eLearning and mLearning for health care workers in Ghana

Effectively addressing health inequalities in Africa

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Background

- Ghana = Fast-developing West African country, but suffering from considerable regional disparities;
- Huge demand for health information by health workers, especially in the rural parts of the country;
- Huge knowledge gap between well endowed schools & health centres in the greater Accra region and the less endowed schools in the periphery;
- Very limited access to Internet, but good access to mobile phones across the country.
The vision of the Ministry of Health

• Electronic library
  • Provide an electronic library which will be accessible to students, tutors and other health workers in the field of service either through the Internet or on their mobile phones.
  • To become a major source of continuous education for students, tutors and other health workers to update their knowledge in the field of health care.
  • To overcome regional disparities by giving all schools equal access to learning materials through the web or mobile phone.

• Teleconferencing lectures
  • Explore the feasibility and usefulness of teleconference lectures from one nursing school to another using webcam and other applications.
Project participants

• Ministry of Health, Accra, Ghana
• Ghana Health Service
• Health training institutions (including teaching hospitals)
• Other national stakeholders (Nurses and Midwives Council, Medical and Dental Council, Christian Association of Ghana, Ghana Nurses Association, Ghana Registered Midwives Association, Disease Control Unit, Environmental Officers Group)
• Health Care Information Technology for Africa Initiative (HITA), a German charitable association.
• Johner Institut for Information Technologies in Health Care, Konstanz, Germany
What has been achieved?

• Exploration workshops with students and tutors/principals of schools
  • 5 Workshops across the country, 1152 students

• Assessment of technical opportunities

• Requirement Analysis & Needs Assessment
  • Verification of hypotheses

• Prepared the ground for the next steps
  • Technical specification for E-Learning Services and Computer Labs
  • Budget planning and fund-raising
Project P1: Mobile Library

Executive Summary
The goal of this project is to provide medical staff, particularly nurses and midwives, with learning materials as text books, teaching videos and quizzes. The digital library will be deployed on mobile phones. It is accessible even without mobile connectivity.

Project P2: Call2Learn

Executive Summary
The goal of this project is to provide medical staff, particularly nurses and midwives, with audio based learning materials comparable to modern podcasts. They call dedicated numbers and can listen to the desired lesson. This project is needed for medical professionals owning “vintage type” mobile phones. This project creates the technical foundation for the telemedicine project, too.

For each unit/tutorial a dedicated phone number/extension can be called. The address book on the mobile phone is augmented to become the table of contents for the learning units and is updated centrally. Alternatively a voice menu can be used.

Picture 1. “Vintange” mobile phone with address book to access voice based tutorials
Workshop with students in Asankragua
Workshops with teachers in Bolgatanga
Need assessment with students
Assessment of technical opportunities
What needs to be done?

• Build up separate E-Learning Centers and Computer Labs in all schools

• Add Mobile-Learning to the overall approach to avoid social exclusion of those who have no internet access:
  – Call to learn (Call in for listening to a tutor)
  – SMS to learn (Get Text Messages for exercises to support the teachers)
  – Mobile Library (Call in for listening to books)

• “Train-the-Trainer“-Approach to support the teachers and to create an avalanche-effect
Outlines of an FP7 project

- Conceptual framework for user-tailored delivery of mobile and internet based services to target groups
- Set-up of Electronic Library
  - Provide an electronic library which will be accessible to students, tutors and other health workers in the field of service either through the Internet or on their mobile phones.
  - To become a major source of continuous education for students, tutors and other health workers to update their health care knowledge.
  - To overcome regional disparities by giving all schools equal access to learning materials through the web or phone.
- Piloting of Teleconferencing Lectures
- Implementation of additional system features to reflect state of the art in mobile services in Europe
Thank you very much for your support and this fruitful cooperation!

Meda wo ase!
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