The Mobile Utility Gap and Literacy Challenges in Oral-Language Communities: SMS use by Berber Women in Morocco

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Pressing Issues

- Conventional wisdom assumes:
  - women with mobile phones can text
  - illiterate women are numerate
  - mobiles obscure gender

- This is not necessarily the case.
  - Many women are only able to use expensive voice services.
  - Functions that rely on counting or number sequences are confusing.
  - Cultural restrictions on communication between men and women extend to mobiles.

- These issues are bigger than a community of Berber women.

*Approximately 500 million women are illiterate.*
The Population: Women and Work

- Berber communities
  - Tribal
  - Traditional
  - Muslim
  - Conservative
  - Rural
  - Arid
  - Poor

- Women lack formal education.
- Women’s livelihoods are tied to the Argan tree.

*UNESCO has designated Morocco’s Argan forests as a Biosphere Reserve.*
The Technology

- Simple, broken, secondhand, counterfeit phones
- Few smart phones
- Relatively broad network coverage and available power

The Goal

- Expand the use of available mobile phones for personal and instrumental communication
- Explore the challenges of moving from oral communication (speaking and calling) to texting in a non-text based community
- Avoid a formal educational approach because of shame and fear
A Complex Language Environment

- 2 spoken dialects:
  - Darija: an amalgamation of Arabic, French and Spanish words and syntax with no standard written form
  - Tachelhit: one of numerous Berber dialects

- 2 official written and spoken languages:
  - Modern Standard Arabic and French

- 3 alphabets:
  - Arabic script (written right-to-left)
  - Latin script (written left-to-right)
  - Tifinagh script (Glyph-based, not widely used)

- 2 numbering systems:
  - Arabic: ١,٢,٣,٤...
  - Arabic-Indic: ١,٢,٣,٤...
The Texting Utility Gap

- Due to the complex literacy and language environment, women’s mobile use is basic.
- They are unable to benefit from many phone features.
  
  "My phone only speaks French. I don’t speak French."
  No/low use of voicemail, SMS, mobile radio, phonebooks or mobile internet
- They face socio-cultural and psycho-dynamic deterrents to learning.
  
  "I can’t learn." "I’m ignorant." "It’s too late to learn."
- Illiterate women are paying a tech tax because they cannot text.
  
  Some women spend 40% of their monthly salary on calls.
- They are foregoing service benefits:
  
  • Unable to take advantage of mobile bonuses
  • Cannot access development initiatives
  • Missing out on training opportunities
Coping Strategies: High Visual Literacy

Many users identify words and numbers as *visual packets* of information.

- They rely on pattern recognition to identify phone numbers.
- They memorize keypad sequences.
- They use paper to assist in phone use.
- They identify contacts with icons, names & numbers.
- They rely on proximate literates & scribes.
Personal Communication: Mobile Support for Literacy in the Coop

- Informal education
- Situated learning
- Adult women get to choose the literacy they want
- Highly motivated to learn Latin alphabet
- The mobile provides the alphabet at their fingertips
- Multi-media learning: mobiles, chalkboard, keypad drawings
Mixed Messages and Creole Texts

Salam, sava?

SMS messages incorporate French, Berber, Arabic and other words. Numbers are a shorthand to represent letters and sounds:

➢ Salam 7ta nki t3zat dari.
   Inrayi omarg nem. nshoofk 9rib
   inshalah. 5adija

   7=is similar to the Arabic letter ‘ha’= ح
   3=the reversed form of the letter ‘A’l’ = ع
   5=represents the sound for the letter ‘kh’= خ

➢ Hawaryo lisli motchis krasis
Instrumental Communication: The Fog Project

• Provide literacy training to women alongside mobile reporting on home water system
• Fogwater information network must accommodate mixed literacy levels, mixed genders, multiple devices
• Transmit data using common messages and symbols
Beyond Berber Villages

- Many mobile services and benefits are not reaching intended beneficiaries in oral-language communities where users have simple ICTs.

- Many of those least capable of accessing mobile services due to language constraints are poor women – who are most in need of the educational, health and communication benefits of mobiles.

- Mobile learning initiatives for low-literate, oral language communities will benefit from a nuanced understanding of the “rich pluralism of regional traditions, languages, dialects and cultures.”

* Morley & Robins. 19
Thank You

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