



Health Care

Education

Entrepreneurship

Public Safety

Environment

Case Study

High School Computer Labs: Computer System Sustainability Toolkit

In April 2006, Qualcomm, working through its Wireless Reach initiative, collaborated with five rural schools in Way Kanan, Southern Sumatra and one urban school in Pacitan, East Java to establish computer labs and Internet connectivity using Qualcomm's CDMA technology. Then, in early 2008, after recognizing challenges that their partner schools were facing, Wireless Reach worked together with FHI 360 (formerly AED) to build the capacity of staff, students and community members at these schools to develop and implement sustainability and business plans for their computer facilities. The Computer System Sustainability Toolkit was subsequently designed to enable these labs and schools across Indonesia to gain the skills needed to develop and implement business plans to sustain their schools' computer systems, and give students and teachers the necessary technical abilities needed to be successful in the 21st century.

Challenge

- Internet access in Indonesia remains low at around 22.4 percent of the population.¹
- While it is common for schools to establish computer facilities that connect to the Internet, an all too frequent challenge for schools is keeping computers maintained, covering increased costs for electricity and Internet connectivity – and integrating the use of computers into the curriculum.

Solution

- Each computer was outfitted with essential software such as Microsoft Office® and the Adobe® product suite, to enable project participants to further expand their IT capabilities. For example, one student noted, her aspiration to be a trader was enhanced by her ability to use Excel for basic accounting and record keeping.
- Schools were provided targeted technical support through two interactive workshops focused on supporting them in developing appropriate systems and activities to sustain and expand their computer labs. As a result of these workshops and follow up assistance, schools developed their own sustainability, business and marketing plans; Student Support Technician Clubs (SSTCs) to handle lab maintenance; and instructional training videos for new IT instructors.
- The Computer System Sustainability Toolkit was distributed to the six participating schools at a sustainability workshop held in Indonesia in August 2010. During the workshop, participants engaged in activities from the Toolkit. These activities focused on the practical application of several of the worksheets and templates included in the Toolkit with its accompanying CD-ROM.

Impact

- For the students, as the primary beneficiaries of the project, their capacities in information and communication technology (ICT) are an advantage to them in the labor market. For many, their world view has been dramatically expanded by access to resources via the Internet. During an external assessment, a number of students also mentioned that this access had broadened their career aspirations.

Indonesia
Education



Partners

- Cisco's Networking Academy
- FHI 360 (formerly AED)
- Sampoerna Telekomunikasi Indonesia (STI)

2011 Statistics

- Life expectancy: 71.6 years
- Population: 248,216,193
- GDP per capita: US\$4,700
- Internet penetration: 22.4%
- Mobile penetration: 102.8%

Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/>); Mobile penetration data provided by Informa UK Limited and based on market intelligence. Internet penetration data based on user data provided by Paul Budde Communication Pty Ltd and population data from CIA World Factbook.

You have given us a train track and now we can drive...down the track and get to our destination.

– Sutamto, Rebang Tangkas,
Way Kanan School Headmaster



An IT teacher works on his own laptop at Rebang Tangkas school.

- In all instances, teachers have improved their command of ICT through the labs by either self teaching or informal training from the IT technician or IT instructor at the school. In addition, several teachers at the schools purchased their own laptops after seeing the benefit that computers had on helping them prepare their lessons.
- At the Pacitan and Pakuan Ratu schools, the labs are generating a significant surplus in revenue, with approximately one to two million Rupiah (US\$100-200) per month that is being invested to buy new equipment and to improve the schools' computer labs.
- Access to the labs has broadened to include younger students through formalized access to secondary and primary level students and the teachers at these junior level schools. This is significantly expanding the impact of this project on developing human capital in the regions surrounding the participating schools.
- All schools have plans for capital reinvestments to progressively upgrade and/or replace the existing equipment provided by the Wireless Reach project.
- This project has demonstrated that with the right technical assistance, rural, remote, and resource-constrained communities have the aptitude and ability to manage and benefit from complex ICT similar to urban populations.

Project Partners

- The six schools participating in this project include:
 - **Buay Bahuga**, Lampung, Southern Sumatra
 - **Negara Batin**, Lampung, Southern Sumatra
 - **Negeri Besar**, Lampung, Southern Sumatra
 - **Madrasah Aliyah Salafiyah Tremas**, Pacitan, East Java
 - **Pakuan Ratu**, Lampung, Southern Sumatra
 - **Rebang Tangkas**, Lampung, Southern Sumatra
 - **Cisco's Networking Academy** provided funding for printed materials and events surrounding project promotion. Assisted in project oversight.
 - **FHI 360 (formerly AED)** served as the lead implementing partner, provided project management, technical assistance and workshop facilitation.
 - **Wireless Reach Initiative from Qualcomm** acted as the primary funder and provided project management support for over four years.
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¹ <http://www.internetworldstats.com/stats.htm>. 2011 figures.

Wireless Reach™ Initiative from Qualcomm

Qualcomm believes access to 3G and next-generation mobile technologies can improve people's lives. Qualcomm's Wireless Reach initiative is a strategic program that brings wireless technology to underserved communities globally. By working with partners, Wireless Reach invests in projects that foster entrepreneurship, aid in public safety, enhance the delivery of health care, enrich teaching and learning and improve environmental sustainability. For more information, please visit www.qualcomm.com/wirelessreach.