Government of Nepal

Ministry of Education

Information & Communication Technology (ICT) in Education

Master Plan 2013-2017

March 2013, Kathmandu

Approved by the Government of Nepal, Ministry of Education on March 2013

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Preface

The long term goal of education in Nepal is to provide citizens with appropriate knowledge, skills and attitude require to work actively in the development of the country and to integrate Nepal into the global community through ensuring equitable access to and quality of education for all. In order to achieve the long term goal the Government of Nepal has been working to ensure the access to and quality of basic education for all and to develop work and job market relevant education so that educational graduate can easily get job in the job market. In this context, the Ministry of Education has considered the use Information and Communication Technology is essential to achieve the .goals of education.

The Ministry of Education aims at providing necessary skills on Information and Communication Technology to the students as well as using Information and Communication Technology as an important tool to improve classroom delivery, increase access to learning materials and improve effectiveness and efficiency of overall educational governance and management. Considering the above focus and aim, the Ministry of Education has prepared this Master Plan on Information and Communication Technology in Education. This Plan will guide for the activities and programmes on Information and Communication Technology in education in Nepal for next five years. Detail activities and implementation plan will be prepared each year by the concern agencies in which this Master Plan provides guidelines and framework.

This Plan has been prepared through consultative process. Various stakeholders including teachers, educational managers, policy makers and development partners were participated in the Plan preparation process. A team in the Ministry of Education coordinated the whole process of the Plan preparation and prepared a draft plan. The draft has been finalised with the input received from various agencies' representatives, policy makers and experts.

The Ministry of Education expresses sincere appreciation to all contributors including members of the Master Plan preparation team, teachers, experts and development partners. In order to implement this Plan the Ministry of Education seek request for effective cooperation and collaboration and active participation to all concern agencies and persons, including parents, communities, teachers, experts, private sector, government agencies and development partners.

Ministry of Education

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Acronyms

CD	: Compact Disk
CDC	: Curriculum Development Centre
DEO	: District Education Office
DOE	: Department of Education
DVD	: Digital Versatile Disk
EFA	: Education for All
E-libraries	: Electronic Libraries
GIDC	: Government Integrated Data Centre
GON	: Government of Nepal
IAC	: Industry-Academia Collaboration
ICT	: Information and communication Technology
ISP	: Internet Service Providers
IT	: Information Technology
MOE	: Ministry of Education
MPhil	: Masters in Philosophy
NAST	: Nepal Academy for Science and Technology
NCED	: National Centre for Education and Development
NCF	: National Curriculum Framework
NPA	: National Plan of Action
OLPC	: One Laptop Per Child
PRSP	: Poverty Reduction Strategy Paper
R&D	: Research & Development
SRRP	: School Sector Reform Plan
TSLC	: Technical School Leaving Certificate
TYIP	: Three Year Interim Plan
TYP	: Three Year Plan
UNESCO	: United Nations Educational, Scientific and Cultural Organization

1. Introduction

1.1 Context

The long-term goal of Education in Nepal is to provide citizens with appropriate knowledge, skills and attitude require to work actively in the development of the country and to integrate Nepal into the global community through ensuring equitable access to and quality of education for all, particularly focusing on basic education. Education has been considered as a fundamental right of the people by the Interim Constitution of Nepal 2007. Current National Plans on education: Education for All (EFA) National Plan of Action/NPA (2001-2015), Three Year Plan (2011-2013) and School Sector Reform Plan/SSRP (2009-2015) have identified some of the strategies to ensure equitable access to education. The Government of Nepal (GON), Ministry of Education (MOE) has introduced various interventions in order to achieve the goal of education in Nepal. Use of Information and Communication Technologies (ICT) in education has been considered as one of the strategies to achieve the broader goals of education.

The SSRP has envisioned for implementing and expanding ICT assisted teaching/learning process in all schools. ICT in education has been identified as an innovative and effective means of teaching and learning. Students of schools in urban areas have easier access to ICT whereas those students who are studying in remote areas have hardly any access to these technologies, which eventually is creating a digital divide. In this regard, there should be a comprehensive ICT in education Master Plan to introduce ICT as a tool to expand access to and enhance quality of education, particularly using ICT as a tool for instruction. Besides, ICT can itself be a literacy that enables children, youth and every one to get benefit from the global environment. The Master Plan intends to mitigate both the gaps in an equitable manner.

The education system of Nepal has also been influenced by the changes made by ICT in the global context. The Government of Nepal, Ministry of Education, through National Curriculum Framework (NCF), has introduced ICT as a subject as well as ICT as a tool for instruction in school education. Some Universities/Colleges and schools have already started ICT as a separate subject as well as ICT as a means of teaching learning process. However, there is a need of streamlining these initiatives into a broader national framework in order to ensure equitable access to and quality of education.

The IT Policy (2067), SRRP (2009-2015) and Three Year Plan (2011-1013) of the GON have included some policies and strategies in order to develop and integrate ICT in education. However, there is a need of explicit ICT in education policy in Nepal. In this context, MOE initiated discussion on ICT in education and organized several interactions and workshops and identified the need for a Master Plan for ICT in Education in Nepal. UNESCO Bangkok and UNESCO Kathmandu have also supported to this initiative of the MOE. Taking into account of current education policies and strategies, this Master Plan identifies goals, objectives, major strategies and activities with timeline for the development and use of ICT in education. This Plan will guide for the planning and implementation of ICT in Education in Nepal for next five years and provide direction for long term plan. The main focus of this plan is to effectively integrate ICT in teaching and learning process across all education sub-sectors so that access to education will be expanded, quality of education will be enhanced and equity will be promoted.

1.2 The Master Plan: Process and Structure

This Master Plan has been prepared with consultative process of various stakeholders. With the technical support from UNESCO, a four day ICT in Education Master Plan preparation workshop was conducted in Kathmandu in 2010. The workshop provided an opportunity to the participants to familiar

with the process and steps of preparing Master Plan. The workshop further analyzed the context including existing policies, practices, issues and challenges regarding ICT in education in Nepal. After that workshop, several discussions and consultations were held and a Master Plan preparation team was formed by the Ministry of Education (Annex 2). A consultant's input was also incorporated while preparing this Master Plan. The Master Plan preparation team organized regional consultations in order to collect ideas and input for the Master Plan. The Master Plan team also organized a workshop to prepare a first draft. The first draft of the Master Plan has been shared with stakeholders for their inputs. With the incorporation of the inputs received from the stakeholders a workshop was organized to finalize the draft plan (Annex 3).

This Master Plan includes four major components on ICT in education: ICT infrastructure including internet connectivity, human resources, content development and system enhancement. These four components also cover the four pillars of ICT in education, they are infrastructure, connectivity, teaching learning materials and human resource. The master Plan covers five major sub-sector of education, namely, School Education, Higher Education, Teacher Education and Training, and Continue Education and Life-long Learning. Besides, it also includes Governance and Management in Education. Similarly, the plan mentions overall institutional arrangement to implement this plan and identifies monitoring and evaluation process of the plan. For each of these components, this plan identifies objectives, strategies, programs and activities, key results and targets and estimated cost. It also identifies the implementation arrangement as well as monitoring and evaluation structures, process and activities.

1.3 The Education System in Nepal

The formal education structure of Nepal consists of eight years of basic education (grades 1-8), four years of secondary education (grades 9-12) and

three to seven years of higher education (Bachelor, Masters and M.Phil.). In addition, there is a provision of a separate technical education of one and half years to three years (TSLC and Diploma). The literacy and non-formal education opportunity for illiterate and newly literate youths provides a chance for gaining literacy and life-skills, and continuing education. Those who dropped out of school without completion of the relevant education level still have the opportunity of either attending non-formal literacy and life-skills programmes or taking a root of alternative mode of education.

The Ministry of Education provides overall policy direction for the implementation and management of education. Universities are governed and managed by the respective university acts whereas Education acts and regulations are the main legal instruments for school governance and management. As the main implementing agency for the school education Department of Education (DOE) develops and monitors overall programme and activities in school education. DOE implements all educational programs in the districts through District Education offices (DEOs). School management committee (SMC) in each school has the responsibility of planning and implementing school's activities and managing the school. There are separate central unit under the Ministry of Education for Curriculum Development, Teacher Development, Examination, Non-formal Education and Teachers' Records management. There are 29 education training centres across the country under the Government's educational training central - National Centre for Education and Development (NCED). Besides, as a teacher support mechanism there are 1053 resources centres functioning under the District Education Offices (DEOs) across the country.

1.4 ICT in Education in Nepal

The need for ICT in Education has been realized. As a result, some policies have been identified and some activities related to ICT have been carried out. ICT and computer education courses have been offered in general as well as

technical education. For example, National Centre for Educational Development (NCED) has been providing training to the teacher through National Radio and FM; Computer science has been taught as an optional subject in school (grades 9 to 12); Computer Engineering/Computer Science/ ICT programme in Bachelor's and Master's Levels are run by different colleges under various universities; various Training Institutes conduct technical education and vocational training courses in computer and ICT; Tribhuvan University has started Bachelor's in Education program in computer science.

MOE has implemented some of the programs related to ICT in Education. They are: one Laptop per Child (OLPC) pilot project in selected 26 schools of six districts; Lab model (computer sharing mechanism) Project in some schools and Internet connectivity to District Education Offices (DEOs) and schools (through matching fund to schools) and computer labs with internet connection from local ISPs. Similarly, Central Level Agencies under MOE, five Regional Directorates (REDs) and 75 District Education Offices have lunched their web sites. Department of Education (DOE), with the involvement of some NGOs, has developed interactive digital learning materials for the students of grades 2 to 6 in Nepali, Mathematics, English and Science subjects.

Under the matching grant schemes (2007 to 2010), DOE provided 2 computers and one printer to 3038 schools (DOE, 2010). Similarly, DOE provided with internet connectivity to 85 secondary schools conducting distance education programmes (DOE, 2012). Under the Formative Research Project under the Education for All programme, 2004-2009, MOE provided 62 schools with one computer and one printer to each. Besides, some NGOs, trusts and individuals have been provided computers and other accessories to some schools and basic computers training to teachers.

During the fiscal year 2066/67 and 2067/68, the government of Nepal has supported for ICT related infrastructure and internet connectivity to 785 schools. Similarly, to improve educational management and delivery system, the Ministry of Education has provided some additional ICT related equipments to all District Education Offices and lunched website by each District Education Office.

However, such ICT equipments were mostly used for administrative purposes. This is due to the lack of contents as well as lack of proper skill and awareness to the teachers and education managers. For this a comprehensive policy and programme yet to be developed in order to provide relevant ICT education to the students and to use ICT for improving teaching learning activities.

In June 2012, the Ministry of Education has endorsed a guideline for the implementation of ICT in school education in Nepal. The institutional arrangements and other provisions included in this guideline are also taken into consideration while finalising this Master Plan.

2. Policies on ICT in Education

As mentioned earlier, there is an absence of consolidated ICT in Education policy in education in Nepal. However, the IT Policy (2010), SRRP (2009-2015) and Three Year Plan 2011-1013 of the GON have provided some policy and strategy for the development and integration of ICT in education. For example, IT Policy (2010) has the following policy provisions: Expansion of access of the Internet to all schools; Coordination and collaboration with national and international institutions to develop skilled human resources for continuous, relevant and quality education; Promotion of Industry-Academia Collaboration (IAC); and Formulation and implementation of special IT programme focusing on students, teachers and schools in order to develop competent human resources. The School Sector Reform Plan (SSRP) states,

' ICT assisted teaching/learning will be implemented and expanded in all schools'. Similarly, SSRP has made a policy provision to develop ICT infrastructure in education and provide alternative modes of schooling through the use of ICT. One of the objectives of distance learning and distance education set by the MOE is to develop learning support materials to enhance quality of education through the use of ICT. The recent plan (three year plan, 2011-213) of GON (NPC, 2011) has included the following polices related to ICT in Education: schools will be encouraged to use ICT in education to increase access to quality education in rural areas, digital divide will be reduced, and ICT will be integrated in all aspects of education.

Based on the review of existing policies, the following points are drawn to serve as guiding principles in developing the Master Plan.

- The first principle should be ICT for all students, meaning that the policy would act as an enabler to reduce the digital gap.
- The second principle should be emphasized the role and function of ICT in education as a teaching and learning tool that would also encourage for the utilization of all potential media and Technology.
- The third principle is to promote educational access and equity for all regardless of age, gender, ethnicity, disability or location.
- The fourth principle is to give emphasis on the use of ICT to increase efficiency and effectiveness of the management system in education. ICT will extensively be used to automatise and mechanise work processes such as the processing of official forms, timetable generation, management of information systems, lesson planning, financial management, and the maintenance of inventories.

3. Vision, Mission, Goals and Objectives

3.1 Vision

The vision of the Master Plan is to ensure extensive use of ICT in education sector and contribute for access to and quality of education for all.

3.2 Mission

The mission of the Master Plan is to narrow down the digital divide through the development of ICT infrastructures, human resources, digital contents and system enhancement in education.

3.3 Goals

The main goals of ICT in Education Master Plan are:

1. To expand equitable access to education;
2. To enhance the quality of education;
3. To reduce the digital divide;
4. To improve the service delivery system in education.

4. Components of the Plan

There are four components in the ICT in education Master Plan: Development of Infrastructure including connectivity, Development of Human Resources, Development of Digital Learning Materials, and Enhancement of Education System. The following component descriptions cover context and status, objectives and strategies, and programme, activities and key results in each component.

4.1 Component 1: Development of ICT Infrastructure

The Infrastructure development is one of the most important and fundamental requirements to promote ICT in education. It is one of the basic pillars of ICT in education. ICT infrastructure mainly includes ICT equipment, internet connectivity, multimedia classroom, virtual data centre and educational resource sharing platform.

ICT Equipment

The Ministry will issue specifications for ICT laboratory and computers in schools. Schools will have ICT laboratory for students as well as computers for teachers. There will be adequate number of computers and multimedia projector in each RC and training centres.

Connectivity

For ICT enabled teaching learning, the internet connectivity should be available in training centres, resource centres and schools. All teachers training centres, schools and higher education institutions will have equal access to resource centres, libraries and Internet based teaching learning practices. All concerned agencies and stakeholders on ICT education will be connected with central ICT resource centres to share the education materials. Those rural schools where there is no stable electricity supply and no basic ICT equipment, they will use video as an alternative means of improving the training of teachers. To support this initiative, those schools will be equipped with televisions and DVD players and power backup to operate them. Such schools can opt for solar panel for power supply.

The main offices under the Education Ministry will be connected through Internet and intranet as soon as possible and enable the academic resource sharing. This network will cover the Ministry and other agencies and other public higher education institutions. This network will be owned by the Ministry or by the government to avoid recurrent connectivity costs that will otherwise grow significantly when large numbers of centres are connected. The network will be expanded to cover schools, resource centres and teacher training centres.

Data Center and Educational Resource Sharing Platform

All the educational resources will be stored and managed in the data center (preferably virtual cloud based data centres) and will be shared through educational resource sharing platform.

Educational Resource sharing platform is a total repository of educational contents used in teaching learning activities. It covers the concepts of the multimedia classroom and e-Library.

This Master Plan focuses on the development of multimedia text, related to academic curriculum of primary to secondary education. Various types of interactive materials including CDs, DVDs will be developed and distributed in order to promote multimedia based teaching learning process. For this, this Master Plan focuses on developing a well-equipped centre for the development and management of teaching learning resources at a central level agency.

Objectives and Strategies

The overall objective of this component is to develop ICT infrastructure in schools and educational institutions. The following are the specific objectives and strategies of this component:

Objective 1:

To create ICT- enabled learning environment in educational institutions.

Strategies:

Strategies to create ICT- enabled learning environment are:

- Using partnership approach between government and school/community and private sector;
- Providing focused support to disadvantaged schools in remote areas.

Objective 2:

To expand the Internet access to schools and other educational institutions.

Strategies:

Strategies to expand the Internet access to school and other educational institutions are:

- Coordination and collaboration between the government, Internet service providers and local communities;
- Collaboration with Nepal Telecom Authority for the expansion of internet connectivity to schools and other educational institutes;
- Providing focused support to disadvantaged schools in remote areas.

Objective 3:

To expand the accessibility to learning resources through educational resource sharing platform.

Strategies:

Strategies to expand the accessibility to learning resources through educational resource sharing platform are:

- Establishing a Data centre and developing linkage with educational resource sharing platform;
- Developing RC as a local hub for educational resource sharing platform;
- Encouraging higher education institutions to develop establish a Data centre and link it with educational resource sharing platform.

Programs/Activities and Timeline

Activities	Timeline					Responsible agency	Supporting agency	Remarks
	2013	2014	2015	2016	2017			
Base line survey on infrastructure						DOE	MOE	
Develop basic ICT infrastructure (Room, furniture, electricity, ICT equipments and accessories)						DOE	MOE	

Establish/expand internet connectivity						MOE, NTA	NPC, MOIC	
Establish servers to central level agencies, Regional Education Directorate, District Education Offices and ETCs						DOE	MOE	
Establish data centre and educational resource sharing platform						CDC/NCED	DOE, MOE	
Develop RC as educational resource sharing platform and enhance Community learning centres.						NCED	DOE	
Establish linkage with Data Centre for wider access to the digital contents						MOE		
Provide access to Educational Data Centre for Higher education institutions						MOE/DOE	UGC/ Universities	

Key results and targets

The following are the key results and targets for Infrastructure development component:

Key Result	**Unit**	**Targets for 2013-2017**	**Year wise targets**				
			2013	2014	2015	2016	2017
Base line survey on infrastructure	Times	1	1	-	-	-	-

Basic ICT infrastructure including power supply and internet connectivity in school developed/established used for teaching learning	No of schools	10000	2000	2000	2000	2000	2000
Functional Data centre established	No of Centres	1	1	-	-	-	-
Functional educational resource sharing platform established in all resource centres	No of centres	1053	300	500	253	-	-

Cost estimation

Estimated cost of this component for five years is Rs 5,048,244,000 . Detail break down of the cost is included as an annex 1.

4.2 Component 2: Development of Human Resources

Human resource is one of the fundamental requirements for the development and use of ICT in education. There is a need of qualified and skilled human resources for the use ICT as a tool to enhance the teaching and learning process. This Master Plan has categorized the ICT human resources as ICT teachers, ICT trainers, ICT decorater, decision makers and managers in the education system and educational institutions. The consultation with various schools and other stakeholders during the development of this master plan show that there is a lack of skilled ICT human resources at the schools and training centres. Therefore, this Plan has given priority for the development of ICT related human resources across the education system.

ICT Teachers

ICT teachers are highly trained human resource in school. In addition to their role as ICT subject teacher, they will also play a role in training of their colleagues and in supporting the use of ICT for school administration and information management. So, the knowledge necessary to teach the ICT subjects, ICT teachers will also be trained in basic computer maintenance in

order to provide first-level support for the maintenance of computers in their schools.

ICT Trainers in Teacher Training Centres and Resource Centre

Each teacher training centre will have at least one ICT Master Trainer who not only know how to deliver the ICT curriculum but also can do basic maintenance of computers and support the information management system of the Teacher Training Centre. The master trainers at the Teacher Training Centres are highly trained ICT human resources in the Ministry. They will train ICT teachers, general subject teachers and trainers from resource centres.

Human Resource for Digital Content Development

Infrastructure along could not produce desired result without digital materials. In order to develop digital materials adequate human resources needs to be developed. This Master Plan focuses on developing digital materials for teaching and learning. To develop such multimedia based educational materials, this Master Plan suggests for hiring some developers and ICT knowledge based managers to manage the digital contents development and distribution related activities.

Human Resource for ICT in education Programme Management at Central Level

One of the key components of this Master Plan is to ensure sufficient human and material resources at central level to manage and monitor the programme. ICT units in various central level agencies including MOE, DOE, CDC, NCED will have a network and collaboration in order to support for the implementation and monitoring of the programs. For this, MoE should have ICT skilled human resources who can monitor and manage the digital contents development and distribution process.

Objectives and Strategies

The overall objective of this component is to enhance the ICT capacity of human resources in education sector. In order to achieve the goal of this component, the following specific objectives and strategies are identified:

Objective 4:

To prepare teachers for ICT based education.

Strategies:

Strategies to prepare teachers for ICT based education are:

- Developing National ICT Skill Standards;
- Integrating ICT skills in in-service and pre-service teacher training curricula in each level;
- Motivating ICT skilled teachers and certifying them;
- Encouraging ICT skilled teachers to mentor other teachers;
- Integrating ICT skills in performance evaluation of the teachers;
- Promoting continuous and life long learning through open and distance mode;
- Integrating ICT Skills in teacher preparation courses.

Objective 5:

To develop favorable environment for policy making and management for ICT based education

Strategies:

Strategies to develop favorable environment for policy making and management for ICT based education are:

- Organizing campaigns, workshops, seminars, and orientations programs;

- Integrating ICT components (ICT knowledge, skills and innovations) in regular workshops, seminars, and orientation programs;
- Using mass media for orientation.

Objective 6:

To enhance ICT competencies of human resources working in education sector

Strategies:

Strategies to enhance ICT competencies of human resources working in education sector are:

- Encouraging HR to acquire the ICT skills for their professional development;
- Integrating ICT skills on regular training curricula;
- Promoting the ICT-based communication network in work place;
- Integrating ICT skills in performance evaluation of each individual in education sector.

Programs/Activities and Timeline

	Timeline							
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	Responsible agency	Supporting agencies	Remarks
Assess ICT needs						NEDC	DOE/MOE	
Develop ICT Skill standards for teachers and other HR associated with education sector						NECD	DOE/MOE	
Develop manuals to Integrate ICT training with TPD modules						NCED		

Revise teacher development courses						Teacher preparation agency	NCED	
Enhance capacity of HR associated with education sector through training and continue learning (including trainer's and manager's training)						NCED	DOE, MOE	
Conduct training for school teachers and prepare them for ICT enabled teaching-learning environment						NCED		

Key results and targets

The following are the key results and targets for human resources development component:

Key Result	**Unit**	**Targets for 2013-2017**	**Year wise targets**				
			2013	2014	2015	2016	2017
ICT needs identified	Type of HR/teachers	10	10	-	-	-	-
ICT skill standards for teachers established	Level/type of teachers	3	3	-	-	-	-
ICT skill standards for HR working in education sector established	Types of HR	10	10	-	-	-	-
Trainers trained	No of Trainers	218	68	150	72	-	-

Teachers trained for ICT enabled teaching-learning environment	No of teachers	20000	4000	4000	4000	4000	4000
Teacher development course revised with incorporating ICT related contents	No faculty/ agency	4	-	4	-	-	-
ICT capacity of HR associated with education sector enhanced	No of person	500	100	100	100	100	100
Mechanism for continue learning for teachers and other HR in the education sector established	No of mechanisms	3	2	1	-	-	-

Cost estimation

Estimated cost of this component for five years is Rs 339,962,000. Detail break down of cost is included as an annex 1.

4.3 Component 3: Development of Digital Learning Materials

Curricula

The digital revolution in the twenty first century is irreversible. In this context, the government of Nepal has initiated developing a broader policy provisions to incorporate ICT into school curricula. The National Curriculum Framework (NCF) for school education has clearly articulated the need for Information and Communication Technology in two ways: ICT in Education and ICT Education. ICT in education means the use of ICT as a tool to support pedagogical activities meaning that the delivery of specified curricular contents through the use of ICT. More specifically, ICT has been considered as an effective tool for educational transformation through improved teaching learning process making learning horizon wider. The Master Plan is one the broader frameworks, which intends to promote the use of ICT in teaching and

learning process so that students will have better understanding of the contents. This eventually leads the learners towards creating knowledge based society. In this way, ICT can be used as a tool, which can help teachers to conduct teaching in a meaningful manner. Second focus on the curriculum is to improve ICT education through teaching ICT as a subject itself.

Curricula for Students

Basic computer skills such as Word Processors, Spreadsheet Application, Database Management, Email and the Internet Application to be provided all secondary level students as a core soft or generic skill. Besides, there will be optional or elective courses in ICT as a form of vocational and professional courses. In higher education there will be two types of ICT curricula: academic curriculum and professional training.

Curricula for Teachers

In order to integrate ICT education into general education system every teacher should have basic ICT skills. These ICT skills can be obtained either taking separate courses during teacher preparation or integrating ICT in other subject curriculum like Mathematics, Physics, English, Economics, and Nepali and so on while preparing teachers. In this case, most of the school teachers will have ICT literacy so that they can use it as a tool for teaching learning process. ICT curricula for teachers need to be developed for teacher preparation as well as teacher development programmes. It includes Email/ Internet use and other skills to use and handle the teaching learning tools like multimedia, accessing e-library and so on. Graduates of higher education in ICT subjects together with relevant teacher preparation courses will work as the teacher for ICT subjects in school level.

Contents

Interactive digital contents need to be developed on the basis of curriculum so that students will learn through the use of such digital contents. A live presentation of the contents through the use of ICT instruments like computer,

multimedia, radio, television in pedagogical procedure creates an encouraging environment to the learners for better learning. NCF provides a broader framework for the development of school curriculum. Based on this framework, level wise curricula for the school education are developed. These curricula are translated into real class through several reference materials. Printed textbooks are most popular and widely used tool helping learners enhancing their knowledge, skills and behaviours based on the pre-designed curricula. However, the printed materials may not necessarily support learners to develop their concepts and insights in lively manner. Well-designed interactive CD-ROM based digital contents and Web-based activities are instrumental to provide students with access to digital resources and on-line collections. Such digital contents help learners better understand the contents and sustain the learning. At this stage, the limited use of ICT to supplement, enhance or provide access to content, particularly in textbooks and supplementary materials should be developed and expanded.

Students and teachers should be ICT literate then only they will able to use ICT as a tool for teaching learning. For ICT based study there should be sufficient digital contents to support their regular education. This plan focuses on preparing the digital material related to the curriculum of students and teachers. Development of multimedia contents, digital literature and interactive CDs and DVDs will also enhance the existing contents of study materials.

Digital and interactive materials developed according to the curriculum and approved by the Ministry of Education will be used at schools. User created contents will also be promoted. Use of open source code is promoted for the development of software useful to the pedagogical process and enhancement of educational system. The respective government agency provides an approval to the interactive digital contents designed and developed from

public and private sectors in order to ensure the contents better serve the NCF.

Objectives and Strategies

Development of digital contents and reference materials for making teaching and learning more effective is one of the fundamental aspects of the use of ICT in Education Master Plan. The following are the specific objectives and strategies under this component.

Objective 7:

To facilitate the teaching learning process through the use of interactive digital contents.

Strategies:

Strategies to facilitate the teaching learning process through the use of interactive digital contents are:

- Strengthening Curriculum Development Centre for developing, managing and disseminating digital contents;
- Promoting private sectors to develop open source learning materials;
- Selecting/Screening and providing approval for the content developed by the public/private sectors under the NCF framework;
- Promoting and acknowledging user-created innovative contents;
- Creating environment to use of open source materials through the use of ICT to make learning horizon of the learners wider,
- Establishing linkage with Government Integrated Data Centre (GIDC) for wider access to the digital content;
- Establishing network among the global educational institutions for easy access to the digital contents/resources;

- Encouraging the teachers/learners to create and exchange their contents innovatively;
- Promoting E-libraries in the national as well as in regional level;
- Strengthening Curriculum Development Centre and National Centre for Educational Development for developing and disseminating teacher support materials;
- Promoting and acknowledging user-created innovative teacher support materials;
- Endorsing the available relevant global resources;
- Establishing a content management system;
- Developing Interactive digital curricular materials.

Programs/ Activities and Timeline

	Timeline							
	2013	**2014**	**2015**	**2016**	**2017**	Responsible agency	Supporting agency	Remarks
Develop, update and revise the existing ICT curricula						CDD/universities	MOE	
Develop interactive digital teaching learning and training materials						CDC	MOE/DOE/ NCED/ Contents developers	
Evaluate and provide approval for the contents development by the public and private sector						CDC	MOE	
Develop interactive digital training materials						NCED	CDC/DOE	
Develop interactive digital content for non- formal, distance and open learning						NFEC	DOE/CDC/ NCED	

Develop disable friendly materials to enhance them with digital contents						CDC	DOE/NCED	
Establish and operate content management system						CDC	MOE/DOE	
Promote and encourage the use of free and open source materials						MOE	CDE/DOE/NCED/UGC	

Key results and targets

The following are the key results and targets for the component on development of digital learning materials:

Key Result	Unit	Targets for 2013-2017	Year wise targets				
			2013	2014	2015	2016	2017
Core and optional ICT curriculum for students of secondary level revised/developed	Set of curriculum	10	4	2	2	2	-
Interactive digital contents for students of all grades developed	No of subjects	70	10	20	20	10	10
Interactive digital contents developed by public and private sectors evaluated and approved	No of materials	as available					
Functional content management system established	No of system	1	1	1	1	1	1

Interactive digital contents for non-formal, distance and open learning developed	Sets	3	1	2	-	-	-
Interactive digital materials for teacher training developed	No of subjects	8	2	6	2	-	-

Cost estimation

Estimated cost of this component for five years is Rs 48,965,000. Detail break down of cost is included as an annex 1.

4.4 Component 4: Enhancement of Education System

ICT is one of the effective tools to improve service delivery system and to ensure good governance, transparency, effectiveness, efficiency and accountability in education sector. The use of ICT eventually helps raise the level of clientele satisfaction. Improved database and management information system is one of the fundamental aspects of governance, which contributes for the informed decision making process and formulation of policies and plans.

Objectives and Strategies

The overall objective of this component is to enhance education system through the use of ICT. The following specific objectives and strategies are set in order to achieving this objective.

Objective 8:

To develop and enhance policy and regulatory provisions for effective and efficient use of ICT in education

Strategies:

Strategies to develop and enhance policy and regulatory provisions for effective and efficient use of ICT in education are:

- Reviewing and revising the existing policy and regulatory provisions;
- Developing new policies to address the innovations in the global context in ICT sector;
- Reflecting policy directives into national prioritized plans and programs;
- Developing policies for data security and cyber ethics;
- Promoting open sources.

Objective 9:

To promote Research and Development system in education.

Strategies:

Strategies to promote Research and Development system are:

- Supporting R&D activities;
- Establishing linkage, cooperation and collaboration among the national and international R&D agencies.

Objective 10:

To strengthen Management Information System (MIS) and Office Automation System (OAS) in education sector

Strategies:

Strategies to strengthen Management Information System (MIS) and Office Automation System (OAS) in education sector are

- Reviewing existing status of MIS and OAS;
- Strengthening existing data-base system and increasing its reliability;
- Integrating cross-functional data to support to facilitate evidence based policy, planning and decision making process;

- Promoting OAS to ensure effective service delivery in educational management.

Programs and Activities

	Timeline							
	2013	**2014**	**2015**	**2016**	**2017**	Responsible agency	Supporting agency	Remarks
Strengthen the MIS						MOE,DOEUGC/CTEVT		
Improve the Office Automation System						MOE/DOE/ UGC/CTEVT		
Enhance Examination Management System						NEB/OCE		
Establish/strengthen ICT based M&E system						MOE/DOE/ UGC		
Conduct institutional mapping and establish networking among the agencies working in the field of ICT						DOE	MOE	
Support R &D activities in education						MOE/DOE		
Establish and strengthen E-governance system in education sector						MOE/DOE		

Key results and targets

The following are the key results and targets for the components on Enhancement of Education System:

Key Result	Unit	Targets for 2013-2017	Year wise Targets				
			2013	2014	2015	2016	2017
Existing EMIS and MIS reviewed and revised and used	No of system	1	1 reviewed	1 revised	1	1	1
OAS improved and made functional	No of system	1	1	1	1	1	1
ICT base M & E system established	No of system	1	1	1	1	1	1
Institutional mapping conducted and link established	times	1	1	-	-	-	-
E-governance in education sector established	No of system	1	1	1	1	1	1
Feedback and communication system improved through the use of ICT	No of system	1	1	1	1	1	1
Functional National steering committee formed and coordination committee established	No of committee	2	2	2	2	2	2
Functional District and local level coordinate committee established	Levels	3	3	3	3	3	3
Functional ICT units at all levels of education management established	Levels	4	4	4	4	4	4
Base line survey conducted	Times	1	1	-	-	-	-
Quality bench mark established	Times	1	-	1	-	-	-

Partnership frameworks between private, public , community , and industry academic	No of frameworks	2	2	-	-	-	-
ICT related programmes in regular plans and programmes in education integrated	Times	5	1	1	1	1	1
RC as a ICT hub of school established	No of RCs	1053	300	800	1053	1053	1053

Cost estimation

Estimated cost of this component for five years is Rs 24,300,000. Detail break down of cost is included as an annex 1.

5. Implementation Arrangement

Effective implementation of ICT in education program requires well structured implementation arrangement, which includes institutional arrangement, overall framework for cooperation and collaboration, and implementation structure and mechanism. This section describes three key aspects of implementation arrangement, namely institutional arrangement, implementation structure, and collaboration and cooperation strategies.

It defines implementation arrangement which includes institutional arrangement including legal requirement, implementation structure, and collaboration and cooperation strategies to carry out the ICT plans and programmes at all levels.

5.1 Institutional Arrangement

There is a need for inter-sectoral and inter-agency coordination and cooperation while implementing ICT in education programme as envisioned in this Master Plan. For this, a Steering Committee (SC) and a Coordination Committee (CC) are proposed.

Steering Committee

A Steering Committee shall be constituted under the chair of Honourable Member of NPC in order to make policy decisions and facilitate for the implementation of the Master Plan. ICT in Education National Steering Committee will be constituted with the following members:

Chairperson	NPC Member (Education)	NPC
Member	Secretary	MOE
Member	Secretary/Joint secretary level representation	MOF
Member	Secretary/Representative, Joint secretary	MOIC
Member	Secretary/Representative, Joint secretary	MoST
Member	Director General	DOE
Member	Member-secretary	UGC
Member	Representative	Teacher preparation agency
Member	Chair person	Nepal Telecom Authority
Member	Chief	Nepal Telecom
Member	ICT Experts (2 persons)	Nominated by the ICT in education steering committee
Member	Representative from ICT related associations/business associations (2 persons)	Nominated by the ICT in education steering committee
Member-secretary	Joint Secretary	MOE

ICT in Education National Steering Committee shall review and revise the policies adapted during the time of implementation of ICT in education master plan, appraise annual progress, and solve problems that may arise and carry out such other activities as it may deem necessary for the development and expansion of the use of ICT in education. The committee also facilitates for

the coordinate various actors, including government agencies, private sector, and civil society.

Coordination Committee

ICT in Education Coordination Committee at the central level will be formed for overall planning and coordination of implementation of Master Plan. The committee will be chaired by the secretary of MOE. The coordination committee will have the following representation:

Chairperson	Secretary,	MOE
Member	Director General	DoE
Member	Executive Director	CDC
Member	Executive Director	NCED
Member	Representative	NPC
Member	Representative	MoF
Member	Representative	UGC
Member	ICT Experts (2)	Nominated by the Committee
Member	Joint Secretary	MoE, Planning
Member	Joint Secretary	MoE, member secretary of the SC
Member	Representative	Teachers' Union
Member – Secretary	Under Secretary	REMIS, MOE

Legal Provision

Necessary laws shall be enacted to regulate the use of ICT in education and services to be carried out through the use information and communication technology. The enacted laws will also cover necessary arrangements related to ICT including the protection of intellectual property right. Currently, the following legal and policy documents provide some basis for ICT in education

in Nepal.

Provisions for ICT in National Plans and Programmes

National development Plans (PRSP 2002, TYIP 2007 and TYP 2011) included following programmes on ICT in education:

- ICT skilled human resource development management;
- Increasing access to education;
- Narrowing down the digital divide;
- Integration of ICT in all aspects of education;
- Infrastructure Development;

IT Policy-2067

- Expansion of access of the Internet to all schools;
- Coordination and collaboration with national and international institutions to develop skilled human resources for continuous, relevant and quality education;
- Promotion of Industry-Academia Collaboration (IAC);
- Formulation and implementation of special IT programmes focusing on students, teachers and schools to develop competent human resources.

School Sector Reform Plan (SSRP)

- ICT assisted teaching/learning in all schools;
- Development of ICT infrastructure in education;
- Alternative modes of schooling through ICT;
- Professional development of teachers and personnel (distance and on line mode) course for professional development).

The policies and legal provisions may be reviewed and amended every two years in conformity with technological development and expansion of services

as a result of rapid developments in the information technology and education sector. Nonetheless, at the suggestion of various sectors, it may be appraised and amended if necessary even prior to it.

5.2 Implementation Structure and Mechanism

Various levels of management structures will be responsible of implementing ICT in Education. At school level the School Management Committee will be made responsible for planning and implementation of ICT in education in school. Resource centre will have the responsibility to coordinate the activities of school and provide necessary technical support to schools. In the first year of implementation every resource centre will be equipped with computer laboratory and internet connectivity.

Based on school's preparation and demand DEO will have to develop, implement and monitor district level ICT in education plan. One responsible officer for ICT in education will be identified in each of the districts.

At the central level, based on the district demand and readiness, Department of Education (DOE) will make yearly plan for ICT in Education, focusing on schools. Besides, CDC will make a plan and implement the plan in order to develop and revise school level curriculum and develop and disseminate digital contents related to curriculum. Teacher development and training plan and activities will be coordinated by NCED. NCED also coordinate human resources development activities to the staff under the MOE. Ministry of education will formulate policies and coordinates the activities under the Master plan. Ministry of education further facilitate for the collaboration of private sector and industry, universities, civil society and development partners in order to implement the plan. In each central level agency, there will be a unit/person responsible to coordinate the activities on ICT in education. In addition, ICT unit in each central agency will facilitate for the use of ICT in educational governance and management. CTEVT and Universities

will make their plan for the enhancement of ICT education and for the use ICT in education. Teacher preparation agency/faculties/schools of universities will revise/develop and implement the curriculum of teacher preparation courses and include ICT components in the curriculum.

5.3 Arrangement for Cooperation and Collaboration

To promote ICT in education, this Master Plan defines some roles of Public-Private Partnership, Industry-Academia Collaboration and the role of Schools and Community. There should be a good co-operation, co-ordination and collaboration between these parties to implement the ICT in education Master Plan.

Public-Private Partnership

Master plan focuses on PPP (Public-Private Partnership) in order to strengthen the infrastructure development as well as other components of the plan. Private sectors will be encouraged for infrastructure development and training. Government will work together with private sector for promotion and enrichments of ICT in education.

Industry-Academia Collaboration

This master plan describes the term “Transfer of Knowledge”, in particular the Industry-Academia Partnership Scheme. The aim of Industry-Academia Partnerships is to foster co-operation between public research organisations and private commercial enterprises. These partnerships aim to stimulate long-term collaboration between the sectors and address the perceived or real barriers which inhibit movement of researchers between the public and private research domains.

Strengthening Community Roles

To implement this Master Plan, the roles of local community are crucial. The successful integration of ICT into the education system will require a coordinated and comprehensive approach of participation and collaboration.

The wider community related for the purpose of this Master Plan comprises parents, local institutions/agencies and school.

Parents

It is recognized that parents will play a vital role in encouraging and guiding their children towards the achievement of required skills. School management will have to work with parents in facilitating students' learning and planning for the ICT in education in school.

Community Centres

Local community facilities such as Community e-Centres and local Internet Cafes will play an important role in overcoming the digital divide. Equity of access is an issue facing many students. While there are plans to increase the number of computers and access to ICT in each school, schools should continue to seek alternative ICT access for their students. Community Learning Centres (CLCs) can be utilized as a community centre to promote ICT in education program.

Local Government Units

Local government should play a facilitating role for the implementation of the ICT in education master plan. They can provide significant resources that will enable schools to achieve the goals articulated in this plan.

Other Institutions

Community organizations, NGOs and higher education institutions can work at the local level, particularly at schools in order to facilitate for the use of ICT in education. Universities' departments and research groups can conduct successful programs, so that they could be able to provide support and advice to schools.

The Private Sector

Private sector is an important partner in the implementation of this ICT in education master plan. Private sector should be encouraged to become involved in helping schools achieve the strategic thrust of this Plan.

External Support

In order to implement the Master Plan external supports from various development partners, institutions and experts will be required. Supports are required in different areas including financial resource generation, technology development and expert services. The Plan considers one of the important areas of cooperation is to mobilised development partners' supports in this area.

Programs and Activities

	Timeline							
	2013	**2014**	**2015**	**2016**	**2017**	Respon-sible agency	supporting agency	Remarks
Formation of National ICT in education steering committee						MOE	NPC	Already formed
Formation of ICT in education central coordination committee						MOE		
Formation of district and local coordination committee for ICT in education						DOE		
Establish/Restructure ICT units from Ministry to School level						MOE/ DOE		
Create enabling environment to collaborate between private, public and community ICT service providers and NGOs.						MOE		
Baseline survey (Mapping : location, schools, teachers etc. associate with ICT)						DOE	MOE	
Develop Quality benchmark for ICT services in Education						MOE/D OE		
Promote partnership approach through PPP , Industry- Academia collaborations						MOE/U GC		

Integrate ICT in Education activities in National Education Plans and Programs						MOE	NPC/MOF	
Mobilised external support in ICT in education						MOE	NPC/MOF	
Develop/strengthen RCs as a ICT hub for schools						NCED	DOE	
Promote ICT clubs/Communities/CLCs						DOE	MOE	

Key results and targets

The following are the key results and targets for the Implementation Arrangement:

Key Result	**Unit**	**Targets for 2013-2017**	**Year wise targets**				
			2013	2014	2015	2016	2017
Functional National steering committee formed and coordination committee established	No of committee	2	2	2	2	2	2
Functional District and local level coordinate committee established	Levels	3	3	3	3	3	3
Functional ICT units at all levels of education management established	Levels	4	4	4	4	4	4
Base line survey conducted	Times	1	1	-	-	-	-
Quality bench mark established	Times	1	-	1	-	-	-

Partnership frameworks between private, public , community , and industry academic established	No of frameworks	2	2	-	-	-	-
ICT related programmes in regular plans and programmes in education integrated	Times	5	1	1	1	1	1
RC as a ICT hub of school established	No of RCs	1053	300	800	1053	1053	1053

6. Monitoring and Evaluation

Regular monitoring and evaluation system of the MOE will carry out the monitoring and evaluation of the implementation of ICT in Education Master Plan. However, during the planning phase specific indicators on ICT in Education will be incorporated in the regular reporting system. Base line status will be assessed in each district and a compiled status will be prepared by the Department of Education. In the monitoring and evaluation report, there will be a separate section for the analysis of ICT in education programme.

ICT in Education Coordination Committee and Steering Committee will review the overall progress of the implementation of the ICT in Education Master Plan. As per the suggestion made by the Coordination Committee and Steering Committee, periodic study and evaluation will be carried out in which the result of such evaluations and studies will be incorporated in the further planning of ICT in Education.

Programs and Activities

	Timeline							
	2013	**2014**	**2015**	**2016**	**2017**	Responsible agency	Supporting agency	Remarks
Establishment of base line and quality bench mark						DOE	MOE	
Development and revision of Monitoring Indicators and tools						DOE/MOE		
Integration of monitoring indicators and tools to the regular monitoring process of MOE						DOE/MOE		
Preparation of quarterly and yearly monitoring integrated report						MOE/DOE		
Preparation of specific/focus monitoring plan for Coordination Committee and Steering Committee						MOE/CC/SC		
Yearly review of strategies and programme						MOE		
Mid-term review of the plan						MOE		
Evaluation of the programme						MOE		

Key results and targets

The following are the key results and targets for the Monitoring and Evaluation:

Key Result	Unit	Targets for 2013-2017	Year wise targets				
			2013	2014	2015	2016	2017
Base line established and quality bench mark prepared	Times	1	1	1	2	2	2
Monitoring Indicators and tools Developed/revised	Times	5	1	1	1	1	1
Monitoring indicators and tools integrated to the regular monitoring process of MOE	Times	5	1	1	1	1	1
Trimester and yearly monitoring (integrated) report prepared	Times	20	4	4	4	4	4
Preparation of Specific/focus monitoring plan for Coordination committee and Steering Committee Prepared	Times	5	1	1	1	1	1
Yearly review report of strategies and programme prepared	Review report	5	1	1	1	1	1
Mid-term review report of the plan conducted	MTR report	1	-	-	1	-	-
Programme evaluation conducted	Report	1	-	-	-	-	1

Cost estimation

Most of the cost of monitoring and evaluation will cover from regular program monitoring cost of MOE/DOE. The cost for yearly review, mid-term review and evaluation is estimated to Rs 16,500,000. Detail break down of cost is included as an annex 1.

7. Financing Arrangement

In order to cover the estimated cost of the plan, the financing will be arranged with the contribution from the government, private sector, international development partners, local government, non-governmental organizations, communities and schools. The government will consolidate resources on ICT education from various agencies to education sector and allocate budget to ICT in education program annually. The contribution from the partnerships with private sector and communities/schools, contribution from NGOs, CBOs, Local government as well as support from international development partners will cover the rest of the cost.

The Ministry of Education with the coordination of National Planning commission will initiate the process of arranging partnerships with private sector and communities. Similarly, the Ministry of Education will begin dialogues with possible external development partners. In the meantime recent support from various agencies in ICT education will be consolidated and streamlined, which will also contribute for financing to this plan. Schools will be encouraged to participate in partnership arrangement for the development of ICT in education in their schools. However, in selected disadvantaged areas and communities the government may provide additional support.

8. Expansion

In this Master Plan the activities and budget has been estimated for 5 years. After completing the first 5 year phase of the plan the next five year plan will be developed in order to cover all schools of Nepal. In addition to expanding the program to all schools in the second phase of next 5 years, there will be continued efforts on maintaining and enhancing further the ICT in education programs and activities carried out during the first 5 years.

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Annexes

Annex 1: Summary of Activities and Estimated Cost

Component 1 Development of ICT Infrastructure

	Timeline					
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Base line survey	8244000	0	0	0	0	8244000
Develop basic ICT infrastructure (Room, furniture, electricity, ICT equipments and accessories)	970000000	970000000	970000000	970000000	970000000	4850000000
Functional Data centre established	40000000	0	0	0	0	40000000
Functional educational resource sharing platform established in all resource centres	29000000	75000000	39280000	3360000	3360000	150000000
Total	1047244000	1045000000	1009280000	973360000	973360000	**5048244000**

Component 2: Development of Human Resources

	Timeline					
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Develop ICT Skill standards for teachers and other HR associated with education sector	1200000					1200000
Develop manuals to integrate ICT training with TPD module	693000	346500				1039500
Conduct training for school teachers and prepare them for ICT enabled teaching-learning environment	60000000	60000000	60000000	60000000	60000000	300000000
Revise teacher development courses	2000000	2000000				4000000

Enhance capacity of HR associated with education sector through training and continue learning	6744500	6744500	6744500	6744500	6744500	33722500
Total	70637500	69091000	66744500	66744500	66744500	**339962000**

Component 3: Development of Digital Learning Materials

	Timeline					
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Develop, update and revise the existing ICT curricula	493000	493000	493000	493000	493000	2465000
Develop interactive digital teaching learning materials	5000000	10000000	10000000	5000000	5000000	35000000
Develop interactive digital training materials	800000	800000	800000	800000	800000	4000000
Develop interactive digital content for non- formal, distance and open learning	200000	200000	400000			800000
Develop disable friendly materials to enhance them with digital contents	400000	400000	400000	400000	400000	2000000
Establish and operate content management system	400000	400000	400000	400000	400000	2000000
Promote and encourage the use of free and open source materials	900000	450000	450000	450000	450000	2700000
Total	8193000	12743000	12943000	7543000	7543000	**48965000**

Component 4: Enhancement of Education System

	Timeline					
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Strengthen the MIS	1900000	950000	950000	950000	950000	5700000
Improve the Office Automation System	1400000	400000	400000	400000	400000	3000000
Support R &D activities in education	1900000	1900000	1000000	1000000	1000000	6800000

Establish and strengthen E-governance system in education sector	1900000	1900000	1000000	1000000	1000000	6800000
Develop Quality benchmark for ICT services in Education	1000000	1000000				2000000
Total	8100000	6150000	3350000	3350000	3350000	**24300000**
Activities	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Monitoring and Evaluation						
Yearly review of strategies and programme	1500000	1500000	1500000	1500000	1500000	7500000
Mid-term review of the plan			4000000			4000000
Evaluation of the programme					5000000	5000000
Total	1500000	1500000	5500000	1500000	6500000	**16500000**
Grand Total	**1135674500**	**1134484000**	**1097817500**	**1052497500**	**1057497500**	**5477971000**

Annex 2: Master Plan Preparation Team

This plan was prepared under the supervision of the ICT in Education Master plan preparation Committee headed by Mr Diwakar Dhungel, Joint Secretary of Monitoring and Evaluation Division of the Ministry of Education. The development process was coordinated National ICT in education consultant Er. Shankar N Adhikary with technical support from the team comprising of Dr Lekha Nath Poudel, Mr Narayan Krishna Shrestha, Mr Govinda Ram Paneru, Mr Arjun Aryal , Ms Nirmala Niraula, Ms Sunita Shakya.

Based on the input provided by a policy level sharing of draft plan at the Ministry of Education, a team of MOE/DOE updated the draft and prepared the final draft of the plan in October, 2012.

This Master Plan for ICT in Education has been developed following a strict consultative process, though this master plan is prepared by a core team of the Ministry of education. Interaction with all implicated departments of the Ministry has taken place at each step of the process through some consultative meetings in which different drafts of the Master Plan have been discussed. Technical and financial support for the development process was provided UNESCO, MoE and Department of Education.

Annex 3: Consultations on Master Plan Preparation

Regional consultation

A Regional Consultation Program for the Preparation of ICT in Education Master Plan was organised at Kaski, Pokhara on 2068/08/18 (Dec 4, 2011). Ministry of Education (MoE) has organized a regional consultation program on preparation of ICT master plan at Pokhara , Kaski on 4th Dec 2011. Main objective of this consultation and interaction program was to collect view points from different stakeholders of the ICT in education master plan.

The program was successfully completed and the team was able to collect useful views related to ICT in education. There were 40 participants in the consultation. The participants were graduate school teachers, college lectures, and the representatives from Regional Education Directorate, District Education Office and other academicians and professionals. Questionnaires were prepare to collect view points by focusing different areas of ICT in education

The participants have provided their viewpoints about the problems, opportunities and other issues related to ICT education and ICT in education. These views are reflected on this master plan. This regional consultation program has helped us to gather right information from the users and institutions related to ICT education.

On the interaction and consultation program we have realized that there is an urgent need for a comprehensive ICT in education programme. Lack of ICT related human resources, lack of infrastructure and lack of social awareness they are some of the problems to use ICT in school education. A comprehensive plan with public-private-community participation is required in order to develop the infrastructure, ICT human resources and social awareness program to promote the ICT in education.

Stakeholders' consultation in Kathmandu

A stakeholders' consultation programme was organised in Kathmandu Central level agencies, representative from teachers and experts were participated in the consultation. The consultation suggested a framework and structure of the Master plan. Similarly, the consultation programme suggested some activities and strategies.

These two consultations provided with some important ideas and feedback to the Master Plan team.

Policy level sharing in Kathmandu

A policy level sharing was organised to share and discuss with the draft Plan at the Ministry of Education. The sharing meeting was chaired by the Secretary of the MOE, and Department heads, Joint Secretaries and concern officers from the Ministry of Education and Departmental agencies under MOE, UNESCO representatives and some experts were participated in the sharing. A team from MOE and DOE work to incorporate the input received from the sharing and to prepare final draft of the Plan.