How Technology Supports *ConnectEd*'s Work with Disadvantaged Youth

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Since 2011, World Education, Inc. and the Alcatel-Lucent Foundation have worked in partnership to improve the lives of disadvantaged youth. This global initiative has been implemented in seven countries: Australia, Brazil, Cambodia, China, France, India, and Indonesia. The goals of *ConnectEd* are to help youth in need to achieve better learning outcomes, develop skills to prepare them for the world of work and to be more active participants in their communities. *ConnectEd* uses a wide range of interventions to reach these goals, but a key driver in moving forward in achieving the above stated goals is the use of technology, more specifically Information and Communication technology (ICT).

The areas in which *ConnectEd* has incorporated the use of ICTs include:

- Bridging the digital divide and ensuring all youth have basic skills in digital literacy
- Improving the quality of education
- Improving preparation for the world of work
- Giving youth a voice and connecting them to a broader community
- Giving socially excluded girls access to education
- Improving program management
- Utilizing the skills and support of Alcatel-Lucent volunteers

Research and World Education's experience have made it clear that if youth are to receive quality education and the 21st century skills that come with it, young people and their teachers need to be able to know how to use technology. Without it, disadvantaged youth will fall even further behind. Not only do they need to be provided with necessary technology, but they also need to be equipped with the confidence and competence to carry them into a fully engaged civic life, future schooling and work.

As of 2013 we have provided access to ICT to over **10,000** youth. By training over **300 teachers and providing computers**, tablets and other ICTs, the impact of this global initiative will be able to continue into the foreseeable future.

ConnectEd works in communities where there is a lack of access to computers and the Internet. Sometimes the gap between *ConnectEd* youth and the population at large is enormous. *ConnectEd* attempts to bridge this digital divide by supporting partner schools and centers to find the space to set up computer labs and by providing hardware, software and Internet access. The program has also distributed mobile phones and modems to those programs with limited or poor access to the Internet and mobile technology.

"*Many have come out of curiosity and referred to by peers to enjoy the seemingly unrestricted and enjoyable joy of the computers and the big screens. We used this basic curiosity to keep them engaged.*"

-Madhavi Samson, *ConnectEd* India Program Manager

ConnectEd recognizes the importance of youth possessing basic ICT skills for fostering inclusion and has given disadvantaged youth a better chance to cross the opportunities gap and to access more and better employment options.

To accomplish its objectives, *ConnectEd* has partnered with various organizations, some of which had no prior experience or infrastructure for offering digital literacy to youth. In Cambodia, China, India, and Indonesia, the program offered support in setting up labs, providing equipment and training teachers. Within weeks teachers and students were using desktop computers to learn basic computer skills. The response to the introduction of ICT was overwhelming in many of these communities, with youth, parents and other villagers literally crowding around lab windows to take a look at the new technology, and teachers and youth alike switching on computers for the very first time.

The following are some highlights of how *ConnectEd* attempts to bridge the digital divide in the countries where the program is implemented:

Computer Training for All Teachers

One of the first steps after a lab is set up is to have all teachers trained in computer skills, not just the staff who are responsible for teaching students computer skills. The aim is that teachers are able to use computers in administrative tasks, to support their teaching and create activities that help students learn. As teachers gain more competence with technology they feel more confident about integrating computers in their classes. For example, in one migrant school in **China**, where the computer lab assistant was no longer present, the regular teachers began taking students to the lab on their own because of their newfound comfort with computers.

Computers and Tablets in Classrooms Available to All

As well as having discrete ICT labs in centers in *ConnectEd* **India**, there are two computers in all classrooms. Furthermore, through a separate partnership, teachers now also have access to tablets loaded with educational content. This access, coupled with the provision of laptops for all teachers, means that the use of technology can be integrated into everyday teaching. Projectors are provided so that teachers can demonstrate and discuss this digital content when it is relevant to the textbook subjects the students are

Youth in **Cambodia** articulated how the ICT classes made them feel more positive about living where they do, that their villages do not feel so remote after all.

learning as a way to enhance their learning and interest. With the computers, and now tablets, available to the students at *ConnectEd* centers, they now have extended access to the material whenever they like during their time on the computers and tablets.

Mobile Van for ICT

The majority of the migrant schools that *ConnectEd* **China** works with do not have computer labs or do not have teachers available to use the ICT curricula that *ConnectEd* has developed, preventing *ConnectEd* from helping youth gain ICT skills. The program is now using a mobile learning van in order to reach these youth. This approach provides a cost effective way of providing regular ICT training directly to youth in a number of schools, as well as using the opportunity for *ConnectEd* to offer extracurricular reading opportunities and other activities to enhance the school curricula.

Multimedia Software and Instruction

Nearly 1,500 students in *ConnectEd* **Indonesia** receive training on basic computer skills, with select students receiving instruction in advanced ICT topics including office software (Microsoft Office, CorelDraw), and graphic design/ multimedia programs. A total of 90 students have had the opportunity to participate in an advanced level of computer training. A further 40 students have taken a class focused on graphic design and multimedia where they learned basic skills in photo editing and running a printing service, and a number have gone on to secure work placements based on their new skills.

The Effects of Putting Technology in the Hands of Teachers

In many places *ConnectEd* has helped advance the use of technology simply by making it more available to teachers. For example, in **China, India** and **Indonesia,** projectors were provided so teachers could use technology in class, presenting content in new and exciting ways with PowerPoint. In **China** and **India**, teachers were given laptops. With these, teachers can develop lesson plans, create handouts in Word, prepare presentations and graphics, and use spreadsheets to keep track of attendance.

> "*I can now create and save all my students' scores in the Excel spreadsheet by myself... And through PowerPoint I can engage my students with vivid presentations.*"
>
> *- Ms. Chai, Teacher, Long Hai School, China*

Aside from advancing their computing skills, teachers appear to be more confident. Reports from *ConnectEd* **India** suggest that teachers no longer see the computer as a sacred object that only certain people should touch. They are now far more relaxed at having students use laptops, tablets and desktops in everyday classes and this has really changed the learning environment in *ConnectEd* centers, where technology has now become an 'everyday' thing and a feature of every classroom.

In **India**, providing laptops to each teacher has proved important not only for their jobs and improving teaching and learning quality, but also for the example it sets. *ConnectEd* India teachers are local women who grew up in the same circumstances as *ConnectEd*'s beneficiaries. In the program's target area, access to computers and ICT proficiency is still associated with power, social status and usually with men. Therefore the visible presence of these female *ConnectEd* teachers, themselves recently disadvantaged and of low caste, going off to work with a laptop in hand and committed to improving the lives of children in the community, has proved a powerful way to break down stereotypes and provide important female role models.

Solar-Powered, Thin-Client Computer Lab

An innovative example of how *ConnectEd* has set up computer labs was in its work with *ConnectEd* **Cambodia**. With community buy-in through their work cleaning and painting the lab space, Prey Thom School in Prey Veng Province converted a spare classroom into an groundbreaking, sustainable computer lab. This new lab, a solar-powered "thin-client" lab, is a cutting-edge approach that allows for efficient use of resources. The technology is an energy *and* time saver; all programs are loaded on one server and users do not need separate CPUs, but only a monitor and keyboard. By reducing running and maintenance costs this lab can be sustainable over the long term.

This innovation, piloted by World Education, has led to a close partnership with Cambodia's Ministry of Education, Youth and Sport, and has become a model on a national level.

Once an appropriate location for labs has been selected, the computers are set up and teachers are trained in basic computer skills, *ConnectEd* sets out to capitalize on having ICTs at the disposal of youth and teachers by using them as a means to improve teaching and learning.

It is well understood that just adding technology to a classroom will not improve pedagogy. In fact, integrating technology without training has been found to hinder education. Some believe that "technology can make good teachers better, but it can make bad teachers worse." However, *ConnectEd* has found that when teachers use technology appropriately, it increases retention and student engagement with the very tools they will soon need for success in school and work.

Professional Development for Staff and Teachers

Using ICT to improve education starts with teacher training. Overall, nearly 300 teachers have been trained about integrating ICT during the first two years of the program. Below are some of the actions that have been taken to build the skills of teachers in ICT integration.

Developing a Cadre of Skilled ICT Teacher Trainers

World Education's Senior Advisor for Technology in Education has trained local staff in *ConnectEd* countries to enable them to become ICT teacher trainers. In addition to workshops, one-on-one mentoring in ICT has been an effective method of advancing the skills of staff. Support is then given as these selected staff go on to train teachers.

Teacher Training

Training begins with teachers becoming comfortable using technology. The teachers are guided to see potential in its use and then encouraged to use ICT in the classroom. For example, trainers begin by helping teachers improve presentations of their lessons. Later

they are asked to investigate the potential of project-based learning and to download a facilitator's guide (see http://www.worlded.org/docs/Publications/environmental-health-project-facilitators-guide.pdf) that leads them through the process of doing an environmental health project with their class. To support teachers and trainers in project-based learning and the use of basic and emerging technologies, *ConnectEd* central staff have developed an online toolkit that offers links to tools, additional training, and resources, found at http://cedu.pbworks.com. Depending on the context, *ConnectEd* has begun to train teachers on the appropriate use of mobile devices and Web2.0 tools, such as blogs and wikis. In turn they discover ways to integrate these technologies into their curricula and program.

Master Teachers Offer Peer Support

India uses a model where continuous meetings have been held with a group of ten core teachers to build their capacity on hardware and software use. They are taught about the Internet and email, Skype, presentation software, painting software, and a whole range of other programs and applications that are useful for teaching and administration. These core teachers then provide peer support to other *ConnectEd* teachers and are trained to use computer -aided learning techniques to improve the quality and relevance of the classes, build motivation to learn, and help youth consolidate reading, writing skills and ICT skills.

Staff Development from a Distance

Brazil's staff is spread out throughout the country, so they often use Google+ Hangouts (having previously used Teamviewer and Skype) for its ease of use and ability. These applications can provide an easy method for gathering teachers together easily to share video and discussions simultaneously, to provide training or to help solve a problem a teacher is having. In **India**, teachers have been encouraged to text questions and agenda items for their weekly professional development sessions.

ICT in Teaching

Below are a few ways in which teachers who have been trained are now using ICTs in their work.

Administrative Duties Made Easier

Many teachers practice what they have learned in their initial ICT training by starting to apply those skills directly to their everyday work tasks, such as entering attendance or assessment data into project forms. Some soon move to creating their own tables and spreadsheets. Teachers often create lessons plans, handouts and activities in Microsoft Word.

Best ICT in Teaching Competitions

In **China**, *ConnectEd* has successfully trained **149** teachers in the use of ICTs, even though many had never touched a computer before *ConnectEd*. In addition to basic computer skills, teachers have learned how to present PowerPoint using a projector. One new approach has been a competition held in both Beijing and Shanghai in which all the teachers at partner migrant schools were encouraged to submit lesson plans and PowerPoint presentations, demonstrating how they use ICT in their classes. Overall, 146 teachers took part across seven migrant schools. The competition proved to be a good strategy in maintaining teachers' engagement, fostering continued learning and promoting the ongoing integration of ICT in their teaching practice. Video clips of teachers' presentations were taken during the competition and have been given to schools as resources to share with other teachers. Teachers were encouraged to think through ways that they could use their new skills during teaching, and practiced creating documents and presentations for use in the classroom.
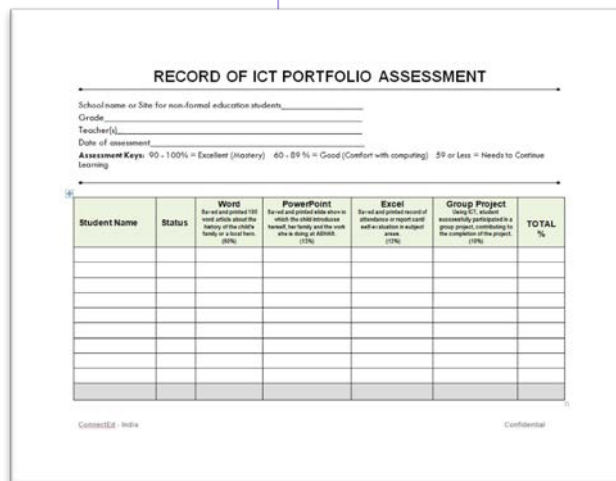
Computer-Assisted Learning

ConnectEd **India** teachers use packaged multimedia teaching and learning materials to enhance instruction on specific subject areas. Although these are loaded on computers and tablets that students can access, initially these materials are shown by teachers in the classroom with the use of projectors. Thanks to teacher training the approach is not a passive one where children sit and

stare at a screen. Youth are engaged and actively participate as teachers pose questions related to the content.

Products as Proof of Performance

ConnectEd staff and teachers have been developing assessments that not only assess student computer skills but evaluate their competencies to use these skills in a school setting. To do this, students complete a project-based activity that corresponds to what they are studying in their classes. The approach is encouraged so that computer teachers align what students are learning in the computer lab with what students are learning in class. This curriculum connection gives added value to the activity and provides an opportunity to do an authentic assessment of their ICT skills. See an example assessment *ConnectEd* Central Team has created for programs to adapt here: http://www.worlded.org/docs/PressRoom/record-of-ict-portfolio-assessment.doc

ICT in Learning

Information Communication Technology is not just used by *ConnectEd* teachers to improve teaching, it is used by *ConnectEd* students as a tool for learning too. Good ICT integration in education means that teachers not only help students learn how to use the hardware and software, but that it is simultaneously used as a part of classroom content. This is where the "learning how to use technology" moves toward "using technology to learn."

ICTs as a Tool for Learning

In *ConnectEd*, youth learn how to navigate the Web and find information by using search engines. However, just learning the skill of using a search engine is not the ultimate goal. In *ConnectEd*, a key approach is using technology as a *tool* for learning, with the intention that the learning does not stop with merely finding

information. *ConnectEd* stresses 21st century digital literacy skills so that students evaluate online resources, use productivity software to create useful products, and communicate ideas well and share them with others. It is this kind of activity that students in *ConnectEd* **Australia** are exposed to when they use the Internet to research topics germane to a job search and create resumes. In **Indonesia**, students are now using their ICT skills to help them in their school tasks, such as completing math assignments, finding articles on social and political subjects, and searching for national and international heroes' profiles.

The ICT curriculum in *ConnectEd* **Brazil** is linked closely with workplace education, using a theme-based method. Each theme is concluded with a project. The use of ICTs in project-based learning plays a key role in this unified approach. Whether it is creating videos of the community they live in or by using a spreadsheet to create their own budget, youth are learning to use technology and simultaneously using it to learn.

What Students Learn Using Social Media

Whether it is *ConnectEd* **Australia** students (click here https://www.facebook.com/photo.php?v=10100633122 110121&set=vb.158717237522419&type=3&theater) creating class videos and uploading on Youtube or *ConnectEd* youth in **Brazil** posting to Facebook, the use of social media tools by youth facilitates the creative generation of content and the development of communication skills with others. The authentic experience of youth communicating with other students via social media on a topic of interest leads to a natural enthusiasm for writing and far more opportunities for youth to learn how to express themselves. *ConnectEd* youth group members in **China** are particularly active on social networking and micro-blogging sites, providing an important outlet for expression.

ICT Highlight

Real-Life Spreadsheets

Teachers in **Brazil** have been introducing students to software applications they might encounter in the workplace. However, many students find working on spreadsheets daunting. Given that challenge, a team of computer teachers developed a low-tech way of introducing Microsoft Excel to their classes.

Teachers created a living spreadsheet by putting down tape on the floor, mirroring what students would see in Excel. The spreadsheet represented a small market's budget that could be found in the student's book. Each student stood in a cell and "became a commodity" with their own monetary value on a sheet of paper. The exercise involved the determination of the total monthly expenditures and income of the market. After the activity, youth entered the computer lab to work directly in Excel. In this way, the teachers brought the key concepts to life.

ConnectEd programs prepare youth for the world of work in many ways, but the learning of basic computer skills plays a key role. Data and field reports from **Brazil** and **Australia** are showing that the youth are using technology for learning about employment opportunities, networking, finding and sharing information, and applying for work. Programs help youth use the Internet for career awareness and job searches, culminating in using Word for the preparation of resumes and cover letters. In addition, **China**, **Indonesia** and **Australia** also provide technical ICT training that provides a vocational qualification in a technology-related area.

"*May be later when I have graduated from school, I can open my own printing service agency which will provide many printing services like producing invitation letters, certificates and medals and also name cards.. Everything runs with technology, therefore we need to keep ourselves updated with the new technology.*"

- Bayu, ConnectEd Indonesia student

Becoming Computer Literate

One early objective for most *ConnectEd* programs introducing youth to the "world of work" is for students to become comfortable using a computer and for them to gain competence in basic computing skills. The groundwork is set with mouse and keyboard mastery. Then students move to word processing and, for some, PowerPoint projects. For programs where Internet access is available, youth learn to navigate and search the web and set up email accounts. After youth have learned how to type using a word processor, navigate the web and have an email account they are ready to work towards broadening their knowledge base about occupations, networks and learning about job search and work specific skills. For instance, youth in *ConnectEd* **Australia's** out-of-school retail program are using the Web to learn about products and different types of product displays, retail website design and ergonomics.

Use of Internet for Wider Job Searches and Online Applications

The Internet helps to widen youths' view of, and access to, a broader world of job opportunities, and expands their social capital tremendously. *ConnectEd* **Australia** and **Brazil** youth learn how to sign on to online job-seeker databases and apply for jobs that match their qualifications. They learn how to use Word to create CVs that are appropriate for applying for jobs on line.

Use of ICT for Specific Skills

- **Data entry**
  For some, such as students who have studied with *ConnectEd* in **Indonesia**, entry level positions in data entry have been a popular way in which youth have taken full advantage of the training they have received.

- **Multimedia**
  In **Indonesia**, *ConnectEd's* course on multimedia has trained students to find work and earn income creating flyers and posters, as well as shooting and editing wedding photos and videos.

- **Online payroll systems**
  Out-of-school hospitality students in Australia similarly found jobs utilizing specific ICT skills. They were trained to use an online payroll system to update personal details, to check and verify pay slips, and to look up leave balances.

Nicolas, ConnectEd *Brazil student, is elated to report that after a rigorous and competitive selection process, he and four other members of the program were selected to take and Auto CAD (Computer Assisted Design) course through ASPRO, a large engineering firm. Upon completion of the course, Nicolas will have a job with the company.*

- **Word Processing and Stenography Training**
  ConnectEd **China** trains out-of-school young women in word processing and stenography. Such trainings are providing newly-arrived migrant adolescent girls with job placements and safer transitions into their new lives in the city.

Open Lab Time to Advance Workplace Skills

In programs such as those in **Brazil** and **India,** the computer labs are open to youth before, between and after classes so that students are able and encouraged to use the machines whenever they would like. Students use this time to perfect a project they are working on or bring their keyboarding and basic computer skills to another level.

ICT Highlight

From Course Work to Real Work

Ucay is enthusiastic about the multimedia class with *Connected* **Indonesia's** local partner, YABIM. He hopes that by learning computing and multimedia under *ConnectEd*, in the future he will be able to combine his passion for music and multimedia and computer devices to create new songs. His talent in multimedia and computing has already provided him with the opportunity to work as YABIM's event organizer, where he has received several jobs in video and photography services, shooting and producing film.

USING ICT TO GIVE YOUTH A VOICE

ConnectEd is showing the role that ICT can have in promoting the civic engagement of youth. Their use of ICT for accessing information, creating their own content, and networking represents a huge increase in the civic participation and connectedness of these previously excluded young people. *ConnectEd*'s work is providing youth with what it takes to interface with their community and beyond. Youth in *ConnectEd*'s leadership training, peer education, youth groups and other Youth Voice activities are exposed to the potential of technology for leading their own campaigns, highlighting the needs of youth, or exposing rights abuses or malfunctioning government services. Whether creating class videos on YouTube, using cameras and presentation software to show photos of issues in their communities during public forums, blogging or posting to Facebook, the technology and social media tools used in *ConnectEd* facilitate the creation of content and the development of communication skills with others. These kinds of activities help youth not only communicate to a broader world but make a better one.

"*If I am now given a camera, I can teach people in the village how to do it. I think I have become more responsible for my own behavior after taking this class. I used to go out and play over weekends, but now I finish my homework so that I can go to the Small Eyes Big World class on Sunday without worries.*"

–Jin-Tang, ConnectEd China student

Giving Voice to Girls' Aspirations

During recent workshops in *ConnectEd* **India**, girls made a presentation about themselves with the use of cameras, computers and a projector to share their aspirations and dreams and where they see themselves at the end of five years. At the same time these girls were encouraged to

share their fears and to identify the resources and inputs they would need in order to achieve their dreams.

ConnectEd civic engagement interventions, such as those in **Brazil,** have provided opportunities for *ConnectEd* youth to use the Internet to research and then form links to organizations that work with extremely vulnerable populations. They further develop their life skills, such as organizing skills, group work, budgeting and communication, as they plan their projects. Some of these projects have involved youth creating videos showcasing their work and what they feel are important topics in their communities.

The Bee's Wings Youth Action Group Are the Bee's Knees!

Out-of-school youth participating in **China's** *ConnectEd* youth action group, Bees' Wings, were provided with laptops, a digital camera and computer access to conduct action research, collect materials for a youth conference/forum, and establish internal and external communication mechanisms by using instant messages, emails or blogs to exchange, communicate, and disseminate ideas. Since then it has been exciting to note how they have been actively utilizing social networking platforms, QQ and Wei Bo, to broadcast their group's actions and to recruit volunteers to join their monthly activities. For example, one member just posted an announcement that attracted over 20 youth to take part in a tree-planting event. Members have also been actively using digital cameras and are in the process of learning to record video clips to introduce Bees' Wings to other youth as well as to use videos for future campaigns.

Small Eyes, Big World

ConnectEd **China** developed a new course called "Small Eyes Big World." This course is a life skills program designed for migrant school students who are from excluded, isolated migrant communities on the periphery of city life. The program provides these students with basic photography skills which offer them a platform to document and record aspects in their lives they consider important and to tell others their stories. The program also gives them the opportunity to consider and present their perspective on issues or concerns as they observe and interact with the outside world. This was piloted in our partner schools in Beijing and is now being conducted in Henan Province by local partner HQ and in Shanghai by Alcatel-Lucent Shanghai Bell employees who received training from *ConnectEd* **China** about how to facilitate the course. The course demonstrates the power that ICT can have in allowing excluded youth to have a voice, and we look forward to the impact that our expansion of this course will have in the coming year.

USING ICT TO GIVE SOCIALLY EXCLUDED GIRLS ACCESS TO EDUCATION

ConnectEd **India** focuses on serving girls who remain at a greater disadvantage due to prevailing gender inequity. Not always having equal access to technology as boys, an initial benefit for girls in *ConnectEd* India is merely having the opportunity to have access to computers. They often are not given a chance to participate in computer courses or allowed to visit local Internet cafes simply because some parents think computers are not for girls. For some, the situation is even worse and they are not allowed to leave the home for any type of education at all. Here, too, *ConnectEd* India is using technology to counter their exclusion.

Visiting the ABHAS center to witness the classroom teaching, computer lab and Computer-Aided Learning curriculum was a major turning point for Sundari's parents. Her mother announced to the family that if her husband could not support Sundari, then she would work to support Sundari's education herself.

"*I want to complete my studies and computer training, and then I will teach computers to other girls like me.*"

— *Sajda, ConnectEd India student*

Taking Technology to the Homes of Excluded Girls

A key feature of *ConnectEd* is its outreach to underserved populations, and technology has been instrumental in our success. This is especially the case in **India**. Teachers are now taking their laptops or tablets to provide individual lessons to girls whose families and communities do not allow them to go out to study. The tablet, in particular, has proven to be a boon in this regard as its content can be freshened at regular intervals and is light and easy to carry to the children.

"Computers are for girls too!"

A benefit for girls in *ConnectEd* programs is exposure to such training as keyboarding and Microsoft Office suite, or its equivalent. One young woman in **India** said upon her successful experience, "Computers are for girls too!" (Watch the video here: http://www.facebook.com/photo.php?v=3372187792439&set=vb.158717237522419&type=3&video_source=pages_video_set) Not only are young women more likely to overcome the idea that technology isn't only for males, this experience provides young women the opportunity to use ICT skills for work or study. There are some young women who have taken it a step further and gotten specific training and certification in IT.

Through these visits, *ConnectEd* staff have been able bring to the child's doorstep a world of exposure to fun, learning and possibility through academic training, social-emotional learning and ICT. Out of the girls who have been reached this way, a number have now been allowed by their parents to go out of leave their homes and to engage in the classes provided at the *ConnectEd* center closest to them. This is an enormous achievement, literally opening up these girls' worlds as they and their families begin to acknowledge the value in an education. *ConnectEd* is hoping that the next step will be for these families to agree to their daughters being mainstreamed into government school or joining the National Institute of Open Schooling.

Find the video of this *ConnectEd* teacher making home visits with a tablet at: https://www.facebook.com/photo.php?v=10100738961482171&set=vb.158717237522419&type=3&video_source=pages_video_set

USING ICT TO IMPROVE PROGRAM MANAGEMENT

As a result of *ConnectEd* and its focus on ICT, several partners have undergone transformations within their own organizational systems, not just in the services they provide. In particular, the use of technology has been a real advantage for program management and information flow.

Using Office for the Office

In **Cambodia, China, Indonesia** and **India**, teachers learned how to use software like **Word and Excel** to record progress, track attendance, create lesson plans and develop handouts.

Sharing Documents Using Dropbox

Staff in **Brazil** use Dropbox to share documents from a common server in the cloud.

Using mobile phones for student reporting purposes

Communications technologies have been used effectively in program management. Managing almost 6,000 students led *ConnectEd* **India** to be on the cutting edge in the use of mobile phones with teachers. Teachers use SMS to report student attendance, and, using a platform with funding from Dimagi, Inc., new inroads are being made to track individual student attendance and progress.

ICT Highlight

Improving Retention

ConnectEd is proud that in **India** the retention rate remains high at 98% for the in-school youth and 100% for the out-of-school youth. The promotion of using mobile phones and text messaging as part of improved program management is contributing to keeping student attendance high, and drop out low.

First, the barriers to mobile phone use are lowered as phones are either provided or their costs reimbursed, and teachers receive training about how to maximize the use of mobile phones. Then, the teachers do not use the phones only for texting in student data to the project managers each day; teachers are also expected to have entered the phone numbers of all the parents into their phones and when a child does not come to school, even if it is for one class, the parent is called and told. The aim of this is an increased reassurance to the parent that the program cares enough about every individual child to call if the child is not in class. This has had the benefit of being in better touch with families and building strong connections with parents. This increases trust and most likely has had consequences for attendance too.

USING ICT AS AN ENTRY POINT FOR ALCATEL-LUCENT VOLUNTEER ENGAGEMENT

A key aim of *ConnectEd* is to have employees at Alcatel-Lucent volunteer their skills to benefit the program. Volunteers have brought to bear their knowledge of ICT to address the needs of in-country programs.

Technologies Used By Volunteers

Aside from the technology that employees use in their presentation to students on their visits to Alcatel Lucent offices, volunteers in **India** have used mobile phones and Skype to connect with students from a distance and help them improve their English skills.

Setting up and Opening Computer Labs

Alcatel-Lucent employees helped set up a new computer lab in **Indonesia** at the outset of the program. Similarly, in **Cambodia** staff traveled out to a rural province to attend a lab opening day and helped introduce the youth and teachers to their new technology.

Basic Computer Skills Training

Teachers in **India** are integrating ICT in new and creative ways because an employee from Alcatel-Lucent took the time to train *ConnectEd* **India's** ICT teachers. With this training, more teachers will be able to bring more ICT skills into the classroom to help bridge the digital divide in the areas where *ConnectEd* India works. In **China**, too, Alcatel-Lucent Shanghai Bell staff's abilities in ICT have been put to strategic use. 15 staff trained 30 teachers at a migrant school in Shanghai, and assistance has also been provided in Beijing.

Social Networking Workshop

After the launch of the new computer lab in June 2012 Alcatel-Lucent employees led a Social Networking workshop in **Indonesia** for *ConnectEd* youth.

Website Re-design

Alcatel-Lucent staff in **Indonesia** are providing assistance to *ConnectEd's* local partner, YABIM, to re-design their website and bring better publicity about the good work being done under the program. They will also provide teaching videos on the website to help prepare youth for the world of work.

Teaching Youth to Use Photography to Document their World

In **China**, Alcatel-Lucent Shanghai Bell staff have been trained and are now leading the Small Eyes Big World course for children who are from excluded, isolated migrant communities on the periphery of city life. Volunteers are helping equip these students with basic photography skills which provide them a platform to document and record aspects in their lives they consider important, and to tell others their stories and perspectives.

ICT Highlight

They are quite friendly looking!

Sitting patiently in their computer lab a dozen students nervously awaited meeting new Alcatel-Lucent volunteers who would teach them English from a distance, using Skype. When the video with the smiles of the volunteers suddenly came online, there was a spontaneous cheer and a sense of relief when the youth realized these professionals were actually quite friendly looking! Within minutes Skype and the connection broke off and as staff scrambled to think of what to do, the idea came forth to call on mobiles. Each child got a chance to talk with a volunteer and with the opportunity to see each other's faces you could tell from the beams on the children's faces that this was an important step toward a new relationship.

WHAT WORLD EDUCATION HAS LEARNED

- **For *ConnectEd*, bridging the digital divide does not mean only providing hardware or software.** It is not even about providing the computer skills alone. It is about youth attaining the ability to use these skills to solve problems - to find information and evaluate it, and to then create and communicate it well to others. This requires changing the way we educate.

- **Good technology integration calls for training in new ways of teaching.** In educating youth for the 21st century, not only do students and teachers have to *learn to use technology* but technology needs to be *used to learn*. Students need to use their newfound computer skills to learn and teachers need to use their ICT skills to improve teaching. This means staff development that includes technology and its integration into education. It means devoting money for hardware and software, training and time for teachers to learn how to use the technology. Then it calls for teachers to learn and use methodologies for integrating the technology in their teaching. Teachers cannot effectively use technology in combination with outdated teaching methodologies. Support and reinforcement for teachers needs to be provided over the long-term, not in one-off trainings, for real change in teaching to come about.

- **Inserting technology into a local context has brought new and often unintended opportunities to students, teachers and program directors.** This ranges from the increased attendance and engagement of students, to the excitement of teachers about a cross-school competition for the best use of technology. It encompasses using tablets to "bring the school" to homebound girls, and the use of cell phones for helping an abused child stay safe. It has brought unanticipated changes and benefits to the management and efficiency of some of the local *ConnectEd* partner organizations.

- **It is important to select technology based on program objectives.** Although some ideas for technology use can be spontaneous and spawned out of need, the use of ICTs in a program must be thoughtfully and strategically approached. One must assess the needs of the audience and program objectives. As the strategies and the technologies to achieve those objectives become clear, then appropriate technology can be chosen.

- **Equally important to its selection is technology's appropriate use.** Our efforts to bring technology to *ConnectEd* need to ensure that youth and teachers use technology appropriately and in ways that match with *ConnectEd's* mission, all the while keeping themselves safe.

- **Possessing technology skills has made it easier for some volunteers to find their niche in helping programs and youth.** Although many Alcatel-Lucent employee volunteers choose to tutor in academic subjects or give workshops, some find helping with tasks such as a website design, training teachers in ICT, or teaching youth digital photography a good way to contribute.

- **Technology not only prepares youth for work, it can end up being their work.** *ConnectEd* students become proficient at using a computer at school and work. For some in *ConnectEd* their tech skills have led directly to actually finding employment in working with computers, whether in data entry or video editing.

- **Many of *ConnectEd* youth will not immediately find work where they will use computers; however, many disadvantaged youth, especially girls, benefit greatly from learning to use technology**. Reports reveal improvements in confidence and a sense of belonging to a greater "advantaged" world. In making both teachers and students more comfortable and competent using ICTs, *ConnectEd* has brought its program youth closer to their goals for study and work as well as becoming more civically engaged.

- **The value of professional development and teacher training in ICT cannot be overemphasized.** World Education has seen some of the most profound transformations in the way ICT is used in the places where organizations have shown the strongest commitment to professional development. The key to the successful use of technology seems to be the investment of time and resources towards the training, ongoing support and development opportunities provided to teachers and staff.

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