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How Mobile Technology is a Game Changer for Developing Africa

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Texting isn't just for late night convos and killing boredom. Short bursts of instant communication are connecting some isolated African communities to vital information.

Because of widespread poverty in Africa, the technology culture there has followed a different path than the West. Because computers are so expensive, affordable mobile phones have become the ubiquitous form of communication. [Between 2003 and 2008](#), Africa had the fastest growing mobile phone market in the world. On average, more than one-third of the African population has a mobile plan, with some areas reaching almost two-thirds market penetration.

Non-profit organizations have seized on this unexpected opportunity to bring lifesaving health care information, quality K-12 educational curricula, and advanced farming techniques to millions. Here's a look at some of these mobile awareness efforts.



Health



It's impossible to overstate the [health care crisis](#) in Africa. Over 5.6 million people are stricken with HIV/AIDS in South Africa alone; upwards of 30% of the population in some age groups. Many are unaware that medical care is even available. Perhaps even more heartbreaking, the multi-million dollar efforts to provide antiretroviral drugs are in vain for those without proper instructions and monitoring.

[Cell-Life Aftercare](#), a joint project between the University of Cape Town and Peninsula University of Technology, can remotely monitor 15 to 20 patients per health care worker, provide supplemental medical information and relay information back to a central database all via mobile technology.

"The single greatest risk [to effective patient monitoring] is the lack of resources to roll out [antiretroviral therapy] effectively," said Ulrike Rivett, founder of Cell-Life. "The areas with the highest prevalence of HIV have a shortage of skilled medical personnel, lack of good nursing and management staff and have limited financial resources."

Instant communication combined with an eagle-eye view of disease demographics has already prevented at least one outbreak of typhoid in Uganda. The U.S.-based non-profit [Academy of Educational Development – Satellife](#) developed a program to relay information through networks via personal digital assistants (PDAs). "The outbreak was contained because we could see that something was amiss," said Holly Ladd, Director of AED-Satellite. "This would not have been possible with paper and pencil reporting, which is much more time-consuming."

While we are far from stopping the serious health care issues that plague African communities, these early projects seem like an important and promising technological step.

Instant Education



With so many young eyeballs fixated on mobile devices, educators saw a great opportunity to reach kids who have traditionally struggled with formal education. [MXit](#), a mobile messaging and social networking client, reaches 40% of South Africa's population according to a company spokesperson, and has teamed up with scores of organizations to provide educational information on everything from mathematics to driving instructions.

For mathematics, MXit partners with cities and school districts to provide personal tutoring and curricula for use inside and outside of the classroom. For schools, teachers are given established curricula and student performance results to help them tailor future lessons. Outside the classroom, students can get answers to burning math quandaries through direct access to a real-life tutor. They can also refer a struggling friend.

MXit seems pleased enough with the initial results to extend the program. According to materials provided by MXit, a new project partnership with Nokia that began with 260 learners has been expanded to over 3,000 and will soon cover two more South African provinces.

Other educational projects include the aptly-titled "[m-novels](#)," which aims to provide mobile-formatted novels to fiction-hungry teens (as of this writing, only one such book, [Kontax](#), seems to be in circulation).

Finally, for young people striving for a driver's license, MXit beams instructional videos and driver-knowledge questions to help them ace their test. According to material provided to Mashable [by](#) MXit, over 85,000 people utilized the program in the first month.

Agricultural Education and Equality



For many in the industrialized world, so-called "[price dispersion](#)" is a mere inconvenience — we might splurge for a \$9 bagel on New York's 5th Avenue even if we could buy one for 99 cents further downtown. For people in low-income countries, however, price variance across markets can mean one less meal for a entire family.

Fortunately, research finds that cell phone permeation can help smooth out price variation across markets. [One study shows](#) that for the fishing industry in sub-Saharan Africa, mobile phone penetration reduces waste, increased profits by 8%, and decreased consumer prices by 4%. "[With a cell phone], I know the price for US\$2, rather than traveling [to the market], which costs US\$20," [said](#) one grain trader in Zinder, Nigeria to researcher Jenny Aker.

Mobile phones also provide access to global markets and crop-saving weather forecasts in developing areas around the world. Ross Biddiscombe reporting for the *Guardian* [found that](#):

“...using the Reuters Mobile Light (RML) mobile phone service, one grape grower in Maharashtra state, India, began sending his product to Russia for a higher price after subscribing, while a maize grower received an SMS message about bird flu in West Bengal which would cut his sale price, so he decided to store his produce, selling it for an increased profit when the market improved a few weeks later.”

Pocket-sized technologies are making the age-old uncertainties of agriculture somewhat more manageable for many in Africa and other developing regions. And for those with meager savings to buffer a crisis, it's little wonder farmers are taking advantage of every opportunity to avoid them.

Conclusion

Cheap and efficient mobile technologies are significantly changing the lives of people in developing areas who are burdened by unequal access to resources and information. Health, education and agriculture are all benefiting from the collective I.Q. of a mobile nation, and cell phones are bridging the gap between isolated African communities and a global market eager for knowledge and talent.

More Mobile Resources from Mashable:

- [How Non-Profits Should Approach Making iPhone Apps](#)
- [5 Real Challenges For Non-Profit Texting Campaigns](#)
- [3 Free iPhone Apps to Help Make a Difference](#)
- [Top 8 iPhone Apps for Self-Help](#)
- [Windows vs. Apple: The Future of Mobile Games](#)

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1.  [Amanda](#) [Monday 19. 2010 @ 10:58 pm](#)

There was an interesting profile in the WSJ today about @Concern Worldwide's innovative use of mobile phones to fight hunger in Niger: <http://bit.ly/aOCRpj>

Really interesting progress.

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2.  [Wayne Luke](#) [Monday 19. 2010 @ 11:41 pm](#)

Programs to get technology into developing nations and teaching the people how to use them and better their lives is good and I fully support them. The more knowledge and access people have, the better chance that they can better themselves is. These are simply tools. Unfortunately, the companies behind these drives forget about their own homelands and often times the divide between haves and have-nots widens even further.

Love the programs but I think we should be doing more to relieve poverty in our own homelands as well. According to [FeedingAmerica.org](#), one out of four children in the United States go hungry every day and many families still don't have cellphones or other devices to be connected. Since they are in the United States, they won't get access to the same tools either.

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3.  [Demensi Monday 19. 2010 @ 11:53 pm](#)


Mixit sounds eerily similar to Nixle.

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4.  [Demensi Monday 19. 2010 @ 11:53 pm](#)


Mixit sounds eerily similar to Nixle.

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5.  [Shiroi Neko Tuesday 20. 2010 @ 4:19 am](#)

I do believe that cellphone can bring so much good things to the developing countries, contrary, they can bring some bad things to them too.

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6.  [Noah Tuesday 20. 2010 @ 6:14 am](#)

How can this article not have anything about M-Pesa, a mobile money transfer that is used by millions in Kenya?

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7.  [Justin Long Tuesday 20. 2010 @ 7:32 am](#)

Noah, there's LOTS of countries in Africa and I'm sure the author could have only chosen the best examples he had access to. If he wrote about every program I'm sure that this article would be too long to read.

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8.  [Matt Banbury Tuesday 20. 2010 @ 4:55 pm](#)

Noah, I totally agree. I spent more than two years living in West Africa, and mobile banking is showing signs of being a bigger game changer than any other implementation of mobile tech mentioned. It is hard for many people to understand what kind of impact M-Pesa and other companies like it will have. This article clearly isn't focused on representing Sub-Saharan Africa equally (not a knock, just responding to Justin's remark) otherwise there would be less emphasis and statistics placed on South Africa and Cape Town.

People in my village would travel two days or more to get money transfered Western Union. They have no banking access, and often cash on hand means a social obligation to give it to one's neighbors when asked.

Savings has many roadblocks in parts of Africa, some are access related, and others are social. Mobile banking can't fix everything, but it can help quite a bit.

There are of course a ton of more difficult to track implications of widespread mobile tech, from art, to social, to literacy, and beyond. One of the largest impacts the web in hand experience will have is a reason to learn to read. Motivation for a poor African student is one of the scarcest resources of all.

"Africa" is a hard concept to cover a journalist, even for those who specialize in covering its countries, events, communities, and news. That stems largely from the fact that America's (and to some extent the rest of the world's) views of African countries and peoples tend to be uniformed and parochial.

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9.  [ferenstein Tuesday 20, 2010 @ 5:53 pm](#)

The short answer is that I'm looking into mobile banking. It ended up being too complex for this story. I agree, its a really important issue.

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10.  [ferenstein Tuesday 20, 2010 @ 7:01 pm](#)

cool! thanks

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11.  [Larry Tuesday 20, 2010 @ 7:24 pm](#)

What's exciting to me is that the technology is moving toward even wider access through mobile phones than is currently possible through internet access. While under-served, small, rural populations still do not have widespread mobile access, it is slowly developing. In some cases, it's developing rapidly. The range of applications for improving the quality of life for the African people, especially those outside cities where technology is not readily available, is staggering. Thanks for this look at one kind of possibility. Thanks to Mashable for covering the issue. I hope to see more.

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12.  [akriti Thursday 22, 2010 @ 12:35 pm](#)


This is a very good blog on Mobile Technology. <http://www.reliable.co.in>

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13.  [akriti Thursday 22, 2010 @ 12:35 pm](#)

This is a very good blog on Mobile Technology. <http://www.reliable.co.in>

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14.  [Thomas Oppong](#) [Thursday 22. 2010 @ 10:35 pm](#)

There is just much we can do as Africans to use mobile technology to our advantage. Mobile phone usage is just enormous and I am seriously looking into leveraging on the growth of mobile in Africa to build an app to solve a social problem in Ghana where I come from. Ghana has close to 23M people and 13M of that have mobile phones according to the statistics released by the ministry of communication. If you intend to invest in our Country I am available for partnership. I have already registered my software company.

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15.  [alison richards](#) [Thursday 26. 2010 @ 11:05 pm](#)

I'm working with partners in South Africa on developing educational and job creation programs that will harness this technology and create a knowledge economy in rural and impoverished regions.

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