mLearning: A Commercial look at Implementation

eLearning Africa

May 2011
The GSMA

- Represents the interests of mobile operators in 219 countries.
- Unites nearly 800 of the world’s mobile operators, as well as more than 200 companies in the broader mobile ecosystem, including handset makers, software companies, equipment providers, Internet companies, and media and entertainment organisations.
- Produces industry-leading events such as the Mobile World Congress and Mobile Asia Congress.
As of 2007, there were more mobile users in the developing than the developed world. How can we leverage this opportunity?

The Development Fund accelerates economic, environmental and social evolution through mobile technology. The provision of relevant, scalable mobile services to those in the developing world tangibly improves lives.

We are proof that doing good is good business.
Current Initiatives

Mobile Money for the Unbanked
In partnership with the Bill and Melinda Gates Foundation, MMU was launched in February 2009. It hugely accelerates the availability of mobile money services to the unbanked and those living on less than US$2 per day. Banking the developed world took 100 years. Banking everyone else will take a handful

Green Power for Mobile
600 million subscribers live off grid. How does your business reach them? Green Power for Mobile specialises in helping operators build highly cost effective base stations. The excess power generated runs into kilowatts and can be used in the community: vaccine fridges and health clinics. GPM is a classic alignment of commercial and developmental goals.

mAgri
The GSMA Development Fund’s mAgri initiative has been established to provide mobile solutions to serve the agriculture sector. Think of it as virtual fertiliser. With our partners the Bill and Melinda Gates Foundation and the Rockefeller Foundation we run projects in Africa and India delivering mAgri services.

mHealth
The world’s population is aging, and health care cost are increasing exponentially. Mobile Health’s potential fill this gap is practically unlimited. mHealth works to build and deploy viable mobile health solutions that improve access to appropriate, necessary and quality health services in developing markets.

mWomen
Groundbreaking research undertaken by the GSMA identified a yawning gender gap in phone ownership in the developing world. 300 million women remain unconnected, for a raft of cultural reasons. Closing this gap is the aim of the mWomen programme.

mLearning
No variable is a more reliable indicator of success in 2000 than a country’s investment in education in 1900. This programme looks at the role mobile technology can play in delivering learning and educational services to people in remote areas or who have no access to existing education provision.
mLearning Report

*mLearning is the ability to access educational resources, tools and materials at anytime from anywhere, using mobile technology*

Rationale

- No variable from 1900 better explains economic success in 2000 than investment in education
- Mobile connections will reach 6 billion by 2012 providing unmatched ubiquity and access

Overview

- mLearning projects have been piloted around the world for at least 10 years
- To date very few, if any, truly sustainable and large scale programmes exist however, the industry is gaining momentum
Key Findings:

- Still and Emerging and Fragmented Market
- Handset and Technology Limitations and Capabilities need to be a key Consideration
- The Business Case is Still Under Debate
- Scalability and Replicability are a Challenge
# A Framework for mLearning

<table>
<thead>
<tr>
<th>Technology</th>
<th>IVR</th>
<th>Messaging</th>
<th>Mobile Web</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice</td>
<td>SMS</td>
<td>USSD</td>
<td>GPRS</td>
<td>Bluetooth</td>
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<tr>
<td>Low End</td>
<td>Feature</td>
<td>Smart</td>
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<table>
<thead>
<tr>
<th>Mode</th>
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<th>Asynchronous</th>
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<td>Formal</td>
<td>Informal</td>
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<table>
<thead>
<tr>
<th>Learning Area</th>
<th>Foundation</th>
<th>Vocational</th>
<th>Teacher</th>
<th>Training</th>
<th>Languages</th>
<th>Life Skills</th>
<th>Literacy</th>
<th>Numeracy</th>
<th>Health</th>
<th>Education</th>
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<tbody>
<tr>
<td>Student</td>
<td>Teacher</td>
<td>Self Motivated</td>
<td></td>
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<table>
<thead>
<tr>
<th>Method</th>
<th>Complementary</th>
<th>Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>In addition of support to other learning activities</td>
<td>As a standalone way of accessing educational tools, resources or courses</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Players</th>
<th>Academic Community</th>
<th>Content Providers</th>
<th>Government Organisations</th>
<th>Mobile Network Operators</th>
<th>Non Government Organisations</th>
<th>Technology Vendors</th>
</tr>
</thead>
</table>
In the News....

Girls to receive free sanitary towels
Lack of pads keeps learners out of class
Kenya - May 25 2011 Daily Nation

Gordon Brown: Poor education will thwart Africa's dreams
JOHANNESBURG, SOUTH AFRICA - May 20 2011 19:01 Mail & Guardian Online

Kenya: Possessed Pupils Kicked Out of School
Kenya - May 21 2011 Nairobi Star
Target Countries: An Analysis Method

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Country Selection</td>
<td>198</td>
</tr>
<tr>
<td>Filtering Criteria</td>
<td>68</td>
</tr>
<tr>
<td>Clustering Criteria</td>
<td>23</td>
</tr>
<tr>
<td>Ranking Criteria</td>
<td>10</td>
</tr>
<tr>
<td>Selecting Criteria</td>
<td>4</td>
</tr>
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</table>

**Cluster 1**
- GDP per capita < 5K USD
- Country Population > 1M
- Safety

**Clustering Criteria**
- Mobile penetration (40%)
- Literacy rate (80%)
- Cluster 1 → high need, high opportunity

**Ranking Criteria**
- Adult & Youth
  - Mobile Penetration
  - Population (Total & Rural)
  - Internet Users
  - Literacy Rate
  - Public Education Spend
  - Drop Out Rate
  - Out of School Children
  - Pupil Teacher Ratio

**Selecting Criteria**
- Safety Travel Advice
- MNO market share
- Current relationship with MNOs
- Current educational initiatives

**Cluster 1:**
- High need, high opportunity

**Cluster 1 Indicators:**
- Adult & Youth
- Mobile Penetration
- Population (Total & Rural)
- Internet Users
- Literacy Rate
- Public Education Spend
- Drop Out Rate
- Out of School Children
- Pupil Teacher Ratio

**Population Distribution:**
- Asia
- Africa
- Latam

**Map:**
Target Countries: An Analysis Method

Country Selection: 198

Filtering Criteria: 68
- GDP per capita <5K USD
- Country Population >1M
- Safety

Clustering Criteria: 23
- Mobile penetration (40%)
- Literacy rate (80%)
- Cluster 1 - high need, high opportunity

Ranking Criteria: 10
- Adult & Youth
  - Mobile Penetration
  - Population (Total & Rural)
  - Internet Users
  - Literacy Rate
  - Public Education Spend
  - Drop Out Rate
  - Out of School Children
  - Pupil-Teacher Ratio

Selecting Criteria: 4
- Safety Travel Advice
- MNO market share
- Current relationship with MNOs
- Current educational initiatives

Morocco
Pakistan
Guatemala
India
Senegal
Nigeria
Gambia, The
Ghana
Cote d’Ivoire
Sierra Leone
Sudan
Tanzania

Adult

Youth

Pakistan
Nigeria
Senegal
Zambia
Cote d’Ivoire
Morocco
Tanzania
Guatemala
India
Uganda
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- **GDP per capita <5K USD**
- **Country Population >1M**
- **Safety**
- **Mobile penetration (40%)**
- **Literacy rate (80%)**
- **Cluster 1 → high need, high opportunity**
- **Adult & Youth**
- **Mobile Penetration**
- **Population (Total & Rural)**
- **Internet Users**
- **Literacy Rate**
- **Public Education Spend**
- **Drop Out Rate**
- **Out of School Children**
- **Pupil Teacher Ratio**
- **Safety Travel Advice**
- **MNO market share**
- **Current relationship with MNOs**
- **Current educational initiatives**

Morocco, Guatemala, Senegal, Nigeria

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<tr>
<td>Guatemala</td>
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<tr>
<td>Senegal</td>
</tr>
<tr>
<td>Nigeria</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Population, 2009</th>
<th>GDP per capita, PPP, 2000</th>
<th>Internet users (per 100 people), 2003</th>
<th>Literacy rate, youth total, 2008</th>
<th>Literacy rate, adult total, 2008</th>
<th>Unemployment rate, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guatemala</td>
<td>14,028,947</td>
<td>$4,726</td>
<td>14.3</td>
<td>86.0</td>
<td>73.8</td>
</tr>
<tr>
<td>Morocco</td>
<td>31,902,562</td>
<td>$4,464</td>
<td>33.0</td>
<td>70.6</td>
<td>56.4</td>
</tr>
<tr>
<td>Nigeria</td>
<td>154,729,892</td>
<td>$2,263</td>
<td>15.9</td>
<td>71.5</td>
<td>80.1</td>
</tr>
<tr>
<td>Senegal</td>
<td>12,534,228</td>
<td>$1,817</td>
<td>8.4</td>
<td>50.6</td>
<td>41.5</td>
</tr>
</tbody>
</table>
The unemployment rate in Nigeria sits at almost 20% and close to 70% for youths. There is a great need for information about educational and work-related opportunities in order to help them grow their skills. Combining the fact that there is a high penetration of internet enabled feature phones and the rampant use of social media in urban Nigeria, a platform that integrates career advice, life skills and a job search tool would be an ideal deployment solution.
## Project ‘Sustainability’

<table>
<thead>
<tr>
<th>Project Example</th>
<th>Type</th>
<th>Learner</th>
<th>Content Supplier</th>
<th>Payment of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBC WST Janala</td>
<td>Language</td>
<td>Self Motivated</td>
<td>Developed / owned by BBC WST</td>
<td>End User</td>
</tr>
<tr>
<td>Nokia Life Tools</td>
<td>Life Skills</td>
<td>Self Motivated</td>
<td>Preloaded onto Nokia handsets</td>
<td>End User</td>
</tr>
<tr>
<td>Text2Teach</td>
<td>Teacher Training/Support</td>
<td>Teacher</td>
<td>Pearson, Philippines DoE, pre-loaded onto Nokia handsets</td>
<td>Funder/End User</td>
</tr>
<tr>
<td>Text to Change</td>
<td>Health Education</td>
<td>Self Motivated</td>
<td>Provided by Text to Change</td>
<td>End User</td>
</tr>
<tr>
<td>Kontax/Yoza</td>
<td>Literacy</td>
<td>Self Motivated</td>
<td>Provided by local novelist</td>
<td>End User</td>
</tr>
<tr>
<td>SMS for Literacy</td>
<td>Literacy</td>
<td>Self Motivated</td>
<td>Locally Sourced</td>
<td>Funder</td>
</tr>
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</table>
The Multiplier Effect: Green Power for Mobile

- IFC investment in to the GPM Programme has been matched by the Development Fund to approx 170% of initial funding
- Purposes of GSMA, IFC investments:
  - 3 working group meetings per year (avg 30 organisation attending)
  - 18 MNOs receiving technical assistance
  - 2 market research/white papers published per year
  - 1 training guide published per year

- MNOs involved in feasibility studies: 20
- Green base station rolled out by MNOs involved in feasibility studies: 2,000
- Average investment for a green BTS: **US$50K** for an average 5kW green BTS
- Total # GREEN BTS worldwide: 15-20K green BTS deployed worldwide with total investment of 1.4B US$ - Target 118K BTS by 2012
- Total Savings CO$_2$: **Target 6.8M** metric ton by 2012
- Total OPEX Savings: **Target 2.5B US$$ by 2012**
In partnership with the Bill and Melinda Gates Foundation, MMU was launched in February 2009. It hugely accelerates the availability of mobile money services to the unbanked and those living on less than US$2 per day. Banking the developed world took 100 years. Banking everyone else will take a handful0

The MMU Fund and its Grantees

- Grantees: 19
- Size Grants: 50k US$ - 500 US$
- Applicants are expected to contribute at least a minimum of 50% of total project costs in cash and in kind
- Examples of grant purposes:
  - Expanding distribution network via new types of agents to reach more customers
  - Customer education via three step process to promote consumer adoption
  - Providing a platform for Oxfam and Concern Worldwide to disburse government aid to vulnerable groups
  - Joining forces with an international bank to offer cross border money transfer services to mobile money customers in East Africa
  - Adopting intense direct marketing campaign and person to person contact to accelerate uptake of the Mobile Money service

MTN Uganda Case Study

- 250 US$: MNO Investment
- 250K US$: MMU Grant
- 10.2 M US$: Total MNO Investment for Mobile Money Platform (first 16 months)
- 4.9M US$: Fixed Costs
- 5.3M US$: Step and Variable Costs
- 973k mobile money users (first 16 months)
Example Implementation and Delivery Model

- Other partners
  - Students
  - Teachers
  - Self-motivated

- Funding partner
  - Government Depts
  - Training Institutions
  - NGOs
  - Media
  - Agencies
  - Others
  - Content

- Development

- Education modules
  - Social network
  - Jobs directory
  - News & Info
  - Other

- Delivery

- Sustainability
  - Government
  - Other donors
    - Vendor advertisements
    - Consumers
Three Questions.....

1. What are the key drivers and barriers in the uptake of mLearning services for the end user.

2. Can mLearning exist without the support of Governments?

3. What role can or should your organisation be playing?
Mobiles and Literacy

A study by Dr Clare Wood, a psychologist at Coventry University, carried out tests on eight to 12-year-olds over a 10 week period. The findings countered popular fears commonly expressed by showing that the use of text message abbreviations actually had positive links with literacy amongst youngsters. Furthermore, the research found the children with better spelling and writing skills were actually those that used the most ‘textisms’.