

## ICT in Education in Algeria

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Source: World Fact Book<sup>1</sup>

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## Overview

Algeria is encouraging and fostering the use of ICT to enhance the development process in general and the development of the educational system in particular, paving the road for an ICT policy framework along with an implementation strategy.

The government has placed weight on the development of ICT-related human resources. In light of the globally emerging knowledge and information society, Algeria has formed a committee in charge of defining the elements of an Algerian national information society strategy. It is anticipated that the committee will work on creating synergies among the different sectors in the area of infrastructure, training, and research as well as information systems and ICTs. The committee will identify a national ICT working group, which will be charged with formulating short-, medium-, and long-term action plans for ICT.

## Country Profile

Algeria is a gateway between Africa and Europe. It is sometimes called the ‘land of the million martyrs’, as over a million Algerians were killed in the fight against France for independence, which it eventually achieved in 1962. Algeria has also faced internal unrest and instability caused by Islamic militants. The government is currently pursuing a variety of development programmes to better participate in the increasingly globalized knowledge economy.

The fruits of Tunisia’s educational reform process are reflected in growing numbers of children attending school. As is the case in many developing countries, Algeria is experiencing a continuing population shift from rural to urban.

Table 1 provides some selected socio-economic indicators for the country.<sup>2</sup>

**Table 1: Socio-economic Indicators: Algeria**

Indicator	
Religions	Sunni Muslim (state religion) 99%; Christian and Jewish 1%
Languages	Arabic (official), French, Berber dialects
Population	32.9 million (July 2006 est.)
Population growth rate	1.22% (2006 est.)
Literacy	Male: 78.8% Female: 61% Total population: 70% (2003 est.)
GDP	\$92.22 billion (2006 est.)
GDP per capita	\$7,700 (2006 est.)
Unemployment rate	15.7% (2006 est.)

## The Education System

The Arabian Campus Web site describes the Algeria education system as follows:<sup>3</sup>

Primary education is mandatory and lasts for nine years (École fondamentale). Secondary education is compulsory and consists of a three-year cycle of study provided in secondary schools and technicums. There are three branches of secondary education: general, specialized, and technical/vocational. Students in general secondary and specialized secondary education study for three years and sit for the Baccalauréat examination. Successful students are awarded the Baccalauréat de l'Enseignement secondaire in one of the various streams offered. The Baccalauréat gives access to higher education but some institutions require it to be of a certain type (science, arts, etc.). The objective of technical and vocational secondary education is to prepare students for active life and industry (technicians and qualified workers). Studies last between one and four years, according to the type of training undertaken and can also lead to higher education.

Higher education is provided by universities, specialized institutes, national institutes of higher education, and teacher training institutes, which fall under the responsibility of the Ministry of Higher Education and Scientific Research, as well as by institutes run by other ministries. The specific degrees awarded are determined by the field of study, not the institution. The Ministry of Higher Education approves the curriculum, which is standardized for each field of study. Algerian institutions also award graduate degrees (Diplômes de Postgraduation) in most fields in which a Licence or DES is awarded.

Table 2 provides a quantitative picture of participation in the system.<sup>4</sup>

**Table 2: Selected Education Data**

Indicator	2000	2005
Primary school enrolment (% gross)*	107.7	111.8
Primary completion rate (% of relevant age group)	82.5	95.8
Secondary school enrolment (% of gross)*	107.7	83.1
Tertiary school enrolment (% of gross)*	107.7	20.3
Ratio of girls to boys in primary and secondary (%)**	94.4	102.1

\*Percent of gross is the number enrolled as a percentage of the number in the eligible age group.

\*\*Ratio of girls to boys is the percentage of girls to boys enrolled at primary and secondary levels in public and private schools.

## ICT Policies

The Algerian government has mandated the Ministry of Post and IT to implement and manage the national ICT policy.<sup>5</sup> At the same time the government has also initiated

collaboration with a number of international agencies to enhance the ICT status in the country. In 2002 the World Bank also co-operated with the ministry to develop and implement projects for the creation of the enabling environment and improving access to ICT while making it affordable for all.

Table 3 provides a snapshot of the state of national ICT infrastructure in Algeria.

**Table 3: ICT in Algeria<sup>6</sup>**

Indicator	
Telephone – main lines in use	2.572 million (2005)
Telephones –_mobile cellular	13.661 million (2005)
Radio broadcast stations	AM 25; FM 1; shortwave 8 (1999)
Television broadcast stations	46 (plus 216 repeaters) (1995)
Internet users	1.92 million (2005)

The level of ICT integration is still ongoing and at an early stage. The programme aiming at providing access to ICT through the Computer for Every Home Initiative was launched in 2003.

Some forms of media, such as radio and television, have achieved high penetration rates. Mobile phones are commonplace and the number of Internet users is increasing rapidly due to the number of Internet cafés, shops, and access centres that are available – particularly in urban areas.

In 2000 a regulatory law was passed where the old public institution in charge of national telecom was split into two commercial organisations and two operators emerged: Algeria Poste and Algeria Telecom. The law also created an independent regulatory authority of posts and telecommunication. Currently there are three operators:

- Algerie Telecom (mobile and fixed lines)
- Orascom (Djzzy and Lacom for fixed lines)
- Alwatanya (Nedjma and Internet access with mobile phones)

To facilitate the entry of Algeria into the information society, the following national ICT initiatives have been designed:<sup>7</sup>

- The project of the Ministry of Education to equip all schools with computers by 2005
- The distance education project
- The virtual university project
- The research network to be put in place by the Ministry of Higher Education and Scientific Research

- The health network developed and maintained by the National Health Development Agency (ANDS)
- The Djaweb Internet platform

### **ICT environment in education**

The government is committed to set forth a policy for the integration of ICT within the educational system. The reform of the educational process and inclusion of ICT with a set structure was formally included in the country's formal ICT policy in June 2002 with an allocation of three billion dinar.

The Ministry of Education is working on building the infrastructure for enabling the ICT environment. All secondary schools were equipped with computer labs (15 computers: 10 for students, five for teachers) connected to the Internet through ADSL, and 30% of this foundation had Internet access via cable modem. Half of the middle schools have adopted ICT as an integral part of the educational programme.

In the case of the primary schools, the ICT policy remains limited to the administrative process and teacher training. The existence of computer labs at primary schools remains subject to local contributions and donations by parents and community members.

All universities have computer labs and Internet access for faculty, students, and administration in addition to the availability of digital libraries. Each university has its own ICT policy to accelerate the educational process and offer better learning opportunities in virtual universities and with distance and open learning.

Within the framework of enhancing the level of ICT penetration and usage in education, the government has signed a number of agreements with international organisations. For example, UNESCO is undertaking a number of initiatives for the proper integration of ICT in the Algerian education system, and the Japanese government has provided funding for teacher-training programmes totaling to USD\$750,000.

There are a number of initiatives that have been adopted in an attempt to improve the quality of teaching and learning. The related strategies, under the heading of e-learning, were set forth to:

- Promote the development of e-learning resources
- Facilitate public-private partnerships to mobilise resources in order to support e-learning initiatives
- Promote the development of integrated e-learning curriculum to support ICT in education
- Promote distance education and virtual institutions, particularly in higher education and training
- Promote the establishment of a national ICT centre of excellence
- Provide affordable infrastructure to facilitate dissemination of knowledge and skill through e-learning platforms

- Promote the development of content to address the educational needs of primary, secondary, and tertiary institutions
- Create awareness of the opportunities offered by ICT as an educational tool to the education sector
- Facilitate sharing of e-learning resources between institutions
- Integrate e-learning resources with other existing resources

### **Curriculum and textbooks**

In Algeria all education institutions deliver the same ICT curriculum as designed by the Ministry of Education. However the plan is to integrate ICT within the different subject matters to enhance learning and education. It therefore becomes a process of learning through the use of ICT rather than learning about the technology.

### **Training professionals on teaching and usage of ICT**

In Algeria the programme of ICT training for teachers has been limited to basic information, with most receiving 30-60 hours of training. Although 100% of secondary teachers and 60% of middle school teachers received the basic ICT training, this has to date very little impact on the quality or method of delivery of education in the classroom.

Major training components:

- *Basic ICT training*: basic operations, Windows-based software, e-mail, and Internet
- *Intermediate training*: classroom applications, Internet for teaching, and e-mail as a medium for communication and collaboration
- *Advanced training*: development and creation of educational software, on-line classes, telecommunication, e-mailing, development of interactive Web sites, production of multimedia presentations, producing creative work

## **Current ICT Initiatives and Projects**

Algeria has placed considerable emphasis on the importance of developing a national ICT strategy for education and training. The Ministry of Education has taken steps to support the implementation of the strategy either by direct action or through the various institutions and agencies that partners with the ministry, such as UNESCO, the EU, and different UN agencies.

Approximately USD\$130 million was allocated for the creation of a technology park at Sidi Abdallah, 30 kilometres from Algiers. The park (or IT City) is foreseen to facilitate Algeria's entry into the information society, and a number of ICT initiatives have been designed:

- **Technopole of Sidi Abdallah** comprises three major technology parks and an industrial park with the aim of providing the space for technology firms and fostering the growth in ICT sector while encouraging local, international, private, and public investment in the field of ICT.

- **Net Enterprise** is a project to support the new ICT companies and ensure their growth and sustainability.
- **Technobridge Incubator** supports research and development in the field of ICT, supports ICT start ups, provides institutional support and development to existing businesses with clear coherent operational and growth visions, and provides support to Institut National des Telecommunications (INT) and the École Centrale de Postes et Telecommunications for renewing curricula on ICT management and cyber entrepreneurship.

## Implementing ICT in Education: What Helps and What Hinders?

Table 4 lists the core factors and provides a summary of the current stage of development in Algeria in terms of enabling or constraining ICT applications in the education system.

**Table 4: Factors Influencing ICT Adoption**

<b>Factors</b>	<b>Enabling Features</b>	<b>Constraining Features</b>
<i>Policy framework</i>	A national ICT policy for educational development was set forth in 2002. The government has adopted ICT in all domains, particularly the education sector, as an integral part of the development process.	The policy for ICT exists, but to be successfully implemented it needs strong infrastructure and resources. Vast areas of Algeria are still lagging behind in basic needs.
<i>Infrastructure and access</i>		Algeria faces problems of poor infrastructure and connectivity issues.
<i>Availability of appropriate learning materials</i>	The development and provision of tools and learning material are at the heart of the policy of ICT for educational development.	There are not enough appropriate learning materials.
<i>Rural/urban divisions</i>	A major concern of the national ICT policy is provision of access and connectivity to all areas of the country.	Few schools and even fewer universities and higher institutions are available in rural communities.
<i>Gender equity</i>	A number of development projects, especially non-formal education programmes, are directed towards females being part of the underserved population.	In general, the level of illiteracy is higher among females and this is reflected in their access to ICT as well as training and skills.
<i>Human resource development</i>		The multilingual base in Algeria poses a major hurdle to unifying or implementing programmes at a large scale. Professional development

		programmes and teacher training is still limited to basic ICT training with no connection or relevance to integration into the educational process. Professional development and ICT programmes lack connection with content and curriculum development in a manner that allows for proper implementation of reform. The disconnection among the different development programmes impedes proper impact and progress.
<b>Sustainability</b>	The political arena has stabilised somewhat in Algeria, thus setting the grounds for proper implementation of the development programmes and allowing for a more sustained reform effort. The political stability leading into economic reform allows for attracting investment and support locally and internationally.	Several projects and initiatives have been underway, but due to the obstacles posed by the political unrest, many of them have been discontinued.

## Notes

1 The World Fact Book <https://www.cia.gov/cia/publications/factbook/>

2 Ibid.

3 Study in Algeria-Education System. Arabian Campus;  
<http://www.arabiancampus.com/studyinalgeria/edusys.htm>

4 World Development Indicators 2006. The World Bank.  
<http://devdata.worldbank.org/external/CPProfile.asp?PTYPE=CP&CCODE=DZA>

5 Algeria. The United Nations Economic Commission for Africa (UNECA).  
<http://www.uneca.org/aisi/nici/Algeria/algeria.htm>

6 The World Factbook 2007. <https://www.cia.gov/library/publications/the-world-factbook/geos/ag.html>

7 Contribution de l'Algérie à la réunion préparatoire africaine du Sommet mondial de la Société de l'information, Bamako, du 28 au 30 mai 2002

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