on temporary posting leaving their job mid-way, rendering all the efforts to zilch. However, things swung in the favor of Narayan as no one else in his school was willing to take the challenge of becoming a computer operator, the factor being that all teachers had to teach 6 periods in a weekday and the work of computer operator would only be an extra task with the school not in a position to provide any financial incentive for this added responsibility. Narayan nevertheless accepted the offer and he decided to give as much time as possible for computer operations.

Narayan had already seen computer while printing exam question-sheets in Pokhara, a popular tourist destination and a regional hub in the western Nepal. He knew some facts about computer but had never got any opportunity to learn further or use it.

He was actually hesitant when he used a computer for the first time. He feared if the machine would breakdown or explode. That was six years ago. ENRD and High Level Commission of Information Technology (HLCIT) had sent four computers to his school before the training was offered to him. The training started three months after that. Even before the training Narayan wanted to operate the computer by himself, but did not know how to open or shut down. He tried to find someone who could teach him

this 'on' and 'off'. For that he decided to go to Pokhara, go to a cyber café there hoping someone would teach him this skill.

Once, in the cyber café, to his dismay he discovered that no one was willing to help him out. So he decided to observe how others operate a computer. For an entire day he stood near a cyber café and watched others using computers and tried to do same things by himself.

Eventually, after three months a computer training program was organized by ENRD in Kathmandu. He had loads of queries. In the training he not only learned to use to computer but also got trained in basic hardware maintenance. He also learned about connecting and fixing wireless networks, building towers and installation of wireless networks.

These days Naryan Datta Adhikari provides regular support to more than 10 villages around his school for fixing wireless network as well as troubleshooting computer-related hardware and software problems, to the point he confidently said, "I have used damaged wireless radios and made those workable".

During the PAN localization training Narayan worked as local leader and ran trainings in two villages Tolka and Landruk. He said, "PAN Localization Phase II project has empowered me in many aspects. I learned more while teaching others. I also learned about using Nepali Unicode, setting up and uploading blogs."

Success to Narayan did not come without a cost however. Naryan says, he received lots of help and encouragement from colleagues when learning computer but he was struggling at the family front. Before becoming a computer operator he and his wife ran a small tea-shop where he would help her after school hours. Once he joined as a computer operator he could not allocate time for his family as well as the tea-shop. As his wife alone could not handle the business, they eventually had to relinquish it. This caused considerable debate and quarrel in his family. But he is happy about his new role and says he is learning new things every day.

Narayan is now recognized as a pioneer in and around Lumle Village Development Committee (VDC). He cannot imagine his life without computer and internet. Recently, he has bought his own computer and provides computer training to his family members including three kids. Also he receives several requests for advice from villagers and local businessmen to help them choose PCs and connect with the wireless internet for daily work. One among them is Mr Jhak Bahadur Thapa, former ward president, who bought a PC and got it connected to the internet under the guidance of Narayan. "Internet has lots

of benefits for learning new things for my business and Mr Adhikari provided me a lot of support in this regards”.

These days, Narayan is busy solving computer and internet problems in the school and in the village. “ I just need parts of computer. I can fix them and run all applications required for the school”, he proudly says.

After learning computer skills his behavior and lifestyle has been changed. Before, he used to spend most of his time in his tea-shop, washing glasses and talking with customers, who often happened to be alcoholics and habitual gamblers.

Now he spends his free time browsing the internet, writing mails to his friends and relatives. Once, some Italian tourists visited his school who gave him their email-ids. Narayan not only kept the communications flowing with them but also sent scenic photographs of his village. It so happened, that the tourists published some of his photographs in a calendar and for that sent some money to the school. The amount was enough to cover the cost of building three classrooms.

Also, Narayan frequently gets called by ENRD to setup and extend wireless network around his neighboring village. In course of this work, he has already visited more than 15 villages of Myagdi, Kaski, Parbat and Syangja districts.

The grudge is that he is now 45 years old, and his posting as a teacher is still a temporary one. He teaches mathematics as a major subject and computer up to grade VIII. He has received support and respect from the villagers, but is worried that several of his colleagues are not taking up computers and hence not sharing his workload.

He explains, “By using computer we can improve the teaching and learning process. More so in the rural areas, because in remote places there are not enough teaching materials, hence, internet can come really helpful for teachers and students.” Further, he wishes there was an LCD projector in the school. Previously, he was worried that he did not have a permanent posting, now he believes he has got enough skills to make equivalent income.

Article 6

Kajiman Shrestha, Tanahun, Keshvtar

Author – Mr. Rajendra Poudel

Editor – Mr. Bal Krishna Bal

In November 2005, 42 year old Kajiman Shrestha was appointed as the Principal of Keshavtar Higher Secondary school. Mr. Shrestha took it as a challenge to bring about changes in the school as well as in the village. He was looking for some idea about how feelings of change could be propogated quickly and effectively. He was indeed having atough time having to look after so many responsibilities at at time starting from administration, management, monitoring and supervision. At the same time, he was also supposed to make strategic plans for taking the school forward.



In this respect, Mr. Shrestha thought computer and the internet could probably be a key solution. Hence he decided to adopt the technology at the school and the village, although problems were not few. First and foremost, it required some starting fund and besides skilled human resource to look after the setup and last but not the least, it required operating costs.

Mr. Shrestha began to share and contact several people for the fund raising to initiate the works. Fortunately, he came across Mr. Lekh Bikram Thapa, a residence of the UK who took his plans quite seriously. Soon Mr. Thapa started helping to gather the fund from the people from Keshavtar living in the UK. . In a short span of time, they had already collected 2 hundred and 65 thousand Nepali rupees. In the meanwhile, Mr. Nem Bahadur Thapa, a friend of Mr. Lekh Bikram Thapa, advised Mr. Shrestha to contact Dr. Mahabir Pun of E-Networkign Research and Development (ENRD). Mr. Shrestha had heard about the many good works of Mr. Mahabir Pun but had not had an opportunity to see him. Hence, in the beginning he was a bit hesitant to directly call him, because he thought such a world wide renowned person would not accept his phone and would not respond to him. But on the contrary, he found Mr. Pun very simple and down-to-the-earth person. Mr. Shrestha shared his plan with Mr. Pun and similarly with retired colonel Bodh Bikram Thapa and Dhan Bahadur Ale. All of them helped him a lot to move ahead with his plan.

After a few months, Mr. Mahabir Pun sent two wireless engineers to do a survey for installing the wireless network in Kajiman's village..

Currently, Kajiman's village is connected with the Nepal wireless network and thus they have internet connection. These days, school students, teachers, villagers are hanging over the internet and spending their free time in this manner. Kajiman himself is a regular user of computer and internet and constantly motivates others to use it for some creative and useful purpose.

Kajiman shrestha explains "bringing internet to the village does not seem to be any more difficult but the difficult part is effectively engaging the people to take the fullest benefits of this technology. So these days, I have requested the mother groups of Keshavtar to use computers for helping in their daily business"

Kajiman's recent focus is on regularly running computer literacy programs in village for women and the unemployed.

Out of the 18 computers in the village, 14 are kept at the school, 4 are owned by the mothers' group whereas one of them is with the local health post. The good part is that all of these computers are connected to the Internet..

Teachers and students have been using Google search for searching and accessing teaching and learning materials. Nowadays, it is not uncommon to hear about about the internet, facebook and google search in tea shops. Previously unemployed people were just gathering and playing cards, drinking alcohol and taking drugs. But now this has been some how decreased and their recent engagement is of course the facebook and skype.

Parallel Session – I, Day 2

The two parallel sessions planned for Parallel Session – I of Day 2 were respectively, "How to make the unsustainable sustainable? Sustainability issues on ICT Deployment and Use" and "Dreaming the ICT enabled rural Nepal: Defining each of our roles". However, due to some unavoidable circumstances not all the panelists were able to come. Hence we merged the two parallel sessions into one. The merged sessions were jointly moderated by Mr. Rajendra Poudel and Mr. Kedar Sharma. The panelists of the combined sessions were respectively, Dr. Bharat Pahari, Dean, Institute of Engineering, Pulchowk, Mr. Tikajit Rai, Magnus Consulting Pvt. Ltd., Er. Binod Dhakal, 2nd Vice President, Computer Association Nepal, Mr. Ananda Raj Khanal, Nepal Telecommunication Authority and Mr. Krishna Prasad Bhandari, Nepal Telecom. While Dr. Pahari talked about "Dreaming the ICT enabled rural Nepal: Defining each of our roles", the rest of the panelists talked about "How to make the unsustainable sustainable?"

Sustainability issues on ICT Deployment and Use”. The details of the presentation slides of the panelists are available at

http://ltk.org.np/downloads/ICT_enabled_rural_Nepal.pdf

http://ltk.org.np/downloads/Use_of_ICT_in_Rural_Nepal.pdf

<http://ltk.org.np/downloads/sustianableICTinRuralNepal.pdf>

<http://ltk.org.np/downloads/Sustainability-Issues-for-Rural-ICT.pdf>



Figure 24: Dr. Bharat Pahari addressing the Parallel Session



Figure 25: Mr. Tikajit Rai

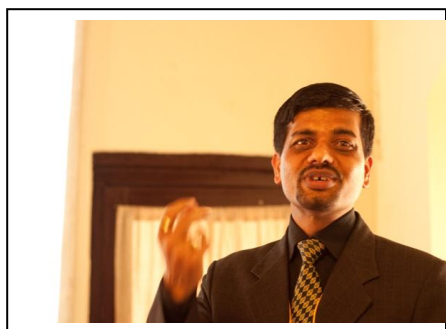


Figure 26: Mr. Ananda Raj Khanal



Figure 27: Mr. Krishna Prasad Bhandari

Parallel Session II, Day 2

In the second Parallel Session for Day 2, the planned sessions were “Bridging the Digital Divide: Tools and Techniques for tangible solutions” and “Use of Nepali Unicode: Challenges, Opportunity, and Emerging Trends”. The session on Bridging the Digital Divide was moderated by Mr. Bal Krishna Bal and the one on Unicode was moderated by Mr. Shamik Mishra. The Panelists for Bridging the Digital Divide were respectively Mr. Ganesh Shah, former minister, Ministry of Science and Technology, Mr. Upendra Aryal, Equal Access, Mr. Subir Pradhanang, Open Learning Exchange and FOSS-Nepal Community, Mr. Dibyendra Hyoju from Madan Puraskar Pustakalaya and Er. Saroj Dhakal representing the Nepali Wikipedia Team. In the Unicode session, the panelists were Mr. Kedar Sharma, Mr. K.P. Dhungana, Blogger and President Online Journalists Association, Nepal, Mr. Vinaya Kasajoo, Information Commission, Prof. Dr. Madhav Pokharel, Tribhuvan University, Central Department of

Linguistics and Mr. Ganesh Poudel representing the Nepali Wikipedia Team. The details of the slides of the panelists can be found at:

http://ltk.org.np/downloads/Bridging_the_digital_divide.pdf

http://ltk.org.np/downloads/Bridging_the_digital_divide_in_school_education.pdf



Figure 28: Mr. Ganesh Shah addressing the Parallel Session



Figure 29: Mr. Upendra Aryal addressing the Parallel Session



Figure 30: Mr. Subir Pradhanang



Figure 31: Mr. Kedar Sharma



Figure 32: Mr. Vinaya Kasajoo addressing the Parallel Session

Closing and awarding of Tokens of Appreciation and Certificates

Mr. Bal Krishna Bal made a summary of the proceedings of the two day conference and workshop in which he remarked that the success of any conference or workshop would remain in whether collaborations got developed as an outcome of the conference or not. Mr. Bal stressed on the need for further collaboration between individuals or groups working on common areas so that the efforts got consolidated rather than reinventing the wheels. This was followed by awarding of the tokens of appreciation and certificates to the speakers, panelists, participants and the volunteers by Mr. Kamal Mani Dixit. After this, Mr. Vinaya Kasajoo passed his impression and remarks on the 2 day conference. Finally, Mr. Kamal Mani Dixit gave a closing remarks bringing in history and flashback memories of the old times and relating it to how fast technology has moved forward. He thanked all for making the conference a success and encouraged to make the stories of change further in their individual lives and the society as a whole.

Some glimpses of the award ceremony:



Acknowledgements

We would like to express our sincere gratitude to International Development Research Center (IDRC) for supporting the conference and the Use Models of Technology Project. Our thanks go to Dr. Sarmad Hussain and team for approving our concept note on the Conference and Workshop organization. Thanks are due to the LTK and MPP team who worked really hard to make the conference happen. Thanks to Mr. Rajendra Poudel for the co-ordination with the local heroes and the articles on stories of change. Similarly, thanks are also due to Mr. Rabi Karmacharya and Mr. Subir Pradhanang from OLE for their help in bringing the local heroes to the conference. Last but not the least, we would like to thank the speakers, panelists and participants for their support and help to the conference.