2. Afghanistan

The Islamic Republic of Afghanistan is located approximately in the center of Asia, bordered by Iran in the south and west, Pakistan in the south and east, Turkmenistan, Uzbekistan, and Tajikistan in the north, and China in the far north east.

It is spread over a region of 652,090 sq. km and has a population of around 27,145,000 with a population density of around 41.6 per sq. km. The city of Kabul is the capital of Afghanistan.

The economy of Afghanistan is recovering after the fall of the Taliban regime in 2001. There has been substantial development in the agriculture and service sector, which has contributed to the economic recovery of the country. The real GDP growth exceeded 7% in 2008; however, despite the growth the country is still poor and largely dependent on donors for foreign aid.

Some of the key demographic and economic indicators for Afghanistan are given as follows:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>27,145,000</td>
<td>2007</td>
</tr>
<tr>
<td>Gross domestic growth (million US $)</td>
<td>9,359</td>
<td>2007</td>
</tr>
<tr>
<td>GDP per capita (US $)</td>
<td>344.8</td>
<td>2007</td>
</tr>
<tr>
<td>Human development index ranking</td>
<td>181/182</td>
<td>2009</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>53%</td>
<td>2003</td>
</tr>
</tbody>
</table>

2.1. Background

During the reign of Mohammad Zahir Shah who ruled Afghanistan from 1933 to 1973, 90% of Afghanistan's population was literate. Following the overthrow of the Taliban in 2001, the Interim government received substantial international aid to restore the education system. The process of rebuilding the education system has been slow with continuing instability and the targeting of educational institutions by extremists.

In 2006, the estimated percentage of illiterate men was 57% and the same figure for women was 87. In 2008, around 800,000 new students were enrolled in schools in Afghanistan. About 40% of the newly enrolled students are girls. The total number of students has increased to 5.7 million of which 35% are girls. Still, half of Afghanistan's school-age children are estimated to be out of schools with significant gender and provincial disparities. The number of teachers has grown seven-fold but only 22% meet the minimum qualifications of grade 14 and only 28% are female teachers, located primarily in urban areas. In the last five years, curriculum development has concentrated on the first six years of school; however, there is no new curriculum for secondary schools. Although more than 3,500 schools have been built only 25% of schools have buildings. Thousands of communities have no easy access to schools. In 2006–07, education (primary and secondary) received 19% of the operating budget, 4.3% of the core development budget, and 7% of the total core and external, operating, and development budget.

With the reopening of Kabul University in 2002, some 24,000 students are enrolled in the University. In the early 2000s, the rehabilitation of five other universities progressed very slowly. Although seven universities were operating in 2007, only a total of 22,700 students were active in higher education.

Some of the key education indicators are shown as follows:

<table>
<thead>
<tr>
<th>Table 6: Education Indicators - Afghanistan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education parameter</strong></td>
</tr>
<tr>
<td>Adult literacy rate</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Youth literacy rate</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Gross enrollment ratio (%): Primary education</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Expenditure on education (% of GDP)</td>
</tr>
</tbody>
</table>

Source: [www.unicef.org](http://www.unicef.org); [www.cia.gov](http://www.cia.gov)

To develop ICT policy for the country, the Afghan government had been in consultation with the UNDP. The major objective of the policy had been to promote the overall development of the society and reap the benefits of ICT. Education has been recognized as an important aspect for social
development and one of the key focus areas to initiate educational and developmental programs was to set up adequate infrastructural facilities.

Afghanistan had an estimated 50,000 main line telephones and 600,000 cellular phones in 2004. Mobile phones were introduced in Afghanistan in 2001 and it became the principal means of communication very soon, which virtually stopped the expansion of main line telephone network. Around 3.2 million mobile phone subscriptions were active in 2006. By 2008 four mobile phone companies were operational. Plans call for the establishment of a unified countrywide mobile phone network based on code division multiple access technology, in cooperation with U.S. and Chinese companies.

The Afghan Aid Coordination Authority had been successful in providing proper Internet connectivity to major ministries and aid agencies; however, the cost of Internet service is high compared with other South Asian countries. The number of citizens with Internet connection has increased substantially from 2000 to 2008, multiplying an estimated 1,000 to 580,000.

Some of the key ICT indicators for Afghanistan are given as follows:

<table>
<thead>
<tr>
<th>ICT parameters</th>
<th>Value</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet users (per 100)</td>
<td>1.9</td>
<td>2008</td>
</tr>
<tr>
<td>Internet subscribers (per 100)</td>
<td>0.24</td>
<td>2008</td>
</tr>
<tr>
<td>Broadband subscribers (per 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile coverage (%)</td>
<td>72</td>
<td>2007</td>
</tr>
<tr>
<td>Mobile subscribers (per 100)</td>
<td>29.03</td>
<td>2007</td>
</tr>
<tr>
<td>Personal computers (per 100)</td>
<td>0.32</td>
<td>2006–2007</td>
</tr>
<tr>
<td>Internet affordability (US $/month)</td>
<td>24</td>
<td>2007</td>
</tr>
<tr>
<td>Mobile affordability (US$/month)</td>
<td>5.6</td>
<td>2007</td>
</tr>
<tr>
<td>Radio subscribers (per 1000)</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Households with TV (%)</td>
<td>6.2</td>
<td></td>
</tr>
</tbody>
</table>

Source: [www.itu.int](http://www.itu.int); [www.mdgs.un.org](http://www.mdgs.un.org); World Development Indicators Database; [www.cia.gov](http://www.cia.gov)

### 2.2. Policy Framework and Delivery Mechanism

The MoE has formulated a National Education Strategic Plan 2006–10, which outlines the vision for the education system in Afghanistan. ICT is recognized as an enabler of a social and economic discourse that works toward enhancing economic activities and promoting social welfare. The National Telecommunications Policy issued in July 2002 and Telecommunications Development Strategy issued in October 2002 are the two key ICT policies of Afghanistan.

The policies identified challenges, issues, and processes for developing and implementing a national ICT policy for Afghanistan. The policies highlight that ICT needs to be utilized in such a way that it enables Afghanistan to be a part of the global information society and at the same time preserve its rich historical and cultural heritage.
The successful implementation of ICT can help to promote national goals, achieve a tolerant socioeconomic atmosphere in Afghanistan. It can also support the governmental policies of rebuilding social welfare, generating employment, establishing a dynamic and growing private sector, eradicating poverty, and initiate programs and policies for the emancipation of the underprivileged groups. Building communications infrastructure has been the prerogative of these policies.

The need to establish ICT for the successful promotion of education was realized with the development of a draft ICT policy paper with the help of UNDP in the year 2003. The policy highlighted the fact that the scope of ICT is critical in countries like Afghanistan, which have a large section of the population living in rural areas, and a sizable segment of the population (including women) without access to education. The government has planned to take certain initiatives through the Ministry of Communication, in order to address these specific socioeconomic predicaments.

- Resources should be mobilized to purchase ICT equipment and educational materials. Technological connectivity and infrastructural facilities in educational institutes can be enhanced through the judicious utilization of the resources.
- The MoE should be assisted by the MoC to develop ICT curricula at both secondary and tertiary level in order to encourage and generate participation in courses like Computer science, multimedia, communications, and engineering.
- It is important to impart specific skills to the teachers and trainers in ICT-related subjects. The MOC should be supported for initiating such train-the-trainer programs.
- Opportunities for exposure to technology should be created for the students located in remote areas. Initiating Mobile Internet units to visit various schools, setting up networking academies that supports the institute to design, build and maintain computer networks, and developing telecenters that would remain operational during and after the school hours can act as an effective mechanism for enhancing technology specific skills for the students.
- Work toward the preparation and official international adoption of official computer-based fonts applicable to the educational and business languages of Afghanistan.
- To ensure the implementation of ICT at the administrative level it is important to cooperate with the public agencies, through which the civil servants can be trained in ICT skills and applications.
- Public access to information and opportunities can be enhanced through educational radio program; distribution of written materials where appropriate; and establishment of kiosks at public locations (such as airports, ministry departments, and so on).
- Mutually beneficial opportunities should be identified for both the public and private sector in order to utilize ICT as a tool for achieving developmental goals for the country.


### 2.3. Initiatives

To achieve the national ICT plans and strategies outlined in the National ICT Policy, the Ministry of Communication and Information Technology has taken an initiative to launch the National ICT
Council of Afghanistan (NICTA), which is responsible for coordinating national ICT initiatives and policies. The council will ensure close collaboration among the government, the private and not-for-profit organizations, the civil society, and more broadly the international community. The Government of Afghanistan as well as other international donors have taken up many initiatives to improve the quality of education through ICT; some major initiatives are outlined in the following:

**Afghanistan Higher Education Portal**

The Global Learning Portal (GLP) is an open source networking platform for teachers, institutions, and education activities throughout the world. In May 2009, they signed an MoU with the Afghanistan Ministry of Higher Education (MoHE) in an effort to empower teachers, learners, and communities to improve education access and quality. Under the MoU, GLP will empower the Afghanistan Higher Education Project (sponsored by USAID) by initiating the Afghanistan Higher Education Portal (HEP), which will provide technical assistance, learning resources, and networking tools for faculty members in Afghanistan. The Portal will be supported by faculty members from various institutes and will provide daily online discussions, facilitate exchange of information, and share workshop information and material. The portal has scope for English, Dari, and Pashto. It also supports various activities such as providing online forms, enhancing English language skills, and promoting initiatives of professional development.

**Educational Radio and Television**

Educational Radio and Television (ERTV) was established in 1969 under the MoE with a mandate of raising public awareness, raising adult literacy levels, and broadcasting educational programmes to schools. However, due to the Soviet invasion in 1989 it needed major restructuring and rebuilding. Therefore, in 2001, the MoE requested the support of UNESCO to rebuild ERTV and extend its reach to deprived sections of society as well. ERTV is now equipped with computers, television and radio production equipment, and Internet facility. The ERTV project, funded by the Italian government had handed over more than 80 pieces of educational equipments to provide a new studio to ERTV, in order to develop educational broadcasting in Afghanistan. In 2005, the project enabled a dedicated channel for educational broadcasting. In 2010, the Government of Italy and UNESCO decided on yet another project “Development of ERTV for audio-visual support to teacher-training in Afghanistan” to enhance distance learning through audio-visual programmes.

**Radio Education for Afghan Children**

Radio Education for Afghan Children (REACH) is an education initiative aimed at raising literacy levels of Afghan children who have been denied education due to conflict and war. The project is managed by the BBC Afghan Education Projects (BBC AEP) and funded by the UK Department of International Development, United Nations Children Fund (UNICEF), and the Canadian International Development Agency (CIDA). REACH focuses on broadcasting educational programs on the radio; these programs are not intended to replace formal schooling but educate the children on the “Afghan Life.” The programs are broadcasted on BBC World Service's Persian and Pashto Services six days a week. One of the most popular soap opera broadcasted is “New home new life,”
which intermingles basic information with attractive story lines. Other programs include imaginative stories, riddles, numeracy games, and advice for teenagers on various issues.

**Multipurpose Community Telecenters**

In order to ensure equitable ICT access to the rural and urban communities, the Government of Afghanistan in collaboration with the Government of India, International Telecommunication Union (ITU), and Universal Postal Union upgraded post offices in 12 provinces in Afghanistan to enable them to act as Multipurpose Community Telecentres (MCT) offering a variety of ICT services. These centers are equipped with computers, printers, modems, and generators and are interconnected through the existing Government Communication Network (GCN) to facilitate data exchange. The center will also provide advice on how to use the products, access to experts and consultants, current information from colleges and universities, training, and information databases. One of the key objectives of this initiative is to work toward the dissemination of information. It will also work as a platform for exchanging information and best practices. Setting up social networks is an innovative way of deploying knowledge and education. This has a larger reach for the poor and deprived, who can have easy access to Internet education through such a community-based set up.

**One Laptop per Child**

The One Laptop per Child (OLPC) project was launched in Afghanistan in 2008 through a PPP model involving the MoE, MoCIT, USAID’s Afghanistan Small and Medium Enterprise Development (ASMED) and telecom development company – Roshan. Under the first phase of the project, XO laptops were distributed to students of select schools. Teachers from these schools also received the laptops along with a four day training programme. Each XO laptop was pre-installed with the standard national curriculum books along with other manuals, guides, health information, local directory and so on. The laptops also have access to word processor, email and internet browser. All the core activities on the laptop can be accessed through both the national languages – Dari and Pashto. Till 2009, 396 laptops were distributed to Istiqlal High School in Jalalabad covering grades IV to VI.

The project is now on the second phase under which four schools (including two ‘all girl schools’) in Kabul will be equipped with a total of 2000 XO laptops. OLPC Afghanistan has also collaborated with Master Teachers by Satellite for Afghanistan (MTSA) and Afghan Film to develop educational games for the XO laptop. The game will focus on literacy and numeracy in the first phase.

**Teacher Training programs**

The introduction of ICT into teacher’s training program had been one of the key drivers for the successful implementation of ICT in the educational blueprint. Training the teachers is a cornerstone for bringing a revolutionary change in the education system. Various teachers training program had been organized in order to meet the growing demand of technically skilled faculty to facilitate a modern and updated delivery mode of learning. Crash courses are held on a regular basis for the trainers. With the effective establishment of HEP, the trainers can join the forum and
share their thoughts. Collaborative online training for the teachers is also organized, so that the trainers are competent enough to use ICT in classrooms. Workshops are held in order to discuss various pedagogical matters to ensure effective implementation of ICT. Multimodal training is enhanced through such trainings. Some of the major teacher training projects in Afghanistan are highlighted as follows:

- The ICT Capacity Building Project (Phase II) with the help of UNDP and MoCIT aims at building advanced ICT capacity in the country. The CISCO networking Academy program is a key venture of this project, which will enable students to benefit from educational opportunities and streamline the ICT initiatives. This included establishment of testing centers in educational institutions and enhanced participation of students through enrollment in various ICT-enabled workshops. The academies are driving their initiatives to address the problem of a huge gender and digital gulf by upgrading the female participation rate in educational programs.
- Denmark is providing support in restructuring and developing the primary education subsector in Afghanistan. The Danish International Development Agency, DANIDA’s support will focus on teacher development and training programs, curriculum restructuring and providing physical infrastructure, rehabilitation and construction of schools and development of school mapping.
- Microsoft’s Unlimited Potential program with support from UNDP aims at providing computer skills and education to the lowest strata of the society. Through the train-the-trainer program under the Microsoft Unlimited Potential program, basic curriculum support and training has been provided for the Community Technology and Learning Centers (CTLCs).

Role of NGOs in bringing educational reform:

Various NGOs had worked toward the restructuring of the Afghan education system through the implementation of ICT policies. Few among them are the University of Afghanistan, Afghan American University, Kardan University, Bakhtar University, Aryana University, Afghan Pooshesh Training Institute, and ICT Institute (ICTI) Kabul. Different Learning centers had been set up in order to provide multimodal education.

The Afghan Institute of Learning is a women-led NGO that uses a various interactive and creative pedagogical strategies to meet the health and education needs of Afghan women, children, and communities and provides ICT training at its IT centers.

The Afghan School Project is a group of Canadian and Afghan volunteers working to provide funding and support to education in Afghanistan. The focus of this group is on educating women and creating employment opportunities for them.

1.4. Constraints

If we look at the ICT sector, particularly its use in the improvement of education, a lot of gaps can be seen which needs to be filled by initiatives from the government and the private sector. Some of the
potential challenges faced by the government in integrating ICT in education are outlined as follows:

**Lack of Infrastructure:** The key constraint of the current education system is the lack of infrastructure such as buildings and qualified teachers. A large number of schools were destroyed during the war and a number of qualified teachers fled the country, took jobs outside of education, worked in refugee camps or have been killed. In 2003 it was estimated that 4,350 new teachers need to be recruited and trained each year to achieve an enrolment rate of 85% within 10 years (ADB). The cost involved in such an expansion can be overwhelming for an economy like Afghanistan.

**High Cost of Internet:** Under the Taliban Internet was banned; even though efforts were made to establish proper Internet connectivity after the overthrow of the Taliban regime, the price of Internet services remains high and accessible to only a small section of the population.

**Linguistic Constraints:** To increase the familiarity and awareness of ICT in the general population, the government will either have to ensure that people are able to understand and manipulate information available in the English language or provide them information in their local languages. This could prove to be extremely costly and tedious as new software will have to be developed for the two common mother tongues spoken by the people in Afghanistan.

**ICT Literacy at Administration Level:** The lack of capable and ICT literate administrators who can monitor the rebuilding initiatives of international donor organizations and governments is a serious concern. It is important for the people in the administration level to be proficient enough to participate and provide input as well as manage the necessary groundwork and field reports. The capacity building in ICT will ensure a streamlined and efficient way of managing the ICT initiatives.

1.5. Insights

Afghanistan has been subjected to 23 years of civil war and political and social instability. Innovative and cost-effective methods will need to be employed for economic and social restructuring; the use of ICT can therefore be a critical factor in ensuring that the country’s workforce is skilled and prepared to meet the challenges of such a reformation. To build an ICT-based society donor agencies, the government will need to focus their efforts in re-building the IT and Telecom infrastructure destroyed due to the war. Efforts will need to be made in terms of human resource development, particularly providing trained teachers, otherwise the large amount of money spent on building the infrastructure will not find optimal use.

In case of Afghanistan, role of multilateral and bilateral agencies such as the World Bank, Asian Developmental Bank (ADB), UNESCO, UNDP, SIDA CIDA, USAID, the British Council, and international NGOs is considered very important. An effective collaboration among these agencies can help in developing local/regional networks of education supported by appropriate technologies including ICT to address local and regional requirements in terms of capacity building and implementation of actual programs. These agencies can effectively use their links in regional
countries to establish collaboration in the areas of curriculum and textbook sharing as well as in teacher training. Content development is another focus area that needs to be addressed; software should support the use of Dari and Pashtu languages.

Much of the efforts of various agencies has gone on radio and print-based distance education in an attempt to improve literacy levels among the large segments of the population who are educationally disadvantaged (rural population and females). While this may be of great value to Afghanistan given the shortage of trained teachers, it cannot be a permanent solution; other more interactive and effective ICT forms such as the Internet will need to be explored eventually. Proper policy planning and implementation and an effective streamlining of the communication system can bring about effective changes in ICT implementation in the country.
2.6. Select Bibliography


Links to Initiatives

**Government Links**


**Private Companies**


**Non Government Organizations**


**Other Important Links**

- One Laptop per Child, Afghanistan: [www.wiki.laptop.org/go/OLPC_Afghanistan](http://www.wiki.laptop.org/go/OLPC_Afghanistan); [www.olpc.af/](http://www.olpc.af/)