INFORMATION AND COMUNICATION TECHNOLOGY FOR DEVELOPMENT (ICT4D)

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Executive Summary

This thesis paper is all about the ICT4D in Bangladesh contents. I have done some researches and activities during my internee period in GKP's host organization BFES as GKP-Youth Fellow. As the Information and Communication Technology (ICT) revolution is rapidly taking the world by storm Bangladesh is playing its part to reach the frontline. To utilize ICT for development, we need proper planning, since our resources are limited, our opportunities are also limited but we have unlimited desires. For proper use of ICT we have to make an organized plan taking into account these practical issues. One of the first steps should be introduction of ICT to our rural and urban young group. A matter of great sorrow is that only some of facilities about ICT are available in urban areas, but in our rural areas there are almost no existences of ICT facilities. Therefore, one of our main targets should be reduce the digital divide. Students of different universities in our country learn IT at universities. These students can immensely help the development of ICT in their own villages and small towns.

I have achieved the chance to research on one of ICT4D project of GKP member organization Bangladesh Friendship Education Society (BFES) as GKP-Youth Fellow. During the internee period I am introduced with different activities of some international organizations such as WSIS, UNDP ICT4D project, SDC etc. In this thesis paper I have tried to explain those activities in the contents of Bangladesh. This paper is also included the activities of Amader Gram ICT4D project, where people from different stages and backgrounds of society are learning ICT to change their society into knowledge base. In this regards I have given an action plan for my internee and tried to follow that plan during internee. At the end of this paper there are some suggestions, practice examples from other countries and opportunities are focused. I have added those from my idea and experiences and from some web resources. Here I just tried to show that all those practices are suitable for Bangladesh. The subject of e-government is very broad. It is the use and application of ICT for good governance. If we can provide better information through ICT at all levels. We will also improve the level of efficiency and transparency of government. We also

need to give citizens the opportunity to call back. The internet can be a means of informing and also gaining information from citizens.

Building information societies is always based on the history and the local conditions of country. This means that an information society can be done to share information, experiences and best practices. The information society has a huge potential in offering equal opportunities to all members of the community to enhance their well-being and quality of life.

It is significant that the poor are often illiterate and have no assets like land, livestock, fishpond or productive skills. Often they survive on uncertain wage labors. Therefore, building assets has to be the major goal of any poverty alleviation effort. Facilitating a paradigm shift from unskilled to skilled work is basic to both poverty reduction and a healthy and productive life.

ICT are such as computers, mobile phones, radio, TV, video and the internet effective instruments to empower people, reduce poverty and improve life.

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Abbreviations

AGLC – Amader Gram Learning Center

AGP – Amader Gram Project

BFES – Bangladesh Friendship Education Society

GKP – Global Knowledge Partnership

HSC – Higher Secondary Certificate

ICT4D - Information and communication technology for development

KM4D – Knowledge Management for Development

KT4D – Knowledge Transfer for Development

LAN – Local Area Networking

MAN – Metropolitan Area Networking

MDG – Millennium Development Goal

NGO – Non Government Organization

OJC – Online Journalism Content

SDC – Swiss Agency for Development and Cooperation

SSC – Secondary School Certificate

UNDP – United Nation Development Program

WAN – World Area Networking

WSIS – World Summit on the Information Society

YCDO – Youth Creating Digital Opportunities

YFP – Youth Fellowship Program

1. ICT4D Today

With the upcoming of the Internet, the ways to communicate have changed for a large part of the world's population. That reference is made to a new revolution of the "Information Society". Access to information and seeking knowledge to make effective decisions in any part of life is only possible by the usage of information and communication technology (ICT).

Digital Divide: The difference of tele-density, number of Internet users and access costs causes a Digital Divide between industrialized and developing countries and – inside one country – between rural and urban regions. This reinforces existing wealth difference by adding a Knowledge Divide and enhancing unequal development opportunities.

In consideration of local needs, capacities and existing opportunities, it is important to include digital technologies along with the more "traditional" ones like radio, TV or telephony when speaking of "Information and Communication Technologies" (ICT). In line with this understanding, "ICT for Development" (ICT4D) is aiming at bringing relevant information to the people and building communication opportunities by combining the technologies necessary and most suitable in the local setting. It goes more than giving access to simple technology, but is focused on demand driven projects and the effective use of information and knowledge. This very often implies innovative approaches in order to create local content and to structure the project to the full benefit of users and communicators.

Advanced ICT tools may be relatively more cost-effective for the poor than for the rich. The Grameen bank effort in South Asia (Bangladesh) has shown that even the poorest people can find value and resources to support a system of cellular communications (World Bank 1994).

ICT can empower people. They unlock a world of super-fast, globalised communications and decentralized information network. Once people can access and use the technology, their lives will be improved. Access to communications technologies can improve people's livelihoods, access to services, agricultural practices, participation in government, incomes, vice, security, social relationships and health.

Malaysia, For example, sees ICT as both an incentive and means of reforming its schooling system, while reaching the broader community through its youth. Mali has made use of ICT in telemedicine projects that share advanced expertise and case studies across remote areas of the country and abroad with Swiss organizations. In both this sectors and e-governance, Bolivia has focused the importance of public access to the information sources. Finland has made a comprehensive national development strategy in the context of its advanced welfare state, to the role of professional skills, research and development as well as e-services and e-business.

The promise of information and communications technologies to enhance the basic education, literacy and livelihood of poor people is a tremendously challenging area of development work today, in booth poor and wealthy nations. To be effective in this period of globalization is more difficult than it at first appears. With a set of good principles, a reasonable level of support and as eye toward innovation, a great deal can be achieved employ ICTs to help the poorest of the poor.

More recently, this visible dilemma has also been eased with falling ICT costs from the declining cost of PCs, development of open source software solutions, new cost effective technologies (e.g. mobile/wireless) and increased competitions in the communication sector.

2.0 WSIS

2.1.1 Background of WSIS

The UN General Assembly, on 21 December 2001, adopted a Resolution (A/RES/56/183) endorsing the organization of the World Summit on the Information Society (WSIS), to be convened under the patronage of the United Nations Secretary-General, Kofi Annan, with the International Telecommunication Union taking the lead role in its preparation along with interested UN organizations and the host countries.

2.1.2 WSIS and Bangladesh Working Group

In Bangladesh, the process of WSIS has been started with Global Knowledge Partnership (GKP) and its' member Bangladesh Friendship Education Society (BFES) in 2002. BFES works with particular emphasis on ICT and development. In January 2002 it conducted an international conference on Towards Building a Knowledge Society: The Role of NGOs with the support of Swiss government. The necessity of WSIS process in Bangladesh was first felt in that meeting where members from GKP, Swiss government, policy makers from Bangladesh government, media, NGOs, and civil society members were present.

BFES as a member of GKP is involved in the process since long and as a part of the process it organized a regional consultation meeting in Dhaka in September 2002 with GKP South Asia Regional Meeting, which was attended by national and international policy makers, NGOs, civil society members and experts. In the conference a special session on WSIS was conducted where the importance of WSIS in Bangladesh perspective was also seriously felt. And the conference was supplementary to the WSIS global process as country consultation.

Since this is also a priority agenda, BFES has been playing the role of disseminating information both formally and informally to government and non-government sectors especially with the Ministry of Science and ICT, Bangladesh Telecommunications Regulatory Commission (BTRC), Ministry of

Information, Ministry of Post and Telecommunications and with media, NGOs and civil society groups. Finally, a Working Group on WSIS was formed with the representatives of GO-NGO and civil society actors. This is an exemplary group formed with the representative of government, NGO and civil society and as a collaborative effort, the process is continuing that can contribute to taking position on building information right to people and a knowledge society. BFES is providing all secretarial support to the Working Group.

3.0 GKP-YFP: An ICT4D platform

3.1 About the ICT for Development (ICT4D) Platform

3.1.1 Concept

The ICT for Development Platform (ICT4D Platform) aims to enrich the political core segment of the World Summit on the Information Society (WSIS), held December 10-12, 2003, by showcasing the development dimension of Information and Communication Technology (ICT) in a unique multi-stakeholder gathering. As the largest Summit Event the Platform is organised by the Swiss Agency for Development and Cooperation (SDC) jointly with the Global Knowledge Partnership (GKP).

3.1.2 Goal

The ICT for Development Platform contributes to a more effective use of ICT for development.

3.1.3 The main themes of the Platform

The exhibition as well as the series of panels and workshops will adhere to the context of the following prevailing themes outlined by the International Advisory Panel of the ICT for Development Platform:

1. Innovating for Equitable Access
2. Enhancing Human Capacity & Empowerment

3. Strengthening Communications for Development

4. Promoting Local Content and Knowledge

5. Fostering Policy and Implementation

3.2 About GKP-YFP:

The Global Knowledge Partnership Youth Fellowship Program (YFP) The Youth Fellowship Program is a component of the Global Knowledge Partnership Youth Program that focuses on building capacity among young people and empowering them to be learners, developers and entrepreneurs. The initiatives under the GKP Youth Program are based on the "Youth Creating Digital Opportunities" (*YCDO) framework; a strategic framework aimed at realizing the potential of young people as leaders in using information and communications technologies (ICTs) to achieve sustainable development in their communities and around the world.

* The YCDO focuses on 3 main areas of action:

- Supporting the involvement of young people in ICT for development projects;
- Ensuring the meaningful participation of young people in ICT for development policy-making at the national, regional, and international levels;
- Promoting continuous learning through facilitating a community of young people working on ICT for development policy and practice.

Through the GKP Youth Fellowship Program, GKP member organizations will host youths in a capacity building initiative in the field of Information and Communication Technologies for Development (ICT4D). Each internships will be for a period of 3 months and the internship positions are open to candidates who are citizens of, and residing in, the same country as the Host organization.

The objectives of the GKP – YFP

Develop and enhance opportunities to engage youth in capacity building programs, matching them with activities undertaken by GKP member organizations.

Strengthen the knowledge base of youth on ICTs in the development context.

Foster opportunities for building human resource development for youth including building capacity in the area of Information and Communication Technologies for Development, through investment in education, training and ICTs.

Contribute to capacity building of GKP member organizations by enabling them to access ideas and perspectives being developed by young leaders in ICT4D.

The GKP – YFP Host Organizations

GKP members are committed to harnessing the potential of ICT4D thus the youth intern activity will be oriented towards ICTs in the development context. Host organizations in the GKP-YFP are GKP members, with sufficient expertise and infrastructure to host an intern and provide a meaningful work experience, training, support and supervision in a conducive work environment.

Benefits for the Intern

GKP believes that young people in developing countries can benefit from the GKP-YFP by gaining meaningful work experience, improving their networking connections, and learning opportunities. Young leaders can also contribute by providing fresh perspectives to organizations developing relevant work in the area of ICT4D. Through the GKP-YFP, participating youths will join a community of empowered youths, actors in the information society, young people who are involved in policy making, projects implementation and community networking in the field of ICT4D.

4.0   BFES (My Internee Host organization)

Bangladesh Friendship Education Society (BFES) is a non-government development organization based in Bangladesh. It has been established in 1993 with a view to support education projects in rural areas. The Founders are basically educationists and development practitioners.

BFES's principal partner Japan Friendship Education Fund (JFEF) based in Mito City of Japan supports to its projects. The other partners are so far - Government of Japan, AusAid, and the Royal Netherlands Government. Sometime BFES complements in implementing development projects of Bangladesh Government.

Developing Knowledge Network is one of the prime activity of BFES initiatives. BFES is closely working with Global Knowledge Partnership (GKP) as it's first member from Bangladesh and initiated a Regional Knowledge Network (South Network) among the NGOs and CSOs of South Asia.

5.0 My internee action plan

01 September to 09 September: Orientation training at BFES, Dhaka office

10 September: Go to Khulna (Project area)

13 November to 30 November: Prepare the final report and monitoring the project field

Weekly report to BFES

** AGP – Amader Gram Project, OJC – Online Journalism Content

01. **Intro. To the AGP (workers n beneficiaries): [*11sept – 16sept*]**

   i.   How the workers are working in AGP?

   ii.   What is the feedback of the workers for AGP?

   iii.   Introduction to beneficiaries' life style and their feedback.

   Accomplished Benefits: From this step we can identify the present situation of AGP workers and the beneficiaries and plan for the next step according to the output of step 1.

02. **Knowledge Share with the workers: [*11sept – 23sept*]**

   i.   Experience of the workers.

   ii.   Feedback on my action plan.

   Accomplished Benefits: In this step the workers are shared their idea from experiences to success the plan. So that we can able to give some input for the next step.

03. **Knowledge Share with the beneficiaries: [11*5sept – 23sept*]**

   i.   Experience of the beneficiaries.

   ii.   Identify their common professional problem.

   iii.   Their own solve technique if they can solve.

   iv.   Their own future plan for their life.

v. Their preparation for their future. What they are thinking about it.

Accomplished Benefits: There are huge realistic problems in the rural social life. Most of our rural people cannot face to this problem. Suppose there are some men who are doing same professions but most of them can not develop (improve) their economical condition, but very few of them can change their life. They can learn from their life very easily. I want to transfer the success of men's knowledge to the failure. So that they can equally face to any problem in the same environment on their life. I have noted the process how they face the problem in their life. For example: Every farmer produces their crops and sells those to the market. But some can get profit more and some get less. I have asked them why this different. The farmer who can make more profit said me that he analyzes the markets in his village and also outside the village and take decision to sell his products to the appropriate market. So, I can identify that market demand analysis in and out the boundary is important. I am trying to point out their matters and share that with the weak farmer and encourage them. Knowledge transfer is done and BFES is given Knowledge Management training to them.

04. **Knowledge Share with the school teachers: [25 sept – 14 oct]**

i. Set a schedule for the seminar (25 September, Saturday)

ii. Invite the teachers and the computer teachers of the local schools

iii. The duration of the seminar will be 3 hours.

iv. Identify their problem to teaching science to the student.

v. How they solve their problem, if they can.

vi. Knowledge share on the teaching technique. How they can teach ICT in an effective way.

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vii.   Their feedback and open discussion on that.

Accomplished Benefits: I have added this step because they said me to establish a process that online rural news journalism will updated regularly by the rural young group. This step is continuing and in December 04 I will open a new online rural journal in Bangladesh. At least the world can read news about us.

05. **Knowledge share with the school students [9 oct – 21 oct]**

i.   Their own future plan for their life.

ii.   Their preparation for their future. What they are thinking about it.

iii.   How they can improve their knowledge.

iv.   The importance of the knowledge society.

v.   How they can be a member of knowledge Society.

06. **Workshop on OJC for AGP among the workers: [16 oct – 21 oct]**

i.   Invite local journalist for the workshop.

ii.   Set the schedule for the workshop. Expected date 19 September 2004 (Sunday)

iii.   Prepare sample OJC from the workshop.

Accomplished Benefits: This step was added to establish a process that will update rural news by the young group. Anybody can read the news about some rural student's personal life and their villages' news. Currently I am able to include ten villages in this online journalism.

07. **Knowledge share with the local people [25 sept – 11 nov]**

i.   Identify their common professional problem.

ii.   Their own solve technique if they can solve.

iii. Their own future plan for their life.

iv. Their preparation for their future. What they are thinking about it.

v. How they can improve their knowledge.

vi. The importance of the knowledge society.

vii. How they can be a member of knowledge Society.

08. **"Knowledge Fair" preparation: [2 oct – before the fair]**

i. Arrange an attractive fair in the auditorium or in the school or college campus

ii. The participant will be from the young people who has already completed one or more computer courses

iii. The fair will just like the science fair, where the entire participant in group or individually present their knowledge to the people. (Suppose some participant are interested on hardware or some are interested on MSWord, they present the benefits of that knowledge to the visitor of the fair)

iv. Presentation Practice session

v. Announce

09. **Arrange the Knowledge Fair [one week of the fair date]**

i. Expected date will 30 October and 31 October (Saturday and Sunday)

10. **Short training to the workers [16 oct – 15 nov]**

i. Possible short training to the knowledge workers from their feedback

ii. The training will be in Khulna or in Amader Gram, Rampal.

11. **Report to GKP**

      i.   I have to submit a monthly report to GKP. I also have to submit weekly report to the BFES about all my activities during the internship.

12. **Final feedback**

      There will be arranged a seminar with the workers and the local people of AGP about their improved knowledge and experience.

There were some corrections needed in my action plan. After the introduction to AGP and BFES for the flood climate in Bangladesh I couldn't start the next step, all the next programs were set to start ten days later.

6.0 GKP-YFP Reports

6.1 GKP-YFP First month report

6.1.1 EXPERIENCE IN SETTING IN THE BFES:

I have gained much experience in setting up the Amader Gram project through BFES. At first I had no idea about Amader Gram project. Mr. Reza Salim, Associate Director of BFES gave me one weeklong orientation to the project in their Dhaka office. I was informed about all the activities in Dhaka. BFES also discussed with me about their arrangement of my working. I had to prepare my work plan and a list of the tools required for my action plan. That is, what type of the questioners or posters or arrangement materials. After an extensive discussion Mr. Reza Salim on the behalf of BFES accepted the action plan.

It is my one of the most important and interesting experience in my life. All of the staffs welcomed me as their colleague. They help me to understand their activities clearly. The beneficiaries were also very nice people. They were very open to me as their knowledge share partner. Therefore I got to know about their problems and their feedback. I give them some idea about my activities and also about ICT4D. All of them had dreams about their children's future education. I have respected their dreams and gave them feedback to do everything possible to achieve their dreams.

6.1.2 THE REPORTS ON KS WITH THE WORKERS AND BENEFICIARIES:

The workers of Amader Gram help all the people of Amader Gram as their friends. They communicate with the local people and the beneficiaries are very good. I just give them feedback to help the beneficiaries' personal life also. Like one of our beneficiaries has a disable son. She was spending lot of money in the wrong treatment of her son. If she had proper information she would not have made such mistakes. We should try to help these types of people by giving proper information to build a knowledge society. However the workers are very interested to do their job better in Amader Gram. They have got good guideline from the Associate Director of BFES, so they work in such effective way.

The beneficiaries of BFES, Amader Gram project are very hopeful about their life. They want a good future for their children. So they are trying their best to earn sufficient money to fulfill their dreams. They are working together in their family to prosper. That is why the recovery rate of the credit money is high in BFES. But some beneficiaries have personal problems. Some children are not interested to continue their study. This is an important problem. On the other hand some beneficiaries need more money to extend their business.

6.1.3 THE REPORTS ON KS WITH THE SCHOOL TEACHERS:

When Bangladesh is standing in front of globalization, we need to prepare our citizens for usage of modern technology for development. Computer is one of very important tools in information and communication technology. It is clear that we have significant members in the young generation. But most of them live in the rural area. They are lagging behind due to lack of information. Most

of them are reading in the rural school and college and after that they migrate to the urban areas for their live hood. The rural school/college teachers can play a very important role to encourage and inform about ICT4D to the rural young group. The teachers have very effective communication to the society via their students. Here knowledge can be transferred as:

Teachers → Students → Society

As per my intern action plan, Amader Gram, BFES has organized a conference on ICT4D among the rural teachers. Mr. Reza Salim, the Associate Director of BFES and Mr Ganiul Zadid, GKP-Fellow facilitated this conference.

The objective of the Conference: To identify the problems of rural teachers to teach anything related to ICT to their students. And to discuss about some possible solutions along with their feedback. Discuss success case stories on ICT4D.

What we have found from this conference: When we talked about the ICT education the teachers are very importantly listen us. They informed about their technical problems in their institutes.

The problems:

    i.   There are actually no initiative activities about the computer service in the rural school. Even one teacher has said that his computer is still packed in his institute waiting to be installed. The supplier has no responsibility for installation. Their computer teachers are not experienced enough to install and trouble shoot.

    ii.   Now, in SSC and HSC syllabus of computer study add some programming language like VBasic etc. they do not have sufficient knowledge to teach the programming language.

iii. The teachers have not more knowledge about Software development and Database Management system. So they can't give any real examples to their students in any area.

iv. The teachers have no knowledge about the Internet and networking (LAN, MAN, WAN).

v. Their knowledge of computer technology is really at a basic level. They need at least advance level knowledge to teach their students.

vi. They have no chance to read any ICT related magazine. So that they don't know about the current use of ICT for development.

vii. They have no guideline how to teach the computer technology. To teach a technology related subject and a normal subject are not same. So they need a good and effective guideline to teach. Students are encouraged learn at least the basic level. The basic level has an important role to help sustain their participation in ICT4D.

Suggested solution:

i. We can organize one/two week(s) workshop on operating system and software installation and trouble shooting among the rural school/college teachers. So that they will have no installation problem.

ii. Another three weeks/four weeks workshop/training on programming language, software development and database management system and Internet can be arranged for the teachers. So that they will come out from their problems (ii, iii, iv, v).

iii. We can establish a communication between the school/college committees and the ICT magazine sellers or publishers. So that they are informed about the modern technology for development and real life. They also get help from those magazines as their guide on teaching.

iv. We can build some team to guide the rural teachers about ICT education and follow up at least for three years duration.

6.1.4 THE REPORTS ON KS WITH THE LOCAL PEOPLE:

This program is continuing in my whole intern plan. I had a discussion with some local people (school teachers, guardians of students and **fishermen**). They give me various feedbacks to continue my program. They have a lot of confidence in the Amader Gram project. They said that they are interested to know about ICT4D and uses of computer application. They have also encouraged their children. One of our trainee is interested to be a successful businessman in his life by using information and communication technology in his own field. He is in fisheries (prawns). I gave him suggestions about the export business. He needs effective and appropriate guidelines. I had requested him to collect all the related information about his business first. Then I organized that information so that it could be shared with others and also be enriched by others.

6.1.5 What the hosting organization actually do:

Amader Gram project is working for empowerment the rural people. The process of empowerment they follows first Knowledge transfer for development (KT4D) and then Knowledge Management for Development (KM4D). Here KT4D and KM4D both are parts of ICT4D (Information and Communication technology for development). Both are the very important way to build the knowledge society.

6.1.5.1 How Amader Gram continues the activities:-

KT4D: First Amader Gram doing the base line survey to identify the ultra poor and organizing meeting once a week. From this steps demand identify and demand analysis is be pointed out. So that it identifies what type of knowledge they need for their professions and life. After identifying and analyzing their demand Amader Gram organize training for required knowledge transfer to the ultra poor. This training is directed by the expertise of related field.

KM4D: The success rate of KT4D is depends on the KM4D. How they manage their knowledge. They need fund and management knowledge for development with the new knowledge. Amader Gram project has a credit program for that content with very low interest rate (10%). This credit program is run by the Rotate Loan Flows (RLF). The return rate is more than hundred. Most of the beneficiaries are return the money before their return time. They can return for their proper use of gaining knowledge. They are empowered to use their knowledge and to live in knowledge society.

In the Parallel way, Amader Gram is also doing some other activities for awareness of the rural people in health, nutrition's, foods, educations, women rights, children care etc. Amader Gram project involve female knowledge workers in field level, they follow up the beneficiaries problems and job with the gained knowledge.

6.1.5.2 Amader Gram Learning Center (AGLC):

While the beneficiaries are empowered by the program of KT4D and KM4D, Amader Gram has opened a learning center for awareness of the rural people about ICT4D. Computer is one of the main tools of ICT4D. Amader Gram Learning Center (AGLC) is giving computer training to the young group and

students of rural area in very minimum fees. The response of the rural people is very encouraging to continue AGLC. Especially the young group and students are very interested to introduce with computer technology for their future. They want to know how computer is used everywhere in the world. They want to learn about basic computer applications so that they can fit themselves for their expected job. AGLC is doing its best with the limited resources.

6.1.6 THE SCOPE OF MY WORK:

Although BFES is doing their work in one rural area of Bangladesh, but I think that it should continue to whole country for building awareness of the people. I am very hopeful to their missions and goals. They should extend their working area very soon. They can easily use their "Rampal Model" in other rural area. They can be effectively achieve their missions and goal by extend their working area.

6.1.7 SOME LIMITATIONS OF AGLC:

AGLC is located in the rural area of Bangladesh. There are no facilities of modern technology. Now there are few mobile phones in Rampal. But other technology like internet, computer training center etc are not existences in that place before the Amader Gram Initiatives. AGLC is giving some opportunities to train the people.

The limitations of AGLC are as follows:
  i.   One computer for two trainees.
  ii.   No internet connections in the computer lab.
  iii.   No such a library that the trainee can read any books or journal to know the modern age.
  iv.   No funding support to use the trainees for their knowledge transfer to the real life and others. Their knowledge transfer is

fully depends on their interest. AGLC can't offer any part time job to them. But now AGLC is thinking about knowledge share activities by the trained group.

v.   Not sufficient computer input and output device, like scanner, digital camera, laser printer etc.

vi.   No chance to compares their knowledge with the urban young group.

BFES is effectively doing this praiseworthy activity with these limitations.

6.1.8 WHAT DO THE PEOPLE LEARN FROM AGLC?

Now most of the rural people of Amader Gram project are introduced to computer and informed about ICT4D. Now the guardians groups are understood that their sons/daughters are needed to learn computer for their bright future. The teachers of the schools and colleges are also sharing their knowledge with the AGLC and hope to get help and training to improve their knowledge. The students group is known about the applications of computer from AGLC and the beneficiaries groups are also known about the ICT for their development.

6.1.9 THE STUDENTS OF AGLC:

There are total 24 students in 2 shifts a day, 12 students in each shift. 6 females and others are male students. All of them are secondary school certificate passed. Most of them need a better job in their life by using their computer knowledge. Some are want to do some business by using their computer knowledge. Some of them want to higher study in computer science in their university education. They are brilliant in their own thinking and understanding skills. I think if we can give them proper guideline through the training program they can effectively use their knowledge to plan their career.

We are introducing them computer as an important tools of ICT. They can use it for various purposes.

We should create more opportunities in the local market for the local skills and interested students/youth. Their knowledge is more suitable for the web development or out sourcing; they also capable to give mathematical solution of real life problems, if effective guide is provided. Before that we should introduce them with ICT as development tools.

6.2 GKP-YFP 2nd month report

6.2.1 Teachers Advance Computer Training:

I have pointed out some problems regarding the computer education in rural school during my first month of internee. To overcome those problems BFES had requested me to design an advanced computer teachers training program. I had designed a course outline by talking with the 9 computers' teacher of different schools of Rampal union. BFES has also requested me to take this training in Amader Gram Learning Center, Rampal, Bagerhat. I have designed the training outline named as *"Advance Computer Teachers' Computer training for self guideline"* after discuss with my university advisor Mss Sadia Kazi (BRAC University) and show that course out line to Mr Reza Salim (Associate Director, BFES).

S L	Date	Courses/Lectures	Course Contents
1		Operating System	OS installation and trouble shooting
	24/10/04 sun	Lecture 1	*Brief Discussion on OS* What is OS? How it's working procedure? The common types of OS are used. What is the specialty of different OS?
	25/10/04 Monday	Lecture 2	*OS Installation and troubleshooting* Practice on OS installation
	26/10/04	Lecture 3	Full practice installation/Self practice
	27/10/04 Wednesda y	Lecture 4	MS office and different type of software installation and tips to operate
	28/10/04	*Lab Practice*	*OS installation and trouble shooting*
2		Programming Language(PL)	VBasic, Borland C
	30/10/04 Saturday	Lecture 5	*Basic Idea about PL* What is PL? How computer follows the instruction of PL? PL for developing software.
	31/10/04	Lecture 6	VBasic (SSC syllabus), introduction
	1/11/04	Lecture 7	VBasic syntax
	2/11/04	Lecture 8	VBasic logic, Assignment on VBasic
	3/11/04	Lecture 9	Lab VBasic, Solution of the assignment
	4/11/04	*Lab practice*	*VBasic*
	6/11/04 Saturday	Lecture 10	C introduction, syntax (header, body, input, output system)
	7/11/04	Lecture 11	C logic, Assignment on C
	8/11/04	Lecture 12	Lab C, Solution of the assignment
3		DBMS	Data Base Management System
	9/11/04	Lecture 13	Introduction DBMS

	10/11/04 Wednesday	Lecture 14	Practice with real life example (including books' syllabus)
	11/11/04	*Lab practice*	*MS Access DBMS*
	13 – 18 Nov	*Eid holiday*	
4		Webpage Designing	MS Front page, HTML
	20/11/04 Saturday	Lecture 15	Introduction to Internet and website and Front page
	21/11/04	Lecture 16	Practical class on Front page
	22/11/04	Lecture 17	Complete personal webpage/OJC workshop
	23/11/04	*Lab practice*	*Personal webpage*
5		Networking	LAN, MAN, WAN
	24/11/04	Lecture 18	Introduction to LAN, WAN, MAN
	25/11/04	Lecture 19	Practical Peer to Peer (P2P) networking
	28/11/04	Progress test	Sunday, Time: 10 am – 12.30 pm

Although it was very challenging but I have taken the challenge.

My objective of that training was *Be capable to know about any new technology by self study and transfer the new knowledge to the society for awareness of the people.*

Limitations of the Advance training

Short time (one month) and not available all technology materials (internet, projector etc.) for using in the training and knowledge transfer program.

Opening the Advance computer teachers' training:

Total seven teachers had completed their registration and participated in the training. They were very encouraging me to doing my job well. All of them were young and in the new professions (computer teacher). I had found

another most important point in the training that all the teachers were sharing there knowledge with each other. It was also the great opportunities to build a platform for sharing their knowledge and experiences each other. I had encouraged them to continue their knowledge share in future by personal communication when any one faces any technical problem in computer teaching and maintenances. I think it would be very helpful for them.

This type of training should be continuing in our rural area for the computer teachers.

6.2.2 Knowledge Share with the School students

I have already discussed with 50 senior students in one school named Sreefaltala High School, Rampal. I have also requested the seven computer teachers from the "Advance teachers training" program for help me to share our knowledge with the school students. They were with me. The students are very interested to learn computer and information technology. All of them were wanted to know why we call this time as the age of computer technology. I have shared my knowledge with some example to understand them.

All of the students are thought that they need to learn computer but they don't have clear understanding that why they have needed it to learn. I had given them a leaflet on ICT4D sponsored by the Amader Gram Learning Center (AGLC) and edited by me. I also requested them if anyone want to know more about ICT4D please contact with me in AGLC or with their computer teacher in their school. The computer teachers have welcomed them all time. I have also encouraged them to participate in the math contest in the Knowledge Fair.

6.2.3 Leaflet to the rural students about ICT4D

I had requested to BFES for sponsor a leaflet on ICT4D in Bangla so that I can distributed it to the rural students after the knowledge share program. They had accepted my idea and the manager of Amader Gram project printed the leaflet. That leaflet is like this in English:-

Amader Gram Computer Learning Center
Rampal, Bagerhat
Phone: 0187056944

ICT4D

This is the age of information and communication technology (ICT). Therefore we believe that there are no alternative to learn computer. We have to more serious about this matter that computer is not the ICT. It is one of the most important parts of ICT. Important are the uses of computer and find the answer that why all of the business organizations are using computer technology for their business and why they are wanted to appoint new staffs with computer knowledge. How we can use our knowledge in real life as well as in professional life is also most important matter. This is the proper time for the students of the schools and colleges to prepare themselves for their future. For this reason our interest should on ICT. We can easily know about latest news on ICT from various sources, like Television, teachers, Newspapers, ICT related magazines etc.

Who have right information they will not become failure or looser in life. We need to know much information to prosper in life. Thus we can reduce the dividend between rural and urban people. And we can prosper in life by using own brains and skills. This is the perfect time to prepare our self for the future. Bangladesh will enter into the modern world with its full resources. Everyone will use ICT in their profession life and education life. Today's students can prepare themselves for the future.

Best wishes,
Ganiul Zadid
GKP-Youth Fellow
ICT4D platform

In the knowledge share session I have used a questionnaire. That is

1	Do you know about computer?	Yes / No
2	What is called the parts of computer like TV?	……… / Don't Know
3	What is called the Board written A, B, C, D?	……… / Don't Know
4	What is called the parts of computer where all the commands manipulate?	……… / Don't Know
5	Do you know about internet?	Yes / No
6	Do you need to learn computer?	Yes / No / Don't Know
7	Write down some uses of computer and internet?	Open ended

I had discussed with 50 students. And the graph analysis is as follows:
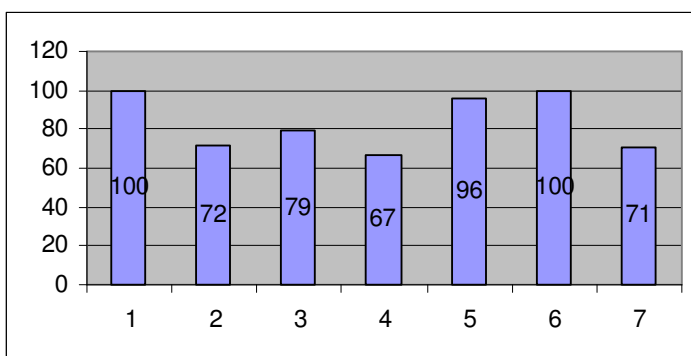
Here X axis is the question No and Y axis is the percentages of right answer given.

Graph: on the questionnaires analysis

I had found that all of them are only heard about the computer technology and know that they should learn the use of computer technology. So we should plan an activity to consider the other points of the questionnaires.

6.2.4 Knowledge share with the local people:

I had talked about ICT with some local people in different areas. Some of them are Rickshaw-Van Drivers, Fishermen (Pawn), Government social officer and Vocational students. All of them are very interested on Computer education and the use of computer. They are very interested to take care about their children in computer education. When I asked one fisherman that if you could know the exported price of your fish then will it easy to sell your fish? He said, off-course, it will help me to identify my selling price, but we need to build a processing unit where we can store our fish for 1-2 month. Then it will help to sell our products at market price rate." Most of the fishermen are young. They are the young entrepreneurs in the Rampal. The government social officer requested to the manager of BFES to keep communication with him about the ICT project. So that he can keep the report on our activities. And very interesting to talk with some vocational students of Rampal Vocational institute. When I asked to the civil engineering students that, have they heard AutoCAD? Some of them are said that they know the name of that and they know that it is very useful tools for civil engineering. When I said them Amader Gram Project is now thinking about a computer club in Rampal, they are requested me to keep some book of AutoCAD in the computer club's library. So that they can read those books and introduce with the AutoCAD. It is very important to keep such professional books in the computer club's library. We need to list the name of those books.

6.2.5 Knowledge Fair Preparation

BFES had selected the manager of Amader Gram project as the convener and selected me as the member secretary of the First knowledge fair. BFES had selected the committee for different events of the fair. The list of the events in the Knowledge Fair:

Events	Details
ICT4D	Total 10 panels of different computer programs like 1. MSWord, 2. MSExcel, 3. MSPaint, 4. Computer Networking, 5. Multimedia-projector-digital camera-printer, 6. Internet, 7. CD corner, 8. Radio-TV communication panel, 9. AGLC "Wonder world" panel 10. ICT4D success story corner
Math Contest	All the participants are the students from different high schools of Rampal. I have communicated with the Math Olympiad committee of Bangladesh for helping us.
Rural school panel	There are 9 stalls for the rural schools. Visitors of the fair can know from every stall about the griseous news of that school. Their success records.
BFES panel	Here BFES will present all their activities
Other NGOs and GOs panel	All the interested organization can present their activities.
Chess Competition	Nock-out tournament and facilitate to reply all the record to the visitor by projector
Caroms Competition	Nock-out tournament
Art Competition	Competition among the rural people
Songs Competition	Competition among the rural people
Rime/Poetry recitation	Participants are the rural people
Dance Competition	Participants are the rural people
Scientific innovations Fair	Participants are the rural people
Other innovations	Participants are the rural people

BFES had selected me for the convener of the ICT4D and Math Contest events. One special team had helped me to success both events. The knowledge workers and the students of AGLC and the computer teachers from different schools are assisted me. It was very helpful for me to organize successfully and effectively both events.

6.3 GKP-YFP 3rd month report

6.3.1 Knowledge Share with the local people:

I was doing this action during my whole internee period. At last month I had discussed with many rural people about the knowledge fair and about the uses of ICT for development. All the people are very interested to ICT and they are also very interested about their economical development. They are wanted such a knowledge center in their village, where they can easily access for their requirement information. All the rural people who had met me, they understood about the power of right information. They agree with me that cheating is done with wrong information in our society. Every year people are cheated more by lack of right information. Therefore I had found the demand of knowledge society in grass root level of our country.

6.3.2 Advance Computer teachers' training for self-guideline:

 It's the output of the "Knowledge share with the school teachers" activities of my internee action plan. The rural schoolteachers requested us in the teachers' conference for giving them a guideline to teach computer. After that conference I had two meetings with the computer teachers of those rural schools. The meetings were about their existing knowledge on computer and

what they want to learn from the advance training. I had also another meeting with the headmasters of the rural schools on the advance training schedule and management. Finally I had designed a course for the "teachers' advance computer training for self-guideline".

Total seven computer teachers were participated in that training from different rural schools. All of them had basic training from different government training center. But they have no basic knowledge about programming language, operating system, and database management system and webpage design. At that advance training they have done some assignment on those topics and most of them were done good. I am very pleased on their performance. It my new experience to teach some one. At the midterm evaluation I had found that they were very happy to attend in this training program because most of the courses were designed as practical and real life use. So that, they can apply their new knowledge in their real life. Now all of those can compile a program in computer after writing a program and try to find the bug. They are not expert but they are now in beginning level. I have given them some arithmetic algorithm (summation of series), program (calculator), webpage of their school etc as the assignment. Most of them were trying and gave me. The assignments were very helpful for them. Although time was short I have tried to give them a useful guideline. BFES had supervised my works and gave me all possible supports to success the training.

6.3.3 Knowledge Fair:

When I had given my action plan to Mr Reza Salim, I said him about the knowledge fair. But BFES had organized a great knowledge fair in the rural area. I can't imagine before about this knowledge fair. There were thousands of rural people have visited the fair. This proves their

interest on ICT. There were 15 stalls. 7 stalls about the rural schools where all the history of the schools had shown digitally by the computer teachers of the schools. These teachers were trained from the advance teachers' training program. 1 stall was about "Amader Gram Learning Center". And all other stalls were about human knowledge management like, hand made mat, vegetables in salt earth, some handicrafts etc. There were two other non-government organizations' stalls in the fair. They had shown how they work with the information for the awareness of the people. They had shown some their activities in that fair. "Rupantor" organization was one of them. It showed Potgan (village song in front of sceneries) in the stage of the fair.

There were another events on knowledge. That is knowledge contest events. This knowledge contest events included Math, Chess, Caroms, Art, Rime/poetry, Dance and Song competition. I am proudly writing here that all the contestants of the knowledge contest events were very genius rural citizen. Bangladesh Math Olympiad society will give chance to top nine math contestants from that math contest in their divisional math contest. There were 46 contestants in the math contest event in Knowledge Fair.

There was another discussion session in BFES office ground when the knowledge contest was going on. In that session the ICT professionals and the rural people meet together and discuss about their interest on ICT.

There were some VIPs present in the fair. The chief guest was chairman of BTRC Mr Margub Morshed. The special guest was the chairman of BFES and the director of Bangladesh National museum Prof. Mahmudul Haque. Mr Karar Mahmudul Hasan ex. Secretary of Science and ICT ministry of Bangladesh was also presented in the fair as special guest. There were also presented ICT journalists from different national daily news papers.

6.3.4 The impacts of the knowledge fair on the rural people:

All the villagers' had known from their neighbors about ICT and existing information of their village in this knowledge fair. There were numbers of rural people who had saw computer first in their life in that fair. Most of the rural people of Bangladesh are listened about computer and information technology. But they have not clear idea about ICT. The young rural people are wanted to learn computer for getting a better job, but they don't know why their computer skills is important for the job providers. Actually what has happened in modern ICT times in the job market? The rural people had known many uses of ICT in the modern age from the stalls and all events of the fair, like how a school can digitalized their information for globalization by visiting the schools panel, how and why a government and non-government organization serve information to the society (AIDS, Human rights, Women rights, ICT4D etc.) by visiting the BFES, Rupantor and BISIC panels, how we can be benefited by management our knowledge by visiting the hand made mat stall and vegetables in salt earth stall and other handicrafts stall and all the extra ordinary knowledge like mathematical problem solving technique, chess and caroms playing, dance, poetry, singing songs, arts/painting etc. are also important for the real life that the villagers also known from the fair.

Finally the fair was the successful events for the awareness of the rural people about the ICT4D.

6.4 The total actions during my internee periods:

SL	Name of the action	Done?	Remarks
01	Knowledge Share with the workers	Done	Done within the time
02	Knowledge Share with the beneficiaries	Done	Done within the time
03	Knowledge Share with the school teachers	Done	Done within the time

04	Knowledge share with the school students	Done	Done within the time
05	Advance computer teachers training for self guide line	Done	Done within the time
06	Workshop on Online Journalism Content for Amader Gram Project	Not Done	For short duration of my internee
07	Knowledge share with the local people	Done	Done within the time
08	Short training to the workers	Done (not in formal way)	For short duration of my internee
09	Knowledge Fair	Done	Done within the time

I have left two actions from my internee action plan for the short time. One is Short training to the workers and other is workshop on Online Journalism Contents. BFES will give me the facilities in next time to do my left of actions and Mr Reza Salim had offered me as the behalf of BFES that they have selected me as their Ambassador/Research Fellow of ICT4D project.

7.0 Experience sharing workshop in Thailand

Youth Fellowship Programme (YFP) Workshop

Hosted by TRN (Thai RuralNet) & Mitra Foundation India

4th – 7th December 2004, Buriram, Thailand

Number of participant; 16 Persons

Participants list

GKP members

> **Leticia Zero (GKP Secretariat)**

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Mr. Muhammad Abdul Wahed Tomal (PROSHIKA), Bangladesh aw_tomal@yahoo.com

Number of key personalities who attended/participated in the workshop:

1. Rahul Nainwal (Mitra) Facilitator
2. John Dada (Fantsuam) Guest Speaker
3. Sunit Shrestha (TRN) Overall Workshop Director

Focus of Event:

The main focus of the event was to expose the interns to the concept of youth social entrepreneurship within a local context and share their intern experiences. The interns had the opportunity to listen to renowned social entrepreneurs namely, Rahul Nainwal from Mitra and

John Dada from Fantsuam. Additionally, the interns underwent guided brainstorm and discussion sessions for the three day period on creating, managing and sustaining ICT geared social enterprises towards addressing social issues within local communities via a bottom-up strategy.

Over the course of the intense three day workshop, the interns came across various development issues, social enterprise concepts and frequently used terminologies. The interns came to understand the characteristics and benefits of projects that involved multi-stakeholder partnerships. More importantly, the interns realized the role that youth can play towards addressing social problems such as poverty, disease, and gender issues via the use of ICT tools. The workshop also urged all interns to search for their own significant contribution in living their live as change makers, several

social enterprising models were developed and discussed during the workshop with issues ranging from environmental protection to knowledge sharing for development.

The local host of the workshop, TRN, held several presentations on the activities that they are pursuing and managed to expose the interns to several indigenous knowledge and local content projects that were being carried out in the Northeast of Thailand, particularly in Buriram.

The interns were shocked as to the importance of collecting, organizing, updating and preserving indigenous knowledge. They were introduced to the details of managing such a project within the project-site at Buriram.

Outcome of the workshop

Sharing of experiences

All interns had shared their internship experiences in various countries. Lessons are shared as well as various comments on the internship process. For example, some host organizations truly empowered the interns to take charge of their mission,

however, overstretch of intern's capacity become key concerns. Some key lessons also emerged from discussions, especially the tendency that youth is natural bearer

of ICT-driven changes in various underdevelopment areas in the world. Yet, most of them required much more attention from their host organizations to mentor their capacity building towards achieving greater social objective while aligning with personal discovery.

Exposure to ICT-driven social entrepreneurship process

Beyond sharing of experiences, fellows were exposed to concept of ICT-driven social entrepreneurship and its process from visioning to implementation. Both conceptual framework and cases were presented. Brief history of social entrepreneurship was discussed as well. The workshop has

urged them to think of social enterprising as alternative paths for their lives. Social enterprise ideas were developed with assistance of Rahul in clarifying and modifying those ideas for better chance of success.

Gaining insight to grass-root level development

Beyond conferencing environment, the host organization-TRN, has arranged a field visit for the interns to various project sites. This visit gave the fellows an insight to rural development in rural areas, especially in the Northeast of Thailand that have the highest poverty rate nationally. Demonstration of appropriate rural knowledge & technologies to solve local problem was matched by how Information and Communication Technology helps accelerating the development process. There were several meetings with the farmers and rural communities that are partners with TRN for its development project. Thus, the fellows were also exposed into the reality in the field that is beyond their immediate environment as well as seeing that ultimately all development projects must achieve development impact at target population. One common theme also emerged from site visit, many countries the fellows belong to has the same problem with rural agricultural development and knowledge transfer or collaboration between TRN and them can result in the replication of TRN's model in various rural areas in different developing countries.

8.0 - ICT for Bangladesh Development

8.1 - Amader Gram, ICT4D model project

The Amader Gram is an innovative project and as a social innovation first of its kind in the country. Through this project there is a formal way of collecting, preserving and even re-sourcing data on so many things both in respect of project's own activities and beyond, instead of letting thousands of everyday data get lost. On the contrary, the Statistical Department of Government does not have any regular mechanism to collect/preserve data on our villages. Of course, in some of the upazila (sub-district), Government has branches of the Statistical department with only one officer (remain absent most of the time) and does not have any ICT facilities. So, introducing a formal/disciplined set-up of collecting and preserving data of the village society (as an on-going process), may be exemplary against the present mechanism of the government's data keeping way. Not only local data keeping, there are scopes of data generation also. Data is being collected and kept for its generation and uses. At the one hand the collected data is documenting the day-to-day changes in villagers' lives. On the other hand, the stored data will generate lot of many other data those can be used for the acceleration in further changing of the living status of the villagers. For example the data related to micro-credit activities is providing information on potential Income Generating Activity (IGA) sectors and on the ways of access to credit and other supports so that the entrepreneurs can take quick and appropriate steps for undertaking suitable projects. A database on credit provides information on the amount of credit installment, rate of interest, sources of credit, recovery procedure etc.- all those can help in breaking the deadlock and gain confidence towards micro-credit access for the silent majority.

Simultaneously the database on training (knowledge transfer) can be effective by providing information on training courses, trainers, training cost, and training resources –all those can contribute in growing up of a skilled human force within the rural community. We believe that skilled manpower is a pre-

requisite for the successful implementation of income generating programs by utilizing any amount of credit. Training on leadership, group dynamism, accounts keeping, program monitoring, marketing are some of the identified area where people are yet to be developed on. Fair and uninterrupted access to credit and its proper utilization will create a large number of entrepreneurs, the number certainly contribute to the efforts of other development actors in GO-NGO sectors –who are working on the same cause in the same area.

Data linkages to the schools may need some elaboration. Because, not only the data on school going children, but also on the dropout children, their causes of being dropout and other socio-economic features will be stored. This storage can help to set-up future plan for the enrollment of dropouts and to choose the suitable education package (whether technical or non-technical) for them. If it is addressed properly, the dropout rates may be prevented which is very much part of the poverty reduction strategies of the country.

As for linkages of the information flow to local government , here it is important to mention that in "Amader Gram" project area BFES is not only the actor, there are other development actors like local government departments, local elected bodies, elite – all are working towards the same mission: Poverty Reduction. At Upazila level, there is a central development committee in which GO and NGOs are the partners and complementary to each other for the same cause. Now it is needed to blend all the stakeholders and ensure their participation.

The primary users of those data are the beneficiaries of 'Amader Gram' project. In fact, they are the owners. Getting access to information and having the ownership, the beneficiaries have great privilege to monitor the other actors' role in reducing the poverty in the area. Beneficiaries (primary users) can help by giving regular feedback on the development activity progress, to central development committee and thus can help in the planning process and

finding out a common strategy (by the stakeholders) towards poverty reduction in the area.

As well, while the beneficiaries are the primary users of the database, the government people, researchers, local leaders, teachers, religious leaders and other stakeholders may be the secondary users by which they can improve, rectify and upgrade themselves.

The above information on database activities to poverty reduction strategies is linked with their outcomes. A disciplined process of data collection and analysis on credit and skill development training widen the scopes of employment. Women, unemployed youth and seasonal workers can have options for employment . Availability of data will not only help by presenting the increasing number of ultra poor, but also prevent the poor class to become ultra poor. On the contrary, it will show some innovative means, ideas and technologies. (As for example, information on availability and variations of seeds and related technology may show a farmer new ways to utilize his fallow land or to cultivate additional crops after harvesting of normal crops. Data on marketing may help the farmers inspiring cultivation of year - round crops, develops selling centers, vegetable/fruit processing and many other agro-based initiatives). Those data will be effective to feed up different professional groups. Access to data base to different stakeholders will help formulating common plan basing on a common context analysis which will contribute to poverty reduction efforts, by avoiding duplications.

While the increasing unemployment is a vital cause of poverty, the skilled ICT users can increase the number of entrepreneurs by holding computer centers, either individual or group level, using the micro-credit support. A good number of skilled youth can start earning by selling training to the others and by doing repairing and trouble shooting job.

The ICT based education at village level is helping people to communicate independently and to get scopes of distance learning. This scope will improve the quality and accelerate the rate of education in the area.

8.2 - ICT for Youth career development in grassroots

There are more than fifty percent people are in youth group in Bangladesh. And more than 80% people are live in rural area in our country. So it is clearly identified that most youth people are live in grass roots of our country. I have found three groups of youth in "Amader gram" project area:

i.　　Group 1: (Secondary School Certificate pass and above) This group is in more complicated situation in rural area. Because of their career. Most of them has no more interest to continue their education. They want to get any job and they don't think for cultivation as their career. But they are not full fit for any job in job market.

ii.　　Group 2: (Primary to SSC) This group is beginning of the group 1. The members of this group learn from their senior. When they see any senior failed with education, they are faded up about their life.

iii.　　Group 3: (Illiterate youth group) This group are already involved in any professions in their society.

All three groups are doing their work for their career development. For example: A rickshaw driver wants to earn more. A peon in a office wants to improve his/her salary by his/her performance. The question arises "What opportunities the youth group getting in grass root for develop their career?"

To find the answer of the above question let see a case example:

When I asked the youths why they are learning computer. They answered me that they want to get a job. And then I asked them why they think that computer knowledge can help them to get job. They answered me that they see most of the job circular are mentioned about computer knowledge. And finally I asked them why they want to appointed such a person with computer knowledge. They did not give me clear answer. Actually they have no clear

idea about the use of computer in government and non-government office. And for this reason they could not prepare them selves according to their job. Who has the main responsible to inform them? I think their society. Here I have found the importance of the 'information center' in grass roots. Youth are able to do anything what they able to think.

Any youth group in society needs more information to build their career. Hence there are no alternative to provide right information. ICT can give them chance to easy access into information sources.

8.4 - School networking

Why school networking:-

A school networking with a strong foundation that is grounded on a solid rationale and a unified set of objectives is better able to put its networking operations on target.

Three factors of school networking:-

The effectiveness of network objectives depends on a balance of three factors –

  i.   Technology including telecommunications infrastructure
  ii.   Teaching materials (referring to types and contents of materials)
  iii.   Teachers (referring to teacher qualifications)

Skills needed for school networking:-

In Bangladesh, we can focus its training activities on skills needed to use the internet and develop web pages and websites. Teachers and students will be trained to make the best use of the internet, to manage their own information and to serve as trainers for other schools in the provinces.

Having provided training to build teacher knowledge of and confidence in using ICT based resources and producing lesson plans, there is a need to sustain their interest and keep them motivated. This can be done through an incentive scheme with a wide range of offerings, including additional training,

sharing of resources, self-instructional packages and self-taught training mechanisms in the form of books, videos and CD ROMs.

Financial stability of school networking:-

School networking may derive their funding from various sources, typically including government allocations, school fees, private contributions, partnership agreement and so on.

Government and private sectors donated computers in different rural schools to establish a computer lab. This is a good opportunity to set up school networking in grass roots of Bangladesh.

We should build school networking in grassroots of our country for change our society as knowledge base. Knowledge normally flows from the educational institution (here rural schools) in rural society. So to ensure the effective information flows in society we must care the school networking.

8.5 - ICT for rural social entrepreneurs development

In Thailand GKP workshop on Dec 04, Mr Rahul Nainwal from Mitra, India had presented an ideal example of social entrepreneurs:

Mother Teresa as the sign of social welfare and Bill gates as the sign of finance, and combination of both signs is the social entrepreneur. He had given a real example of social entrepreneur is Dr Md Yunus for the Grameen Bank project.

A social entrepreneur must go through the following issues-

- Think about a social problem/business opportunity in local Area
- And then think how as a social entrepreneur will go about solving it
- Cover the following areas
  - What is the social issue and the its context
  - What is the " IDEA"
  - How the plan to execute it

- Is the idea sustainable/Scalable

There are many social problems in rural area of Bangladesh. We have many rural small and medium entrepreneurs in rural area. We need to more focus on those entrepreneurs for being social entrepreneurs. Uses of ICT will be more effective to solve many highlighted social problems like, provide Information of any social issue like female education, Agri-technology, health etc. to the society.

There are also many young in rural area, who are seeking job/business career to live in society. We can influence them to build their career in ICT platform. They will do business using ICT tools to fill up their society's demand.

9.0 ICT in National Development: Four International Examples

The experiences of Bolivia, Finland, Malaysia and Mali offer a variety of approaches for the construction of information societies. In a high level panel debate jointly organized by Swiss Agency for Development and Cooperation (SDC) and Global Knowledge Partnership (GKP), which took place on 10 December 2003 in Geneva. All these countries look at ICT as a tool for development; as a necessity but not an aim in itself. The panel speakers were Carlos Castillo, Executive Director, Agency for the Development of the Information Society in Bolivia (ADSIB) and Mamadou Diallo Iam, Chief of Mission of Informatics and ICTs, Mali and Paula Lehtomaki, Minister for Foreign trade and development, Finland and Leo Moggie, Minister of Energy, Communications and Multimedia, Malaysia.

Bolivia: – Addressing old social problems with new technology.

Social exclusion: The Bolivia government has developed a "Plan National de inclusive social", which aims to increase the availability of ICT and significantly improve the connection of the country by 2010. Four areas are particularly important –

i.   Access and connectivity: half of all schools and health centres to be connected by 2010; promotion of private initiatives for public access services

ii.   Capacity building: there is a need in all parts of society

iii.   Content: Relevance and responding to the needs of communities

iv.   Sustainability: the participation of communities is essential

Finland: – Involving all sectors in an inclusive information society.

There have been information society programmes for a period of ten years. The new program launched by the government includes several focus areas, the main ones being:-

- Improving the skills needed by citizens to operate in the information society, education, working life, R & D, electronic services of the public sector, social welfare and health care, e-business, e-contents and e-services and rapid Internet access and digital TV.

Malaysia: – Moving beyond the Multimedia super corridor.

Government of Malaysia adopted the shift towards information technology and information society issues. In 1996, they lounched a particular programme called the multimedia super corridor (MSC). It is a 15 by 50 Km corridor between the international airport in Kuala Lumpur and the city centre. MSC statuses are –

- Freedom to source your capital wherever you are
- 100 percent ownership for foreign investors

- Free access to capital

- Sourcing of knowledge-workers

- Complete freedom of movement of capital

- Tax incentives for ten years

- Free import of equipment and products required for multimedia manufacturing

- First class communication infrastructure

In this regards they have achieved more than their initial target. Phase 1 is confirmed to this 15 by 50 Km corridor. They are now going to embark on phase 2 of this program, which will extend it to other parts of the country. They believe that there is always a risk when pushing specialized zone that other sectors in the country may feel left out. That's why they have a flagship introduction program, covering:

- Tele-health

- Electronic government

- Smart school program

This is not only uses ICT but involves modifying the way lessons are conducted and the way the teacher's role changes to facilitate the learning process. They provide internet connectivity to almost 10,000 schools, primary and secondary in the country.

Mali: – Using ICT as a Tool for development.

The experience of Mali is somewhat different, because of the history, geography and position. But the authorities have quickly realized that in certain areas, ICT can permit them certain shortcuts, although they lack infrastructure and human capacity.

Now they have established a multipurpose community telecentre, sponsored by UNESCO, FAO (Food and Agriculture Organization of the UN) and others in Timbuktu. They also have established school networking project and Tele-health project. In the case of Tele-health project, it allows radiology to be taken on-site, the data is then compressed and sent to Bamako, where

specialists can interpret the information and send back their diagnosis by e-mail.

A vast program has also been undertaken in Mali to provide all of the country's towns and villages with telephone and Internet connections so as to truly popularize the use of new information technology by the largest possible number of citizens.

Other projects have come to life within the framework of international cooperation to the support of development partners: "Internet at school" in Timbuktu; the Timbuktu multi-purposes community Telecentre; the wireless network at the University of Bamako; the Keneya Blonw health project and the telecommunications hook-up in certain towns.

10 Opportunities today at grassroots

Information is a valuable resources and lack of access to it is an important element of people's poverty. It is important for people to identify which types of information they have access to, which information sources are available, useful or reliable and any barriers to accessing such sources. In ICT4D platform Bangladesh can get a shortcut way to development with its existing resources. Today ICT4D gives that chance to all the developing country of the world. In this research I have found some sustainable opportunities for our country. May be some are practiced by different organization but we have no plan for these opportunities at all.

However when we want to identify which type of information needs by the rural groups then we found –

Group	Information need
Men	- Where to access credit - Market for their produce - Job opportunity - Modern farming practices - Land ownership rights
Women	- where to access credit - agriculture - health: particularly HIV, antenatal, reproductive - education opportunities for girls - cooking - women's rights: dowry; children; property
Girls	- education opportunities for girls - reproductive health/HIV/AIDS - women's rights - job opportunities
Boys	- business/job opportunities - education - agriculture - health: HIV/AIDS

And thus we can plan to provide such type of required information to the rural groups for make their decision most effectively. There are many great opportunities for our country to develop using ICT as tools. Those are –

(i)   ICT for poverty reduction.
(ii)   Outsourcing
(iii)   ICT for develop skill manpower resources etc.

Opportunities – ICT for poverty reduction:-

Attempts to use information communication technologies (ICTs) for poverty reduction are more effective when embedded and synchronized with other

policies and resources. If we can build such an enable environment where job opportunities or access to credit or health services etc are available then ICT for poverty reduction will be succeed. The poor have to be at the centre of poverty reduction effort. In order to exploit their potential effectively technologies used must be adequate to the skills of them. ICTs can enable people to actively challenge and change the power structures which keep them poor and marginalized. Although there are some barriers of the ICT enable program but it is more effective. The main barrier is high installation cost of any ICT related program. However I have considered some possible uses of ICT for poverty reduction to apply in Bangladesh. These are Cameras, *Radio, Video, Mobile phone and Computer system*. It is important that these are only used as part of a process which focuses on the information and communication needs.

Digital Camera: Digital camera are becoming increasingly affordable and have the added advantage that pictures are available to see immediately without the time and expense of finishing a film and getting it processed. One of the more innovative uses of cameras is for people to take a camera and document things which are important to them, or represent changes they have experienced. This gives people a chance to express themselves directly, without intermediaries or complicated and intimidating equipment. As cameras require no literacy, do not usually have a great status attached to them and require few technical skills, they do not fall prey to significant power issues.

Radio: Radio has many uses, from entertainment to education and broadcast of personal messages. Radio has also been used by rural groups to assert their identity and provide a cultural reference point. In other cases we can focused on the community radio. A community oriented station not only gives information but also gives the community a voice, enabling local people to actively produce material for broadcast, share their analysis and experience, influence others and gain new skills. Although many poor households own a radio set, it is the man of the house who controls when it is used and what

programs are listened to. In Bangladesh, Government should give permit to broadcast independently for the rural radio stations with specific objective guided by development issues and rules and regulation might be provided.

Video: Video can be very powerful means of communication and with good planning, can present complex issues very clearly. The process of making a video can be a good way of getting diverse voices into a debate or planning proves. Video can also be used to create good, locally relevant information resources in local languages or as an advocacy and campaigning tool. Technology to show video is getting better, smaller and cheaper all the time so the possibilities for use of materials created are very broad.

Mobile phone: Mobile phones or cell phones quickly become invaluable communication tools where reception and coverage is good. Apart from obvious social uses, small-business owners can use them for marketing and logistics, cutting down the need for travel. They can also be useful to the process of organizing people across communities, enabling people to work together on common issues and maintain regular communication. It also gives good earning opportunity to the rural people. It works as and owner-operated pay phone, providing telephone services in rural areas where no such facilities existed before and allowing the rural poor access to phone services without subscribing. However the economics of this technology means that individuals need financial security or backing to access to satellite pones.

Computer system: Computers are powerful technical resources reliant on the skill and training of users and as such closely linked to status and power. If the control and training is not carefully managed in favor of the poorest they are in danger of becoming the tools of the elite, further widening gaps between the rich and poor. Conversely, where computers are introduced in the hands of previously low status people – e.g rural women – this can have a positive transformative effect on power relations in the community. "Amader Gram" project in Bagerhat, Bangladesh provides information services to

people in remote rural areas through a mixture of technology, training and information services staff (knowledge workers).

Opportunities – Outsourcing:-

The present time highlighted business in the world is I.T business. Software development, web development, data entry, call center etc are the focused business. There are more companies in Bangladesh are doing that types of work successfully. Most of those companies are worked in capital city and some of them are worked in different division in Bangladesh. But none of them are worked with rural manpower. There are some groups in rural area with basic computer knowledge and analytical knowledge. We should give them opportunity to work in I.T Company. We can use their knowledge for such type of work which are done in more controlled and fixed way, such as the testing phase of software development life cycle or for data entry or problem (math/analytical) solving by providing special training.

11. Conclusion

In consideration of local needs, capacities and existing opportunities, it is important to include digital technologies along with the more "traditional" ones like radio, TV or telephony when speaking of "Information and Communication Technologies" (ICT). In line with this understanding, "ICT for Development" (ICT4D) is aiming at bringing relevant information to the people and building communication opportunities by combining the technologies necessary and most suitable in the local setting. It goes further than giving access to technology, but is focused on demand driven projects and the effective use of information and knowledge. This very often implies innovative approaches in order to create local content and to structure the project to the full benefit of users and communicators.

The most important barrier and also a great challenge to build knowledge society at grass roots is the jobless young group. They had no guideline even sometime no dream about their life. The most effective way to involve the young group is in ICT4D platform as social entrepreneurs in different social aspects.

The sixty-eight thousands villages of our country represent the most significant population. Without their participation there can be no significant development in the field of the ICT. Concept like e-commerce, e-governance cannot succeed if we do not introduce ICT to our young group now. The "ICT4D" program gives us this chance. We strongly believe that we will enter ICT world and our dream will come true. We look forward to the time when Bangladesh will be recognized globally as the country of Information and Communication Technology.

12 Appendix/References

12.1 Tools and materials I have used during my internee

I have used

- A leaflet on ICT4D to share my knowledge with rural students and people,

- Different type of questioners to identify the ICT knowledge level of the rural people.

- An action plan on my internee

- A course plan for the advance training for the rural computer teachers

All of the above tools and materials are developed by me and given in the corresponding sections of the report. BFES has support me to utilize those tools in their project according to my action plan.

12.2 FEEDBACK ON PARTICIPATION AT:
[GKP-YFP 2004 meeting at Thailand]

Content

1. What added value did the event offer you? (Choose more than one answer where appropriate)
   - □ Knowledge and information
   - □ New concrete solutions or approaches
   - □ New contacts
   - □ Potential new partnerships
   - □ Potential customers / markets
   - □ Potential new financing sources

2. Is there a possibility of new partnerships/ventures being formed as a result of your participation in the event?

   → Yes. In Bangladesh there is a significant numbers of young people are seeking jobs very honestly and dreaming about there develop

society. I am also one of them. I have already discussed with almost hundred of young peoples in my country about the ICT4D. They are very interested to build their career in development activities specially ICT4D. And now we are developing an action plan all together for Knowledge transfer for development (KT4D) and knowledge management for development (KM4D) and knowledge share for awareness (KS4A). We actually think very seriously about the sustainability of our action plan. However there is very high possibility of new partnership being formed as a result of my participation in the event.

BFES can play another important role in ICT4D platform in our country. My ideas/plan (I have mentioned in my first report) in BFES had succeeded in their working project and they are now going to plan to do it in more effective way.

3. Were the issues discussed and covered satisfactorily?
   → Yes

4. Are you satisfied with the agenda of the meeting?
   □ Yes
   □ Comments: That was very useful agenda of the meeting. And I am very satisfied with the agenda of the meeting.

5. Are you satisfied with the meeting outcomes?

   □ Yes
   □ Comments: Actually I want to learn how can organize a workshop very effective way. Because I want to organize such workshop in rural area for knowledge share purpose as well as problem identification and point out the possible solutions from the idea of the participants. I thought these are done very effectively in the meeting. I am satisfied with the meeting outcomes.

6. Did you have an opportunity to share your knowledge at the event?

□ Yes

□ Comments: We got Mr John (Dada) and I got a big idea about the Open Rural University from him.

7. Are there any other ICT4D organizations who should be invited?

→ Yes. I know one of the projects of BRAC. That is Information Technology for Children and adolescent under their education program (BRAC Education Program). There are more union library with computer in the grassroots of Bangladesh maintenance by BRAC.

Presenters and Presentations (where applicable)

8. Were you satisfied with the quality of speakers?
   □ Yes

Management of Event/Activities

9. Are you satisfied with the meeting packet and information (if applicable)?
   □ Yes
   □ Comments: No comments.

10. How appropriate did you find the general set-up of the venue?
   □ Appropriate
   □ Comments: there should be more focus on the uses of different technology like Internet, mobile phone etc. for development. However I thought that was appropriate for knowledge management and knowledge transfer for development by using some technology.

11. Are you satisfied with the transportation and accommodation arrangements?

   □ Yes

Others

12. How did you get to know about the event?

   □ GKP mailing list

13. What is your overall rating of the event?

   □ Excellent/Good

14. Which is your preferred method of viewing GKP publications?

□ Print (Hardcopy)

□ Download from GKP portal

□ Both of them.

15. Other thoughts you would like to share (comments, critical remarks and suggestions for improvement):

I have an action plan for development of my country using ICT tools. During my internship I have found that the action plan is more effective to our society to build knowledge society. Now I have modified the plan for the sustainable change in the society, so that the young social entrepreneurs will get the guideline from the actions to perform well in their existing/new professions to the society. I have mentioned about the outsourcing opportunity in my presentation; how can we easily use our young rural group for the testing and debugging phases of a software development life cycle (SDLC). My hosting organization is doing most important actions like knowledge management for development (KM4D) and knowledge transfer for development (KT4D). That is my great experience to know the way to change the society with information and technology. I want to utilize my experience for whole of my country at grass roots. So that I build an ICT4D volunteer team by

30 skilled young people to serve the actions to the grass roots of our country. We have also weakness to organize properly everything of the action plan for financial problems. We have prepared the Proposal Papers for that action plan and looking for sufficient partners.

My suggestions for the improvement of the fellowship program is increase the internee duration, at least 4 months and other is every intern should follow an action plan providing or approving (if the interns has own) by the host organization.

12.3 References Books/Printing documents

- "ICT4D – Connecting people for a better world" edited by Gefolf Weigel and Daniele Waldburger published by SDC and GKP
- "ICT for development: Empowerment or exploitation?" by Hannah Beardon with Fred Munyampeta, Subrat Rout and Grace Maiso Williams published by ActionAid.
- "ICT for education in Asia and the pacific" volume 6 published by UNESCO
- "School Networking: Lessons Learned" published by UNESCO Bangkok

12.4 Web resources on ICT4D

Asia Development Bank ICT4D Strategy http://www.adb.org/Documents/Policies/ICT/

Development Gateway (World Bank) http://www.developmentgateway.org/

Digital Opportunity Initiative http://www.opt-init.org/

e-ASEAN Task Force http://www.e-aseantf.org/

Global Knowledge Partnership Network http://www.globalknowledge.org/

WSIS ICT for Development Platform http://www.ict-4d.org/

Pan Asia Networking http://www.panasia.org.sg/

UN ICT Task Force http://www.unicttaskforce.org/index.asp

UNDP APDIP http://www.apdip.net/

UNDP ICT4D http://sdnhq.undp.org/it4dev/

UNESCAP ICT Activities http://www.unescap.org/escap_work/ict/

UNESCO ICTs for Education in Asia/Pacific http://www.unesco.org/bangkok/education/ict/

UNESCO WebWorld: Communication and Information http://www.unesco.org/webworld/

World Bank InfoDev http://www.infodev.org/

WSIS http://www.itu.int/wsis/