Kenya Digital Schools

Airbus Project Report

October 2023

Project Overview

Introduction

Computer Aid International's Digital Schools project has been designed to improve teacher, student and educational outcomes at 22 secondary schools across Naivasha, Kenya. This has been achieved by installing fully functioning digital learning centres in each school and training three teachers in each school to improve their digital competencies. The project started with funding from Dell Technologies in ten schools and was subsequently extended as funding became available. Airbus funded four schools.

School Selection

Schools selected for the project were chosen based upon a number of criteria including their need for modernising and infrastructure improvements , their capacity to use the equipment provided and ability to sustain the centres. None of the schools had a functioning computer lab for use by pupils prior to the project. Each school undertook some classroom refurbishments to better prepare the rooms for hosting the equipment.

Digital Centres

The digital centres in each school contain 30 PC stations, 30 internet dongles, a projector and screen, 30 sets of headphones, speakers, and a printer. The PCs have Windows 10 operating systems and Microsoft Office installed and other educational software. The computers were shipped by Computer Aid and arrived in Nairobi, Kenya in June 2023, being subsequently installed in the schools during the summer school holiday period.

Teacher Training & Development

Each teacher participating in the project received a personal laptop provided by Computer Aid prior to the start of their training. The purpose of the training is to improve their digital competencies and therefore provide digital skills training to the school pupils as well as to better prepare for their own lessons.

The teachers took part in online ICDL training thorough Google Meet with ICDL trainer Martin Kuria in September. ICDL (The International Computer Driving License agency) is an international federation of ICT training organisations that follow a comprehensive range of globally recognised training modules. Beneficiaries that pass the ICDL examinations receive an internationally recognised qualification.

Each teacher received training in six modules: Computer & Online Essentials, Online Collaboration, Spreadsheets, Presentations, Documents, and ICT in Education. The last module is intended to better equip teachers to use digital technology and therefore improve their subject teaching.

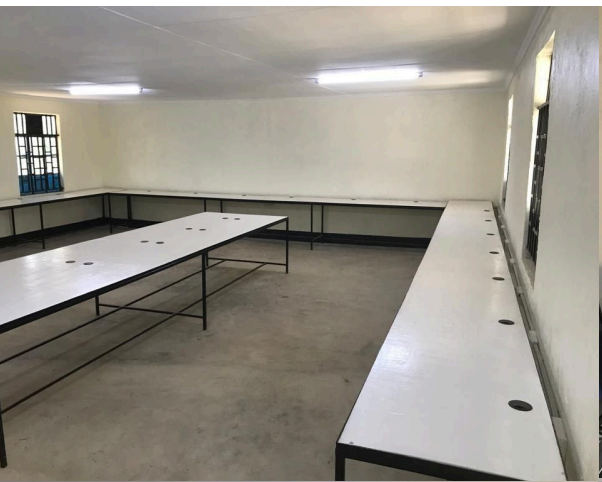
Metrics Survey

An introductory metrics survey was conducted with new schools in July 2023. in order to gauge anticipated levels of beneficiaries and demographic data for the year ahead. This survey was completed by school management through the Typeform survey platform.

Case Study

Moi Ndabi Secondary School: Moi Ndabi is a remote school situated about 54km from Naivasha and has a total of 369 students, 192 boys and 177 girls mostly between the ages of 14 and 18, with some older students too. There are 15 teachers, all of whom wanted to undertake ICDL training. Training is usually offered to 3 teachers per school, but given the remote location of the school, it was deemed beneficial to train more teachers and therefore 12 teachers were selected for training.

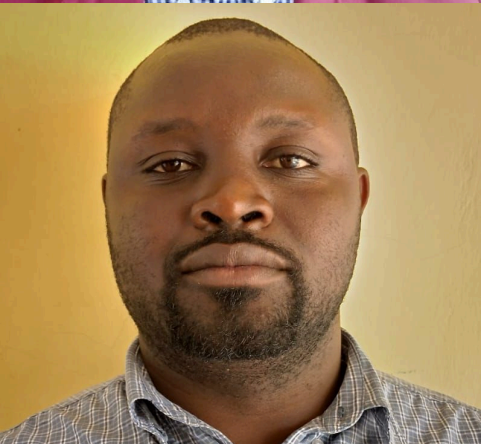
The school was very excited to have a computer lab installed and ensured that the host classroom was properly furnished and well-organised to receive the equipment.



Quote from school principal of Moi Ndabi, Samuel Mugambi: "The technology has changed the dynamic of the school and training of students has started immediately, especially for the students who are graduating from the school this year. The teachers are equally excited and are spending more time in the computer lab to train students in ICT and incorporate the technology into other subjects. We are expecting a bigger student population next year due to the newly installed computer lab."

Sarah Senewa passed all 6 ICDL modules offered with an average pass mark of 86%. Her highest mark was 94% in the 'Documents' module.

Jestus Kantet passed all 6 ICDL modules offered with an average pass mark of 85%. His highest mark was 94% in the 'Online Collaboration' module.



David Kingori passed all 6 ICDL modules offered with an average pass mark of 84%. His highest mark was 91% in the 'ICT in Education' module.

ICDL Results

The table below shows the results for all recent ICDL assessments, from a total cohort of 12 teachers. One teacher is yet to complete the ICDL assessments.

Module	Passes	Highest Score	Average Pass Score
Computer & Online Essentials	11	88%	82%
Documents	11	100%	87%
ICT In Education	11	91%	82%
Spreadsheets	11	94%	81%
Presentations	10	91%	84%
Online Collaboration	11	97%	86%
TOTAL / AVERAGE	**65**	**94%**	**84%**

SUSTAINABLE DEVELOPMENT GOALS

Quality Education

This project contributes to Target 4.4 of SDG 4 which states:
By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

Both teachers and students at project schools are directly gaining and have the opportunity to gain relevant technical skills that will improve their job prospects, contributing to Target 4.4.

Gender Equality

This project contributes to Target 5.B of SDG 5 which states:
Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

By working exclusively with schools with similar ratios of boys to girls and in some cases having more female students, usage of equipment by both genders ensures that no individual is excluded.

Industry, Innovation And Infrastructure

This project contributes to Target 9.C of SDG 9 which states:
Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

By providing schools with computer labs and assistive technology such as projectors, thousands of students have access to information and communications technology.

Responsible Consumption And Production

This project contributes to Target 12.5 of SDG 12 which states:
By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

ICT Equipment used in projects is donated largely from companies; equipment is data-wiped and refurbished before being sent to projects. Therefore, this project is promoting the reuse of equipment and reducing e-waste.

Next Steps

As the project continues to progress, students will further benefit from classes in their respective computer labs and teachers will continue to cascade their ICT knowledge to the students. Baseline monitoring surveys will be run with teachers and students before December 2023.

This will be an opportunity to monitor how equipment is performing at the schools, connectivity issues, how often the equipment is being and understand which types of software are utilised, and which types of tasks are being completed on the machines.

There will be further opportunities for teachers to conduct training and retake assessment in ICDL modules which they are yet to pass, and this will help to equalise any ICT attainment gap between schools.