2010 Global Symposium on ICT in Education
The Development of ICT in Education Agencies

NAJAH
ICT in the middle of reform

November 3, 2010
1. Kingdom of Morocco
2. Education System Characteristics
3. Emergency Program NAJAH 2009-2012
4. Structure of ICT in Ministry
5. Highlight ICT projects in education & Partnership
6. Challenges
7. Conclusion
Kingdom of Morocco

- Located in northwest of Africa on the Atlantic Ocean and the Mediterranean sea.
- The kingdom's capital is Rabat.
- Area: 740,000 Km²
- Population: 30 millions.
- Official language: Arabic
Morocco’s education system consists of:

- 6 years of primary,
- 3 years of intermediate school,
- 3 years of upper secondary,
- a tertiary education.
Education System Characteristics

- The MOE decentralized its functions to regional levels in 1999.
- 16 regional administrative units
- 80 provincial administrative units
- 9799 schools
- 13400 satellite-schools
## Education System Characteristics

### Students

<table>
<thead>
<tr>
<th></th>
<th>Middle</th>
<th>primary</th>
<th>Collegial Secondary</th>
<th>qualifying Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban</strong></td>
<td></td>
<td>1.970.568</td>
<td>1.114.605</td>
<td>767.074</td>
<td>3.852.247</td>
</tr>
<tr>
<td><strong>Rural</strong></td>
<td></td>
<td>2.057.109</td>
<td>437.771</td>
<td>98.720</td>
<td>2.593.600</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>4.027.677</td>
<td>1.552.376</td>
<td>865.794</td>
<td>6.445.847</td>
</tr>
</tbody>
</table>

- **6-11 years**:
  - 2007-2008: 91.4%
  - 2008-2009: 94.9%

- **12-15 years**:
  - 2007-2008: 71.3%
  - 2008-2009: 75.4%

- **16-18 years**:
  - 2007-2008: 48.1%
  - 2008-2009: 50.4%

- **Urban** vs. **Rural**
  - Urban: 60%
  - Rural: 40%

- **Primary** vs. **Secondary**
  - Primary: 63%
  - Secondary: 24%
  - Secondary qualifying: 13%

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*Note: Data and percentages are illustrative and not actual figures.*
## Education System Characteristics
### Teachers

<table>
<thead>
<tr>
<th></th>
<th>Middle</th>
<th>primary</th>
<th>Collegial Secondary</th>
<th>qualifying Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbain</td>
<td>50.332</td>
<td>39.999</td>
<td>32.014</td>
<td>122.345</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>74.946</td>
<td>15.108</td>
<td>4.589</td>
<td>94.643</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>125.28</td>
<td>55.107</td>
<td>36.603</td>
<td>216.988</td>
<td></td>
</tr>
</tbody>
</table>

- **Urbain**: 58%
- **Rural**: 44%

**Graphique 13**: Évolution des taux d'encadrement : avec et sans optimisation

- **Primaire sans optimisation**: 20.8%
- **Secondaire collégial sans Optimisation**: 26.8%
- **Secondaire qualifiant sans Optimisation**: 29.6%

**Ministère de l’Éducation Nationale de l’Enseignement Supérieur de la Formation des Cadres et de la Recherche Scientifique**
Reform Moroccan Education system

► Education and training constitute a major stake for the development of our country. So it was solemnly set up in second national priority after the territorial integrity.

► Thus since 1999 Morocco worked out a charter for the reform of the education system which profited from a national consensus. Its implementation started in 2000.

► In 2009, the king, gave the kickoff to emergency program NAJAH to accelerate the implementation of the reform.

► The emergency Program 2009-2012 is organized around a principle guiding: Place student it in the middle of the System of Education.

► The emergency program adopts management by project, 27 projects was identified, planned and budgeted for.
Program NAJAH 2009-2012

- Percentage of Government expenditure for education increases over 28%
- Global budget increases twofold after introduction of NAJAH 5 (emergency program)
Integration **ICT** into teaching is one of the important focus of the **educational reform**. It supported by the **highest political makers** as well as the **collaboration of selected business leaders**.

**Percentage of budget dedicated to ICT in MOE**

- 2007: 16%
- 2008: 19%
- 2009: 22%

**Other funds**
- Universal Service Fund (USF)
- National Fund to Develop ICT
- Donations of associations or international partners

NB: Without including salaries

- Total government expenditure on education
- Total government expenditure on ICTs in education
2 Structure of ICT and 2 projects

Minister

General Secretary

General Direction of curriculum

DPG

E1P10 : GENIE

……

General Direction of Development

DSI

……

……

E3P5 : EMIS & Infrastructure
EMIS: Educational Management Information System & Infrastructure

Project E3P5

- Information system strategic plan
- Information system for management
- Development of the capacities
- Improvement of connectivity
- Equipment
- Services and led change
Highlight E3P5 project: Infrastructure

- **WAN National**: A protected national data-processing network via VPN-MPLS of a national provider
- **DATACENTRE**: Equipment and installation
- **SIAS**: Equipment of the school by KIT 3G + laptops
- **NAFIDA**: Subsidize equipment for teachers and the Ministry personnel
- **TAALIM.MA**: Live@Edu from Microsoft: platform of mail for the teachers, and the pupils
Highlight projects E3P5 : SIE

EMIS : Educational Management Information System
Headlights projects E3P5 : SIE
SIE and the Integration of Information System

Ressources Humaines
- MASIRH
- GPEEC
- Mouvement
- PSTS

Gestion financière et comptable
- VECTIS
- PRAXIS

Planification et Pilotage
- ESISE
- CARSCO
- CARPRO
- Réf-Elève
- CCT

Examens
- SAGE
- Demat - Examens
## ICT Indicators (Information System)

<table>
<thead>
<tr>
<th></th>
<th>Schools</th>
<th>Provincial administration</th>
<th>Regional Administration</th>
<th>Central Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web a</td>
<td></td>
<td></td>
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<tr>
<td>Security</td>
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<tr>
<td>Mail (official)</td>
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<td></td>
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<tr>
<td>Web Site</td>
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<tr>
<td>Organization IT</td>
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<tr>
<td>Rate of framing</td>
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<tr>
<td>Given Training for Specialist</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Given Training for users</td>
<td></td>
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</tbody>
</table>

**Legend**
- **Good**
- **Middle**
- **Weak**
E1.P10 : ICT in Pedagogy

GENIE Program
Project: GENIE

- Equipment
- Training
- Conduct change
- Content
# Project: GENIE

<table>
<thead>
<tr>
<th>Areas Focuses</th>
<th>Achievement</th>
<th>Partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>• 2046 SMM, 1000 ClassMate, 1000 VMM&lt;br&gt;• Teachers using SMM: 20% (potentialy)&lt;br&gt;• Students using SMM: 18%&lt;br&gt;• SMM connected to the Internet: 84% With filter and control system.&lt;br&gt;• Cover rural schools: 30%</td>
<td>➢ FSU (20% budget GENIE)&lt;br&gt;➢ INTEL (ClassMate PC)&lt;br&gt;➢ Associations (VMM)</td>
</tr>
<tr>
<td>Content</td>
<td>Acquisition of the NR priority: 51696 licences with 48% of Rate of deployment.&lt;br&gt;Installation of the LNRN (Certification, acquisition, production, Survey, Training and diffusion.&lt;br&gt;Educational TV channel&lt;br&gt;Portail TICE (Project not achieved)</td>
<td>➢ KOICA: CITI (2006)&lt;br&gt;➢ INTEL: (SKOOL)</td>
</tr>
<tr>
<td>Training</td>
<td>52,600 trained teachers (40%)&lt;br&gt;2671 trained Inspectors&lt;br&gt;99 CF equipped into 119 SMM&lt;br&gt;Installation of CMCF-TICE</td>
<td>➢ KOICA: CMCF TICE&lt;br&gt;➢ INTEL: ISEF &amp; others&lt;br&gt;➢ UNESCO: Reference frame of competence ICT CST:</td>
</tr>
<tr>
<td>Development of use</td>
<td>3 National Forums&lt;br&gt;30 APAR&lt;br&gt;300 teachers given awareness&lt;br&gt;400 master trainers in the network</td>
<td>Microsoft (Forum of the innovating teachers)</td>
</tr>
<tr>
<td>Awareness program,</td>
<td></td>
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<tr>
<td>communication,</td>
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<tr>
<td>Sharing best</td>
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<tr>
<td>practices, Following</td>
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<td>and valuating</td>
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GENIE New Stratégie 2009-2013

**LYCÉES**
- 2009: 434 Lycées (VMM)
- 2010: 434 Lycées (SMM fixe)
- 2011: 304 Lycées G1 (VMM)
- 2012: 10 Lycées (SMM mobile)
- 2013: 10 Lycées (SMM mobile)

**COLLEGES**
- 2009: 70 Ecoles (2 PC/Salle)
- 2010: 998 Collèges (VMM)
- 2011: 521 Collèges G1 (VMM)
- 2012: 10 Collèges (SMM mobile)

**PRIMAIRE**
- 2009: 30 Écoles (5 PC/Salle)
- 2010: 100 Écoles (VMM)
- 2011: 300 Écoles G1 (VMM)
- 2012: 300 Écoles (PC/Salle)

**TOTAL**
- 2009: 838 établissements
- 2010: 219 établissements
- 2011: 2103 établissements
- 2012: 2100 établissements
- 2013: 2100 établissements

**Opérationnalisation**
- 2009: 2119 établissements
- 2010: 838 établissements
- 2011: 2103 établissements
- 2012: 2100 établissements
- 2013: 2100 établissements

**Total Budget :** 1 172 M Dh
**Total schools :** 9960
Morocco shows a great will to integrate ICT into schools as regards of the projects launched and the budget allocated. The new strategy of integrating ICT try to respect best practices. However, We are faced with many challenges:

**EMIS**
- Integrating different management systems
- Lack of standardization of concepts

**GENIE**
- Weakness in using SMM (30%) – develop local lead of the project.
- Develop specific contents and needs of diversify ways to introduce ICT in education.
- Need to accelerate the rate of trainings.
- Need to develop ICT curriculum

**Infrastructure**
- Limited bandwidth of educational network and high cost of communication will not support increase usage in ICT
- Weakness of security and connectivity in schools
- Lack in local qualified ICT personnel
conclusions

**Government:**
- Reduce the cost incurred by service provider to keep Educational Network
- Establish perennial investment in ICT with PPP (private public partnership)
- Drain funds to accelerate the rate of procurement of equipment
- Establish a good ICT governance
- Ensuring ICT agencies and Training Agencies committed to bring projects to full potential

**Focus area in partnership:**
- Aid to develop vision and economic model for PPP;
- Share best practices and standards in introducing ICT in Education;
- Knowledge Management Transfer in technical deals (security, network administration..)
- Aid to develop ability of ICT agencies
Thank you
CMCF Missions - TICE

2 goals

1. Training for the educative community in order to develop and use pedagogic scenarios in teaching, integrating the ICT and adapting curricula

2. Encourage production of content for pedagogic uses
CMCF-TICE curricula

Module 1
Teaching bases of the training (Theories of the training & approaches teaching)

Module 2
Design and uses of scenarios teaching integrating the ICT in Education

Module 3
Teaching design of a numerical resource (approaches and models of design)

Module 4
Design and development of interactive multimedia contents

Specific Modules
Cérémonie d’inauguration
Plan du CMCF-TICE
Pyramide de formation

Partenaires

- LNRN Commission e-contenus
- Didacticiels disciplines
- Modules
- Culture numérique 230 000

e-learning

- Usage des Ressources Numériques (RN)
- Approfondissement TIC
- TICE et développement professionnel

Experts RN

- 1000 E+I
- 20000 E+I
- 40000 E+I
- 230 000

Inspecteurs (I)
I1 I2 I3

Directeurs (D)
D1 D2 D3

Enseignants (E)
E1 E2 E3

Ministère de l'Education Nationale
de l'Enseignement Supérieur
de la Formation des Cadres
de la Recherche Scientifique

29
GENIE for teachers

Objectives
- To improve quality of the trainings by the TIC in class
- To develop competences of the pupil through the TIC
- To develop professional competences of the teacher

Means
- VMM according to the number of teachers by school

Arrangement
- mais il y a besoin de renforcer la structure informatique par des ressources supplémentaires (le taux d’encadrement ne dépasse pas VMM)
- Connection to the Internet
- Formation with the use of the ICT

Obligations
- To make compulsory in a progressive way the use of the TICE in the major disciplines
GENIE for students

Objectives

• To develop competences TIC through:
  • The use of software, email, Internet, forum…
  • Development of the projects (research and groupware)

Means

• 3 hours of use per pupil and week in secondary
• 2 hours of use per pupil and week in college
• 1 hours of use per pupil and week in the primary education

Arrangements

• SMM fixes at the college
• Mobile SMM with the college as pilot project
• To equip the rooms by 2 PC in the last 3 levels with the primary education Pilot project of small islands of 5 PC per room in the last 3 years levels of primary

Obligations

• To make compulsory in a progressive way the use of the TICE in the major disciplines