Education for All: Is it Feasible?

According to the last edition of the World Bank’s Development Report, more than 113 million children, between the ages of 6 and 12 years old, are denied the chance to go to school in the developing world today. Well over 60 percent are girls. The world’s failure to give these children even the basic building blocks of literacy, and thus the ability to transform their lives, will have profound consequences not only for their home countries, but for the rest of the global community for generations to come.

The international community knows that the rationale for making good quality education universally available is compelling. No country has ever achieved sustained economic growth without reaching the critical threshold of literacy for its population.

Among the ‘International Development Goals’ (IDGs) identified by the international community, enrollment of all children in primary education by year 2015 appears in second place on the list of priorities. The educational challenge is greatest in Africa, where about half of all countries are unlikely to reach the target unless serious action is taken. In seven of these countries, around half of all children of primary age are currently not in primary school.

In this issue of the eXchange we have tried to explore how Information and Communication Technologies can contribute to improve the quality and the reach of education around the world.

The ‘Digital Divide’ Seen from the South

On a late afternoon in mid October in Montreal, Canada, a Dot Force meeting had taken place to discuss how to implement the ‘Action Plan’, endorsed by the G8 Heads of State, during the last G8 Summit in Genoa, Italy.

Around fifty people from at least eighteen different countries participated in the meeting, including eight representatives from developing countries. The discussion had been lively and creative.

During the meeting, it became evident that participants from the ‘South’ had very important messages and unique views about the digital divide. Yet in the global ‘orchestra’ of the discussion and due to severe time constraints their voice had sometimes not been loud enough.

The eXchange proposed a roundtable on the ‘digital divide’ exclusive to representatives from developing countries.

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The Education Challenge

To What Extent Can ICTs Help?

Over the last ten years, it has become increasingly evident that Information and Communication Technologies (ICTs) create unique opportunities for improving the quality of education at various levels. ICTs also improve access to education and training to people located in remote or rural areas, both in developed and in developing countries.

In the Digital Opportunity Task Force’s report, endorsed during the 2001 G8 Summit in Genoa, Italy, ICT dissemination among children of the development world, ‘digital literacy’ among teachers, school connectivity, and improved networking among education and research networks, are some of the key issues that need to be addressed in the near future to seize the broad range of opportunities that ICTs are opening up for education. But to what extent can interactive radio instruction, distance education through television, or e-learning, be valuable alternatives to traditional education systems and be transformed into effective answers to the needs of the poor in developing countries?

Interactive Radio Instruction

Interactive radio instruction has extensively been used in developing countries for the last twenty five years, proving to be an effective tool to improve educational quality at affordable costs.

It can be described as interactive lessons in which a distant teacher through the medium of radio or audiocassette, is carefully integrated with classroom activities carried out by the classroom teacher and learners. The distant teacher leads the teaching, and directs learning activities (such as exercises, answers to questions, songs, and practical tasks) that take place during carefully timed pauses in the audio script. The classroom teacher’s role is often to facilitate the lesson, give individual assistance to learners, and provide follow-up support after the audio component is finished. In some programs, such as those for language instruction, the classroom teacher’s role is expanded to include periods of teaching (www.techknowlogia.org).

This methodology was pioneered by Stanford University in 1974 in Nicaragua, and has been used to expand access to basic education and vocational training – especially in remote areas – and to enrich the learning experiences and resources that are not often available at the local level.

Classroom teachers also receive training and pedagogical support over radio and play an essential role in leading by example.

Interaction has been useful in capturing and holding young students’ interest and attention and reinforcing their learning. Projects have been implemented in several other developing nations, including Angola, Bangladesh, Bolivia, Cape Verde, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guinea Bissau, Haiti, Honduras, Indonesia, Kenya, Lesotho, Mozambique, Nepal, Pakistan, Papua New Guinea, Principe, Sao Tomé, South Africa, Thailand and Venezuela. and

Education subjects range from mathematics to language arts. Teaching for an adult public has also been promoted in several countries, to increase the level of basic education in relevant areas, such as maternal-child care, rural health worker training, civics and environmental care.

Interactive radio instruction has shown significant impact in education in several countries, but in order to be sustained, it has to become an integral part of the whole education system, and a more strategic resource for delivering curricular content. In that way, projects could take advantage of economies of scale and gather the necessary political and institutional com-
mitment from public authorities, schools, broadcasters, teachers, parents and other constituencies, which are required to ensure long term sustainability. For many years to come, it will remain as one of the most affordable and immediate ways to extend access to education for people of all ages in remote areas, particularly where difficult infrastructure, technology and cultural barriers still exist.

Computers in Schools

Starting from the mid eighties, several developing countries have been experimenting with the use of information technology in the school systems, generally in the form of pilot initiatives. Some governments, including Belize, Brazil, Colombia, Chile, the Philippines and Jamaica, also decided to launch country-wide programs introducing computers in their education systems. These programs were generally aimed at enhancing the learning processes through computer-assisted instruction programs or integrated learning systems. Many schools introduced the use of word processing, spreadsheets and data bases. The LOGO programming has been used since the early 80's as a tool to enhance cognitive skills, problem solving and creativity in educational environments. Computers have been used for a long time also for pedagogical administration, allowing teachers organize more effective learning environments in the classroom.

Several studies have been conducted to demonstrate the effectiveness of computer systems to enhance the learning processes. However, despite the accumulated evidence on the positive impact of the use of computers in the learning process and in extending the quality and coverage of education, education systems and practices in developed and developing countries are still quite far from fully embracing the unique opportunities offered by ICT. Resistance to change in the traditional school systems, lack of teachers ICT training, lack of resources, and skepticism towards the introduction of computers in schools are some of the main challenges that generally need to be addressed.

A study on the impact of computer in basic education published in 1998 by the World Bank, indicates that “starting a project by buying computers in educational systems is one of the most common causes for failure”. Appropriate decision making processes, planning, teachers' training, gradual approaches by the introduction of pilots, and community support are considered key to implement such type of initiatives. (www.worldbank.org/education/digitaldivide/)

Internet has made much more relevant and immediate the need to convert computers and networks into more effective platforms for enabling the transformation of the whole education system. However, it has been demonstrated that the technology is not the pressing issue. Besides the main barriers mentioned above, one of the main issues that need to be addressed in developing countries and elsewhere is the long-term sustainability. Interestingly, several countries seem to be proving that it is possible to establish creative mechanisms to channel resources for institutional development, training, curricular transformation, application development, and deployment of reliable ICT infrastructure. There are several examples in developed and developing countries that are showing that it is possible.

Initiatives such as the E-rate in United States, Computers for Schools in Canada, eSchool in the European Union, Educar in Argentina, Proinfo in Brazil, Enlaces in Chile, Conexiones and Computadores para Educar in Colombia, Red Escolar of Mexico, EduRed of Peru, and many others are exploring different mechanisms for carrying out country-wide programs.
E-Learning

Advances in ICTs are opening up a broad set of opportunities for the delivery of education, and very interestingly for enhancing learning environment and processes. Computers are currently being used in many different ways as tools for improving the integration of teachers, students and communities in new ways that were not possible before because of the cost, distance, interfaces and the format of learning modules. The convergence of information, multimedia and networking technologies are expanding the frontier of possibilities for learning and knowledge generation at all levels, be it at the primary school, the research lab or at the enterprise level.

As Dr. Saymour Papert has recently stated, "The real transformation will occur when we have new ways of organizing people and knowledge. Instead of fragmenting knowledge into 'subjects' and segmenting children by age, we will see groups formed around common interests. I see children using computers for making music, movies, robots - whatever evokes their passion. The assumptions we made as to why writing was superior to speaking no longer hold up in many ways. Voice recognition makes possible the recording and indexing of the spoken language in new ways. In the very, very long run, maybe we'll just give up reading, mathematics will break out of this box we've put it in - this very abstract, pure manipulation of symbols. If we look imaginatively at technology, new directions are open."

However, there are several difficult barriers that need to be overcome. One of them is connectivity, so that the poor can have access to a broader set of knowledge resources, one of the more powerful tools required for them to get out of the poverty trap. On this front several strategies have been explored with different results. One of the most popular is the telecenter, a shared ICT facility that seems to carry the promise for enabling low-cost access to distance learning and virtual education services badly needed by low-income communities almost everywhere. Interestingly, some of those experiences have been testing telecenters located in schools as platforms of distance learning for both schools and communities.

The Bindura Internet Learning Center (ILC) is an example of school-based community telecenter. Established as a successful partnership between the Zimbabwe Ministry of Education, Sport and Culture and the World Bank-sponsored Zimbabwe-World Links for Development Program (WorLD), the Bindura ILC is one of a series of thirteen school and community-oriented centers which were opened in 1999. Bindura is a successful model of a dual-use telecenter — serving students and teachers in the surrounding schools during the day, and the general community and adult learners in the evenings, weekends, and holidays. The adult learners constitute 50 percent of the total clients served, and are an important source for the center's financial sustainability. By paying a fee for training and access, they are underwriting the recurrent costs of hardware maintenance, power, supplies, and connectivity.

The approximately 180 pupils and teachers come from nine surrounding primary and secondary schools. Two full-time teachers provide these learners with instruction in computer literacy, software applications and online collaborative projects, which will link these students with their peers around the world via the Internet. Adult learners receive instruction in operating systems, software applications and research via e-mail and the Internet. Specific client groups served include education officers from the Ministry of Education, lecturers from the nearby Bindura Technical University, and students from the Zimba-
bwe Open University. A majority of these users, approximately 70 per cent, are women.

Because the World Links program provides resources mostly for training, the dual-use centers must generate revenues from the fee-paying adult community.

Another interesting example of successful e-learning is provided by the African Virtual University (www.avu.org). The African Virtual University (AVU) is a "university without walls" consortium that uses ICTs to provide access high-quality academic faculty and learning resources. The AVU enables students in 16 African countries to take courses and seminars taught by professors from universities around the world. Since the launch of its pilot phase in 1997, more than 12,000 students have completed semester-long courses in engineering and in sciences, and over 2,500 professionals have attended executive and professional management seminars. During class, the students have real-time interaction with their instructors, via talkback or e-mail.

Tutors guide students through the course and act as liaison with course instructors. Class preparation material and research are distributed over the Internet.

AVU also provides students access to an on-line digital library with over 1,000 full-text journals and over 10,000 free e-mail accounts have been opened and can be accessed through the AVU Web site.

The African Virtual University was also the first project funded by infoDev back in 1996. infoDev supported the launch of the AVU through a $250,000 grant to conduct the feasibility study leading to the University's creation and to establish the main components of the business plan. The study involved the definition of the organization model which would form the basis for the formulation of the AVU's business plan, including the choices of the technological options for the delivery of instruction, the arrangements with partnering institutions both on the supply and the demand side, the definition of programs of studies for the start-up phase, the contractual arrangements with suppliers (including agreements on intellectual property rights), and the establishment of agreements with African countries and institutions.

In its pilot phase, the initiative was carried out with World Bank's support. Building upon its success, it then transitioned itself as an independent non-profit organization headquartered in Nairobi, Kenya.

During the next three years, AVU plans to expand to more countries in Africa and reach undergraduate students, faculty and professionals through three main avenues: learning centers established in public and private universities; private franchises and on-site professional learning centers housed in corporations and non-governmental organizations.

Mobilizing the Resources

There is broad consensus on the fact that education plays a key role for socioeconomic development, and that ICTs can help bridge the educational gap much faster and in a more cost-effective way.

The real problem lies on the 'size' of the gap that needs to be bridged: It has been estimated that US$5 billion to US$7 billion per year are needed to get all primary school-age children into school. Additional resources are needed to improve educational quality and relevance.

It is therefore evident that all actors involved - including governments, academic institutions, development organizations, the private sector, grassroots, and ultimately the communities - are bound to play a relevant role to mobilize the resources requested to fill the considerable education gap in developing countries.

Since 1963, the World Bank has provided over US$30 billion in loans and credits for education projects, and it currently finances 164 projects in 82 countries. Within its strong commitment in education, which mainly addresses the public education systems in developing countries, the institution is increasingly incorporating ICT components to achieve better efficiency and broader access.

Through the World Bank Institute (www.worldbank.org/wbi) - the learning arm of the World Bank - courses and seminars
aimed at reducing poverty and promoting economic opportunity and growth are also being delivered to government officials, academics, business leaders, journalists, and other interested parties. The WBI’s Global Development Learning Network (GDLN) is an example of how the World Bank currently operates to promote learning by using advanced communication technology. The GDLN (www.gdln.org/) is a partnership of organizations drawn from all sectors of society — public, private, and non-governmental organizations. These organizations work together through a fully interactive, multichannel network to provide distance learning programs that serve the development community. GDLN's Courses and Seminars combine two-way multimedia videoconferencing sessions complemented with print packages, CD-ROMs, interactive web communications, or face-to-face tutorials.

The GDLN provides learning programs drawn from a variety of sources. They cover the full range of development issues from AIDS education to anti-corruption strategies, from environmental compliance and enforcement to business journalism, and from macroeconomic policy to urban development. These topics are explored through courses, seminars, global dialogues and web-based courses.

Another interesting initiative promoted by the World Bank is the World Links for Development (WorLD) Program (www.worldbank.org/worldlinks).

Started in 1997, the initiative provides leadership, training resources and additional support for mobilizing equipment, capacity building, educational resources and school-to-school partnerships required to bring students in developing countries online and into the global community.

WorLD helps mobilize financing for technical and financial feasibilities studies, leading to the procurement and installation of necessary hardware and software for secondary schools in developing countries. Teachers, teacher trainers and students are trained in educational applications of information technology, as well as in the use and maintenance of the technology itself.

infoDev: A 'Pioneer' in ICT for Education

Since its creation infoDev has provided financial support to innovative projects applying ICT in education in developing countries. The current portfolio includes several approaches to different scenarios and many of them have successfully demonstrated a spectrum of possibilities for implementation in other scenarios and for scale up. However, taking into account that the existing gap is so wide, and the resources required imply deep and broad interventions and massive capital mobilization, we might wonder to what extent a relatively small program such as infoDev can contribute and make a difference in the education development agenda.

Over the last five years, in no sector like ICT for education, have pilot experimentation and demonstration initiatives proved to be so fundamental. At least three out of the thirteen education projects promoted by infoDev since 1996 - started as 'pilots' or 'feasibility studies' - have been scaled up or replicated.

The African Virtual University is not the only 'success story' in infoDev's track record in education project.

'Conexiones' is a project that was supported by infoDev in its pilot phase, and is now successfully transitioning into its expansion phase. Conexiones experimented with and evaluated new learning environments in basic education in Colombia. It aimed to foster the use of new pedagogical methodologies combined with low-cost technological solutions. The project was based upon the flexibility and adaptation of the curriculum, encouraging individual capabilities to reach group goals, teacher training, and community involvement.

To accomplish this goal, Conexiones deployed a pilot communications network linking a large number of public and private schools in urban and rural areas of the state of Antioquia in Colombia.

The project clearly demonstrated that the crucial ingredients for implementing tech-
Technology in education are human and institutional. The project was implemented by EAFIT University in partnership with several academic and private institutions, working very closely with rural and urban schools and education authorities. Conexiones developed a sustainable model for the development and integration of new learning environments supported by ICT in the classroom. It has been successfully adapted and replicated by other educational institutions in other Colombian states. The replication began successfully in eight schools in the region of Santander (Colombia). Today, there are students and teachers of more than one hundred schools interacting daily with the project, who receive training and advice in the technical, technological and pedagogical issues of the project so that teachers and students can perform their school activities. The project is now moving into a second phase where the same model is being extended to outreach the communities themselves where it has been implemented.

According to Rafael Hernandez - task manager of the Conexiones project - 'Conexiones is a clear and sound demonstration that with a combination of leadership, creativity, imagination, enthusiasm, low-cost technology, and more importantly, with the active participation of all the actors of the education process (teachers, students, parents, pedagogical researchers, and education authorities), it is possible to design, implement and sustain new learning environments tailored to match primary education needs of low-income communities living in very difficult conditions.' The Conexiones experience has been recognized nationally and internationally, and its model has been fully incorporated into a larger education development operation in Colombia, funded by a loan from the World Bank. (www.conexiones.eafit.edu.co/)

Another interesting project supported by infoDev in its pilot phase is the ‘Partnership for Technology in Basic Education’ project in Jamaica. This project tested the capacity to improve the quality of education in Jamaica through the introduction of computers. infoDev support was geared toward exploring how computational and communication technologies could best contribute to literacy learning in primary and secondary schools, and evaluating the outcomes for replication on a larger scale. The project has made an important contribution to understanding how to integrate computers into rural basic education in Jamaica.

Operational lessons from this project have proved to be useful to similar projects promoted in the region, including Trinidad, Barbados and El Salvador.

The Road Ahead
Despite the many efforts, technologies and resources, the battle for ‘education for all’ is far from being won. We may therefore expect that, at least over the next ten years, education will remain at the top of the global development agenda.

To the extent that growth can be accelerated by better education and ICT can substantially contribute to this agenda, infoDev believes that it has a relevant role to play - in the capturing and dissemination of best ICT for Education practices and the lessons learned by pilot initiatives around the world. Therefore, substantial efforts will be made to increase the development of best practices and the sharing of information among countries and institutions, and to promote national, regional and global partnerships in this field with a broader set of institutions both from developing and developed countries.

A school in India (Picture: The World Bank)
Mohsen Khalil on the World Bank Group ICT Strategy

Mohsen Khalil, Director of the Global ICT Department (GICT) of the World Bank Group, to tell us more about the strategy.

The World Bank's Board of Directors recently endorsed the ICT sector strategy paper, which was prepared by the GICT department. What is the 'vision' and what are the main development axes of the World Bank's ICT strategy?

The World Bank Board of Directors approved on September 6th, the new strategy paper for the ICT sector which in general has looked at the role the World Bank group will play in this sector. The main focus of the strategy is to help our member countries develop efficient information infrastructure as the basis for an information-based economy, enabling those countries to make ICT a powerful platform for development, in line with the World Bank mission.

The strategy focuses on four strategic directions. The first one is related to the need for any country to attract the required levels of investment and to move towards a well-regulated and well-managed ICT sector and create the appropriate enabling environments. For the World Bank group that would mean to continue to provide assistance in the form of advisory work to member countries on how to push a well-formulated sector reform agenda which may be conducive to the requested private investments.

The second strategic direction relates to improving and increasing access. Although over the last ten years the gap between the developed and the developing countries has decreased in terms of penetration of telephone lines — and to large extent due to the advent of cellular technologies — the truth of the matter is that in many countries there are serious shortages of access, not only to telephones, but also to networks that provide access to information. Any country that wants to compete in the global economy has to build an information-based economy, and access, in that respect, becomes an essential prerequisite for economic development.

The third strategic direction is supporting ICT human capacity for human development. ICT is a powerful enabling tool to foster entrepreneurship and realize the full potential of human intellectual capital in developing countries. This is something which is not necessarily the responsibility of one single department, but it is something that will have to be reflected in the future education programs of the WB.

The fourth strategic direction is towards ICT based applications. ICT in this case is a tool rather than the objective. There are many types of services today that are enabled by ICT, and which are improved by them in terms of quality, efficiency or of delivery reach.

As far as the focus of the strategy is concerned, the Global ICT department is mainly involved in the first two strategic directions. In supporting the governments, we will try to broaden our assistance to cover not only the traditional telecommunications agenda, but also the information agenda that can help develop the information-based economy. That is a major shift from what we have done in the past. We will also pay more attention to build up the institution capacity to regulate what has become a much more complex sector — with the mix of technologies that are in-
As regards the private investments part, our activity has increased but there remains a major deficiency in a large number of developing countries, and there we can play the role of catalyst to attract other private investments through the IFC.

The two other strategic components will remain the concern of the World Bank group as a whole, but will not necessarily be confined to any specific group. These are also much broader objectives which are longer term and require the involvement of a large number of constituencies including from outside of the World Bank Group.

Under the approved global strategy, we'll be able to look at the whole span of activities, and that will be a great advantage as opposed to the past, because we will be able to look at any specific country with respect to the ICT needs from both the public and private sector perspectives, as well as to approach them with a series of instruments which are becoming increasingly responsive to the needs.

The GICT department hosts two very different ‘souls' of the WB - the IBRD and the IFC - working respectively with governments and the private sector. How do these two components complement each other in the strategy, and what are the ‘practical implications' that you have to address in the everyday activity?

I think that its greatest value is with respect to our clients. This is a dynamic sector, and the policies have to address the interests of all stakeholders. This requires that the policymakers, the investors, the financiers, and the customers maintain a dialogue ensuring that the environment as a whole will address the concerns of all the stakeholders. In this respect any policy which has not achieved this balanced situation is not sustainable.

Under the integrated structure that we have, the idea is to foster an ongoing dialogue between the private arm and the public arm of the Bank services. In this particular sector we do hope to be able to link the two arms much closer together and to produce a better quality for our clients both in the public and in the private sectors.

The implications are quite evident: When we are providing policy advice, if our people are more sensitive to the interest and the concerns of the private sector, be it the investors or the financiers, we will be able to provide advice which is much more pragmatic and practical and which will create an environment that is conducive to private investment. On the other hand, when our people are looking at a certain investment from the private sector, they must be able to identify the policy or regulatory deficiencies that may exist, and which may affect the market scenario.

This type of integration in our department is allowing us to look at the needs of a given country through a more holistic approach, much more than we have done before, being aware that the public and the private sectors complement each other. I believe that in this sector, an integrated approach can be followed more easily, because in the ICT sector, and in particular in telecommunications, there is a broad consensus on the respective roles that should be played by the public and the private sectors. This is not so evident in other utilities.

There are limited situations nowadays in which investment from the government is required in telecommunications. This is also addressed in our strategy under the universal access theme, aimed to promote the creation of funds to support universal access through government intervention, where governments should provide minimum subsidies, but the private sector should play a role of owning and operating the companies that would provide access.

What role is played by infoDev in this context?

Although not a World Bank program per se, infoDev has a very important role to play in this equation. Within the department today we have the policy dimension for the creation of the ‘enabling environments' – which is very important; we have the investment side, which in many ways is commercially-based and emphasizes the
long-term sustainability of the operations; and then we have infoDev, which is a grant program which is an ‘incubator’, testing the ideas that can have the highest developmental impact, but may have a high-risk profile initially.

When we look at these three dimensions we can see clearly the synergies among them. We are beginning to bring the operations much closer, not from an organization point of view, as much as from the synergy point of view, to see how we can leverage one arm with the other arm.

infoDev is the vehicle which enables us to test many ideas that have great potential and strong developmental value. Some of these ideas may prove to have long-term financial viability, although at the beginning they need some seed capital. In such cases, we will be able to leverage the IFC side to continue to support such initiatives on a larger scale beyond the means of infoDev. Through infoDev, many countries may also be encouraged to test certain ideas with the use of ICT in specific applications, and if successful, possibly implement them by adopting the appropriate policies.

There is no doubt that the three components are related to each other and infoDev fits as an integral part of this triangular relationship.

Our objective, with the support of other donors, is to scale-up infoDev by leveraging the synergy and complementarities with the other World Bank Group public and private sector activities in ICT, under the integrated IFC/Bank structure of the Global ICT Department.

What are the main challenges regarding the implementation of the ICT strategy over the next years?

The ICT sector is extremely innovative and dynamic. People have recently been talking a great deal about the market ‘crash’. I believe this is only a financial measure. Even during the hype of the market, you would never measure the importance of ICT by the value of the stock market.

We have no doubt that ICT remains, regardless of what happens in the stock market, a very powerful enabling tool for development.

What has happened in the stock market – the rise as well as the ‘crash’ – has happened in a very dramatic manner. In the industry this trend has been smoother. What we are witnessing is a rationalization of the industry, something that we have already experienced in other industries before – maybe in a shorter period of time, in a more dramatic manner, but in no way different than any new technology industry over time. We remain very strong believers in the role of ICT and its potential for development.

For us the challenge is how to build up on our established track record in telecom and broaden our agenda towards the ‘broader’ information technology sector. In order to achieve this we need to develop our internal capacity in line with the development which takes place in the industry.

Another challenge is to be more responsive and innovative than we have traditionally been in the past. We can make a lot of difference by sharing information or by making quick interventions. At the same time we need to develop some more innovative instruments that are peculiar to the nature of the sector. The third challenge is to bring about a larger degree of synergy value among the various components of the department. We are making a full utilization of the instruments and of the capacity that we have at our disposal to deliver at better quality, but we also need to better learn from our experience, measure the impact that we make, and pass this know-how to our partners, and to our member countries.

Last but not least, this is an area to which so many players and organizations are venturing, and we need to develop partnerships in order to share the knowledge base that we are all creating. There is a huge space. I don't think any particular institution will ever be able to play a dominant role in it. As regards the World Bank group, we hope that we’ll continue to be a catalytic agent, helping energize and bring focus to the discussion on the use of ICT for development, as well as providing the advisory, grant, or investment interventions that are demanded.

We are experiencing a quite challenging and exciting agenda. If we were to measure the need for the World Bank by the growth in demand, we would be very encouraged because last year witnessed our largest growth of business across the department. In this context we are also beginning to see a resurgence for the interest in infoDev as a very effective platform which we can definitely use to launch new flagships initiatives around new themes needing particularly attention.
Proposals Review: Faster Processing, Lower Costs and More Transparency

infoDev recently transitioned to a new proposals review system, which was introduced last July for its first 'round' of evaluations. How does it work, and how effective did it prove to be during the trial?

Over the last few years, the issue of how to speed-up and improve the infoDev project evaluation process has been a theme of lively debate.

The program's donors, technical advisory panel, management, and proponents, all recognized that the process could be more efficient.

The evaluation process, which originally implied at least two external reviews and often also several requests of clarifications before final approval or rejection, was considered unsatisfactory by all parties involved. Proponents found the process too complex and lengthy, often involving proposal readjustments and intensive follow up. The process was also relatively costly and complex. The infoDev management decided to take steps to speed up grant allocation and disbursements.

In July 2001, it was decided that the transition from the previous 'two stage' evaluation to the new 'batch process' was ready to be implemented. All projects - totaling 145 - submitted since April 1, 2001 through June 1, 2001, were reviewed in one batch. The new process was designed to be more cost effective and faster, while also transparent and reliable.

The process was conducted in three steps. In the first stage, infoDev staff under the direction of the Work Program Administrator initially screened all proposals to eliminate those which were incomplete, those which were not sufficiently consonant with infoDev objectives or of sufficient quality to be competitive.

An external peer review was then organized for the evaluation of the remaining proposals. Five panels were assembled according to specific topic criteria. The peers selected are experts in the specific areas of the projects. Efforts were made to include reviewers from developing countries as well as to assure wide sectoral representation and gender balance. Peer review was conducted through in-person panel meetings in mid-July, with infoDev staff support. Each peer review meeting considered a set of related proposals, and identified the priority order among those proposals deemed worthy of funding.

Finally, a wrap-up session with the chairmen from each panel, assisted by three infoDev staff members who had attended all of the panel meetings, was held. The session reviewed the proposals recommended for approval or resubmission to identify the best projects, respecting the rank order within panels, but adding considerations of regional and topical balance.

At the end of the evaluation process, eighteen proposals were recommended for funding and ranked in order of priority. Based on the strategic direction

Some of the members of the infoDev committee at work. From left to right: Rafael Hernandez, Ellie Alavi, John Daly, Pamela Street and Louise Chamberlain.
of the program, available funding, and complementarities with the existing portfolio, twelve of these projects have subsequently been awarded grants.

At the end of the review process, John Daly, then acting Program Administrator commented, "In the past we were very lucky to complete a first stage review in two months, the communications with the proponents took longer, and it was a rare second stage review that was completed within the one month time specified in the contract; many second stage reviews lagged for many months. In this round two thirds of the proponents knew they were out of the running at the end of three weeks. In this case, the review process has been completed in seven weeks. Of course we have a lot of problems still to iron out for the next review processes, but I think we have made a good start."

It is also worth mentioning that the review panels generated a number of inputs regarding how to improve the proposals guidelines, as well as areas needing specific attention. Among these, projects addressing the needs of indigenous communities and of people with disabilities were considered particularly important for a program such as infoDev. Other topics, including e-government and telecom policy were also considered areas in which infoDev should be more active.

Building on the lessons learned during the first batch process, a new round is already under preparation, and will be announced in the near future. The announcement for the next round of proposal reviews can be found at: www.infodev.org/projects/review.htm

The Winners of the Evaluation Round

VITA Connect (Africa)

A Voice Portal for health (Latin America & the Caribbean)

Future Stations - stimulating economic integration of low-income populations via the internet (Latin America & the Caribbean)

Strengthening Women's Leadership in Community Development through Radiointernet in Brazil (Latin America & the Caribbean)

Using Satellite Technology to Disseminate Critical Knowledge Throughout Africa (Africa)

CDI International Expansion (Latin America & the Caribbean)

Implementation of OHADA.com: A Legal & Economic Internet Portal for Africa (Africa)


Empowerment Incubator for the Voluntary Sector In North Eastern India (South Asia)

OpenSchool: A collaboration platform for educational content development using "Open Source" principles (Africa)

School Governance Networks for Educational Improvement in Developing Countries - Gansu, China Pilot (East Asia)

Siberian Development Net: Russian regional approach to stimulating economic growth (Europe & Central Asia)
On a late afternoon in mid October in Montreal, Canada, a Dot Force meeting had taken place to discuss how to implement the 'Action Plan', endorsed by the G8 Heads of State, during the last G8 Summit in Genoa, Italy.

Around fifty people from at least eighteen different countries participated in the meeting, including eight representatives from developing countries. The discussion had been lively and creative.

During the meeting, it became evident that participants from the ‘South’ had very important messages and unique views about the digital divide. Yet in the global 'orchestra' of the discussion and due to severe time constraints their voice had sometimes not been loud enough.

The eXchange proposed a roundtable on the 'digital divide' exclusive to representatives from developing countries. It took place at the end of the main meeting. We were fortunate to find an empty conference room to use for our discussion. We began talking shyly until a couple of workers came into the conference room, and started hammering away and assembling furniture. This was when the voices of the members started to get louder and with that a very lively debate followed.

The roundtable was attended by eight representatives from seven different countries: Maria Ines Bastos from the Ministry of Science and Technology of Brazil, Rodrigo Arce from the 'Unidad de Fortalecimiento Informatico' of the Government of Bolivia, Muralikrishna Kumar, from the Ministry of Information Technology of India, Aizirman Djusan from the Ministry for Administrative Reforms of Indonesia, Ndeye Maimouna Diop, from the Government of Senegal, Mr. Phindile Dyani, from the Government of South Africa, Simbo Ntiro from KPMG in Tanzania, and David Sawe from the Government of Tanzania.

The discussion covered the several dimensions of the digital divide including topics such as e-learning, and the role of international cooperation - like the Dot Force - to bridge the divide.

Identifying ‘the demand’

All the members seemed to agree on the major components that can be identified as the priorities or prerequisites for success, beginning with awareness, consensus and leadership.

As Simbo Ntiro initially remarked, "The key prerequisite for ICT for use in development is to ensure that our political leaders are aware that ICT is in fact something that is useful to them. Second, an essential element is that the political leaders are ready and have the political will to deploy ICTs for development. Third, is the
capacity to apply knowledge and get real utility from the use of ICT. Without those three elements any strategy and plan are sure to fail, that is simply because without political leadership we have nothing.”

However, a ‘top down’ approach which starts from the establishment of an appropriate e-strategy in each country, must be culturally endorsed by the people, who will ultimately benefit from the implementation of such strategies. David Sawe observed, “One of the important things to remember in the digital divide agenda in any country, is the idea that ICT development has to begin with the people. Pushing technology on people and telling them ‘here is the equipment now get along with it’, will not work. You need to have the people concerned to demand the services that they can get from having the technical equipment available, and therefore you will have demand-oriented development as opposed to supply-oriented development. One of the things that has been particularly effective in the Dot Force process is that our team has agreed to the importance of being very careful between supply push and demand pull in ICT development.”

Muralikrishna Kumar from India remarked, “The demand should therefore be built within each country, complementing the sustainability component of an ICT program”.

On the other hand, raising awareness in people requires a minimum level of literacy and education, otherwise all efforts are bound to fail. In Senegal, for instance, as Maimouna Diop remarks, “A national e-strategy and a plan of action for the next five years have already been defined. In this plan we identified some priorities, including bringing ICT into our development agenda, forming an independent regulatory body, and also opening the market, to increase ICT access. However, our very top priority is to develop education and decrease illiteracy. Today over 57 per cent of the population is illiterate and this means that if we want to bring ICT to these people we have to assist them in becoming literate.”

Education as the most compelling ‘enabling’ factor

The mentioning of education by Maimouna diverted the discussion towards the theme of ICT for education. The lack of basic education in considerable segments of the population of developing countries is a serious issue in each of the countries represented in the debate. Moreover, difficult geographic situations may make education efforts extremely challenging in certain countries, as remarked Aizimar Djusan, “Distance education and e-learning may be extremely important in Indonesia, due to the large population and numerous islands that make up the country.”

Then, taken up by the liveliness of the discussion, Simbo Ntiro grabbed the microphone to highlight the role of telecenters in increasing access to education in developing countries. “To foster education I believe there is a very real possibility to deploy multifunctional telecenters – different types of learning with institutions such as open universities – as an alternative to other means of providing education. That education wouldn’t be limited to the academic, but it should also be vocational education, as related for example to agriculture, crop management, or medicine, and so forth. We have a large country with a challenging geography, making the roads difficult to build and maintain. There are also some areas that are isolated during the raining season, and because of that we cannot physically distribute the books to the schools. We could actually remove all those obstacles if we had regionally-based learning facilities. You can use the technology to overcome some of the physical barriers. I think we have to look at new methods to overcome our problems. Just to give an example, a few months ago the Open University of Tanzania has started an e-learning facility. Since that time, the demand
for the short-term courses, which are professionally-ori-
ented, is huge, and the courses are so cheap they aren't able to keep up with the demand. This is in Dar-es-Salaam, which is the commercial capital, imagine what the demand is outside of the capital. E-learning and e-ed-
ucation are actually underpinning the normal econom-
ic progress of the country, forget about the technology, it is just delivering capacity building services.”

Rodrigo Arce also highlighted some key issues which are observed in Bolivia, as well as in most develop-
ing countries. “Teachers need to be more qualified then they are now. If you put a teacher from my country in front of a computer, it is most likely that he/she will not know what to do with it. So you first have to train the teachers, in order that they may be able to instruct the students. In education as well as in other fields, however I believe there should be more knowledge sharing on successful projects and support for pilot projects which show the benefits of ICT for development, to demonstrate how technology can ease the burden of the poor.”

South-South Cooperation

The remarks made by Rodrigo Arce brought the dis-
cussion to several cases in which programs have failed. Simbo Ntiro observed, how-
ever, that experimentation, including the inevitable mistakes which it often implies, is essential to bring about knowledge and best practices. South-South dialogue is of utmost importance to dis-
seminate best practices, and avoid repeating the same mistakes. “The Jamaican model failed in its introd-
cutory phase, then got back up, then stumbled again, and now is able to better attend to school-online projects. This was brought about with the support of the community which has a responsibility on choosing the content of materials used to instruct and develop the student. The program also gives the parent oversight on the materi-
al used for the instruction and development of the student. How I know of this is because we have the great fortune of being in touch with the implemener of this project in Jamaica.” South-
South cooperation is important for achieving the com-
mon objectives of applying ICT for development. Maria Bastos remarked, “There is a lot that we can do for high level research and development through South-South dialogue”. Regional dimensions of the digital divide must also be addressed by implementing regional de-
velopment strategies. As Phindile Dyani said, “South Af-
rica cannot be an island of wealth surrounded by a sea of poverty. Our interest lies

in South Africa is for region-
al development because nation-
al strategies and region-
al development complement each other.”

The Dot Force and International Cooperation

The discussion had been going on for more than an hour, and everybody seemed still eager to share lessons learned about projects deployed at country level.

The final round of com-
ments regarding the motivation behind each participant in taking part in international cooperation initiatives such as the Dot Force. The members were asked how the themes discussed earlier that day would be brought back to their own countries, and how they judged the ef-
fort promoted by the Dot Force. The answer was unanimous: “The Dot Force as a process has its own val-
ue and it should remain.” Then one of the members added, “Why do I say that? Because we have the atten-
tion of the eight most indus-
trialized nations in the world.”
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infoDev is published as a quarterly electronic and printed newsletter by infoDev, the Information for Development Program, hosted by the Global Information and Communication Technologies Department of the World Bank Group. The Editorial Board of infoDev eXchange is chaired by the Program Manager of infoDev, Bruno Lanvin and includes the members of infoDev’s Technical Advisory Panel.

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