

Computer Learning Centers: Today and Tomorrow

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Glimpses from the Computer Literacy Centers (CLCs)

An unremarkable high school in a nondescript backwater village of our country just became equipped with a Computer Learning Center sponsored by the Volunteers Association for Bangladesh, New Jersey (VAB-NJ). The students in the high school had never seen a real computer in their life; most people in the village had never heard of such a thing, and if they had, they could not care less: *what can a computer do for them?* Students were used to slogging through their SSC “Computer Science” syllabus by memorizing concepts and definitions from the boring, black-and-white, blurred images of CPUs and monitors on newsprint. These were the digital-have-nots in the increasingly digital, but as quickly digitally divided, world. Chances that these students would grow the right skills to compete in the globalized world were remote. Now, the newly established CLC is offering them a ray of hope. Even the villagers are coming by to see the lab and finding out how a computer can impact their lives. This is the story of 36 CLCs (soon to be 43) conceived and funded by VAB-NJ and implemented by D.Net in high schools and colleges of disadvantaged areas of Bangladesh over the last year and a half.

Walk with me to some of these CLCs and see the buzz of activities in an otherwise unexciting establishment of learning, and hear the stories of lives being transformed.

Students’ Lives Being Transformed

Md. Nasir Uddin is a student of Class X in one of these high schools where a CLC has taken shape. Whereas previously he despised his Computer Science subject material which he needed to ingest directly from newsprint, now he could not be more eager to learn the material taught at the Center as he dreams of being a computer scientist one day. Many graduates of the program have found the motivation and courage to pursue advanced studies in computer science.

A poor girl at a Feni CLC was so inspired from her interaction with the computer that she convinced her brother and another relative to buy a computer at home for further learning.

Before the Computer Learning Center was started, students would not get more than 70% in SSC Computer Practical tests. After the establishment of the Center, some students are scoring as high as 100%.



Many graduates of the Computer Literacy Program have been gainfully employed because of the skills they acquired at the CLC. A heartening story is that of Rubel Islam and Alamgir Hossain from Doulatpur who have been employed as computer operators at the Bangladesh Army.

Teachers Becoming Agents of Change

Md. Farid Uddin is the teacher of a high school boasting a CLC. He is leveraging his personal interest in computers to build awareness within the community on how the computer has become the new *pen* in the age old maxim 'The pen is mightier than the sword'. A large number of unemployed youth are coming to him for computer literacy.

Teacher Farhana Akhtar in Bagerhat inspired and guided students Ziaur Rahman and Zahidur Rahman to start their own small 'computer shop'. This is an example of where the CLC gave these two students an *axe* with which to earn a livelihood.

A teacher writes from a CLC in Munshiganj, "The most important effect of CLP is that it has created and is creating computer awareness among the students of the school, now students realize the importance of computer for their present and coming life."

Schools Going through Paradigm Shift

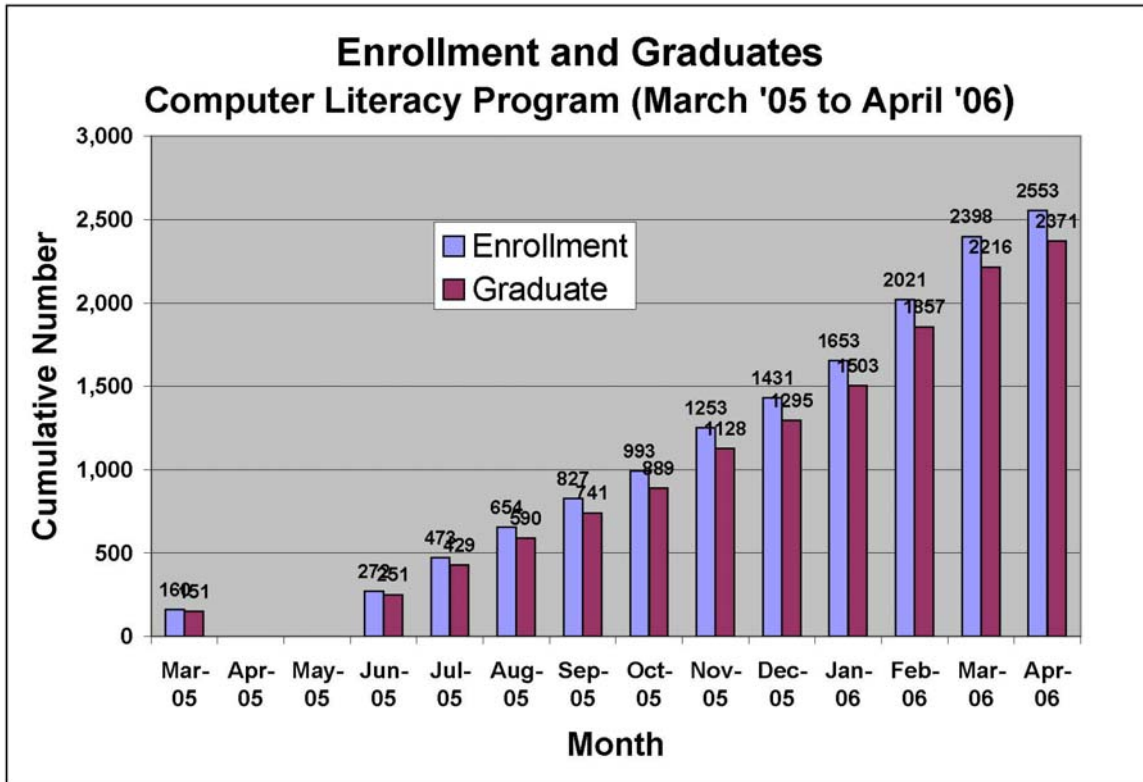
One newly founded college which used to have about 100-120 students has successfully leveraged the CLC started less than a year ago to market itself very prominently. Its 2006 enrollment has jumped to 250.

Every year, this one high school used to spend several days processing the admission test results of a few thousand prospective students. With the computer processing power, and the heightened sense of urgency among the staff, the efficiency gain has cut down this effort to almost a third of what it used to be. Students get their test results within a day.

In a CLC that was established within a youth development center, the graduates are using the center to draft letters, certificates, program schedules among many other things. The CLC has made the center a lot more vibrant and useful to its members, their friends and relatives.

Invariably at all CLCs, group activities on a computer are essential to getting the lessons completed because 1) it is encouraged, and 2) the shortage of computers does not allow one-to-one ratio most of the time. The upside of this arrangement is that the seeds for positive collaboration are sown. Where else in Bangladesh do you see such collaboration at the school level other than students plagiarizing from one another?

Humorous anecdotes of students being petrified of computers and overcoming their fears to become proficient operators of the mystical machine abound. One of our 2,300 graduates fell off her chair while holding the mouse because she was trying to move her body with the movement of the mouse. Another graduate escaped the CLC after closing off the Toolbox in a paint program was terrified because he thought that had 'broken' the computer. Hundreds of these 'frightened' individuals are now operating the computer very successfully and fighting with the new 'pen'.



The Partnership Made It Work

All of this has been possible because of the dedication of a few devoted volunteers in NJ who conceived of the idea two years ago, a good number of donors and sponsors from our non-resident Bangladeshi (NRB) community, and the sustained commitment of VAB-NJ's Bangladeshi partner Development Research Network (D.Net) to make this project successful against all odds in all remote areas of Bangladesh. Take one look at the distribution map (back cover of this booklet) of the centers opened in 2005 and scheduled for 2006, and you will know that the organizers have not just tip-toed around Dhaka or only the big cities. 22 districts are represented with the current 36 centers. Schools miles away from the main road are among the locations selected.



It is important to note that the Computer Literacy Program is not purely charity – the schools have to provide the space and furniture for the lab, mobilize the teachers, students and the community, and manage the program themselves. Thus, it's a true partnership among the VAB-NJ, NRB donors and sponsors, D.Net and school management.

Curiously, through this program the NRBs have motivated capable individuals and organizations in Bangladesh to come forward and sponsor CLCs. During the fund-raising dinner for the program in January 2006 in Dhaka, D.Net was able to raise about US \$1,500 from individuals. Several banks and other organizations pledged setting up multiple CLCs around the country.

I assume most of you reading the article have not made the trek to visit one of these CLCs. It is indeed a rewarding and inspiring experience to talk to the students, teachers, headmasters and the parents. They feel grateful and encouraged that the more fortunate sons and daughters of their soil are finally looking back and 'giving back'.

Computer Literacy Program: Planning the Next Steps

In the last year and a half since inception, the CLP has gone through a maturation process primarily in program management and strengthening of operations on the ground. A strong basic curriculum has been designed and proven. The labs are functioning like clockwork (true, there are occasional hiccups with old computer parts needing urgent replacement, but D.Net has perfected a system to address that in an efficient manner for the current centers). Teachers are being trained effectively. They are delivering training to the students according to the agreed upon schedule. Over 92% of the enrolled students are successfully graduating from the program.

Time has come to evaluate the impact of the program on the target audience objectively, and augment the program with value-added components. The CLP was originally designed to introduce these components at the appropriate time. Now that the foundation of the set of labs has been established around the country, VAB-NJ and D.Net have started planning the next generation activities for the CLCs. The notable planned activities are:

- Impact Assessment Research
- Advanced training
- Internet access
- Computer for general education
- Income generation and sustenance

Impact Assessment Research

D.Net is a research organization. Its strength lies in its ability to objectively assess the impact of a program that it implements and then apply corrective measures to make the intervention more effective and efficient. In general, the CLCs seem to have great positive impact on not only the students and teachers but also on the parents and the community as a whole. However, questions such as the following are crucial to evaluate the impact of this program on the entire educational ecosystem comprising of students, teachers, parents and the extended community:

- How has this program affected the students' grades in non-computer subjects, especially in subjects needing analytical thinking and problem solving such as Mathematics and the Sciences?
- How effective is the program in providing its graduate competitive skills for the job market?
- Has this program had any impact on the community leadership of the students and teachers?
- Is the exercise of group activities for the CLP course spilling over into group activities for students in other areas? Are the teachers prompting and guiding these group activities?
- How can the CLCs go beyond just teaching computer operations and facilitate use of computers for learning subjects such as English and Math, the two most failed subjects in Bangladeshi high schools? Can multimedia CDs offer an answer? (See more plans on this particular question below.)
- How has the school or college hosting a CLC been able to differentiate itself from its pre-CLC image, and also compared to other schools and colleges in the area?
- Can the CLCs be leveraged for income-generating activities? (See more plans on this particular question below.)

Beyond the simple statistics and the anecdotal evidence of a rosy picture, these are among the hard questions that need to be answered through a thorough Impact Assessment Research.

Advanced Training

CLP so far has limited itself to a 32-hour basic training that teaches the students the basics of computer hardware operations, Microsoft Windows fundamentals, word processing, spreadsheets, drawing, and some hardware and software troubleshooting. Advanced courses are being planned which will allow the students more sophisticated use of the computers such as desktop publishing, email and internet, presentations, animation, and even simple programming. D.Net has identified eight schools and conducted a day-long workshop with the teachers to assess demand in these different CLC locations to design the right mix of educational content.

D.Net is also exploring international standard certification programs such as Microsoft's Unlimited Potential, International Computer Driving License among others to offer through the CLCs. This can potentially become an income-generating activity for the CLCs.

Internet Access

None of the CLCs have internet connectivity currently. Internet access can open doors for unprecedented knowledge and creativity for the students. This is directly evidenced in Bangladesh in another program run by an international donor agency Relief International Schools Online that has set up Internet Learning Centers (ILC) in a few underprivileged schools. The schools students are communicating and working on joint projects with students from India, Tajikistan and USA. The joy and resourcefulness unleashed by the ILCs are a sight to behold.

D.Net is in active negotiation with several leading telecom providers in the country to offer internet connectivity in some of the CLCs on an experimental basis in 2006.

Computers for General Education

The power of computers as a tool of general education is established all over the world including developing countries. It is indeed the new 'pen'. D.Net is collaborating with Bangladeshi organizations such as Foundation for Education Research and Innovation (FERI) and Bangladesh Mathematics Olympiad (BdMO) to bring to the CLCs Math and Science Camps where multimedia educational CDs will be demonstrated through the CLC computers and students will engage in various activities on selected topics. BdMO in the last three years has popularized Mathematics all over Bangladesh to the point that all self-respecting schools would want to get involved in the Math competition. The CLCs could provide a very effective avenue for these competitions coupled with multimedia CDs on Math.

Another innovation D.Net is planning to launch around the CLCs is 'Education on Wheels'. The concept has its roots to a visit by a few D.Net members to underprivileged schools in Egypt. There, computers are placed on movable trolleys and taken to classrooms to demonstrate educational concepts thereby making the teaching-learning environment a lot more enjoyable and effective. In the context of CLCs, all D.Net needs is a trolley where one of the center's computers will be fitted and loaded with multimedia educational CDs for their trip through classrooms. Ten CLCs are going to start the 'Education on Wheels' program this year from August, 2006. The schools will bear the cost of trolleys while D.net provides training and relevant CDs for display in the classrooms.

Income Generation and Sustenance

An idea is only as good as its staying power. The Computer Literacy Program has been very successful in its current context. However, the program needs to be sustained. The funds for it must be maintained either through the donors and the sponsors or by some other means. Or, perhaps more realistically, through a combination of donors/sponsors and income-generating activities managed by the CLCs directly. D.Net and VAB are designing

several such components to sustain the remarkable achievement the CLCs have been able to make in a very short time. Some of these activities are:

- Offering advanced courses suitable to local demand
- Leveraging the CLCs as part-time *Pallitathya Kendras*. These are D.Net designed telecenters hosting a unique combination of livelihood digital content needed by the rural communities. Through several years of effort, D.Net has studied the demand for livelihood information such as agriculture, health, legal and human rights, education, appropriate technology, etc. and transformed the necessary information into multimedia digital content. Four areas of the country are already hosting such telecenters, and a growing number of NGOs are licensing D.Net's livelihood content to offer services to their rural clients. Under this plan, the CLCs will double up as Pallitathya Kendras after school hours.

There are many other income generation activities that are on the drawing board, but the program needs to move slowly so as not to upset the integrity that it has been able to build with the school communities hosting the CLCs.

Sustaining the NRB Commitment and Energy

Dr. Raihan, the Executive Director of D.Net, when describing his first contact with VAB-NJ, wrote in his article that appeared in the 2005 fund-raising booklet for the Computer Literacy Program, "I was a bit apprehensive initially. The NRBs started many initiatives before that faltered in the middle of the process due to lack of comprehensive planning and clarity about the ultimate objective, prevalence of 'charity' mentality, inadequacy of back-up plans, and a lack of understanding of the realities in the field." The particular NRBs driving the Computer Literacy Program have proven Dr. Raihan wrong so far – he was indeed quite happy to be proven wrong! Recently, on hearing about CLP, Mark Surman, the Managing Director of telecentre.org, a Canada-based global initiative for IT for development, remarked to Dr. Raihan that it is the only program in the world where countrymen (NRB and residents) successfully pushed such an initiative a long way without any 'foreign donation'.

The almost unnoticeable event of the poor Feni girl figuring out a way to get a computer in her house is by no means ordinary. It is indeed symptomatic of the profound cultural and social revolution that computers can catalyze for our deprived society. Rubel and Alamgir's employment as computer operators in the Army is also part of the equation of paving the road for our countrymen to become able soldiers of the increasingly globalized and digital world. CLP is providing the initial sparks of this revolution and transformation. However, it is important for all of us to realize one thing: if CLP is the only program of its kind and its current pace of progress is sustained, it will take about 900 years to cover all the post-primary educational institutions of Bangladesh. The obvious answer lies in speeding up of the CLP and launching of many other similar programs.

The D.Net CLP team and VAB-NJ volunteers are ever relentless in their pursuit for growing the program and adding new components to it. It is up to us – the larger community of NRBs – to support them in every way possible. It is not just their pursuit. It is every NRB's pursuit: to give every children of our beloved motherland the same opportunities that our children get in the western schools. While this pursuit may have milestones, it must have no end dates.