

Opportunities in mobile learning from IICD's perspective

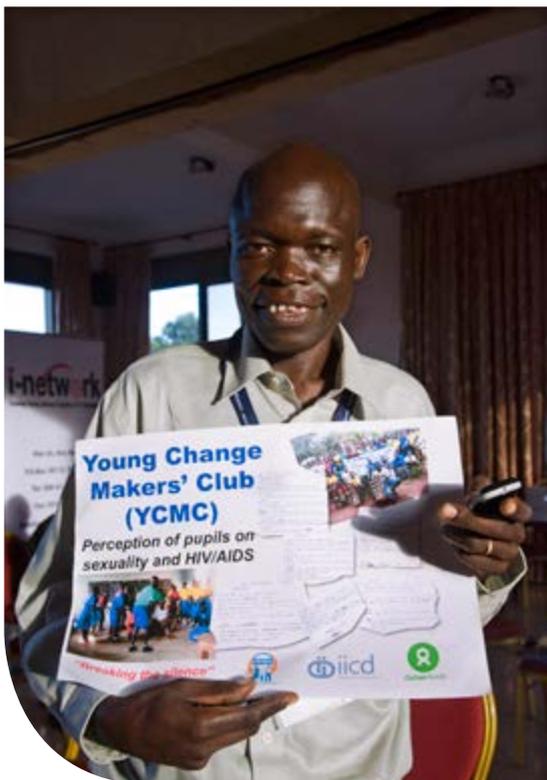
FEBRUARY 2013





CONTENT

MOBILE ON THE MOVE	4
Opportunities in mobile learning from IICD's perspective	4
The IICD Approach	5
M-LEARNING IN EDUCATION	6
M-LEARNING IN ECONOMIC DEVELOPMENT	8
Case: Increasing farmer income through SMS-based market information	9
M-LEARNING IN HEALTH	10
Case: Reducing child mortality by giving mothers information that matters	11





WHERE DO WE APPLY MOBILE SOLUTIONS?

••• IICD COUNTRY
••• IICD HEADQUARTERS



MOBILE ON THE MOVE

OPPORTUNITIES IN MOBILE LEARNING FROM IICD'S PERSPECTIVE

Mobile phone usage is exploding in developing countries. Africa alone had more than 500 million mobile telephone subscribers in 2011. Mobile learning or 'm-learning' services therefore play a growing role in IICD's education, health and economic development programmes.

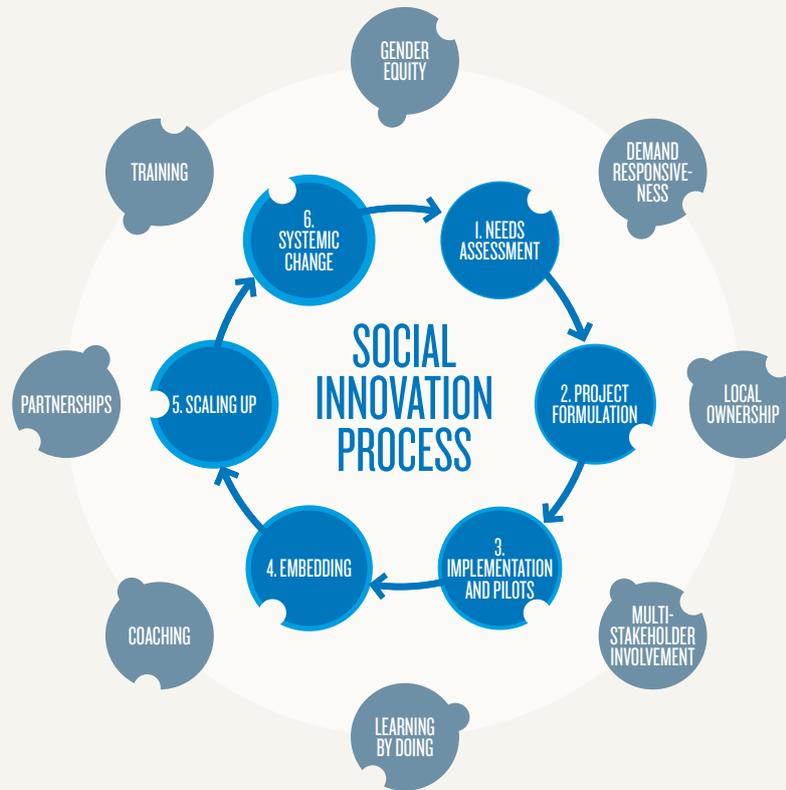
IICD and its partners increasingly develop mobile telephone-based solutions to promote learning and awareness-raising. With mobile services health-related information campaigns can be conducted and feedback sought from citizens. Care workers, rural health facilities and community members use mobile services to disseminate information. Farmers use their mobile telephone to consult with agricultural experts. In education, mobile services promote organisational and individual learning. They offer a conduit for more regular communication between parents and schools, and strengthen participation in school planning and quality improvements. Schools use mobile applications to remind parents of meetings, to send updates to students and to circulate news. Tablets facilitate learning for disabled students.

IICD supports mobile telephone-based projects in 11 countries. As a result of these, more than 3.7 million messages will reach some 150,000 students, farmers, health-care workers and community members in 2013.

IICD's approach: ICT-led social innovation

IICD defines social innovation as people-focused innovation. ICT-based social innovation processes put local actors in the driver's seat, positioning them to decide how their organisations will use ICT to navigate their sector's development path, to empower staff and beneficiaries and, ultimately, to engineer positive change. IICD regards ICT not as an end in itself, but as a tool to be harnessed by people to shape their own development.

FROM NEED TO SUSTAINABILITY THE IICD APPROACH



90%
OF OUR PROJECT
PARTNERS ARE
HIGHLY SATISFIED
WITH OUR
APPROACH

● PROCESS STAGE
● GUIDING PRINCIPLES

IICD does not focus on the transfer of specific innovative technologies to developing countries. Rather, it employs participatory, multi-stakeholder approaches to seek innovative ways to use ICT to address structural problems in agriculture/economic development, education, health and water and climate. Driven by users' needs and powered by local networks of passionate individuals and organisations, IICD facilitates the co-creation of ICT-enabled solutions that are appropriate to local contexts.

IICD has been a guiding partner in the development of 'm-learning' services and expanding their reach. This publication presents a selection of these. Access to 'smart' phones and mobile internet is still limited in developing countries, so most projects use text message and voice services, targeting people with feature phones. Feature phones are multi-purpose phones that have additional functions over basic mobile phones, but that are cheaper and less advanced than smartphones.



M-LEARNING IN EDUCATION

Mobile platforms transform the teacher-student relationship.

Mukuba University in Zambia uses a text messaging platform to announce changes in lesson plans, to send students their grades and to provide updates on upcoming events. This has improved communication between the university and its students, making it faster and more effective. In the past, lecturers had to call their students by telephone, an expensive and time-consuming proposition. They were also constantly being phoned by their students. That last problem is still an issue. The text messaging platform is one-way at present, with the university sending out messages to its students.

Community radio and mobile phone services stimulate dialogue on how to keep school girls safe.

The Association of Christian Educators in Malawi (ACEM) is using mobile telephones to enhance communication among teachers, parents and community structures. Via this new channel, mothers, parent-teacher associations, school management committees and local leaders are addressing such varied issues as gender-based violence, child labour and teacher absenteeism.

Information highlights training and employment opportunities for youths.

Ndola Resource Centre in Zambia has developed a text messaging platform to channel Ministry of Youth information to key organisations of young people. The organisations then spread the information about events, training and grants. The grant information, in particular, had often failed to reach the target groups in the past. Three provincial offices have a youth desk officer to gather the information and send it on to the SMS platform.

Feedback on vocational training and student tracking bring multiple benefits.

Chawama Youth Skills Centre in Zambia tracks 700 students who followed carpentry courses at their vocational training centre. The idea is to learn whether they found work in carpentry, if the skills they learned had proven useful and what aptitudes they still miss. The Centre uses this information to adapt their courses. The platform is also used to promote additional youth training, for example, a two-week entrepreneurship course.

"We set up an SMS platform to raise awareness about the services of vocational training centres and announce information about training opportunities. Internet access is still expensive, but mobile penetration is above 95 per cent. So if we use SMS, we can reach many young people, who can provide feedback instantly."

Isaac Chanda, Project Manager, Ndola Resource Centre



Monitoring systems help improve education.

Ugandan educators send bulk SMS messages to teachers and community members. These spotlight educative topics, announcements and reminders of meetings. Parents can return the favour, texting their views, for example, about teacher attendance at school, school administration, sanitation and hygiene, and the quality of teaching materials. The messages are first verified and approved by project partners Computers for Schools Uganda (CFSU) and Rwenzori Consortium for Civic Competence (RWECO). They are then posted on an online platform. This public monitoring system is modelled on the monitoring platform www.uchaguzi.co.ug used during the general elections in 2011.

Mobile learning expands the world for special children.

Tablets and smartboards are offering new ways for handicapped children in Mpelembe, Zambia, to acquire a broad spectrum of skills. Tablets stimulate their senses with music, visual images and touch applications. Games engage the children and fuel learning. These experiences help them tap into their own creativity, enhancing their confidence as

they enter adolescence. In helping disabled students expand their world, the project has helped parents of children with special needs overcome the cultural stigma and bring their children to school to interact and develop in society.

Text messaging and radio combine to cultivate local languages.

Mobile telephones are being used to define the orthographies of two Ugandan local languages, in close collaboration with communities of speakers. 'Mango Tree' sends out quiz messages during weekly radio talk shows. Feedback and awareness-raising messages are also sent out to the community about newly developed local language products. Before now, these languages had only been spoken; now they are being written as well.



M-LEARNING IN ECONOMIC DEVELOPMENT

Farmers learn about production techniques via mobile telephone services and radio.

Zambian farmers use text messaging to ask experts of the National Agricultural Information Services (NAIS) about production techniques, market opportunities, crop diseases and the like. The maximum response time is 24 hours. In the past, obtaining farming advice could easily take months. There is only one extension worker per 1,000 farmers, so extension visits to farms average only once a year. Questions posed by farmers are also used as input for a radio programme broadcast in seven Zambian languages.

Mobile services enable remote consultations on microfinance.

Mobile telephony offers a new way for rural farmers and entrepreneurs to inquire about a possible loan and receive information on financial products. In Peru, a women's community development organization called PROMUC



uses smartphones and tablets to evaluate and approve loans and to teach financial management in remote areas. Most of the producers accessing this credit are women, as women are considered better microcredit managers.



CASE INCREASING FARMER INCOME THROUGH SMS-BASED MARKET INFORMATION

A project supported by IICD and the SEND Foundation trained 2,000 farmers in Northern Ghana to access market information via community notice boards and mobile telephones via the 'Esoko platform'. In just two years' time, farmers were able to increase their incomes. Farmers now see themselves as better negotiators, as they know what prices they can ask.

Lessons

- **Combination of high-tech and low-tech.** Use of high-tech ICT initiatives alongside traditional techniques, like field visits and notice boards, is a good way to disseminate market information in rural communities. Computers and mobile phones are not always reliable in remote locations, due to factors such as fickle electricity supply.
- **Capacity building.** Farmers benefit from training in the use of mobile services, yet this can best be offered by an organisation that they already know and trust.
- **Low literacy.** Most farmers trained in mobile phone usage had low literacy and therefore could not take full advantage of the training. This can be addressed by involving literate family members, relatives and friends in training, so they can provide ongoing help and support. Fellow farmers and farmer organisations can also provide additional support.
- **Sustainability.** Increasing use of mobile telephones to access market information means that farmers have less need to meet people who can help them to find market information. They are taking control of their own information. This is a key step towards sustainability.



M-LEARNING IN HEALTH

Text messages promote reproductive health among mothers and adolescents.

In Ghana, 5,000 peer educators, traditional birth attendants, HIV-AIDS groups and mothers receive text messages with maternal, sexual and reproductive health information. The Association of Church-based Development NGOs (ACDEP) sends out this information in the form of quizzes, tips, reminders, keyword feedback options and even a reproductive health encyclopaedia.

SMS to reduce malaria-related infant mortality.

Using mobile telephones and a mobile application, community health workers in Mali prevent, diagnose and treat malaria. The project aims to reduce malaria-related infant mortality by 30 per cent in poor neighbourhoods of the capital Bamako. The mobile phone application contributes to patient management by providing a format for risk assessments, strengthening case documentation of patients, and accelerating communication between health workers and clinics via text, images and audio.





CASE REDUCING CHILD MORTALITY BY GIVING MOTHERS INFORMATION THAT MATTERS

Health Child Uganda battles child mortality by sending mothers text messages with information about prenatal and postpartum care. This approach has also helped reduce the number of babies born with HIV-AIDS. Messages have so far been sent to 500 mothers and mothers-to-be in Uganda's Jinja District. The messages tell women how they can protect themselves and their unborn children against diseases and remind them of the importance of going to health clinics for check-ups during pregnancy. Messages to remind women of their antenatal appointments at eight collaborating health centres led to more women attending antenatal care.

Lessons

- **Integration.** Health-related text messages are best integrated into existing health sensitisation programmes that already have a basis of trust with the target group.
- **Health communication expertise.** Specific skills are required to design useful health messages that fit the 160-character SMS message limit.
- **Involve men as well as women.** Women do not always own a mobile phone, but their husbands often do. Health information for wives can be sent to husbands so that he can convey the message. So far, fathers-to-be have responded well to the text messages
- **Power of voice.** To reach illiterate groups, make use of voice messages. The disadvantage is that calls are easily missed and messages cannot be stored for future reference.

IICD's vision is a world in which people are fully able to use information and technology to better their own future and that of their society.

IICD's mission is to enable 15 million low-income people in developing countries to access and use ICTs to address the challenges that they face, understanding that ICT offers opportunities for increased well-being and sustainable economic development in all sectors.

IICD leads the Connect4Change consortium in which five Dutch NGOs have joined hands to set up and support ICT4Development programmes. Our consortium partners are Akvo, Cordaid, Edukans and ICCO. Text to Change is a preferred partner.



@iicd



facebook.com/iicd.org

information@iicd.org
www.iicd.org



International Institute for Communication and Development
Raamweg 5 / 2596 HL The Hague / The Netherlands
Phone: +31 (0)70 311 73 11 / Fax: +31 (0)70 311 73 22
Photos: Roel Burgler: p. 1, 2, 3, 6, 8, 10.
Others: Kunststoff (p. 3, 7), Gaël Hernandez, Martine Koopman
Design: Stephan Csikós, Den Haag / Copyright © IICD 2013

