

2013 Annual Report

Photos:

Front cover: Mhi Wa Salama Children's Home, Mombasa, Kenya, Tim Mansel/ Little Darling English Medium, Primary and Pre- School, Maseru, Lesotho, Justin Keane/ Inspire Children's Academy, Lusaka, Zambia, Tim Mansel/ Tum School, Lusaka, Zambia, Tim Mansel/ Medialelem School, Addis Ababa, Ethiopia, Francis Curran/ New Era School, Addis Ababa, Ethiopia, Francis Curran/ Kenya (boys), Francis Curran.

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Photo: Aseidas Blauvelt

Introduction



About Camara

Camara is an international charity, operating as a social enterprise, that uses technology to deliver 21st century skills and as such improve education in disadvantaged communities around the world. In 2013 we delivered training to 3,419 educators and supplied technology to 777 educational institutions in 9 countries.

Working with partners in civil society, government and the private sector, we operate under a sustainable social enterprise model to deliver high-quality, low-cost, context appropriate e-learning solutions. Since 2005 we have provided over 700,000 students with valuable 21st century skills and delivered training to over 12,000 educators in 2,500 schools.

Camara's mission is to transform education using technology to empower disadvantaged students. This is guided by the beliefs that poverty is wrong in the 21st century, that education is the key to alleviating this poverty and that technology has the ability to radically improve education.

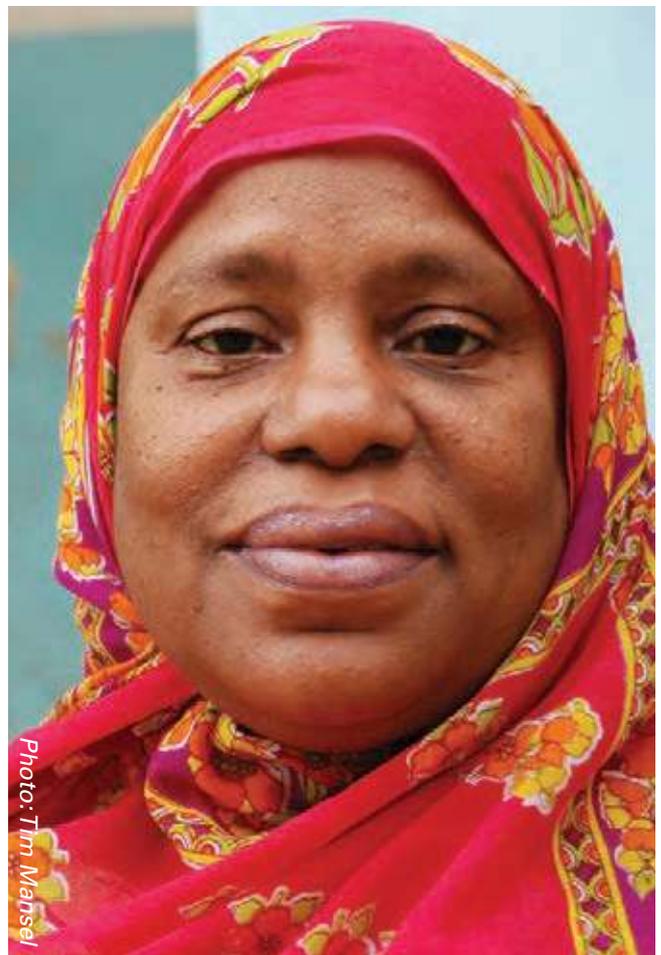
Camara delivers its services through a network of 11 education hubs in total, including Ireland, Kenya, Ethiopia, Zambia, Tanzania, Lesotho, Haiti and Jamaica. Rwanda and Uganda have limited operations at present, and South Africa is both an education hub and resource centre. Technology is supplied to these hubs through our resource and refurbishment centres which are located in Dublin, Belfast, London, San Jose and Johannesburg. Computer equipment is sourced from organisations and individuals who are disposing of equipment that is no longer useful to them. The computers are securely wiped and educational software is installed before they are dispatched to education hubs for distribution to schools.



Camara is a signatory of the Dochas Code of Conduct, a set of principles which ensures that NGOs maintain a high degree of responsibility regarding

images and messages. The adoption of the Code means that Camara has represented fully the complexity of the situations in which we work and that we have sought the permission of the people portrayed in the photos we have used.

Camara is a registered charity in Ireland (CHY 16922), the UK (1135540) and the USA (EIN) : 38-3804011)



"A child can learn everything by using the computer."

*Asma Jabir, Head Teacher,
Bondeni Primary School, Mombasa, Kenya*

Our Year in Numbers

3,419

teachers trained to
use ict in education



700,000  digitally
students are now **literate**



computers
dispatched into
schools

over

33,000

volunteer
hours logged



€1,044,683

fundraised this year



Camara's Supporters

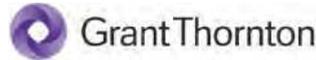
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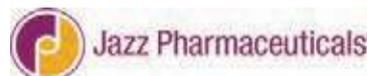
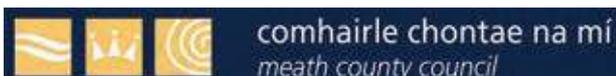
Partnering with:



Supported by:



THE IRISH TIMES



2013 in Stories



500,000th Digitally Literate Child

Since its foundation in 2005, Camara has provided 500,000 students with digital literacy skills.

January 2013



40,000th computer shipment

April 2013



Camara wins ICT Excellence Award

May 2013

Camara signs agreement with UNESCO - IICBA

Camara partners with UNESCO - IICBA on teacher development programme.

May 2013





Camara opens in Haiti

June 2013



President of Ireland opens new Dublin refurbishment centre

June 2013



Camara Kenya becomes first point of collect for EACR

Camara partners with the East African Compliant Recycling Facility.

December 2013



Techspace Strategic Partnership with Adobe Foundation

November 2013



Lord Puttnam is announced as Camara's official patron

October 2013



Chairperson's Report

Maria Mahon
Chairperson of Camara Education

2013 was a very successful year for Camara Education. The efforts over the past eight years have resulted in over 700,000 children from under resourced communities becoming digitally literate to date. In an era where technology is pervasive and brings so many opportunities, what could be a better gift to a child?

Not only did we continue to grow through our existing network, the focus on the quality of operations in all areas was pleasing to see. Implementing technology in schools is the easy part, supporting educators to use it and integrate it into teaching is the real challenge. Hence, I was very pleased to see training courses from the likes of Intel and Cisco being rolled out. These are professional level, ministry approved courses that give teachers the skills to integrate technology into teaching. As such you can understand that training is the most important activity we perform.

Since inception, Camara has been committed to transparency. This report, including the Monitoring and Evaluation report include significant detail on the organisation's activities. By measuring what we do and by sharing our results, both positive and negative, we are being open and honest with

you, and working hard to improve in areas where it is needed. As such I was delighted to see that improvements in both monitoring and evaluation, and quality are two of our three key pillars for the next three years and there is scope for further improvement.

One amazing statistic in the report is that 33,000 volunteer hours were logged in Dublin alone in 2013. When the volunteer numbers from across the network around the world are included, the figure is staggering. What is so powerful is that so many people are joining in the Camara effort to impact upon the lives of those with less. On behalf of the board I would like to thank you all. I know that you are the source of inspiration for many of us.

Finally I would like to thank our board in Dublin for their time and support. We were delighted to have Fiona O'Carroll join us, and to share her extensive education and technology expertise. I would also like to thank the other Camara boards across the network for their time and effort in guiding the organisation. It is a very exciting time for ICT in Education around the world, particularly in our programme countries and we are fortunate to be leading the way in the sector.



Photo: Tim Mansel

Mbheni School for Girls, Mombasa, Kenya.



Treasurer's Report

Deirdre McCooey
Treasurer of Camara
Education

Camara recorded a net surplus of €72,394 in 2013 compared to €388,471 in 2012. Incoming resources in 2013 increased by 7% to €1,787,812 mainly due to extra voluntary income and self-generated income. Resources expended by Camara in 2013 increased by 34% to €1,715,418 which reflected the ongoing growth and development of Camara, which included the opening of hubs (or sub-hubs) in Lesotho, South Africa, Tanzania, Haiti & London. In addition Camara Ireland expanded the Techspace program. As a result of these developments, staff numbers and operational costs increased. Costs continue to be monitored closely and are in line with budgeted expenditure.

As a result of the investment decisions in the quality of delivery and scaling of the network, Camara's cash position at year end decreased slightly to €387,205 in the bank, compared to €390,137 in the previous year. The financial reserves at 31 December 2013 were greater than one quarter of operating costs, in line with the reserves policy adopted by the Board.

Costs associated directly with our Charitable Activities in 2013 represented 89% of our total

resources expended, which is 3% higher than last year, due mainly to the increased activities in the African Hubs. The balance of our costs in 2013 consisted of Governance Costs (6% of the total) and Costs of Generating Voluntary Income (5% of the total) which decreased from last year showing a greater return on spend.

Camara generated €12 from every € spent on generating income.

Summary of our major financial results is presented below:

	2013(€)	2012 (€)
Total Incoming Resources	1,787,812	1,671,979
Total Resources Expended	1,715,418	1,283,508
Net Income Resources	72,394	388,471
Cash at Bank (year end)	387,205	390,137
Staff Costs	745,515	617,358
Costs of Generating Voluntary Income	89,461	94,487
Governance Costs	94,167	82,852
Charitable Activities	1,531,790	1,106,169



Photo: Tim Mansel

Inspire Academy, Lusaka, Zambia.



Chief Executive Officer's Report

John Fitzsimons
CEO of Camara Education

I am delighted to say that 2013 was our best year in Camara's eight year history. We are very fortunate to be growing at such a strong level, especially in such a challenging period for charities. The commitment from the 'Camara Community' has never been stronger. The Camara Community is made up of you, whether you support Camara financially, with technical donations, with your time, in partnership or with your moral support. What binds us is our belief that poverty is unacceptable, education is the key to its eradication and technology can radically enhance the quality of education. Together our efforts in 2013 resulted in an additional 200,000 children in disadvantaged communities gaining digital literacy or other 21st century skills and the opportunity of a better education and life.

In 2013 we trained 3,419 educators. This figure is up 11% on the previous year and almost doubled over the previous two years. We also installed 8,742 computers into schools, 14% more than in 2012. This was only possible due to an increase of 10% in fundraising support. As a social enterprise, we generate revenue over and above fundraising, the ratio of which remains about 1:1. This means for every €1 donated, we have €2 worth of impact. In addition, for every €1 invested in fundraising, €12 was returned. As such, a social enterprise is a very solid social investment. Full audited accounts are included in this report as well as our Monitoring and Evaluation report which highlights the progress that has been made, and also shapes our decisions and future plans. Transparency has always been a core value to Camara and this report plays an important role in delivering on this.

There were many highlights from 2013. Having the President of Ireland Michael D. Higgins and his

wife Sabina open our new refurbishment centre in Dublin was one. The President is very much a member of the Camara Community; given that his life has been spent fighting for social justice and his strong belief of technology's role in achieving this. Another was the first ever Camara global conference, which was held in Addis Ababa, Ethiopia in September. Nearly all of the Camara entities were present which gave many of the team an opportunity to see our impact first hand. Hence the opportunity was used to define Camara's new three year strategy during the conference.

The strategy seeks to prove the impact of ICT in Education, improve the quality of our products and services and to scale our operations in order to reach more disadvantaged communities around the world. Rather than just scale, we know that if we work deeper with schools to drive utilisation of the computers, our impact can grow significantly. As such, we are deepening our education expertise and we are seeking to be the go-to partner for Ministries of Education who need support in introducing technology, so that each student can get the quality education that they deserve.

However the highlight for me has always been visiting the schools that Camara works with, seeing the technology in use and talking to the children that we have impacted. Last year one student in Zambia summed it up better than I ever could. When asked why she thinks that technology is important, she said 'computers make the world small'.

Thank you for continuing to support Camara and I hope you enjoy the read.



Little Darling English Medium, Primary and Pre-School, Maseru, Lesotho.



WELCOME TO ICT

Photo: Asitidas Blauvelt

Jerusalem Primary School, Ethiopia.

Fundraising

Camara acts as a 'social enterprise', operating under strong business principles, generating its own revenues but with the sole purpose of affecting social change – the enhancement of education in disadvantaged schools. Camara benefits from having a number of revenue streams which has allowed it to thrive in a difficult fundraising environment.

It costs Camara approximately €50 to process one PC and to ship it to one of our education hubs. These costs are partly covered by funds raised from recycling revenue and the sale of computers, as well as provision of services to our education hubs. However, Camara is heavily reliant on donors in order to continue to sustain

our operations, as well as to improve and scale our impact on education.

In 2013 Camara's fundraising strategy moved away from mass-marketing and public events, focusing instead on key partnerships, building awareness and relationships with funding organisations and individuals who align themselves with Camara's core principles.

Last year saw a continued growth in fundraising for Camara, with much welcomed repeat funding from loyal donors and exciting new corporate and foundation partners strengthening our supporter base for the future.



Photo: Mike Mirams

A look at Camara's partners and supporters will demonstrate the breadth and variety of donors investing in Camara's work across the world and the organisation gives a huge vote of thanks to all of our supporters, whether individuals, companies, foundations or government organisations.

Camara's e-learning centre sponsorship programme continues to attract generous support across our network. Last year saw the launch of a new fundraising event, a Camara Trek to the Simien Mountains in Ethiopia, which included visits to Camara schools in Addis Ababa and the Afar region.

A group of 19 generous individuals took on this challenge, raising much needed funds to kick start the establishment of Camara's first resource centre in Britain. Camara is very grateful to them and all their supporters, as well as those who continue to sponsor e-learning centres in our programme countries.

Camara's aim for the future is to continue to build a diverse and sustainable set of income streams that will enable it to support its social enterprise models in each education hub. This will allow it to drive new projects that will prove, improve and scale Camara's work over the coming years.



Ethiopia Fundraising Trek, Simien Mountains, Ethiopia.



Photo: Tim Mansel

Education



Education

2013 was Camara's strongest year to date, with an increase of 11% in teachers trained across the network since 2012, as well as the development of training courses provided. The Camara Education team also strengthened key partnerships, including joining the Intel Alliance and partnering with DELL to support its Solar School project in Lagos, Nigeria.

Other key achievements in 2013 include:

- A Memorandum of Understanding was signed between UNESCO International Institute for Capacity Building in Africa (UNESCO-IICBA) and Camara Education to work on practical approaches of using the ICT enhanced Teacher Development (ICTeTD) model.
- A new version of the Camara ICT Skillbuilder for Teachers course was developed and rolled out to include a comprehensive pack of learning aids and assessment structures. The process included capacity development of key trainers around the network.

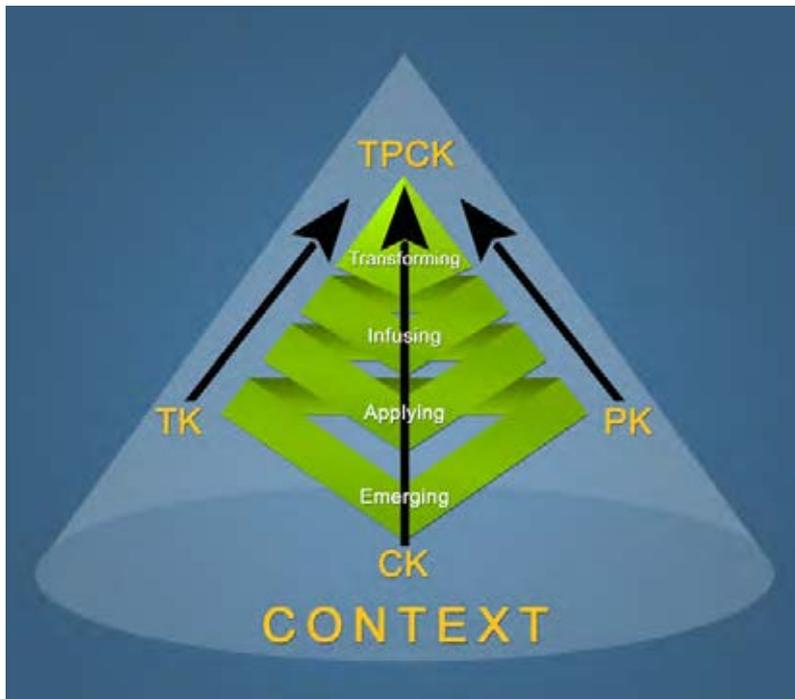
- New processes were also introduced for the classification of educational resources for software builds.
- The team also attended and presented at e-learning Africa in Namibia in May 2013 where a workshop was delivered, also in partnership with DELL, on sustainable ICT programs in schools through continued capacity development of teachers.

Enabling Technology enhanced Learning (TeL) in educational institutes requires comprehensive and continuous support. Research and our operational experience in country has allowed us to identify two key areas of support:

- Teacher Training and Continuous Professional Development
- Educational Resources



*George Mwanza, Headteacher,
Inspire Academy, Lusaka, Zambia.*



UNESCO-IICBA ICT Enhanced Teacher Development Model

Emerging Stage: The teacher development focus is discovering ICT tools and their general functions and uses, and the emphasis is usually on basic ICT literacy and skills. At the emerging stage, classroom practice is still very much teacher-centered.

Applying Stage: The focus is on the development of digital literacy and how to use ICT for professional improvement in different disciplines. Teachers use ICT for professional purposes, focusing on improving their subject teaching in order to enrich how they teach with a range of ICT applications.

Infusing Stage: The teacher development focus is on the use of ICT to guide students through complex problems and manage dynamic learning environments. Teachers are developing the ability to recognise situations where ICT will be helpful, choosing the most appropriate tools for a particular task and using these tools in combination to solve real problems.

Transforming stage: Teachers themselves are master learners and knowledge producers who are constantly engaged in educational experimentation and innovation to produce new knowledge about learning and teaching practice.

Teacher Training and Continuous Professional Development

Since 2012 Camara has focused its approach to supporting teachers' continuous professional development (CPD) through appropriate training, with alignment to the UNESCO-IICBA's ICT enhanced Teacher Development (ICTeTD) model.

Camara follows the ICTeTD model as a framework to identify competency levels and provide a progressive learning path for teachers to deal with individual competence gaps. This allows Camara to build a continuous professional development (CPD) path for teachers. Camara's commitment to each school is to bring teachers to a level where they each have the capacity to transform their educational environment through ICT.

Camara Training Courses

The ICTeTD model provides Camara with a framework to develop an appropriate training path. Each professional development path for teachers will be unique and will be made up of one or many training courses offered by Camara. The following courses are delivered either by an instructor, through e-learning or a blended approach.

Teacher Focused Courses: ICT Skillbuilder for Teachers, Intel Teach Getting Started for Teachers, Intel Teach Elements, Using Moodle to Connect

Students for Teachers, Google Apps for Education Suite, Internet Resources for Classrooms, Scratch Programming in the Classroom

Principals and Schools Leaders: Educational Leadership in the 21st Century

School Technicians: Cisco IT Essentials for School Technicians, Cisco CCNA Discovery for School Technicians, Camara Systems Administration for School Technicians.

Educational Resources

Camara provides schools with educational suites that teachers and educators can use to transform their educational delivery. Each computer that is distributed to schools is loaded with resources to suit the educational environment, such as the Edubuntu package that is distributed to our schools across Africa and Haiti. This package contains quality software for primary, secondary and tertiary level institutes. Schools which face challenges in accessing internet resources are supported by providing offline e-learning resources such as an offline version of Wikipedia built for schools.

Where possible, schools are provided with comprehensive repositories of curriculum focused e-learning content provided by RACHEL and Khan Academy. Through this provision, e-learning is still possible without internet access.

E-Waste and Data Management

Camara Education has strong policies in place to track assets from time of donation to recycling. These ensure secure data management as well as responsible end of life recycling. Receiving educational institutes in our African and Caribbean based hubs are contracted to return equipment to Camara at its end of life. This is then sent for recycling at one of Camara's accredited recycling partners. Institutions receiving equipment in Ireland are contracted to either return it to Camara Ireland or recycle with a registered WEEE facility. Camara Education also recycles large quantities of IT and electrical equipment in Ireland, at a fully licenced and registered WEEE recycling facility.

In 2013 a comprehensive e-waste strategy was developed which established Camara's goal of becoming a positive net contributor to responsible e-waste recycling in all of the countries it operates in. As part of that strategy, an e-waste policy was drafted for all hubs which will continue to be modified in order to ensure that all regional requirements are met satisfactorily. Legislation restricting the movement of used electronics across borders continues to be a major challenge as well as the cost of shipping of aggregated e-waste to certified partners overland.

Significant progress has been made on data management systems in Camara's African education hubs, however improvements are still necessary. The quality of data entry, as well as day to day workshop activities have improved

greatly and African teams are continuing to build on this progress. Progress was also made on reporting capacity through the development of a data warehouse server to report on metrics across all hubs in a single database and a dedicated resource was brought in to manage Camara's e-waste and data management system.

Key achievements:

- The East Africa Compliant Recycling Facility (EACR) was officially opened in December 2013 in Nairobi, with Camara Kenya becoming one of the first official collection points for all e-waste to be recycled.
- All e-waste in Ethiopia was inventoried and prepared for handover to the government e-waste aggregation and disassembly facility. The facility met all of the requirements for an e-waste aggregation point and Camara Ethiopia will be signing an MoU with the MCIT to hand over all Camara Ethiopia e-waste in early 2014.
- Desco was established as a new recycling partner for both Camara Zambia and Camara Lesotho. Camara Lesotho sent its first batch of e-waste, accumulated over 6 years, for recycling in 2013.
- In Rwanda e-waste was collected and passed on to Great Lakes Energy Management in May 2013.



Photo: Tim Mansel

Teacher training, Camara Hub, Mombasa, Kenya.

Hub Accounts



Students from Moseliwane Primary School in Lesotho.

Since 2011, Camara has a standardised financial system for the whole network. As such, all entities produce monthly accounts. The table below includes accounts for 2013.

1. Accounts have been converted into € using the respective FX rates of 31st December 2013 (Northern Ireland on 31st May 2013).
2. Camara Ireland is part of Camara Education Limited and so does not produce separate accounts.
3. Northern Ireland has a year-end of 31st May 2013.
4. Not all accounts are externally audited, this is either due to size or the audit is in progress.

	Income (€)	Expenditure (€)	Surplus/Deficit (€)
Ethiopia	149,438	172,937	-23,499
Jamaica	110,392	188,215	-77,823
Kenya	131,075	122,147	8,928
Lesotho	16,403	13,773	2,630
Northern Ireland	40,723	61,627	-20,904
Rwanda	0	265	-265
Tanzania	105,174	87,304	17,870
Uganda	3,003	3,026	-23
UK	217,669	221,968	-4,299
US	15,052	48,994	-33,942
Zambia	98,118	66,812	31,306
Total	887,047	987,068	-100,021

Education Hubs



Jerusalem School, Addis Ababa. Photo: Aseidas Blauvelt

Ethiopia



Camara Ethiopia has a five year Partnership Agreement with the Federal Ministry of Education in Ethiopia to deliver the Camara Package to around 900 schools across the country. This comprises of 17,500 computers and training of a minimum of 3,000 teachers. Camara Ethiopia is a registered foreign NGO with the Federal Charities and Societies Agency.

As of 2013, Camara Ethiopia has Agreements with the Regional Governments of Addis Ababa, Amhara, Afar and Benishangul Gumuz to work with schools in those Regions.

Notable achievements from 2013 include:

- In October 2013, the hub received a commendation from the Minister of Education for 'Outstanding Contribution to Education Sector Development'.
- Camara Ethiopia hosted two successful events for Camara Education: Camara's First Worldwide Conference in September and a trek in November for key Camara supporters.
- A Memorandum of Understanding was also signed between Camara Ethiopia and the Costa Foundation to support marginalised schools in coffee growing areas in the South of Ethiopia.
- Camara Ethiopia signed an agreement with UNESCO- IICBA to collaborate on teacher development in ICT in Education.

Camara has continued to scale its operations across Ethiopia, with additional agreements now in place with the Regions of Oromia and Gambella, and demand expressed from several other regions.

Camara Ethiopia has expanded the range of services it offers schools to include:

- Educational Leadership for School Directors and local Government Officials.
- Increased training of five teachers from each school for two weeks.
- Educational content and curricular tools.
- Extra content and training for educational institutions working with students with special educational needs.
- In-field support and maintenance conducted in partnership with regional government experts.

	COMPUTERS SENT TO SCHOOLS:	2,418
	SCHOOLS RECEIVING COMPUTERS:	111
	NUMBERS OF TEACHERS TRAINED:	557

Mbheni School for Girls, Mombasa, Kenya. Photo: Tim Mansel



Kenya



In December 2013 Camara marked the shipment of its 10,000th computer to Mombasa, since it was established as Camara’s first African hub in 2008.

Camara Kenya expanded its operations in 2013, due to both a relocation of offices to a larger and more accessible premises as well as the implementation of a number of successful partner projects.

- DELL sponsored a project to install e-learning centres in 20 schools, consisting of 500 new computers.
- 20 e-learning centres consisting of 200 computers were installed in partnership with USAID.
- The Aga Khan Academy also partnered with the hub to install 90 PCs in 20 schools to test early learning literacy software from Canada.

Volunteer training is progressing significantly in Kenya and Cisco Academy status was achieved this year with 2 master trainers accredited. Four groups of volunteers, 120 individuals in total, were trained in PC maintenance during 2013, which will greatly enhance the capacity to deliver quality technical training to schools. Camara Kenya is the first in the network to achieve this status, however it is expected that other educational hubs will follow this model in 2014. In terms of education training, the Intel Combined Skill Builder Course for teachers was piloted at the hub during the year.

Camara Kenya will be one of the official collection points for the East African Compliant Recycling facility (EACR) which officially opened in 2013 in Nairobi. The hub will collect electronic goods which will then be sent for recycling at the EACR, ensuring that Camara are making a positive contribution to the e-waste problem.

“It is unimaginable to have a school without computers, because once a child is exposed to computers they are able to access information.”

Wilfrida Odongo, Ganjoni Principal



COMPUTERS SENT TO SCHOOLS:

1,790



SCHOOLS RECEIVING COMPUTERS:

120



NUMBERS OF TEACHERS TRAINED:

1,234



Photo: Tim Mansel

Precious Nyambe, Teacher, Mahatma Gandhi School, Lusaka

Zambia



Camara Zambia progressed well in 2013 with an increase in both computers into schools as well as the overall number of teachers trained. Camara Zambia’s training programme in particular has been strengthened.

- A model e-learning centre was established at Educational Broadcasting Services which is now Camara’s principal training centre for teachers in Zambia.
- Under an agreement with the Ministry for Education, three training courses were accredited for delivery to school teachers, including; Camara Skill Builder, Camara-Intel Getting Started and Camara Educational Leadership in the 21st Century. This is the first time a Camara developed training course obtained such accreditation across our whole network.
- The Maintenance and School Principals and Leaders training courses were piloted successfully.

Camara Zambia are working closely in partnership with the Ministry of Education on the integration of ICT in Education in the country. The hub is also working in partnership with Puma Energy Foundation on a project to support 40 e-learning centres in Copperbelt, Southern and Lusaka provinces. This project is also supporting Camara’s training and volunteer programme as well as the establishment of a sub hub in the Southern Province.

The first comprehensive monitoring exercise for training in Zambia was undertaken in December 2013 in partnership with the Ministry of Education. The first Camara Educational Leadership

workshop was also rolled out in coordination with the Ministry of Education in Zambia (and Ethiopia). This required course development to be undertaken by Camara Education. In 2013 150 School leaders participated in the workshop. Initial feedback shows great satisfaction and appreciation from both leaders and government partners.

“I love using computers to learn more about new things.”
Angela Teofilo, Inspire Academy, Lusaka, Zambia

An organisational review was undertaken in Lusaka and Dublin in September in relation to Camara Zambia’s Irish Aid Programme, which highlighted a number of gaps and required improvements. Camara responded satisfactorily to the recommendations and funding was redirected to a special one year grant for 2014 to rectify gaps identified, following a successful application.

Future plans at Camara Zambia include the establishment of a sub hub at Mpelembe Secondary School in the Southern Province near the provincial capital, Chroma.

	COMPUTERS SENT TO SCHOOLS:	905
	SCHOOLS RECEIVING COMPUTERS:	57
	NUMBERS OF TEACHERS TRAINED:	397



Photo: Tim Mansel

Tum School, Lusaka, Zambia.



Msasani Secondary School, Moshi, Tanzania.

Tanzania

2013 was Camara Tanzania's first fully operational year. Progress was made toward reaching a partnership agreement with the Ministry of Education. This endorsement of Camara as an education initiative will be hugely beneficial, and the partnership, once in place, will facilitate communication with relevant regions on the implementation of the programme, offering Camara the chance to continue to expand operations across Tanzania.

Progress is also being made toward the establishment of a partnership with the Tanzania Institute of Education. This is the public institution with the responsibility for interpreting government policies on education.

“It is unimaginable to have a school without computers, because once a child is exposed to computers they are able to access information, they do not depend on the teacher, they are provided with wings to fly.”

*Wilfrida Odongo, Ganjoni Principal,
Ganjoni Primary School*

Camara Tanzania built on its relationship with Smiles Communications and together successfully completed a project to deliver free internet to a number of schools with Camara e-learning centres. The hub also commenced another project, funded by an un-named donor, to deliver 20 e-learning centres across the three regions of Kilimanjaro, Singida and Dar Es Salaam.

Computer lab management software, Epointes, was also deployed in several schools in Dar Es Salaam. This unique and powerful classroom management programme was very well received by the teachers and school administration. A classroom server was designed to act as a content server as well as network management console. This server will be deployed in schools to enhance labs and offer additional education content.

The construction of a new dedicated training facility at the hub progressed well during 2013 and is due to be completed soon.

	COMPUTERS SENT TO SCHOOLS:	1,087
	SCHOOLS RECEIVING COMPUTERS:	40
	NUMBERS OF TEACHERS TRAINED:	245



Cormac Lynch, Founder Camara Education, meets Paul Kagame, President of Rwanda in San Francisco.

Rwanda



Operations in Camara Rwanda were limited in 2013 to training, maintenance, monitoring and e-waste collection due to an existing computer specification directive.

High specification requirements exist in Rwanda regarding the importation of refurbished IT equipment. This has strictly limited the extent of Camara's activities in country, however a huge amount of progress has been made on

improving the standard of computer builds that Camara can send to Rwanda. Camara now meets all requirements apart from computer age specification. It is hoped that the hub can become fully operational again in the near future.

To continue to provide a service in Rwanda, one staff member delivered training and support to Camara schools on a part-time basis.



Camara Uganda Team, Fort Portal, Uganda.

Uganda



A ban on the import of refurbished computers remains in place in Uganda, preventing Camara from operating a full education hub. However, with some funding from Camara Education Ltd, training continued in existing computer labs.

Camara Uganda staff travelled to Camara Kenya to train as Cisco Accredited Trainers. This was part of an initiative which will see Camara Uganda

becoming a Cisco Accredited Training Centre. This achievement would allow Camara Uganda to sustain itself by bringing in its own revenue through its offered training courses.

Discussions were ongoing during 2013 with the East African Compliant Recycling Facility (EACR) in Nairobi to take e-waste from Uganda.



Photo: Justin Keane
 Little Darling English Medium, Primary and Pre-School, Maseru, Lesotho

Lesotho



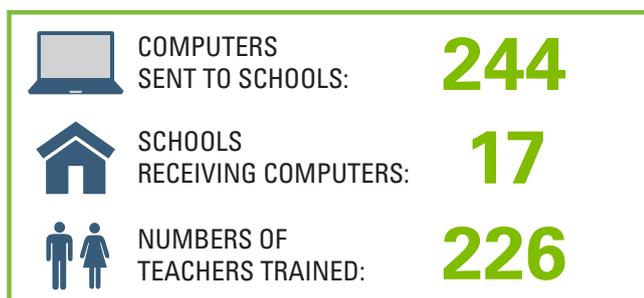
In 2013 Camara Lesotho opened a new centre, hosted by the Sisters of the Holy Family of Bordeaux in the capital city of Maseru. The new centre was co-funded by the Paul Simon Memorial Fund, the Waterloo Foundation and Camara Dublin. The facility became operational in August 2013 and currently has the capacity to train 23 educators. The first Camara Skillbuilders training session took place in late August for a group of sisters from The Holy Family as well as other congregations. The first teacher training took place in October for teachers from Hlalele Primary school.

recognising Camara as an expert ICT in Education training provider. The Ministry is to provide funding to schools for the establishment of the e-learning centres.

In light of the Ministry of Education and Training's restrictions on purchases of ICT by schools, Camara Lesotho plans to approach more local, commercial and semi-state institutions to sponsor schools. The hub plans to begin to train members of the public, if it is successfully registered as a Vocational Education and Training Institution with the Ministry of Education and Training.

A major achievement for the hub was the successful establishment of 6 e-learning centres in schools across Lesotho with a 7th centre scheduled for early 2014. All 7 centres were sponsored by the Waterloo Foundation (UK).

A memorandum of understanding was signed with the Ministry of Education & Training in 2013,



"We are trying to be connected to other schools in other parts of the country, in that way we can learn from them and they also learn from us."

*Asma Jabir,
 Head Teacher, Bondeni Primary School*



Creative Tech Festival, Dublin.

Photo: Tony Kinlan

Ireland

Camara Ireland exceeded both training and computer dispatch targets in 2013. There were over 400 teachers and educators trained in how to use ICT as a tool within their classroom and over 1,100 computers dispatched to 105 schools and youth centres.

Camara Ireland has the benefit of working in an environment with an increasing focus on the importance of digital literacy for young people and a strong high speed internet infrastructure. Our approach has shifted from delivering basic packages of teacher training and computers, to focusing on working with schools and youth centres to integrate technology more effectively into the teaching and learning environment.

During 2013 Camara Ireland also attended and presented at numerous conferences across the country to spread the message of what we do and the positive impact that its training has in schools.

Goals for 2014 are focused on implementing a new three year strategy which includes the planned dispatch of 1,600 computers and the training of 600 educators.

Camara Ireland will also become an independent legal entity in 2014, to bring it in line with the standard Camara model.

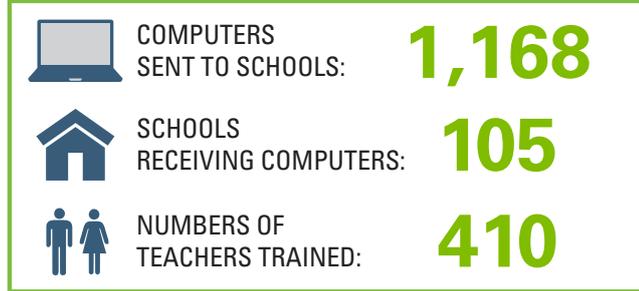


As host of the TechSpace Consortium, Camara Ireland became the Irish strategic partner of the Adobe Foundation in April 2013. One of fourteen global partners selected to manage the Foundation's signature CSR initiative, the Adobe Youth Voices program.

TechSpace was selected based on its capacity to scale the program, through large networks of schools and community based organisations in Ireland and other geographic regions globally and its ability to generate visibility for the program and the resulting youth produced work. This partnership was officially launched at the first TechSpace Creative Tech Festival in November.

The TechSpace Programme was strengthened in 2013, with two full time staff in place, and a number of corporate sponsors, including the Adobe Foundation, ESB, Independent News and Media and Ogilvy & Mather. The programme is also supported by The City of Dublin Youth Service Board, the Ireland Funds, private individuals, youth network partners (Foróige, YMCA Ireland, Crosscare) and pilots with our education partners (DCU, NUIM and IADT).

In 2014 the TechSpace network will be scaled, creating clusters of Techspaces around the country, as well as increasing the number of sites and educators.





Camara initiated its operations in Haiti in the second quarter of the year as a project in partnership with Fondation Digicel. Based on the success of this project it was decided in August to establish a longer-term presence in the form of a hub. Since then the hub has experienced significant growth and great opportunity in Haiti.

In November, Camara Haiti delivered the last of a total of 26 e-learning Centres commissioned under contracts with both Fondation Digicel and Irish NGO Haven Haiti. Discussions began in December between Camara Haiti and the Minister for Vocational Technology on potential partnerships for the coming year, which will build on an existing strong partnership agreement with Fondation Digicel.

Also in December, the Haiti hub hosted a group of seven staff and friends of Camara, sponsored

by Camara USA. The group visited a number of orphanages and women’s centres which had received teacher training and IT equipment from Camara during the year.

In 2014 the focus will be on registering Camara Haiti as a legal entity, establishing the hub structure and on doubling the number of e-learning centres delivered across Haiti. Camara Haiti is also actively seeking alternative energy solutions, with solar energy emerging as a model for e-learning centre delivery.

	COMPUTERS SENT TO SCHOOLS:	305
	SCHOOLS RECEIVING COMPUTERS:	26
	NUMBERS OF TEACHERS TRAINED:	50

“We are fortunate enough to be in receipt of a Camara e-learning Centre, meaning the girls here will gain practical computer skills, which greatly enhance their chances of employment. It is brilliant that so many other Haitians will now get this chance through Camara.”

*Maria Carmelle Lafontant,
Founder of CHREPROF*



In April 2013 a three year Memorandum of Understanding (MOU) was signed between the Digicel Foundation and Camara Jamaica to carry out Digicel Foundation’s Project 1000. This project will provide computers to 1,000 schools, 80% of schools across Jamaica. With approximately 2,000 computers to be installed and 1,000 teachers to be trained.

working to increase the number of PCs per school to bring it more in line with the Camara model which aims to deliver larger e-learning centres.

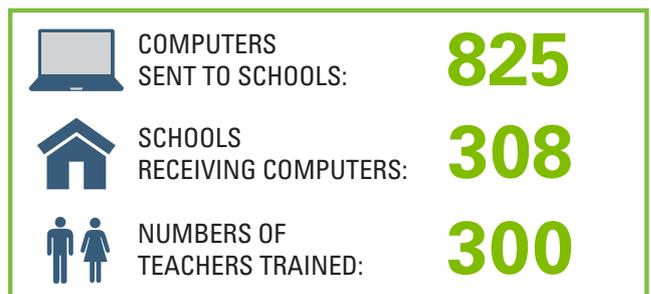
In response to the Jamaican Ministry of Education’s tablet deployment strategy, initial discussions were held and a preliminary investigation carried out into a partnership with Digicel to supplement Camara’s refurbished hardware model with tablets. Customer base expansion was also initiated to target community centres and colleges.

The Camara Jamaica team of four staff and a small group of volunteers continued to strengthen partnerships with the Ministry of Education, the Early Childhood Commission and other strategic stakeholders and are looking forward to installing more e-learning centres with their partners in 2014.

“Project 1000 is the most impacting, far-reaching, and unprecedented private educational initiative to be implemented in Jamaica to date.”

*Karl Gaynor,
CEO of the Camara Jamaica Foundation*

Camara Jamaica provided a total of 825 computers to 308 educational institutions in 2013, averaging at around 2 PCs per school according to Project 1000’s model. However, Camara Jamaica are





AREA 1

NO NOT FOR CHARITY OR ANY

Photo: James Keating

Resource and Refurbishment



Resource and Refurbishment Centres



Photo: James Keating

Akiem Aina, Dublin Resource Centre, Ireland.

Dublin Ireland



Photo: David Soanes

President of Ireland, Michael D. Higgins and his wife Sabina attended the opening of Camara Education's new Dublin premises in June 2013. The President emphasized in his speech the potential of digital technologies to transform teaching and learning experiences in classrooms, and to bridge gaps in society.

Camara Dublin remained as the primary computer refurbishment and deployment centre in 2013. A total of 9,934 units were dispatched from Dublin and received without incident for the first time, making 2013 a record year for production.

In 2013 Camara Dublin declared that its production site was operating to ISO 14001 Environmental Management Standard. External accreditation will be sought in 2014. Upcoming changes in WEEE regulations continued to be monitored and any changes responded to accordingly.

A shortage of laptops and flat-screen monitors was an ongoing issue for production during 2013. Focused initiatives were developed to address this shortfall.

Camara Dublin, as the Shared Services provider for the organisation, continued to deliver high quality, efficient services across the Camara network during 2013. Shared Services oversaw the management of 14 staff in Dublin and 8 across Africa and the Caribbean. There is a total of 55 staff in the overall Camara network with 22 employed by Camara Education Limited and 33 employed directly by the education hubs.

Camara continued to improve its structured volunteer programme in 2013, which resulted in almost 33,000 volunteer hours being logged through the recruitment of both refurbishment

centre and office volunteers. On average the refurbishment centre has 18 volunteers working on a daily basis, while the office has 14 volunteers. Camara's press coverage and social media profile increased substantially through a more structured press strategy and a more strategic approach to social media management.

In February 2013 an IT and Data Manager was recruited, which significantly improved the effectiveness of the Shared Services department with regard to managing communication channels and technical support across the network. It also emphasised the continuing importance that Camara places on its data reporting and management.

Almost

33,000
volunteer hours

10,000
computers dispatched

Belfast Northern Ireland

The total number of computers sourced in Belfast in 2013 came to 4,003, more than double the quantity sourced in previous years. Of these, 1,880 computers were dispatched to our education hubs. Operations at the hub were expanded in 2013, with the appointment of an IT Operations Manager, using funding acquired from Re-Think Waste Fund. The premises were also extended to a neighbouring unit to facilitate growth.

Number of
computers sourced
doubled

In 2014 the hub will focus on delivering 1,300 computers to Camara's African education hubs. This will be the first time that Camara Belfast will supply fully refurbished units. The hub will also continue to develop partnerships in both fundraising and IT sourcing.



In December 2013 a new record was set in our Belfast Hub. 1,033 computers were received from Belfast Metropolitan College, the largest ever single donation to Camara.

London England

Significant progress was made at the London hub. The team engaged extensively with volunteer organizations to supply supporting resources and worked to establish computer collection channels. Work was also ongoing on the administrative establishment of the entity, with a focus specifically on ensuring compliance with the Environmental Agency, possessing the appropriate permits and licences to collect, refurbish and distribute computer equipment. A number of key partnerships were also developed.

First English
resource centre was
opened
in Central London

Priorities for 2014 include establishing operational processes, recruiting volunteers, completing a marketing strategy, building supply channels and continuing to put in place the necessary foundational partnerships to ensure hub funding and resource sustainability in the long-term.



San Jose USA

2013 was an exciting year for Camara USA, with nearly 600 PCs sourced and the first container of 212 PCs shipped to Jamaica.

First two shipments

Camara USA also worked hard to build relationships and partnerships with organisations to support its operations. An agreement was reached with the American Ireland Fund to channel donations from the USA through the organisation.

The hub strengthened its relationship with a local Community College and expects to receive a supply of both computers and volunteers from there. A working relationship was also enabled with a local University that promises to raise Camara's profile and open fundraising opportunities.

Camara USA is working to have its 501 (c) (3) non-profit status reinstated, a process which is due to be completed in early 2014. The hub has also

successfully negotiated an agreement with a local regulated e-waste recycling company.

A newspaper article about Camara USA which appeared in Silicon Valley's main newspaper in December created a lot of interest and immediately caused a surge in computer donations and volunteer sign ups. The hub subsequently enrolled 25 volunteers, including a volunteer coordinator and a sales and marketing intern whose focus is on computer sourcing.



Camara USA sent its first two shipments ever to Jamaica in early 2013, consisting in total of 220 laptops and 30 flat screen monitors.

Johannesburg South Africa



Beginning in July 2013 a situational analysis was conducted to evaluate the market and report on the viability of establishing Camara South Africa. Funding for this project was provided by Enterprise Ireland. Results of the analysis were positive, thus a project manager was taken on under a 6 month contract to launch activities.

Camara South Africa was registered as a Non-Profit Company

There are three key elements involved in the Camara South Africa project including the establishment of a refurbishment centre in Gauteng, the development of a proof of concept and pilot for school engagement in South Africa, and the supply of computers for community centres in South Africa that are operated as social enterprises in townships.

A relationship was established and an agreement reached with Desco Electronics Recyclers in Gauteng to create a downstream partnership to deal with e-waste generated by Camara hubs in the region. A secondary agreement to donate working equipment to Camara South Africa for refurbishment and deployment to schools was also discussed.



Audited Accounts



Director's Report

Review of Activities

Camara is a registered business name of CAMARA EDUCATION LIMITED.

The Directors submit their report and financial statements of the Company for the year ended 31 December 2013.

Objectives and Activities

- A) Camara is an international charity that operates as a social enterprise that uses technology to deliver 21st century skills, and as such improve education in disadvantaged communities around the world.
- B) It is a company limited by guarantee, without having share capital. It is governed by a Board.
- C) The Board met 5 times in 2013.
- D) The business offices of Camara are in Chapelizod Industrial Estate, Dublin 20.
- E) The Camara network consists of Education Hubs, which are independent local entities responsible for the front-line delivery of the Camara model to educational institutes within their respective countries. There are currently eight Education Hubs in Africa (located in Kenya, Lesotho, Tanzania, Uganda, Zambia, Rwanda, Ethiopia and South Africa), two Education Hubs in the Caribbean (located in Jamaica and Haiti) and one Education Hub in Ireland. In addition, there are Resource Centres in Dublin, Belfast, London, San Jose, and Johannesburg. The ultimate governance and decision making authority of the Hubs are the local boards. The Chair of these boards is a direct employee of Camara Education Ltd. The balance of the Board is made up of other Camara and local appointees.
- F) Camara operates as a social enterprise in two distinct business lines: 'Education Delivery' and 'Computer Reuse'. The connection between these two activities is technology.
- G) Camara collects redundant computers from organisations and individuals. These computers are refurbished and loaded with educational software before being shipped out to our Education Hubs in Africa, the Caribbean, and Ireland from where they are typically set up in 'e-learning Centres' in schools, colleges and community centres. Any equipment that cannot be reused in this fashion is recycled according to the EU WEEE Directive. Between 2005 and 2013, Camara processed approximately 86,532 redundant Irish computers, of which 48,600 have been reused as educational tools with the remaining 41,127 being recycled. Reused computers are shipped in bulk by container to our partner Hubs where further processing takes place. Each 40 foot container typically holds 850 machines.
- H) Education Delivery is carried out by our Education Hubs. These Hubs carry out additional quality control tests on the machines. These machines are typically installed in e-learning Centres in schools and community centres to provide educational tools to some of the most disadvantaged communities in the world. In addition to supplying computers to schools, our Hubs also provide other key services:
- Maintenance Support. Each school signs a maintenance contract with their education hub which ensures that the e-learning Centers are kept operational should any technical issues arise.
 - Teacher Training. In the majority of schools where Camara has installed computers, African teachers have little or no knowledge of how to use them. Therefore as part of our contract with them, Camara organises a variety of training programs, aimed at teachers and principals, which allows them to effectively use the computers as learning tools. This training consists of:
 - Basic computer literacy skills.
 - The Pedagogy of ICT. Essentially how to integrate Information and Communications Technologies (ICT) into teaching and learning practices.
 - Technical Support. For selected teachers this would include: basic computer maintenance; networking; administration of the e-learning Centre.

- Recycling. At the end of a computer's life, schools are contracted to return the machine to the hub where it will be recycled according to strict Camara guidelines.

I) Activities in 2013

During the year ended 31 December 2013, Camara:

1. Refurbished and sent out 10,203 fully working computers to the Education Hubs.
2. Supported our hub network train 3,419 teachers and dispatch 8,742 computers from hubs in schools, both significantly up on the previous year.
3. Developed a formal partnership with Intel for their Teacher Training Program.
4. Camara South Africa was established as a Refurbishment and Education Hub.
5. A Refurbishment Hub was established in London.
6. An Education Hub commenced establishment in Haiti.
7. An additional training centre was added to our Education Hub in Lesotho.
8. A more comprehensive e-waste program has been developed in Africa to enhance the environmental impact of Camara.
9. Partnerships were strengthened with Digicel, Trafigura, and Dell.
10. A European & Caribbean Services Centre was established to support the hubs in these territories.
11. The President of Ireland, Michael D. Higgins, officially opened the premises in Chapelizod, Dublin 20.
12. A Strategic Plan was developed for the period 2014 – 2016.

M) Monitoring & Evaluation (M&E)

The findings of all Camara's monitoring & evaluation reports can be accessed at;
<http://camara.org/about-us/monitoring-and-evaluation/>

N) Financial Review

Camara operates as a social enterprise and is financed by a variety of sources: certain revenue generating activities such as computer reuse and the sale of computers to Hubs; grants from institutional donors; private donations; and own fund raising activities. As a social enterprise, Camara places great emphasis on transparency and robust financial stewardship.

Camara recorded a net surplus of €72,394 in 2013, compared to €388,471 in 2012. Incoming resources in 2013 increased by 7% to €1,787,812, mainly due to extra voluntary income and self-generated income. Resources expended by Camara in 2013 increased by 34% to €1,715,418. The main reason behind the increase in total resources expended in 2013 is the expansion and development of the Camara network. Some of the main components of this are the development of the European & Caribbean Services Centre within Camara, as well as the opening of hubs (or sub-hubs) in Lesotho, South Africa, Tanzania, Haiti, and London. In addition, Camara Ireland expanded the Techspace program. As a result of these developments, staff numbers increased and operational costs expanded. Wages and salaries are the biggest expenditure, followed by the cost of refurbishment of computers and support to our Hubs.

As a result of the investment decisions in the quality of delivery and scaling the network, Camara's cash position decreased marginally to €387,205, compared to €390,137 in the previous year. The financial reserves at 31 December 2013 were greater than one quarter of operating costs, in line with the reserves policy adopted by the Board.

Costs associated directly with our Charitable Activities in 2013 represented 89% of our total resources expended, which is 3% higher than previous years, due mainly to the expansion of the hub network. The balance of our costs in 2013 consisted of Governance Costs (6% of the total) and Costs of Generating Voluntary Income (5% of the total).

Camara generated €12 from every one euro spent on fundraising.

Governance

The Board places great importance on appropriate governance at Camara and proper engagement with management and stakeholders. The Board meets on a regular basis throughout the year, usually every 2 to 3 months. Board members examine and approve all strategic plans, annual budgets, operational plans, and statutory audit outcomes. Camara has sub-committees for Remuneration, Finance and Audit, and Fundraising. Board members such as the Chairperson, Treasurer and Secretary are in regular contact with management in relation to the stewardship of the organization between Board meetings. The Board maintains strong oversight of management and the overall direction of Camara. Management presents a comprehensive report at each Board meeting covering operational and financial targets, as well as ongoing activities, future plans, and other issues that would ensure good governance.

There are currently 8 members on the Board. Members are drawn from diverse backgrounds such as business, legal, accounting, the education sector, information technology, marketing, and the not-for-profit sector. Board members are sourced based on the strength of their existing experience of other reputable Boards, and also on the quality of the contribution they can make to the governance of Camara. The Chairperson inducts new members at the beginning of their term. The present Board has strong professional experience across a range of fields to ensure the highest level of governance.

In early 2014 Camara committed to starting the process of adopting and ultimately complying with *The Governance Code: a Code of Practice for Good Governance of Community, Voluntary and Charitable Organisations in Ireland*. The adoption of this Code can provide reassurance to donors that their money is being managed by a well run organization, increase transparency, avoid bad risks, achieve goals faster, and reduce costs.

Risks

Financial

It is the policy of Camara to hold between 3 months and 6 months operating costs as reserves to safeguard the continuity of its operations. No more than one quarter of such reserves should be held in non-euro currencies in order to manage foreign exchange rate movement risks. The proportion of restricted reserves to unrestricted reserves held is also monitored closely. The use of unrestricted reserves is governed by the annual budget that has been approved by the Board. The credit rating of financial institutions where money is held is monitored also on an ongoing basis. The liquidity risk is currently managed by ensuring that sufficient cash and deposits are held on short notice. The directors believe that Camara has adequate resources to continue in operational existence for the foreseeable future.

The financial policies, procedures and controls used by Camara across the network were comprehensively updated in 2013. Camara has developed detailed financial management and reporting systems to mitigate financial risks, which continue to be reviewed on an ongoing basis.

Organisational and Operational

Management undertakes ongoing monitoring of the level of organisational and operational risks. Camara implements appropriate procedures to manage organisational and operational risks to provide reasonable assurance to the Board.

These risks include the impact of potential economic instability on income levels, staff safety and well-being across the global network, organisational cohesion where global standards are maintained but that also allow an appropriate degree of local contextualisation, the achievement and demonstration of impact by Camara's activities, stock leakage, sourcing sufficient quantities of stock to meet demand, and data-wiping integrity.

Overall, the Board is satisfied that systems are in place to monitor, manage, and mitigate Camara's exposure to major risks.

Current Board

Maria Mahon
John Brown
Joe Carthy
Jonathan Kelly
Cormac Lynch
Deirdre McCooey
Julian Davis
Fiona O'Carroll (appointed 3rd November 2013)

Legal Status

The Company is incorporated under the Companies Act 1963 is limited by guarantee and does not have a share capital.

Results and Dividends

The surplus for the financial year was: **€72,394**.

Important Events Since the Period End

1. Camara is partnering with DFID to deliver e-learning centres in Kenya, which will greatly increase the size of the overall Camara network's activities and also form a large study on the effectiveness of technology in education.
2. The Strategic Plan for 2014 – 2016 was officially launched in April 2014. It concentrates on improving the outputs, scaling the operations, and proving the outcomes.
3. An Organisational Quality department has been established to improve the quality of training and educational content provided and ultimately to conduct in-depth monitoring and evaluation activities.
4. Camara Ireland will become an independent entity from Camara Education, and its Techspace program will continue to be developed and expand.
5. Education Hubs will continue to be supplied with refurbished computers from Dublin, but will also now be supplied from Belfast, London, San Jose and Johannesburg.
6. The Haitian Hub will be formally established this year.

Statement of the Directors' Responsibilities

Company law requires the directors to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Company and of the profit or loss of the company for that period. In preparing these financial statements the directors are required to:

1. Select suitable accounting policies and then apply them consistently;
2. Make judgments and estimates that are reasonable and prudent;
3. Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the company and to enable them to ensure that the financial statements comply with the Companies Acts 1963 to 2013. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Books of Account

The directors are responsible for ensuring that proper books and accounting records, as outlined in Section 202 of the Companies Act, 1990, are kept by the company. To achieve this, the directors have appointed a qualified accountant who reports to the Board and ensures that the requirements of Section 202 of the Companies Act, 1990, are complied with.

These books and accounting records are maintained at the company's business address at Chapelizod Industrial Estate, Dublin 20.

Auditors

Grant Thornton and will continue in office in accordance with Section 160(2) of the Companies Act 1963.

On Behalf of the Directors

Maria Mahon - Chairperson **Cormac Lynch** - Secretary - **Dated:** 29th May 2014

Auditor's Report

We have audited the financial statements of Camara Education Limited for the year ended 31st December 2013 which comprise the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement and the related notes. The financial reporting framework that has been applied in their preparation is Irish law and accounting standards issued by the Financial Reporting Council and promulgated by the Institute of Chartered Accountants in Ireland (Generally Accepted Accounting Practice in Ireland).

Respective Responsibilities of Directors and Auditor

As explained more fully in the Directors' Responsibilities Statement set out on page 43 the directors are responsible for the preparation of the financial statements giving a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with Irish law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

This report is made solely to the company's members, as a body, in accordance with Section 193 of the Companies Act, 1990. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Scope of the Audit of the Financial Statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Directors' report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

Opinion on Financial Statements

In our opinion the financial statements:

- give a true and fair view in accordance with Generally Accepted Accounting Practice in Ireland of the state of the company's affairs as at 31st December 2013 and of its surplus for the year then ended; and
- have been properly prepared in accordance with the requirements of the Companies Acts 1963 to 2013.

Matters on which we are Required to Report by the Companies Acts 1963 to 2013

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- In our opinion proper books of account have been kept by the company.
- The financial statements are in agreement with the books of account.
- In our opinion the information given in the directors' report is consistent with the financial statements.

Matters on which we are Required to Report by Exception

We have nothing to report in respect of the provisions in the Companies Acts 1963 to 2013 which require us to report to you if, in our opinion the disclosures of directors' remuneration and transactions specified by law are not made.

24 - 26 City Quay
Dublin 2
Ireland

Dated: 29th May 2014

Turlough Mullen FCA
for and on behalf of
GRANT THORNTON
Chartered Accountants
& Registered Auditors

Statement of Financial Activities

Year ended 31st December 2013

	Note	Unrestricted Funds (€)	Restricted Funds (€)	Total 2013 (€)	Total 2012 (€)
INCOMING RESOURCES					
Income resources from generated funds					
-Voluntary income					
- Iris O'Brien Foundation		250,000	-	250,000	250,000
- Anonymous		-	185,000	185,000	-
- Trafigura		-	93,600	93,600	-
- Other donations		82,547	-	82,547	44,336
- The King Boudouin Foundation US		-	62,173	62,173	-
- Digicel Foundation		-	54,376	54,376	-
- EMC Information Systems		-	51,951	51,951	-
- e-learning Centres Grant Events		-	45,331	45,331	208,797
- TechSpace Prog. Grants		-	41,450	41,450	-
- The Haven Community Foundation		-	15,355	15,355	-
- The Costa Foundation		-	13,598	13,598	-
- The Ireland Fund		-	12,000	12,000	28,712
- Civil Services Charities Fund		-	10,531	10,531	-
- Paul Griffin Fund		-	10,420	10,420	-
- Dell Foundation		-	6,000	6,000	142,672
- Civil Society Third World Fund		-	5,850	5,850	8,000
- Juniper Networks Foundation Fund		-	-	-	18,486
- Electric Aid Grant		-	-	-	7,280
- Donations in Kind		-	198,620	198,620	174,000
Activities for generating funds					
- Sale of computers (Africa & Caribbean)		224,816	-	224,816	211,757
- Sale of computers (Irish Schools)		179,459	-	179,459	158,504
- Recycling		106,073	-	106,073	121,452
- Shared services		32,500	-	32,500	37,191
Income resources from charitable activities					
- Irish Aid		-	95,406	95,406	244,055
- FAS		-	9,095	9,095	9,922
OTHER INCOME					
Investment income		1,535	-	1,535	508
Foreign exchange		126	-	126	-
Revenue refund		-	-	-	6,307
		-----	-----	-----	-----
Total incoming resources		877,056	910,756	1,787,812	1,671,979
		-----	-----	-----	-----
RESOURCES EXPENDED					
COST OF GENERATING INCOME	4	89,461	-	89,461	94,487
CHARITABLE ACTIVITIES	5	-	1,531,790	1,531,790	1,106,169
GOVERNANCE COSTS	6	94,167	-	94,167	82,852
		-----	-----	-----	-----
Total resources expended		183,628	1,531,790	1,715,418	1,283,508
		-----	-----	-----	-----
Net income resources		693,428	(621,034)	72,394	388,471
Transfers between funds		(621,034)	621,034	-	-
Total funds at beginning of year		586,630	-	586,630	198,159
		-----	-----	-----	-----
Total funds at end of year		659,024	-	659,024	586,630
		=====	=====	=====	=====

All of the activities of the company are classed as continuing.

The company has no recognised gains or losses other than the results for the period as set out above.

Balance Sheet

As at 31st December 2013

	Note	2013 (€)	2012 (€)
FIXED ASSETS			
Tangible assets	7	4,705	4,465
CURRENT ASSETS			
Debtors	8	333,818	257,547
Cash at bank		387,205	390,137
		-----	-----
		721,023	647,684
CREDITORS: Amounts falling due within one year	9	(66,704)	(65,519)
		-----	-----
NET CURRENT ASSETS		654,319	582,165
		-----	-----
TOTAL ASSETS LESS CURRENT LIABILITIES		659,024	586,630
		=====	=====
FUNDS			
Restricted funds		-	-
Unrestricted funds		659,024	586,630
		-----	-----
TOTAL FUNDS		659,024	586,630
		=====	=====

These financial statements were approved by the directors on the 29th May 2014 and are signed on their behalf by:

Maria Mahon - Chairperson **Cormac Lynch** - Secretary

Cash Flow Statement

Year ended 31st December 2013

	Note	2013 (€)	2012 (€)
Net cash (outflow)/inflow from operating activities	11	(779)	273,810
Capital expenditure and financial investment		(2,153)	-
		-----	-----
(Decrease)/increase in cash for the year		(2,932)	273,810
		-----	-----
RECONCILIATION OF NET CASH FLOW TO MOVEMENT IN NET DEBT			
(Decrease)/increase in cash for the year		(2,932)	273,810
Net opening cash		390,137	116,327
		-----	-----
Net closing cash		387,205	390,137
		=====	=====

Accounting Policies

Year ended 31st December 2013

PRINCIPLES OF PREPARATION

The financial statements have been prepared in accordance with generally accepted accounting principles under the historic cost convention and comply with the financial reporting standards of the Accounting Standards Board, as promulgated by the Institute of Chartered Accountants in Ireland. The financial statements have also been prepared to comply with "Accounting and Reporting by Charities" (Charities SORP) the revised statement of recommended practice issued by the Accounting Standards Board in 2000 and the Accounting Standards Board "Statement on Update Bulletin 1 of the Charities SORP" issued in December 2002, updated in 2005.

FIXED ASSETS

All fixed assets are initially recorded at cost.

DEPRECIATION

Depreciation is calculated so as to write off the cost of an asset, less its estimated residual value, over the useful economic life of that asset as follows:

Fixtures & Fittings	-	Straight line over 5 years
Motor Vehicles	-	Straight line over 5 years

INCOMING RESOURCES

Incoming resources have been included in the financial statements only when realised or when the ultimate cash realisation of which can be assessed with reasonable certainty.

RESTRICTED FUNDS

Restricted funds consist of funds received which can only be used for the purpose for which they are specified by the donors. These purposes are the aim of the charity.

UNRESTRICTED FUNDS

Unrestricted funds consist of funds received which the charity can spend based on its own discretion to enable it to achieve its overall aim and objectives.

RESERVES

The directors consider it appropriate to retain equivalent to one quarter of operating costs in reserves. The current financial reserves at 31 December 2013 are greater than the one quarter of current operating costs. The directors also consider it appropriate that no more than one quarter of reserves should at any stage be denominated in currencies other than euro.

DONATIONS IN KIND

Donations in kind are recognised at the point when computers have been used for charitable purposes. They are recognised at the market value of such donations.

Notes to the Financial Statements

Year ended 31st December 2012

1. OPERATING (DEFICIT)/SURPLUS

Operating (deficit)/surplus is stated after:

	2013 (€)	2012 (€)
Directors' remuneration	-	-
Depreciation	1,913	1,489
Auditors' remuneration	7,380	7,380
	=====	=====

2. EMPLOYEES AND REMUNERATION

The average number of staff employed by the company during the year was 22 (2012:17).

Staff costs were as follows:

	2013 (€)	2012 (€)
Wages and salaries	687,668	573,516
Social welfare costs	57,847	43,842
	-----	-----
	745,515	617,358
	=====	=====

The basic and performance related payments for the CEO was €80,000 in 2013 (€71,667 in 2012). No other member of staff earned €70,000 or over in 2013. There were no pension contributions made to any staff members during 2013.

3. TAXATION

The company does not engage in a taxable activity and has been granted charitable tax exemption under reference CHY 16922.

4. COSTS OF GENERATING VOLUNTARY INCOME

	Unrestricted 2013 (€)	Restricted 2013 (€)	Total 2013 (€)	Total 2012 (€)
Rent	2,302	-	2,302	4,144
Wages and salaries	79,068	-	79,068	67,639
Fund raising	4,452	-	4,452	15,678
General expenses	3,639	-	3,639	7,026
	-----	-----	-----	-----
	89,461	-	89,461	94,487
	=====	=====	=====	=====

5. CHARITABLE ACTIVITIES

	Unrestricted 2013 (€)	Restricted 2013 (€)	Total 2013 (€)	Total 2012 (€)
Rent	-	35,821	35,821	33,979
Wages & salaries	-	606,806	606,806	500,331
Shipping & packaging	-	54,705	54,705	65,612
Insurance	-	6,885	6,885	5,531
Repairs & maintenance	-	5,023	5,023	7,017
Depreciation	-	1,760	1,760	1,146
Motor & travel	-	67,789	67,789	15,123
Printing, postage and stationery	-	4,856	4,856	1,465
General expenses	-	31,523	31,523	23,574
Bank charges	-	911	911	660
Training	-	2,069	2,069	1,676
Telephone	-	6,015	6,015	10,256
Marketing	-	3,788	3,788	2,198
Workshop expenses	-	72,108	72,108	31,256
Multimedia expenses	-	-	-	2,836
African Hubs	-	270,664	270,664	111,781
Caribbean Hubs	-	50,735	50,735	-
Irish Hubs	-	70,914	70,914	31,062
International Refurbishment Hubs	-	361	361	-
Africa Service Centre	-	35,360	35,360	52,143
Cost of computers donated	-	198,620	198,620	174,000
Bad debt provision	-	-	-	30,000
Bad debt write off	-	-	-	4,523
Foreign exchange	-	5,077	5,077	-
	-	1,531,790	1,531,790	1,106,169

6. GOVERNANCE COSTS

	Unrestricted 2013 (€)	Restricted 2013 (€)	Total 2013 (€)	Total 2012 (€)
Rent	3,315	-	3,315	3,315
Auditors fees & payroll services	10,421	-	10,421	11,050
Wages & salaries	59,641	-	59,641	49,389
General expenses	20,790	-	20,790	19,098
	94,167	-	94,167	82,852

7. TANGIBLE FIXED ASSETS

	Brought forward 1 st Jan 13 (€)	For the year Additions (€)	As at 31 st Dec 13 (€)
COST			
Fixtures & fittings	24,388	2,153	26,541
Motor vehicles	4,050	-	4,050
	-----	-----	-----
	28,438	2,153	30,591
	=====	=====	=====

	Brought forward Accumulated 1 st Jan 2013 (€)	For the year Charges (€)	Accumulated 31 st Dec 2013 (€)
DEPRECIATION			
Fixtures & fittings	19,923	1,913	21,836
Motor vehicles	4,050	-	4,050
	-----	-----	-----
	23,973	1,913	25,886
	=====	=====	=====

	2013 (€)	2012 (€)
NET BOOK VALUE		
Fixtures & fittings	4,705	4,465
Motor vehicles	-	-
	-----	-----
	4,705	4,465
	=====	=====

8. DEBTORS

	2013 (€)	2012 (€)
Trade debtors	341,363	285,197
Provision for bad debts	(10,000)	(30,000)
Prepayments and accrued income	2,455	2,350
	-----	-----
	333,318	257,547
	=====	=====

All amounts are receivable within one year

9. CREDITORS: Amounts falling due within one year

	2013 (€)	2012 (€)
Taxation and social security	13,006	18,163
Other creditors	45,649	32,793
Accruals and deferred income	8,049	14,563
	-----	-----
	66,704	65,519
	=====	=====

10. COMMITMENTS UNDER OPERATING LEASES

At 31st December 2013 the company had annual commitments under non-cancellable operating leases as set out below.

Land and Buildings	2013 (€)	2012 (€)
Operation leases which expire:		
Within 1 year	41,438	41,438
Within 2 to 5 years	41,438	41,438

11. RECONCILIATION OF OPERATING CASH FLOW

	2013 (€)	2012 (€)
Surplus for the year	72,394	388,471
Increase in creditors	1,185	20,012
(Increase) in debtors	(76,271)	(136,162)
Depreciation	1,913	1,489
	-----	-----
Net cash (outflow)/inflow from operating activities	(779)	273,810
	=====	=====

12. MOVEMENT IN FUNDS

	Opening Balance (€)	Income (€)	Expenditure (€)	Transfers (€)	Closing Balance (€)
Restricted funds	-	910,756	(1,531,790)	621,034	-
Unrestricted funds					
General reserve	586,630	877,056	(183,628)	(621,034)	659,024
	-----	-----	-----	-----	-----
	586,630	1,787,812	(1,715,418)	-	659,024
	=====	=====	=====	=====	=====

13. LEGAL STATUS OF THE COMPANY

The company is limited by guarantee and has no share capital. At 31st December 2013, there are 8 members whose guarantee is limited.

14. POST BALANCE SHEET EVENTS

No significant events have taken place since the period end that would result in adjustment to 2013 financial information or inclusion of a note thereto.

15. CONTROLLING PARTY

The company is controlled by the Board of Directors acting in concert.

Detailed Statement of Financial Activities

(Not Covered by the Independent Auditor's Report)

Year ended 31st December 2013

	Cost of generating income (€)	Charitable activities (€)	Governance costs (€)	2013 (€)	2012 (€)
Core costs					
Rent	2,302	35,821	3,315	41,438	41,438
Wages and salaries	79,068	606,806	59,641	745,515	617,358
Fund raising	4,452	-	387	4,839	17,041
Shipping and packaging	-	54,705	4,757	59,462	71,317
Insurance	443	6,885	637	7,965	6,745
Repairs and maintenance	323	5,023	465	5,811	8,557
Depreciation	-	1,760	153	1,913	1,488
Motor and travel	-	67,789	5,894	73,683	16,944
Printing, postage and stationery	70	4,856	428	5,354	1,787
Auditors fees & payroll services	-	-	10,421	10,421	11,050
General expenses	-	31,523	-	31,523	23,574
Bank charges	58	911	85	1,054	804
Training	-	2,069	181	2,250	1,822
Telephone	388	6,015	557	6,960	12,508
Marketing	2,357	3,788	535	6,680	4,483
Workshop expenses	-	72,108	6,270	78,378	33,974
Multimedia expenses	-	-	-	-	4,575
African Hubs	-	270,664	-	270,664	111,781
Caribbean Hubs	-	50,735	-	50,735	-
Irish Hubs	-	70,914	-	70,914	31,062
International Refurbishment Hubs	-	361	-	361	-
Africa Service Centre	-	35,360	-	35,360	56,677
Cost of computers donated	-	198,620	-	198,620	174,000
Bad debts provision	-	-	-	-	30,000
Bad debt write off	-	-	-	-	4,523
Foreign exchange	-	5,077	441	5,518	-
	-----	-----	-----	-----	-----
	89,461	1,531,790	94,167	1,715,418	1,283,508
	=====	=====	=====	=====	=====



Photo: Tim Mansel

Teacher Training, Mombasa, Kenya.



Monitoring and Evaluation



Introduction

The monitoring and evaluation (M&E) report for 2013 is primarily focused on a research exercise, conducted on computers dispatched to Camara partner schools in 2012, to ascertain the reported usage and perceived value of Camara computers, educational content and teacher training by principals, teachers and students. The year on year progress on delivery against Camara's Key Performance Indicators (KPIs) is also briefly documented below.

In 2013, Camara dispatched a total of 8,742 computers (achieving 78% of the 2013 target) to 777 schools and community centres (achieving 106% of the 2013 target), and trained 3,419 teachers (achieving 97% of the 2013 target) through eight international hubs (Zambia, Lesotho, Kenya, Ethiopia, Tanzania, Jamaica, Haiti and Ireland). These numbers were recorded as Key Performance Indicators (KPIs), reported and updated monthly through Camara's Management Information System then used to measure Camara's yearly delivery against defined targets that are planned at the start of each year by hubs. The major KPIs for Camara are the annual number of teachers trained, computers dispatched to schools and the number of schools computers are dispatched to- each of these KPIs increased as absolute numbers from 2012 to 2013 while performance in terms of achieving a percentage of the 2013 targets was either at the same level or improved (the percentage of teachers trained against the target was the same, 97%, for 2012 and 2013, while delivery against the target for dispatched computers improved from 65% in 2012 to 78% in 2013). It should also be noted that as well as absolute numbers and percentages of targets achieved remaining the same or improving from 2012 to 2013 the targets set by hubs in 2013 were more ambitious. These improvements can largely be attributed to the general progress in refining Camara's process and delivery strategy. The students attending, as well as the thousands of teachers trained in Camara partner schools over 2013 gained digital literacy skills which will enable increased learning opportunities and provide enhanced livelihood skills and employment prospects.

Given the evolving nature of technology, pedagogy and the diverse needs of schools in the countries where Camara works, the Camara model promotes adaptability in order to provide a demand-led and high quality range of services to end users of Camara products and services. Fundamental to the model is the need to provide regular and ongoing teacher training, scheduled educational content updates, technical support and delivery provided in a timely manner through close proximity to Camara hubs. Monitoring and evaluation of these ongoing interventions and their impact is at the core of achieving Camara's mission, measuring impact, demonstrating effectiveness and guiding strategic thinking on how best to improve existing interventions. Camara's 2014-2016 Strategy (Prove, Improve, Scale) highlights building a comprehensive M&E framework and system as integral to each phase of the strategy from proving effectiveness, guiding strategic improvements through evidence based planning and decision making and enabling scale up of interventions through the provision of reliable data.

Sustainability is central to the Camara model, as the holistic package has been designed to ensure the longevity of the computers and to maximise the learning impact. The model is sustainable, expandable and transparent, meaning that the outcomes from the Camara programme can be readily shared with other stakeholders to apply the model throughout the host country's educational system. Through developing partnerships with the key stakeholders in the hosting country, Camara aims to ensure that its goals and outcomes are harmonised with domestic educational policies and initiatives. Camara strives to make ICT in Education initiatives affordable, effective, sustainable and long-lasting.

Methodology

Rationale of monitoring and evaluation research exercise for computers dispatched by Camara in 2012*

The main objectives of this year's annual M&E research are the same as last year's allowing for accurate indentifying, tracking, analysis and comparison of trends. Namely the research consisted of design and administration of survey questionnaires for principals, teachers and students aiming to:

1. Determine the reported usage of Camara computers in each partner school.
2. Determine the perceived value of the Camara computers by the students, teachers and principals of schools.
3. Collate data regarding the effectiveness of training, effectiveness of Camara educational content, usage of content and rates of maintenance required for computer upkeep.

This evaluation was conducted by trained Camara staff and volunteers visiting Camara partner schools who had received computers and training in 2012. Questionnaires for students, teachers and principals were designed and administered- three separate questionnaires were created for this purpose and can be accessed from the following webpage: <http://camara.org/about-us/monitoring-and-evaluation/>. The evaluation exercise managed to visit 32% of schools who received Camara computers in 2012 (186 schools out of 583) for questionnaire administration. The data was collected, compiled and collated from the questionnaire administration to 2,640 students representing 142 schools, 303 teachers representing 128 schools and 162 principals representing 162 schools. From the 186 unique schools that were visited it was not possible to get complete questionnaires administered to all relevant cohorts (principals, teachers, students) for a variety of reasons including absence from school and unavailability, incorrect recording of data, misplaced or lost questionnaires and difficulty in administering questionnaires during what was very often a busy period for teachers, students and principals with exam preparation being of paramount importance. Thus, the response rate from visited schools was 87% for school principals, 77% for students and 69% for teachers. Ideally the response rate would be 100% for each questionnaire and mitigation measures to improve response rates will be detailed later in the report.

* The research exercise covers computers dispatched to partner schools by Camara between January 1 and December 31 2012. As we are tracking the rates of computer usage, attrition, trained teacher retention etc. the reporting period is not limited to 2012 or 2013 but covers the time from receipt of Camara computers to the school visit and questionnaire administration in 2014.

M&E Survey Design

1. Methodology of monitoring and evaluation exercise for 2012 dispatched Camara computers – qualitative and quantitative data collection.

This evaluation was conducted using the same methodology as used in the 2012 exercise, i.e. by visiting Camara partner schools who had received computers dispatched through Camara in 2012 and administering questionnaires specific to principals, teachers and students to capture data relevant to the learning the impact of Camara's work. An additional feedback form was prepared to be administered to teachers that received training from Camara in 2012 and mixed, qualitative and quantitative, data collection methodologies were used for this M&E research exercise with the questionnaires capturing both perception and output based data. Primary data was collected using structured questionnaires. The data collection tools were adopted and slightly modified from the previous year's questionnaires that were used for the same exercise for 2011 Camara dispatched computers- this allows for comparable tracking and potential trending analysis particularly as the process is repeated annually.

The evaluation managed to visit 186 schools and deliver survey questionnaires to teachers who use computers for teaching, students at the schools who access computers for learning and principals who are responsible for overseeing the use of computers and eLearning centres set up by Camara. The questionnaires were designed by the central Camara M&E officer then reviewed and validated in consultation with Camara staff, including hub CEOs. Reviewing the questionnaires focused on assessing relevance, content, sensitivity, the simplicity of language used and estimated length of time necessary to complete the questionnaire. The Ethiopian hub had the questionnaires translated to a local language in order to ensure the clearest possible understanding of the questions by respondents. Once the questionnaires passed this vetting process they were pre-tested by the M&E data collection team in each hub to ensure quality control and enable the teams to become familiar with and confident in questionnaire administration.

2. Data collection teams

The data collection process was carried out in each hub through assigned enumerators and M&E coordinators (consultants, managers or hub CEOs). The data collection teams were put together and managed by the individual hubs. Each team had the responsibility of contacting schools to arrange visits, conducting visits at the agreed schedule and administering questionnaires as well as collecting and collating data to be shared with the central M&E Officer in Dublin for cleaning, tabulation and analysis. Each team's designated supervisor (hub CEO) was responsible for continuous management of the team during the entire process beginning from planning stages through hiring staff/volunteers, undergoing training, making appointments with schools, going onsite for visits and ensuring data collection and collation and sharing with the central M&E Officer.

3. Data collection training

Orientation was given by the central M&E Officer to M&E hub coordinators and enumerators, in-person and through Skype, with the aim of ensuring field staff and data collectors had sufficient knowledge and understanding of the research instrument, objectives of the research, correct procedure and methodology for questionnaire administration as well as data collection, collation, management and entry. The orientation focused on contents of the tool and data collection procedures, Camara approaches and model, and data entry techniques. Hubs were also encouraged to add hub specific questions to capture variables specific to their context that they intend to measure.

Learning materials were provided through emails and enumerators went through simulated questionnaire administration under the tutelage of the central M&E Officer who was also available to offer guidance, support and specific assistance when requested, once data collection began and various issues arose.

Data collection in the hubs was conducted over differing periods with hubs managing their own school visitation and data collection schedules. In Ireland data collection began on June 13 2014 and ended on July 18 2014, though this was an imperfect time to conduct school visits and data collection as it clashed with the end of the leaving certificate examinations, school year and the start of the summer holidays. In Ethiopia the data collection phase began on May 21 and ended June 6, while in Kenya it went from May 12 to May 23. School visits and questionnaire administration occurred between May 28 and June 7 in Tanzania, June 16 to June 19 in Zambia and May 18 to May 25 in Lesotho.

4. Data entry and analysis

The data collected from schools was recorded through questionnaire administration onsite then first sequentially coded and entered into a database, in MS Excel, that had been distributed for this purpose. The data was collected from each hub then collated, cleaned and tabulated for analysis using MS-Excel and STATAv11. The data arising from this process was analysed to produce the results recorded below. Analysis of the data and presentation of the results was by country hub and no comparison between hubs was performed due to sampling limitation and response rates.

5. Limitations and challenges

There were several risks and limitations to the M&E exercise most notably a) the difficulty in accurately documenting the actual impact of computers and other technology for student learning in Camara partner schools, and b) the difficulty in coordinating and conducting a global M&E research exercise across the different hubs in Camara ensuring a meaningful sample size and planning the timing to maximise the number of available respondents from schools (i.e. to avoid school holiday periods and lead up to exam time). As the impact of computers and teacher training is best measured over the long term yearly M&E exercises can best capture a) quantitative data such as attrition rate of Camara computers, retention of trained teachers etc. and b) qualitative/perception based data on the benefits and impact of Camara computers and teacher training from recipients and beneficiaries in Camara partner schools.

A. The difficulty in accurately documenting the actual impact of computers

In the absence of cost effective systems to track and collate specific user and real-time usage data the current focus is on measuring teacher training, computer and related technology benefits and usage in terms of self-reported and perception based information from principals, teachers and students. Measurement of computer usage given such limitations is therefore based on self-reported and perceptual data from questionnaire respondents which is subject to the vagaries of memory and the sometimes natural desire of respondents to answer in a manner perceived to be favourable by the questionnaire enumerator. Despite such challenges and issues this data still serves a valuable purpose as it identifies the common perception of Camara partner schools with regards to the utility, impact and benefits of Camara computers, educational software packages and teacher training. The satisfaction or otherwise of Camara partner schools with the goods and services delivered through the Camara Model has the potential to feed into evaluations around how Camara can refine and improve its priorities and methods with direct feedback from the end users providing insightful and invaluable data.

Camara hubs operate across Africa, Europe and the Caribbean in different regional, national and local contexts, time zones and with different school schedules. The challenge of organising and conducting school visits therefore goes beyond questionnaire design and identifying specific research questions and methodologies to best capture relevant data. Indeed on top of these challenges logistics, budgeting, human resources and staff capacity all present varying concerns as well as visiting enough schools to ensure a representative sample size rendering meaningful data from each hub.

B. Sample size or response rate

The M&E plan set a target for hubs to visit 80% schools that received Camara computers and teacher training in 2012. This meant that to achieve the overall target Camara needed to obtain valid responses from 466 schools across seven hubs (Kenya, Ethiopia, Tanzania, Zambia, Jamaica, Ireland and Lesotho). In fact only 172 schools provided usable questionnaire responses and even then not all 172 schools captured principals, teachers and students survey responses as demonstrated by the below table.

	Number of Schools with completed interview		
	Principals	Teachers	Students
Ethiopia	54	49	62
Ireland	3	1	0
Jamaica	7	6	1
Kenya	68	41	55
Lesotho	5	7	7
Tanzania	5	5	4
Zambia	20	19	13
Total	162	128	142

Table 1: Schools with completed interview

The 172 schools represent achieving 37% of the 466 schools sample target, a significant gap caused by many factors further detailed below. The breakdown of sample size per country reveals that the 62 individual schools who rendered at least one completed questionnaire type (principal, teacher, and student) from Ethiopia represents achieving 77% of the sampling target of 90 schools (i.e. 80% of total number of schools in Ethiopia, 111, who received Camara computer in 2012). Kenya captured at least one completed survey type from 68 individual schools achieving 57% of the sampling target of 118 schools. Tanzania captured at least one completed survey from 5 individual schools achieving 42% of the sample size of 12 schools. Jamaica captured at least one completed survey type from 7 individual schools achieving 9% of the 76 school sample size target. Ireland captured at least one completed survey type from 3 individual schools achieving 6% of the sample size target of 46 schools while Zambia achieved 17% of its target sample size of 118 schools. Finally Lesotho achieved over 100% of its target having captured at least one complete survey from 7 schools with a sample size target of 6 schools.

In each hub except Lesotho the target sample size of 80% was not achieved and there is also a wide divergence among hubs on how close they came to achieving the desired sample size. Ethiopia came closest with 77% while Kenya was the only other hub to achieve over 50% of the targeted sample size. The further away from the targeted sample size for capturing data from individual schools each hub is the less reliable and useful the data obtained becomes. In the case of Ireland and Jamaica, particularly it is very hard to draw any generalised or wide scale conclusions from the data gathered and analysed in the below report though as 'case studies' they may provide useful anecdotal information on the performance of Camara hubs and impact of Camara computers, education content and training. However while individual respondent information may be relevant to the research questions posed the totality of information gathered does not reach a level where statistical significance has been attained.

The exercise in these countries still serves a valuable purpose in terms of preparation, generating lessons learned and identifying potential mitigation strategies to ensure continued improvement of Camara's yearly M&E exercise enabling better planning and data capture in future. As the exercise is repeated and Camara further develops its M&E strategy and capacity an increased focus should be put into ensuring M&E plans, processes and targets are fully integrated into Camara's work planning with individual hubs taking the lead in ensuring the planning and implementation of annual M&E research is SMART (Specific, Measurable, Achievable, Relevant and Time-bound). In order for Camara to fully institutionalise and integrate M&E processes and thinking into the Camara model a focus on M&E should become a cultural expectation among staff, particularly hub CEOs. A comprehensive M&E framework is a prerequisite for instilling and fostering the organisation's cultural expectations- this framework should consist of three main components (a narrative that describes how M&E will be undertaken outlining human and other resources needed and available, a results framework to define expected results, and planning matrices strategically consolidate the information required for M&E).

In addition the M&E plan set a target of 15 students, one principal and one teacher per school- the data collection phase captured 2,640 completed individual student questionnaires (achieving 38% of the target of 6,990), 162 principals questionnaires (achieving 35% of the target of 466) and 303 teachers (achieving 65% of the target of 466- though it must be noted that as in some schools more than one teacher responded to the questionnaire this figure includes double counting and is therefore not a reflection of individual teachers from unique schools).

Conclusion

The perception of the principals, teachers and students of Camara partner schools on the impact of Camara computers and teacher training is generally positive- 62% of teachers reported that the standard of Camara computers and eLearning centres is sufficient to meet their needs. However satisfaction rates with Camara hubs maintenance performance was lower (only 36% of teachers rated Camara maintenance as adequate) highlighting an area of potential improvement requiring investment. A majority of teachers (63%) are satisfied with the software and educational content uploaded on Camara computers and most teachers (74%) also reported that Camara technology has improved teaching at their schools. These results are illustrated in the table below and they indicate that the core element of Camara’s operating model, enhancing education through the provision of affordable technology and training and affording students the opportunity to acquire the essential twenty first century skill of digital literacy, is perceived to be working well by most stakeholders in Camara partner schools who were involved in this research exercise.

This impression is reinforced by the reported increase in confidence of students in using educational software and computers and analysis of the student questionnaire data indicates that the majority of students also believe that having Camara computers has had a positive impact on their learning with 63% of students reporting that they are now confident using the internet and OpenOffice applications while 78% agreed that access to Camara computers had enhanced learning in their school and 61% also reported that they believed educational content on Camara computers improved learning.

While overall perceptions of Camara computer, educational content and teacher training from principals, teachers and students was generally positive a number of areas for potential focus and improvement were identified through analysis of the meta questionnaire results. These included noting that reported satisfaction with the number of Camara computers delivered to schools could be substantially improved, 45% of student respondents reported access to computers was limited and 58% reported that there was not enough computers for all students to use. Hub performance was also an area identified by questionnaire results analysis as having the potential to improve significantly. The low percentage of teachers who were satisfied with hub maintenance was complemented by the rating of hub performance by school principal where 54% reported being satisfied with their Camara hub performance and 20% of principal respondents rated hub performance as poor or very poor. In addition the e-waste strategy of Camara partner schools was revealed to be an area of significant concern with many schools either lacking a strategy altogether or having a clearly inadequate strategy according to the standards set out by Camara.

The computer lab in our school is of a sufficient standard to meet our needs.							
	Ethiopia (n=125)	Jamaica (n=6)	Kenya (n=41)	Lesotho (n=58)	Tanzania (n=27)	Zambia (n=45)	Total
Disagree	16%	50%	27%	11%	30%	16%	18%
Neutral	10%	0%	14%	19%	30%	16%	15%
Agree	71%	50%	54%	60%	40%	64%	62%
*missing	3%	0%	5%	10%	0%	45%	5%
Total (N)	125	6	41	58	27	45	302

Table 2: Reported teacher satisfaction with Camara computer lab

The level of maintenance provided by the Camra hub is adequate.							
	Ethiopia (n=125)	Jamaica (n=6)	Kenya (n=41)	Lesotho (n=58)	Tanzania (n=27)	Zambia (n=45)	Total
Disagree	45%	33%	34%	12%	22%	20%	31%
Neutral	14%	67%	24%	41%	41%	22%	2%
Agree	34%	0%	37%	33%	33%	53%	36%
*missing	7%	0%	5%	14%	4%	5%	8%
Total (N)	125	6	41	58	27	45	302

Table 3: Reported teacher satisfaction with Camara maintenance

I am satisfied with the software/content of the computers in the computer laboratory.							
	Ethiopia (n=125)	Jamaica (n=6)	Kenya (n=41)	Lesotho (n=58)	Tanzania (n=27)	Zambia (n=45)	Total
Disagree	14%	33%	15%	12%	18%	22%	16%
Neutral	13%	33%	14%	17%	22%	18%	16%
Agree	69%	33%	66%	59%	56%	58%	63%
*missing	4%	0%	5%	12%	4%	2%	5%
Total (N)	125	6	41	58	27	45	302

Table 4: Reported teacher satisfaction with educational content of Camara

Camara's computers have improved teaching and learning at our school.							
	Ethiopia (n=125)	Jamaica (n=6)	Kenya (n=41)	Lesotho (n=58)	Tanzania (n=27)	Zambia (n=45)	Total
Disagree	7%	0%	10%	12%	22%	9%	10%
Neutral	6%	17%	20%	12%	19%	11%	11%
Agree	85%	83%	66%	66%	55%	76%	74%
*missing	2%	0%	4%	10%	4%	4%	5%
Total (N)	125	6	41	58	27	45	302

Table 5: Reported teacher perception on impact of Camara computers in their school

I am now confident to use the internet, OpenOffice.org word documents and OpenOffice.org spreadsheets.							
	Ethiopia (n=1,459)	Jamaica (n=4)	Kenya (n=751)	Lesotho (n=165)	Tanzania (n=60)	Zambia (n=195)	Total
Disagree	24%	0%	16%	35%	32%	8%	21%
Neutral	10%	0%	19%	14%	23%	16%	14%
Agree	65%	100%	62%	51%	45%	70%	63%
*missing	1%	0%	4%	0%	0%	6%	2%
Total (N)	1,459	4	751	165	60	195	2,634

Table 6: Reported student confidence using internet and Openoffice applications

Having Camara computers improved learning at our school.

	Ethiopia (n=1,459)	Jamaica (n=4)	Kenya (n=751)	Lesotho (n=165)	Tanzania (n=60)	Zambia (n=195)	Total
Disagree	12%	0%	3%	29%	23%	4%	10%
Neutral	11%	75%	8%	18%	15%	7%	10%
Agree	77%	25%	86%	53%	62%	85%	78%
*missing	0%	0%	3%	0%	0%	5%	2%
Total (N)	1,459	4	751	165	60	195	2,634

Table 7: Student perception on impact of Camara computers in their school

The educational content on Camara's computers (e.g. Wikipedia, tuxmaths, child's play etc.) improved learning at our school.

	Ethiopia (n=1,459)	Jamaica (n=4)	Kenya (n=751)	Lesotho (n=165)	Tanzania (n=60)	Zambia (n=195)	Total
Disagree	23%	75%	9%	31%	27%	5%	18%
Neutral	10%	25%	14%	18%	18%	13%	12%
Agree	55%	0%	71%	51%	55%	77%	61%
*missing	12%	0%	6%	0%	0%	5%	9%
Total (N)	1,459	4	751	165	60	195	2,634

Table 8: Student perception on impact of educational content on Camara computers in their school

Access to computers is limited as they are often not working.

	Ethiopia (n=1,459)	Jamaica (n=4)	Kenya (n=751)	Lesotho (n=165)	Tanzania (n=60)	Zambia (n=195)	Total
Disagree	42%	100%	26%	36%	40%	41%	37%
Neutral	13%	0%	12%	32%	28%	26%	15%
Agree	44%	0%	55%	31%	30%	30%	45%
*missing	1%	0%	7%	1%	2%	4%	3%
Total (N)	1,459	4	751	165	60	195	2,634

Table 9: Student perception of computer access in their school

There are not enough computers for all students to use.

	Ethiopia (n=1,459)	Jamaica (n=4)	Kenya (n=751)	Lesotho (n=165)	Tanzania (n=60)	Zambia (n=195)	Total
Disagree	37%	25%	18%	35%	27%	45%	32%
Neutral	8%	25%	3%	17%	10%	12%	8%
Agree	54%	50%	75%	47%	63%	39%	58%
*missing	1%	0%	4%	1%	0%	4%	2%
Total (N)	1,459	4	751	165	60	195	2,634

Table 10: Student perception on number and availability of Camara computers in their school

Rate local Camara hub by principal.							
	Ethiopia (n=54)	Ireland (n=3)	Jamaica (n=7)	Kenya (n=68)	Lesotho (n=5)	Tanzania (n=5)	Total
Very Poor	4%	0%	0%	25%	0%	0%	13%
Poor	6%	0%	43%	4%	20%	0%	7%
Neutral	6%	0%	43%	9%	40%	20%	11%
Good	43%	0%	14%	29%	20%	60%	34%
Very Good	35%	33%	0%	10%	20%	20%	20%
*missing	7%	67%	0%	22%	0%	0%	15%

Table 11: Rating of local Camara hub by school principal

Lessons Learned

The process of planning M&E research across Camara hubs to assess the impact of Camara computers dispatched in 2012 has thrown up a number of lessons learned that are relevant to future M&E research, particularly the conduction of yearly impact evaluation surveys. These lessons include 1) ensuring meticulous records are kept yearly documenting the exact number of partner schools and computers dispatched, 2) the need for hubs to keep in regular contact with partner schools ensuring open lines of communication, and 3) the need for the planning and design phase of the research exercise to begin well in advance of any proposed implementation schedule. The last point is particularly crucial to ensuring data capture and response rates are maximised, the 2014 school visits and questionnaire administration clearly demonstrate the value of allowing sufficient time for staff and volunteer training, scheduling of school visits in consultation with schools, identification of key informants to be interviewed at each school and arranging specific dates and times so the right potential respondents will be present and available when Camara personnel visit the school.

Mitigation Strategies

This section will address two fundamental aspects of using Camara M&E data to a) ensure the perceptions and responses of Camara stakeholders from partner schools (principals, teachers and students) are taken on board, considered seriously and inform future Camara interventions and b) improve the standard, accuracy and worth of Camara's monitoring and evaluation. In order to successfully build on this and previous M&E exercises there are a number of steps Camara should take to ensure challenges and pitfalls are avoided and that lessons learned are fed into future exercises improving the quality and reliability of the data generated. Of particular note here is providing sufficient resources in terms of funding, personnel and time to enable better planning, organisation and implementation of the yearly M&E performance and impact evaluation of Camara dispatched computers, educational software and teacher training. A holistic approach to M&E would see an M&E Strategy developed that enabled centralised data collection through the creation of universally applicable targets, activities, indicators and data sources while also allowing individual hubs the autonomy to be flexible in adding to the strategy as their context dictates.

The following have been identified as necessary steps to tackle the above raised challenges:

1. Coordinate between Camara hubs early to identify the best time to conduct data collection across hubs ensuring maximum reach and response rates. Ideally the data collection phase would occur simultaneously throughout all hubs but in the event that differing school holiday and exam schedules among hub countries preclude concurrent collection each hub should identify the most appropriate time to best capture data and plan to begin data collection at this time.

2. Sufficient funding must be allocated to each hub in order for them to achieve the minimum target for sample size as per the M&E plan enhancing the reliability and usability of M&E data. This includes investing in building a functional, durable and adaptable M&E system as identified in Camara's 2014 – 2016 Strategy. It also includes developing and maintaining adequate human resources through resource allocation and partnership building.
3. Communication between hubs and Camara partner schools should be a core component of a mutually beneficial and sustainable relationship between the service provider and recipient. Regular contact, updates and feedback will facilitate arrangements for school visits and questionnaire administration and help hubs to keep informed of the progress and challenges schools are experiencing following receipt of Camara computers, educational content and teacher training. Response rates for the M&E exercise conducted on Camara's 2012 dispatched computers was disappointingly below the target set- in order to ensure improved response rates to questionnaire administration arrangements should be made well in advance of a school visit sorting out prior to arrival who will be administered questionnaires and developing a timetable for each school so potential respondents know exactly what time they should be available for.

Commonly reported perceived benefits from schools receiving Camara computers, educational content and teacher training included the promotion of blended and e-learning, enhanced exposure to technology increased motivation and innovation, computer illiteracy was tackled and eradicated and in depth research and analysis was encouraged and facilitated while teachers gained increased knowledge, understanding and skills in ICT, became mentors for staff and students and improved their ability to set and correct exams through the use of technology. However despite these positive reported benefits there were also a number of commonly identified challenges to the ongoing implementation of the Camara model from partner schools who received training, content and computers from Camara in 2012. These include a lack of familiarity with the operating system (OS) provided with Camara computers (many teachers and students reported being unfamiliar with the software and OS), inadequate PC availability- hence the ratio of students to PCs is limiting, a lack of internet connectivity, issues with power supply and cost of running generators and retention of trained teachers/lack of ICT knowledge and expertise.

The following have been identified as potentially useful mitigation strategies:

1. Include increased focus on Camara computers operating system and educational content in the teacher training modules for partner schools.
2. Ensure a specific formula is applied to identifying/choosing Camara partner schools to certify that they have sufficient ICT knowledge and understanding to utilise Camara computers for technology enhanced teaching and learning and computer upkeep.
3. In each country in which Camara operates the national hub should focus on the development of a clearly articulated intervention logic based on the needs of the educational sectors that they operate in. Some countries work with more primary schools than secondary thus the nature of intervention will be different based on the needs of each school type. It is vital that each hub has a fully developed intervention logic and monitoring and evaluation strategy with defined objectives, targets, activities, indicators, data sources, expected outputs and clearly delineated roles and responsibilities.
4. In order to improve hub maintenance services it is imperative that individual hubs and Camara Education address resource challenges through increased revenue generation (either through computer pricing or successful fundraising initiatives). Camara is committed to providing an advanced maintenance support package over the life of the project yet these ambitious plans require considerable investment which in turn necessitates sufficient available resources.

Principal Report

A. Principal Respondents

	Ethiopia	Ireland	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
Gender								
Male	89%	67%	0%	75%	60%	40%	80%	75%
Female	11%	33%	100%	24%	40%	60%	20%	25%
Age Group								
25 and below	15%	.	0%	4%	0%	0%	40%	12%
26-35	39%	.	14%	15%	40%	20%	5%	22%
36-45	20%	.	0%	28%	20%	40%	25%	23%
46 and above	20%	.	57%	25%	40%	40%	30%	26%
missing	6%	100%	29%	28%	0%	0%	0%	17%
Age Statistics								
Average Age	37	.	47	42	43	41	.	40
Youngest Age	23	.	32	23	33	28	.	23
Oldest Age	63	.	53	64	59	49	.	64
Number of Schools	54	3	7	68	5	5	20	162

Table 1: Description of principal respondents

A total of 162 principals from partnered schools were included in this monitoring and evaluation research activity. The proportion of male school principals was higher than the proportion of female with 75% male and 24% female. Except for Jamaica and Tanzania all hubs had a higher proportion of male respondents. All seven principals in Jamaica, and 60% of principals in Tanzania, were female.

Only 12% of the school principals were below 26 years old, while 22% were between 26 to 35 years old, 23% were between 36 to 45 years old and 26% belongs to the oldest age group (range from 46 years to older). The overall number of principals for whom no data was recorded was 17%. The youngest respondent was 23 years old from Kenya and the oldest respondent, 64 years old, was also from Kenya. The average age of all respondents was 40 years old.

B. Teachers in School

The school principals were asked for the number of teachers working in their schools and the table below shows the summary statistics of the number of teachers by country as reported by the respondents.

Average Number of Teachers by School

	Average	St Dev	Minimum	Median	Maximum	Sum	Num of Schools
Ethiopia	45	70.84	1	27	489	2288	51
Ireland	13	11.02	6	8	26	40	3
Jamaica	27	16.14	10	20	52	192	7
Kenya	20	11.21	1	18	54	1348	68
Lesotho	26	6.19	19	23	34	128	5
Tanzania	37	25.21	4	54	57	186	5
Zambia	30	21.60	5	21	72	579	19
Total	30	43.11	1	19	489	4761	158

Table 2: Average number of teachers by school

In Ethiopia, the average number of teachers per school was 45 and the median was 27. This was the highest average of teachers per school, but we have to take into consideration that one school reported having 489 teachers and thus significantly increased the average. However, examining the median number of teachers per school, it is more likely to be similar with the other countries. The total number of

teachers as reported by the respondents from 51 partnered schools in Ethiopia was 2,288.

Kenya had, on average, 20 teachers per school as reported by the respondents. Among the 68 partnered schools the total number of teachers was 1,348.

In Ireland, the average number of teachers per school was 13, furthermore, Jamaica had on average 27 teachers, Lesotho had an average of 26 teachers, Tanzania had 37 teachers per school on average and lastly, Zambia had 30 teachers on average per school.

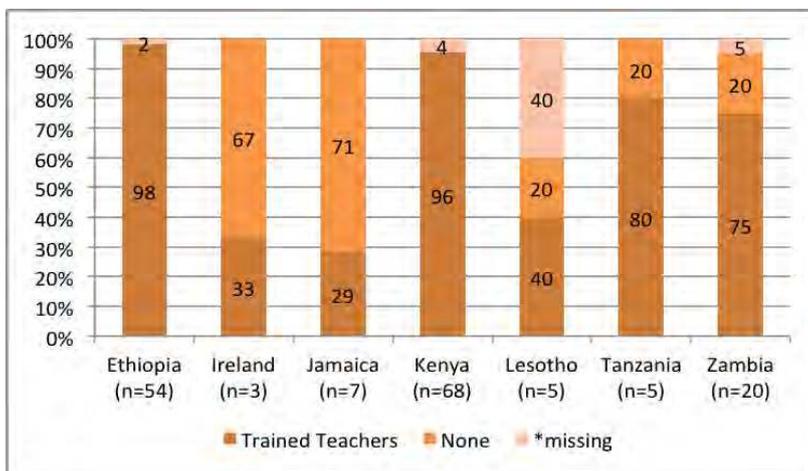


Figure 1: Reported number of trained teachers

The figure above shows the proportion of schools who reported the number of teachers in their school who received training from Camara. There were schools who reported none (0) when asked for the number of teachers who were trained by Camara in 2012 namely one school from Ireland, five from Jamaica, one from Lesotho, and four from Zambia.

	Number of teachers trained	Trained teachers still working in school	Trained teachers left the school	Number of schools	Retention rate
Ethiopia	124	86	38	48	69%
Ireland	5	5	0	1	100%
Jamaica	47	43	4	2	91%
Kenya	419	360	59	65	86%
Lesotho	23	22	1	2	96%
Tanzania	73	69	4	4	95%
Total	691	585	106	122	85%

Table 3: Retention of teachers trained

The table above shows the reported movement of teachers trained by Camara from schools who received computers and training in 2012 until the time of the interview. The results are reported on the actual number provided by the respondents. The retention rate was calculated using this formula:

- $\text{number of teachers trained at school} / \text{number of teachers trained still working at school} \times 100$

In Ethiopia, 48 schools reported complete data on the number of teachers trained by Camara in 2012 and the number of trained teachers still working in school at the time of questionnaire administration. The total number of teachers trained in these schools was 124 and the retention rate was 69%. Out of 124 trained teachers from 2012, 38 had left the school by the time of data collection.

All 2012 trained teachers in Ireland were still working in the school during the data collection phase of this research achieving a 100% retention rate. In Jamaica, out of 47 trained teachers reported by 2 schools, only 4 had left the school from the time of receiving the training until the data collection was conducted achieving a retention rate of 91%.

Sixty-five schools in Kenya reported a total of 419 teachers trained in 2012 and out of these trained teachers, 360 were still teaching at the time of the interview. Therefore the retention rate for this hub is 86%.

In Lesotho, 2 schools reported a total of 23 teachers trained in 2012. Out of these trained teachers, 22 are still teaching during the time of data collection achieving a 96% retention rate. While in Tanzania, all four schools reported a total number of 73 teachers trained by Camara during 2012 with 69 still teaching in their schools at the time of questionnaire administration achieving a retention rate of 95%.

	Teachers trained per school (average)	Trained teachers remained per school (average)	Number of schools
Ethiopia	3	2	48
Ireland	5	5	1
Jamaica	24	22	2
Kenya	6	6	65
Lesotho	12	11	2
Tanzania	18	17	4
Total	6	5	122

Table 4: Movement of trained teachers

Each principal respondent was asked if their school has IT teachers and the figure below shows the proportion of schools interviewed for each country that have IT teachers. Among the schools interviewed Ethiopian principals reported an 87% rate of schools having IT teachers with 13% reporting having no IT teachers. Each school has on average 2 IT teachers. While in Ireland one school has IT teachers, one school reported not having IT teachers and one school has missing data.

Jamaica reported the highest percentage of schools with no IT teachers (57%). Of the 43% with IT teachers, the average number was 1 per school.

In Kenya, only 6% of the schools interviewed reported having no IT teachers while 94% reported having IT teachers- the second highest percentage of schools with IT teachers in the survey. The average number of IT teachers per school was 4.

Lesotho and Tanzania reported percentages of schools without IT teachers as 40% and 20% respectively with the reported average number of IT teachers working at schools who reported having IT teachers being 7 per school for Lesotho and 3 per school for Tanzania.

Lastly, 95% of school principal respondents in Zambia reported having IT teachers while only 5% reported not having IT teachers- this was the highest rate of reported presence of IT teachers among all countries surveyed. The average number of IT teachers per respondent school was 2 teachers.

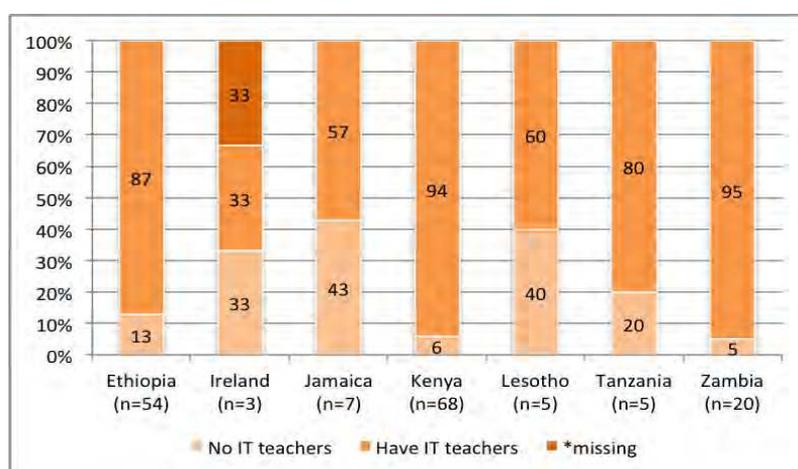


Figure 2: Reported presence of IT teachers

	Average	St Dev	Minimum	Median	Maximum	Sum	Num of Schools
Ethiopia	2	2.1	1	2	11	107	43
Ireland	1	.	1	1	1	1	1
Jamaica	1	0.0	1	1	1	3	3
Kenya	4	3.6	1	1.5	17	218	62
Lesotho	7	7.2	2	3	15	20	3
Tanzania	3	1.3	1	2.5	4	10	4
Zambia	2	1.4	1	2	6	41	19
Total	3	3.0	1	2	17	400	135

Table 5: Summary statistics of IT teachers

The figure below shows the reported usage of the computer laboratory between IT teachers and non-IT teachers. The school principals were asked to give the number of teachers using the computer laboratory to teach their class. The figure shows the average number for each type of teacher (i.e. IT-teachers versus non-IT teachers). The data used for figure 3 below and the proportional figures were specifically for those respondents who gave complete data for both teacher types. Those who have at least one missing data were excluded. This will show a better comparison between usage of computers/the computer laboratory by IT and non IT teachers. In Ethiopia, Ireland, Jamaica, Kenya and Zambia, the average number of non IT teachers is higher than the IT teachers while Lesotho had the same number of IT and non-IT teachers using the computer lab and Tanzania reported a higher rate of IT-teachers than non-IT teachers.

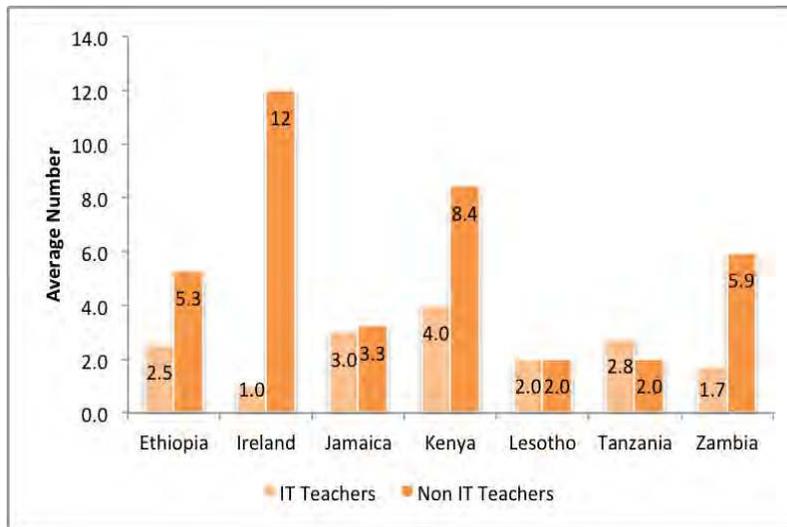


Figure 3: Reported computer lab usage by IT teachers/non-IT teachers

C. Computers

Computer use

The table below shows the average number of hours per week by type of use (formal teaching, informal learning, and teaching ICT subjects). In Ethiopia, principal respondents reported computers from the Camara hub were used for 10 hours a week, on average, for formal instruction and teaching curriculum, another 8 hours for independent learning and research and 9 hours to teach ICT subjects.

In Lesotho, Camara computers were mainly used for teaching ICT subjects with a reported average of 21 hours a week. Furthermore, reported average hours of usage for informal learning and research were greater than for formal use and teaching the curriculum (18 hours and 6 hours respectively).

In Ireland, Tanzania, Kenya and Jamaica computers were used for formal teaching (15, 13, 12, and 10 hours respectively) more than informal learning (5, 7, 11, and 3 hours respectively) and teaching ICT subjects (3, 4, 9, and 3 hours respectively). Lastly, in Zambia computers from the Camara hub were reportedly used, on average per week, for 16 hours for formal teaching, 10 hours for informal use and only 2 hours for teaching ICT subjects.

Reported average number of hours per week by type of use

	Formal Use	Informal Use	ICT Subjects
Ethiopia	10	8	9
Ireland	15	5	3
Jamaica	10	3	3
Kenya	12	11	9
Lesotho	6	18	21
Tanzania	13	7	4
Zambia	16	15	2
Total	11	10	3

Table 6: Reported average number of hours per week by type of use

Computer movement

The figure below shows the average number of computers received by each school in 2012, computers that were still working at the time of questionnaire administration and the number of computers broken between being received and responding to the questionnaire (at least a fifteen month period). In Ethiopia, the average number of computers received was 28 per school. At the time of the survey, each school has on average 22 computers still working and on average has 6 broken computers.

In Kenya, the average number of computers received was 15 per school, the average number of computers still working at the time of the interview was 11. This gives an average of 4 broken computers per school.

Ireland has the highest (absolute) average of broken computers among hubs with 21 computers broken on average. Furthermore, they received the most number of computers (by average per school) from Camara with an average of 34 computers per school and 13 still working at the time of questionnaire administration. However given the extremely small sample size caution should be used when evaluating the usefulness of these figures, in fact they would appear to be an anomaly as from the Irish hub's much larger data-set of recorded returns in the first year of use, the hub sees an average of a 15% breakage rate far below the reported 62% figure that arises from the very small sample size covered in this survey.

In Lesotho, on average, each school received 28 computers from Camara in 2012 and at the time of the survey each school has on average 22 computers still working. This gives an average of 6 broken computers per school.

Tanzanian schools received on average 20 computers per school. Only 4 computers per school (on average) were broken leaving each school with an average of 16 computers still working.

In Zambia, the schools interviewed reported to have receiving on average 20 computers per school and at the time of the survey each school has on average 16 computers still working. This gives an average of 4 broken computers per school.

Lastly, schools in Jamaica received the least number of computers per school (on average 3 computers) from the hub. When asked how many computers are still working, the average number per school was 1 computer. This means that each school has on average 2 broken computers.

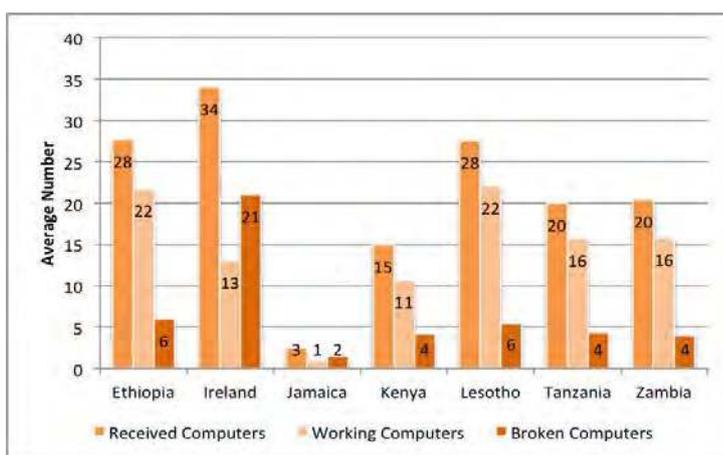


Figure 4: Reported average computers received, working and broken

The table below shows the total number of computers dispatched to schools, computers still working and broken computers as reported by the school principals interviewed in this survey. Not all schools gave data on this section; only 134 schools out of 162 sample schools (between 7 hubs) gave complete data.

	Number of computers received	Number of computers still working	Number of broken computers	N (number)
Ethiopia	1243	974	269	45
Ireland	102	39	63	3
Jamaica	15	6	9	6
Kenya	866	619	247	58
Lesotho	110	88	22	4
Tanzania	60	47	13	3
Zambia	305	237	68	15
Total	2701	2010	691	134

Table 7: Movement of computers by actual number

The figure below shows the attrition rate percentage for Camara’s computers per hub. Ethiopia attrition rate percentage is 22%, Ireland is 62%, Jamaica is 60%, Kenya is 29%, Lesotho is 20%, Tanzania is 22% and lastly, Zambia is 22%.

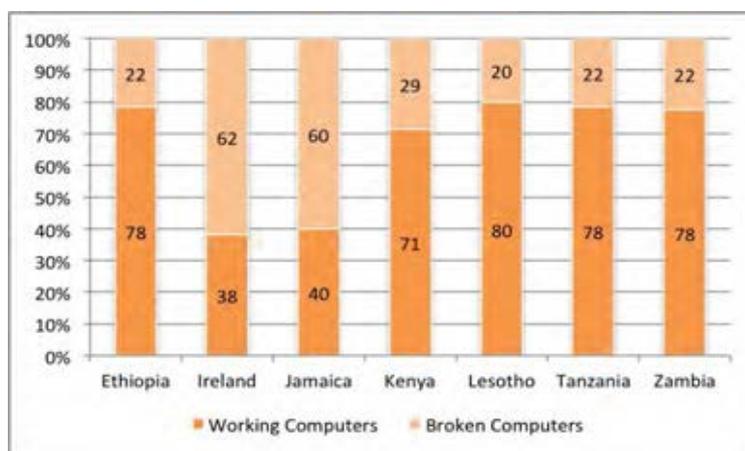


Figure 5: Reported attrition rate for Camara computers dispatched in 2012

D. Evaluation of Camara Hubs – Impact, challenges, and satisfaction

E-WASTE STRATEGY BY COUNTRY HUB

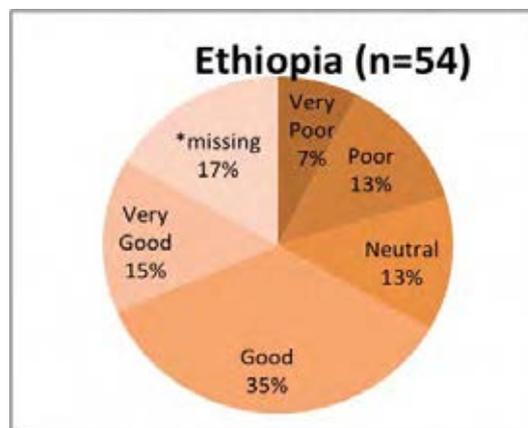
Each of the principals who responded in this survey was asked to illustrate their process of managing their e-waste and to rate this strategy. They were asked to rate from 1 to 5 where 1 is very poor, 2 is poor, 3 is neutral, 4 is good and 5 is very good.

Ethiopia

The following are the specific e-waste strategies as illustrated by the principal(s). Out of 54 schools in Ethiopia, 21 said that they don't have an e-waste strategy.

- Keep or maintain the broken computers
- Place the waste in proper place e.g. put in storage
- Report back to Camara or the responsible person
- Donate to others

Furthermore, thirty-five percent of the schools are satisfied with their e-waste strategy and rated it as good. A fifth of the respondents are reportedly not satisfied with their strategy and rated it as poor and very poor (13% and 7% respectively) and 17% of respondent answers missing.

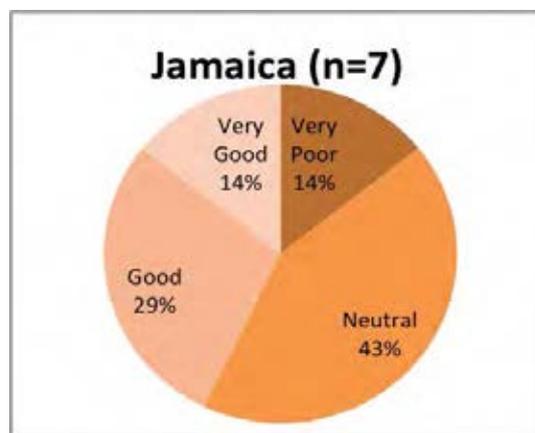


Ireland

Out of the 3 schools in Ireland, two return broken computers to Camara as their e-waste strategy while one school reportedly donates the broken computers to others. Only one school rated their e-waste strategy as good, while the rest did not give any ratings.

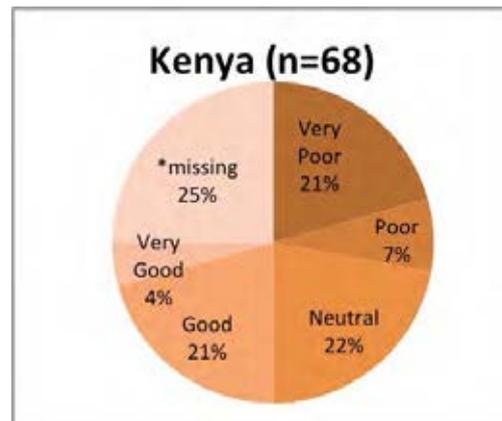
Jamaica

In Jamaica, one school out of 7 has no e-waste strategy, while another school throws the broken computer into regular garbage. The rest of the schools recycle their e-waste (donate to others, put in storage, and use parts in fixing other computers). When asked to rate their e-waste strategy, 14% categorised it as very poor, 43% were neutral, 29% said it is good and 14% reported a very good rating.



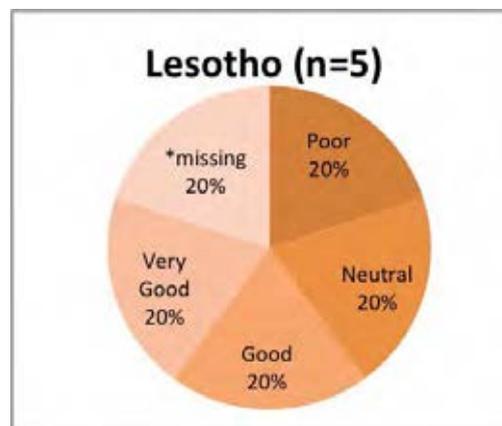
Kenya

Out of the 68 schools in Kenya included in the survey, 40 reported not having an e-waste strategy for their broken computers. Another twenty schools are reportedly waiting for instructions from Camara or they return the broken computers to Camara. When asked to rate these strategies or lack thereof, 21% ranked them to very poor and 7% as poor with 22% being neutral, 21% reporting good and 25% missing/not recording an answer.



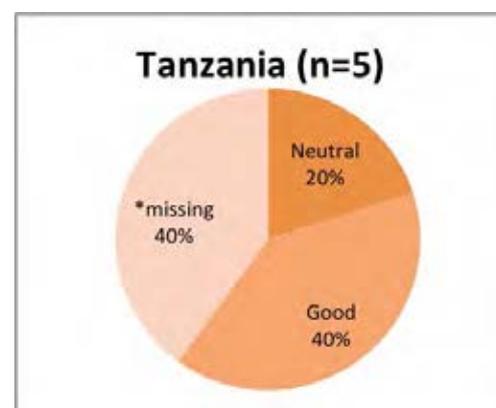
Lesotho

Only 2 schools responded on this question and one does not have a strategy while the other school said that they put their e-waste in storage. Four out of five schools gave a rating on their e-waste strategy or lack thereof. Forty percent have positive rating (good and very good), 20% were neutral and 20% rated their strategy as poor.



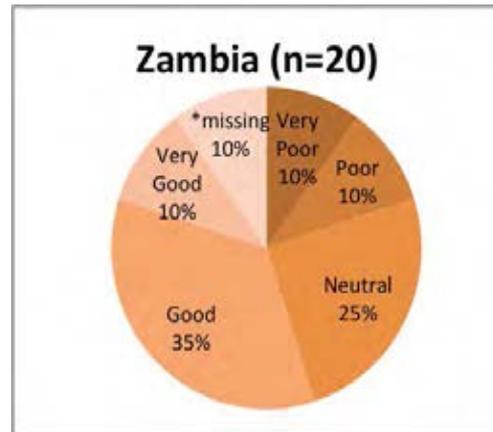
Tanzania

All schools did not elaborate on their e-waste strategy but three schools gave a rating when asked to rate their e-waste strategy. Forty percent of the respondent ranked their e-waste protocol as good.



Zambia

In Zambia, six schools reported not having an e-waste strategy, although some are reportedly already looking into and assessing options available. Most schools reported returning the broken computers to Camara for disposal, others follow the government's procedure on disposal, and some reserved a room to store the broken computers. Out of 20 schools, 35% rated their strategy as good and another 10% as very good while 25% were neutral, 10% poor and 10% very poor with 10% missing.



IMPACT OF CAMARA COMPUTERS AND TRAINING

This section elaborates on evaluation of the impact of computers and educational content supplied by Camara in 2012, the training given to the teachers and the level of support provided by the local hubs to their partnered schools. In general, there were three areas where impact can be categorised: e-learning, performance (student and teacher), and learning/teaching. The individual responses were grouped and some specific examples were enumerated for each category.

The figure below shows the overall ratings of each Camara hub as reported by the school principals interviewed. In Jamaica, 43% of the principals were not happy with their local Camara hub and categorised them as poor, only 14% think that their hub is good and the rest were neutral. A majority of the schools in Tanzania and Ethiopia classified their local Camara hub as good (80% and 78% respectively), while the Kenya, Lesotho and Ireland positive ratings were 40%, 40% and 33% respectively.

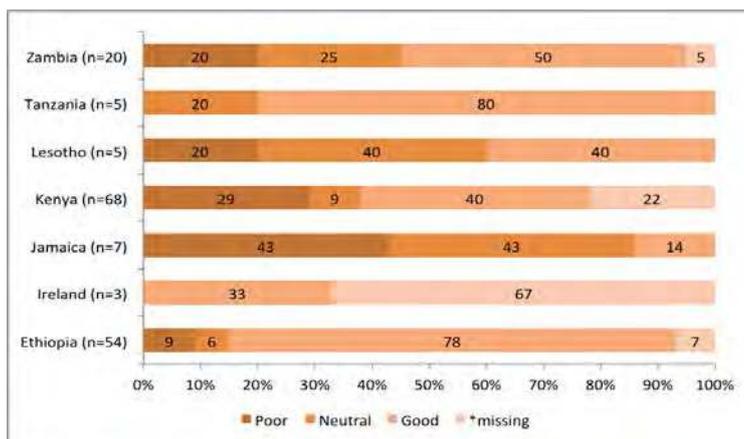


Figure 6: Ratings of each Camara hub as reported by the school principals

Ethiopia

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> • increase knowledge on computer technology • As basic as learning how to use computer • Provide access to explore and learn information and communication technology 	<ul style="list-style-type: none"> • improved teachers' computer skills and share them to other staff and the students • Familiarise with Linux Operating System
Performance	<ul style="list-style-type: none"> • Students have better marks • Improve skills on math and language • Knowledge on more issues and topics • Promote independence among students in learning/doing their assignment • Winning competitions 	<ul style="list-style-type: none"> • Students' performance improved because teachers improved teaching
Learning	<ul style="list-style-type: none"> • Technology supports teachers in making learning easier and faster for students • Creativity in learning 	<ul style="list-style-type: none"> • Shares knowledge to other staff to improve teaching • Familiarize with use of tools such as Wikipedia, games, etc in teaching their students • Teachers transferred knowledge to their students

Level of Support: around 15 partnered schools reported not receiving any support from the local hub. Those who received support were satisfied and reported that they are getting good support and assistance from the local hub. Some schools reported that they would appreciate more maintenance support and general communication from the local hub.

Challenges: the OS (UBUNTU) is not compatible with students' skills / they are not used to the operating system (not user friendly, complicated for starters), software is not updated, many computers are not working (broken) and maintenance support is limited.

Ireland

In Ireland, two schools did not receive training from Camara.

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> Very functional, able to do more with the technology 	
Performance	<ul style="list-style-type: none"> Keep classrooms up and running 	
Learning	<ul style="list-style-type: none"> Teaches children environmental awareness 	<ul style="list-style-type: none"> Encourage independent learning through research

Level of Support: happy with provision of support, Camara Ireland communicates with the office regularly, very supportive on the phone and always available.

Challenges: time and lack of infrastructure such as broadband access.

Jamaica

	CAMARA COMPUTER	CAMARA TRAINING
E-learning		<ul style="list-style-type: none"> More teachers are aware of available software
Performance	<ul style="list-style-type: none"> Students have become independent learners Improved literacy 	
Learning	<ul style="list-style-type: none"> Students enhanced their reading and learning skills Teachers can effectively deliver the curriculum through research and teaching aids 	<ul style="list-style-type: none"> More willing to utilise technology in classroom delivery
Others	<ul style="list-style-type: none"> Pave way to seek out new avenue to acquire more computers for the students 	<ul style="list-style-type: none"> Shared sessions with other staff

Level of Support: consistent training and quicker response to calls about problems, very helpful in walking through any problems over the phone, visited three times to check on the machines. 2 schools reported that they have had no support so far.

Challenges: not having sufficient computers for the students, not enough equipment such as printers, wireless routers, speakers, and internet access. Few teachers are maximizing the use of what is available. One school cannot upgrade to Windows 8 to upgrade their ICT programme.

Kenya

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> Created knowledge and awareness to ICT Eradicate computer illiteracy 	
Performance	<ul style="list-style-type: none"> Encouraged improving research skills Improvise examination setting and assessment 	
Learning	<ul style="list-style-type: none"> Teaching process is easier Encouraged deep research skills Made learning more interesting and effective 	
Others	<ul style="list-style-type: none"> Increased student enrollment 	

Level of Support: 11 schools reported not getting support from the local hub, 26 schools said they received good/excellent support (close supervision and maintenance), some schools (around 7) said they are receiving poor support (minimal support).

Challenges: UBUNTU is not user friendly and complex/difficult for starters, inadequate computers available for students, access to power and internet is limited, lack of ICT teachers (only a few teachers were trained), low ICT awareness, expensive/costly operation and maintenance (power).

Lesotho

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> Students acquired skills to use the computers Technological skills have improved (typing and data storage) Computer literate 	<ul style="list-style-type: none"> Encourage interest about information technology
Performance	<ul style="list-style-type: none"> Office work has become easier 	<ul style="list-style-type: none"> Make office work easier for the staff e.g. financial reports Improved spelling and language skills
Learning	<ul style="list-style-type: none"> Improved students' learning and teachers' teaching 	<ul style="list-style-type: none"> They pass information easily

Level of Support: one school did not receive any support since 2012, the rest are reportedly satisfied with the support received, and they rated the support as good, attentive and available when needed.

Challenges: poor or no internet access, organising and managing the laboratory, over populated, difficult to teach high school about computer because they don't have background during their primary education.

Tanzania

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> Improved ICT performance, one school was ranked first in the national Certificate of Secondary Education Examination (CSEE) 2014 	<ul style="list-style-type: none"> Most teachers now know how to use LINUX (UBUNTU) Management System operation has been made possible thru group effort
Performance	<ul style="list-style-type: none"> Work performance of our teaching staff has been rated excellent, teaching and learning process, setting of exams, internal communication have all been good. 	<ul style="list-style-type: none"> Exams are prepared and printed faster Teachers increased their output in academic areas, teaching programs, report writing, exam setting
Learning	<ul style="list-style-type: none"> Helps teacher to teach effectively Provides access to teaching materials 	<ul style="list-style-type: none"> More access to teaching materials

Level of Support: one school said they received good support through lab inspection and lab lay out setting. Another school reported that the hub did not finish the maintenance of all computers and another school said that they received minor support on maintenance.

Challenges: some schools reported limited access to resources such as electricity and internet connection as major challenges they are facing. Other schools interviewed said that another challenge was that most of their students are not familiar with the OS (LINUX) and it is not user friendly.

Zambia

	CAMARA COMPUTER	CAMARA TRAINING
E-learning	<ul style="list-style-type: none"> Improved computer literacy or skills among students and teachers Students can now access and enjoy learning computer in their schools 	<ul style="list-style-type: none"> Improved teachers' understanding on ICT subject Improved computer skills through hands on experience
Performance	<ul style="list-style-type: none"> Help developed research skills among students Increase in passing rate in some schools Teachers can easily prepare exams 	<ul style="list-style-type: none"> Reduced workloads among IT teachers Enhanced research skill among teachers
Learning	<ul style="list-style-type: none"> Teachers use improved and efficient learning materials in teaching Increased interest among students to learn 	<ul style="list-style-type: none"> Improved teachers' skills in teaching ICT subject to their students

Level of Support: some schools are not receiving any support from the hub, others report that the level of support was excellent in the beginning but has been steadily decreasing, some schools received support less frequently, and some schools say that the support is good especially on repair and maintenance.

Challenges: Lack of compatibility with some windows software already existing in some schools, lack of facilities such as electricity and internet connection, lack of qualified teachers, inadequate number of computers for the students, and cannot upgrade computers with new software/program due to incompatibility with Ubuntu.

Teacher Report

Analysis of the results of the teacher's questionnaire

A. Characteristics of Respondents

A total of 303 teachers from seven Camara hubs responded to this evaluation exercise. The total sample selected was 357 which resulted in an 85% response rate. The following findings presented were from the 303 respondent teachers. The table below shows the breakdown of teacher respondents by hubs. Only one teacher in Ireland participated in the survey.

	Ethiopia	Ireland	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
Number Respondents	125	1	6	41	58	27	45	303
Proportion by Sample	41%	0%	2%	14%	19%	9%	15%	100%

Table 1: Respondents by Hubs

The figure below shows the proportion of male and female respondents by hubs. In general, there were more male teacher respondents (58%, number=175) than female respondents (42%, n=128). However when disaggregated by hubs, Ethiopia, Kenya and Lesotho have a higher proportion of male teacher respondents than female respondents while Jamaica, Tanzania and Zambia, on the other hand, have higher numbers of female teacher respondents than male teacher respondents.

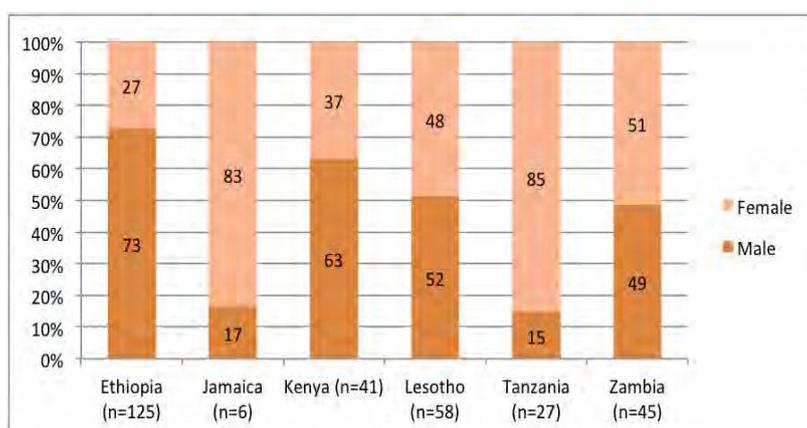


Figure 1: Proportion of Gender of Respondents by Hubs

Table 2 below details the average age of respondents- the average age of respondents in Ethiopia was 30 years of age, in Jamaica it was 39 years of age, in Kenya 29 years old, in Lesotho it was 32 years old and in Tanzania it was 39 years of age. The table below shows the range of ages of the teacher respondents by hub. The youngest respondent was 16 years old from Lesotho with the eldest being 65 in Tanzania- the recorded age of the youngest respondent may have been a transcribing error as the next youngest teacher respondent was 20 years old (both Ethiopia and Kenya reported having 20 year old teacher respondents). Zambia was not included because they did not give the actual/real value for age during the data collection.

	Average Age	SD- standard deviation	Minimum Age	Median Age	Maximum Age	N- number
Ethiopia	30	7.1	20	28	51	122
Jamaica	39	7.1	29	38	50	6
Kenya	29	8.2	20	27	64	40
Lesotho	32	10.7	16	28	62	55
Tanzania	39	12.6	23	35	65	27

Table 2: Age of Respondents (Summary Statistics)

Instead table 3 below shows that 42% of the respondents in Zambia were aged 26 to 35 years old and 38% were 25 and below with 13% being between 36 and 45 and 7% being 46 years old and above.

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
25 and below	35%	0%	34%	33%	7%	38%	32%
26-35	43%	33%	49%	28%	44%	42%	41%
36-45	14%	50%	12%	17%	19%	13%	16%
46 and above	5%	17%	2%	17%	30%	7%	10%
*missing	2%	0%	2%	5%	0%	0%	2%
Total	125	6	41	58	27	45	302

Table 3: Proportion of Respondents by Age Group

Table 4 below details the average number of year's experience teaching across respondents in each hub. The average number of years of teaching among respondent teachers in Ethiopia was 6.2 with two teachers who reported years of teaching experience as less than one year (0). Whilst in Tanzania, the average number of year's experience teaching was 14.6 years, Lesotho respondents averaged 9.3 years teaching experience, Jamaican respondents averaged 10 years teaching experience, Kenya 6.3 years and Zambia 2.1 years teaching experience.

	Average	SD	Minimum	Median	Maximum	N
Ethiopia	6.2	5.2	0	5	28	122
Jamaica	10.0	10.4	1	7.5	30	6
Kenya	6.3	6.2	1	4	30	39
Lesotho	9.3	9.0	0.5	5	34	53
Tanzania	14.6	12.8	0	10	39	27
Zambia	2.1	1.8	1	1	9	44

Table 4: Years of Teaching Summary Statistics

Figure 2 below shows the proportion of the teacher respondents who reported to have received training from Camara in 2012. In Ethiopia and Jamaica, a higher proportion of the teacher respondents reported they did not receive training from Camara (56% and 67% respectively). Lesotho has the highest proportion of respondents (79%) who received training from Camara in 2012, followed by Zambia with 64% of the respondents having received training, then Tanzania with 63% and lastly Kenya with 59% of respondents participating in Camara training in 2012.

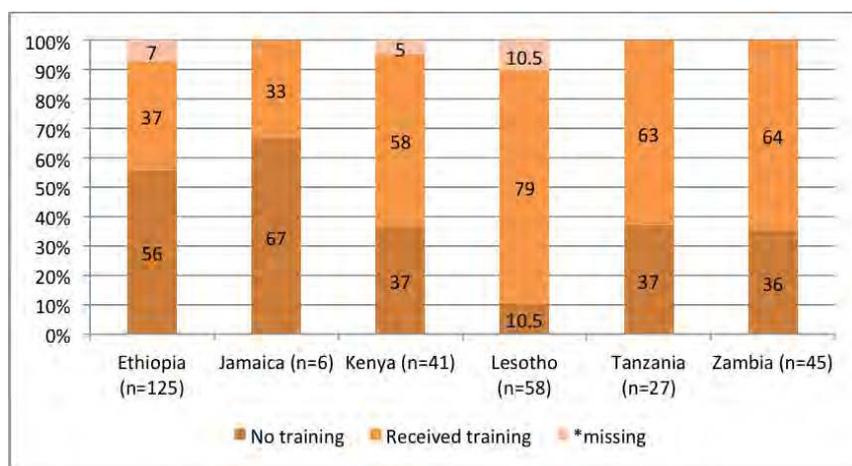


Figure 2: Respondents received training from Camara

B. Teaching and use of Computer Laboratory

Figure 3 below shows the proportion, by hub, of teachers who reported using Camara’s computers for teaching their classes. In Ethiopia, 86% of the teachers who participated in this survey said that they use the computer lab for their classes and 14% said they do not use the lab. In Tanzania, the proportion of those who do not use the computer lab is higher than those who use them for teaching their classes (44% and 56% respectively). Other hubs have reported higher rates of teacher respondents who use the computers for teaching, specifically 100% of Jamaican teachers reported using computers to teach, 90% of Kenyan respondents reported using Camara computers in class while Zambia and Lesotho reported 76% and 72% of teachers using Camara computers for teaching their classes, respectively.

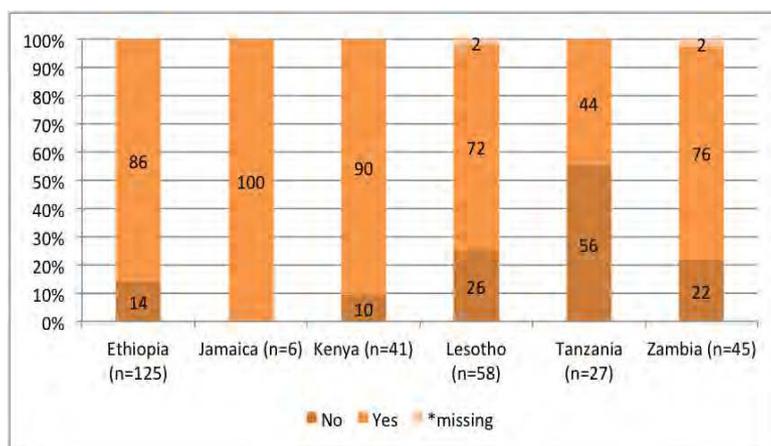


Figure 3: Respondents who report using Camara computers in class

Table 5 below shows the average number of classes in a week, by hub, for a teacher who reported using computers in the laboratory for teaching their subjects. Please note that this result is per teacher and not per school. The N (number) only included teacher respondents who reported using computer laboratory in teaching their classes and has given data.

Average number of class per teacher in a week

	Average	SD	Minimum	Median	Maximum	N	*missing n
Ethiopia	4.3	4.4	1	2	20	92	15
Ireland	1.0	.	1	1	1	1	0
Jamaica	6.3	4.8	1	4.5	14	6	0
Kenya	7.9	6.8	1	6	30	35	2
Lesotho	2.7	3.9	1	1	24	38	4
Tanzania	2.2	1.6	1	2	6	9	3
Zambia	2.2	1.8	1	1	8	33	1

Table 5: Average Number of Class per Teacher in a Week

In Ethiopia, the average number of classes in a week per teacher using the computer laboratory was 4.3 according to the respondents. The maximum number of classes for a teacher was twenty per week and the minimum number of classes per teacher was one class per week. Jamaican teacher respondents had 6.3 classes in a week which used Camara computers for teaching the class on average. Teachers in Kenya reported an average of 7.9 classes using computers per week, teachers in Lesotho reported an average of 2.7 classes using computers and teachers in Tanzania reported an average of 2.2 classes per week using Camara computers. Lastly, in Zambia teacher respondents reported an average of 2.2 classes per week with a maximum of 8 classes taught in a week using computers and a minimum of 1 class per week with computers.

Teachers were then asked for the number of computers they use per class when teaching using the Camara computers. Table 6 below shows the average number of computers per class per teacher in each hub and table 7 below shows the average number of students in a class per teacher. In Ireland, the solitary teacher respondent reported that the average number of students in his class was 26 students and he also reported that the number of computers available in the computer laboratory for use in a class was 55. This shows that each student has more than enough access to a computer.

Average number of computers in a class per teacher

	Average	SD	Minimum	Median	Maximum	N	*missing n
Ethiopia	19.8	9.7	2	20	60	102	5
Ireland	55.0	.	55	55	55	1	0
Jamaica	5.7	2.3	3	6	8	6	0
Kenya	12.6	7.2	2	10	33	37	0
Lesotho	19.0	8.2	1	20	40	31	11
Tanzania	22.3	17.2	5	20	50	10	2
Zambia	22.3	16.5	2	20	80	31	3

Table 6: Average number of computers in a class per teacher

Average number of students per class

	Average	SD	Minimum	Median	Maximum	N	*missing n
Ethiopia	27.5	13.0	7	25	70	104	3
Ireland	26.0	.	26	26	26	1	0
Jamaica	18.0	9.7	8	17.5	35	6	0
Kenya	28.3	16.6	4	26.5	70	36	1
Lesotho	42.2	22.0	16	40	150	31	11
Tanzania	31.8	14.3	10	32.5	60	12	0
Zambia	34.8	14.6	10	40	60	32	2

Table 7: Average number of students per class

In Ethiopia, the average number of students in a class (as reported per teacher) was 27.5 students and the average number of computers used for the class was 19.8 computers. This shows that a teacher in his/her class has a limited number of computers compared to the number of their students. The same situation applies to Jamaica with 5.7 computers and 18 students on average per class, Kenya with 12.6 computers and 28.3 students per class on average, Lesotho with 19 computers and 42.2 students per class on average, Tanzania with 22.3 computers and 31.8 students per class on average, and Zambia with 22.3 computers and 34.8 students per class on average.

Table 8 below shows the average number of minutes a teacher spent using computers in teaching his/her class. In Ethiopia the average number of minutes for each class as reported by the teachers interviewed was 46.2 minutes, Jamaica reported an average of 45 minutes, Kenya reported an average of 50.4 minutes, Lesotho 52.4 minutes, Tanzania 56.4 minutes, and Zambia 59.4 minutes. The top five subjects taught using Camara computers were: ICT, Language, Mathematics, Science, and English.

Average number of minutes per teacher

	Average	SD	Minimum	Median	Maximum	N	*missing n
Ethiopia	46.2	14.8	20	45	120	104	3
Ireland	40.0	.	40	40	40	1	0
Jamaica	45.0	8.4	35	45	60	6	0
Kenya	50.4	26.4	30	40	120	36	1
Lesotho	52.4	17.5	20	45	90	41	1
Tanzania	56.4	21.1	30	60	80	11	1
Zambia	59.4	33.4	5	52.5	180	34	0

Table 8: Average number of minutes per teacher

The teacher respondents were also asked who else has access to the computer laboratory/Camara computers and table 9 below shows the breakdown of the responses by hub. The responses are the proportion of the teachers who reported yes for each group asked during the interview.

In Ethiopia, 2% of the teacher respondents have seen students from other schools that have used Camara computers/a Camara computer laboratory and 4% have seen youth from the community having access to the Camara computers. In Jamaica, teachers only observed students and teachers from their school using Camara computers/the computer laboratory. In Kenya 22% of respondents reported students from other schools using Camara computers, 24% reported youth in the community having access and 15% reported adults in the community having access to Camara computers. In Lesotho 5% of respondents reported that students from other schools and adults from the community have access to Camara computers with 7% also reporting youth in the community having access. In Tanzania 7% of teacher respondents reported students from other schools and youth in the community having access to Camara computers while 4% reported adults in the community having access. 24% of Zambian teacher respondents reported that students from other schools had access to Camara computers, 18% reported adults in the community have access along with 24% reporting youth in the community having access to Camara computers.

Other groups of people that have access to Camara computers

	Ethiopia	Ireland	Jamaica	Kenya	Lesotho	Tanzania	Zambia
Non IT Students	18%	100%	100%	66%	57%	63%	82%
Non IT Teachers	33%	100%	100%	83%	60%	67%	67%
Students from other school	2%	0%	0%	22%	5%	7%	24%
Youth in the community	4%	0%	0%	24%	7%	7%	24%
Adult in the community	0%	0%	0%	15%	5%	4%	18%
N	125	1	6	41	58	27	45

*note: multiple answers, should not result in 100% per hub

Table 9: Access to Camara computers

C. Educational Content Usage

The computers dispatched by Camara contain educational contents that can be used by the teachers and the students in school to enhance teaching and learning. The educational contents included GeoGebra, Tux Math, Tux Typing, Tux Paint, among others, in addition to a variety of science, programming, graphics, sound, video, internet and office applications and tools. Figure 4 below shows the proportion of teacher respondents per country who have reported using the educational contents when teaching.

In Ethiopia, 80% of the teachers said that they used the educational content on Camara's computers while 20% reported not using the educational content. Tanzania had a lower proportion of teachers using the educational content with only 41% of the teachers reporting using the available content while 59% reported not using the educational content. Kenya reported a usage rate of 73%, Lesotho 59%, Jamaica 83%, and Zambia 64% making Tanzania the only country to report a usage rate of educational content among respondent teachers at lower than 50%.

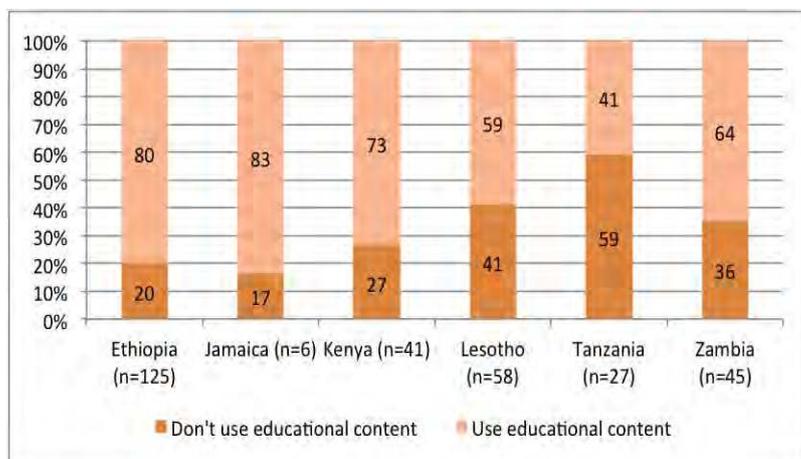


Figure 4: Teachers who have used educational content on Camara computers

In all countries, the most used educational content was reported as follows: Wikipedia, Tux Math, GeoGebra, and OpenOffice (word, spreadsheets). Table 9 below shows the proportion of teachers who used each type of educational content, per country. Jamaica reported low usage of educational content in comparison to other hubs, while Ethiopia reported the most usage of educational content.

Most used educational content

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia
Wikipedia	87%	0%	87%	100%	73%	76%
TuxMath	38%	20%	37%	41%	36%	45%
GeoGebra	24%	20%	10%	6%	9%	21%
OpenOffice	13%	0%	3%	26%	0%	17%
Games	12%	0%	7%	21%	0%	14%
TuxTyping	1%	0%	7%	3%	27%	31%
TuxPaint	1%	0%	7%	6%	9%	10%
Number of teachers	100	5	30	34	11	29

*note: multiple answers, should not result in 100% per hub

Table 10: Most used educational content

D. Satisfaction with Camara Hub

The teacher respondents were asked to agree or disagree with a series of statements to show their satisfaction with the Camara hub in terms of sufficiency, level of maintenance, software and educational content and positive impact on teaching.

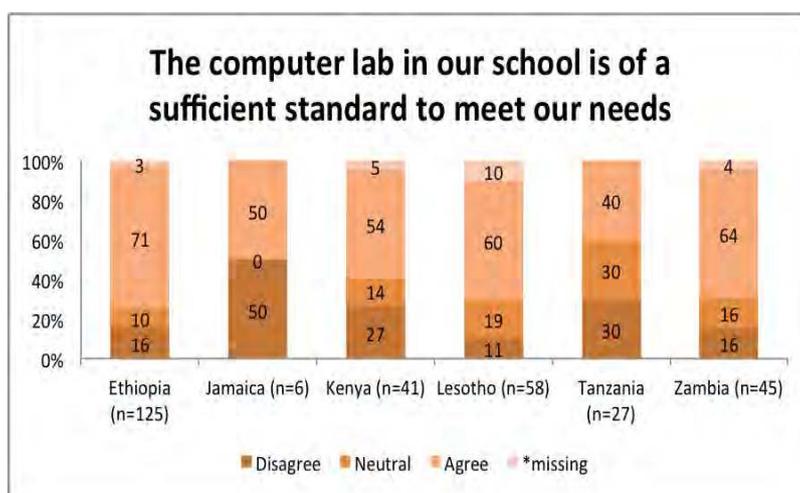


Figure 5: Satisfaction with computer lab

In Ethiopia, 71% of the teachers reported satisfaction with the standards of the computer laboratory in their school by agreeing to the positive statement, “the computer lab in our school is of a sufficient standard to meet our needs”, 10% were neutral and 16% reported that they were not satisfied.

In Kenya, a higher proportion (54%) reported that they are satisfied with the standards of the computer lab while 14% were neutral and 27% were not satisfied and 5% of respondent’s answers were incomplete or missing. Lesotho reported 60% of teachers who are satisfied, 19% neutral and 11% not satisfied with 10% of responses missing or incomplete. Tanzania reported a 40% satisfaction rate with 30% of teacher respondents being dissatisfied and 30% neutral. Jamaica reported a satisfaction rate of 50% with 50% being dissatisfied. Lastly, 64% of the Zambian teacher respondents reported satisfaction with the standards of the computer lab while 16% were dissatisfied, 16% neutral and 4% missing or incomplete.

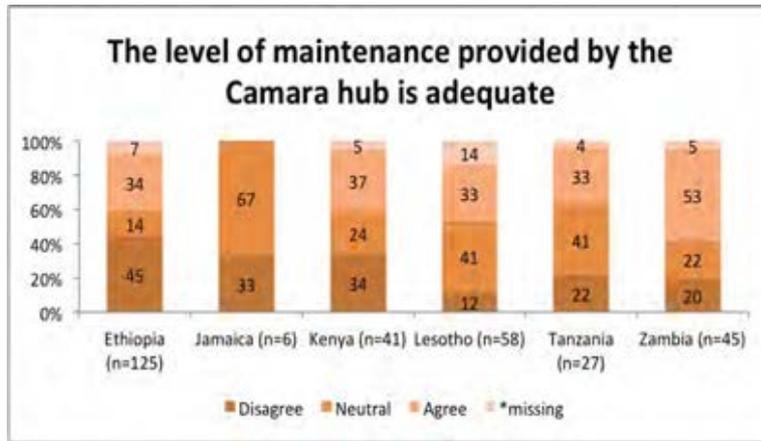


Figure 6: Satisfaction with Camara hub maintenance performance

In Ethiopia, a higher proportion of the teachers (with 45%) disagreed with the statement that the level of maintenance provided by the Camara hub is adequate. Only 34% reported being satisfied and 14% were neutral with 7% missing or giving incomplete answers.

A higher proportion of teachers reported impartiality on the adequacy of the level of maintenance provided by their hub in Jamaica (67%), Lesotho (41%) and Tanzania (41%). In Jamaica 33% of respondent teachers reported dissatisfaction with the level of maintenance provided by the Camara hub, Lesotho reported a 12% dissatisfaction rate with 14% of answers missing or incomplete and 33% being satisfied while in Tanzania 33% of teachers were dissatisfied with 22% being satisfied and 4% of respondent answers missing or incomplete.

In Kenya 24% of respondents reported a neutral opinion of the level of maintenance provided by the Camara while 37% were satisfied and 34% were unsatisfied. Lastly, 53% of respondents in Zambia agreed to the positive statement on Camara hub's level of maintenance, while 20% disagreed with the statement, 22% were neutral and 5% of respondent answers were missing or incomplete.

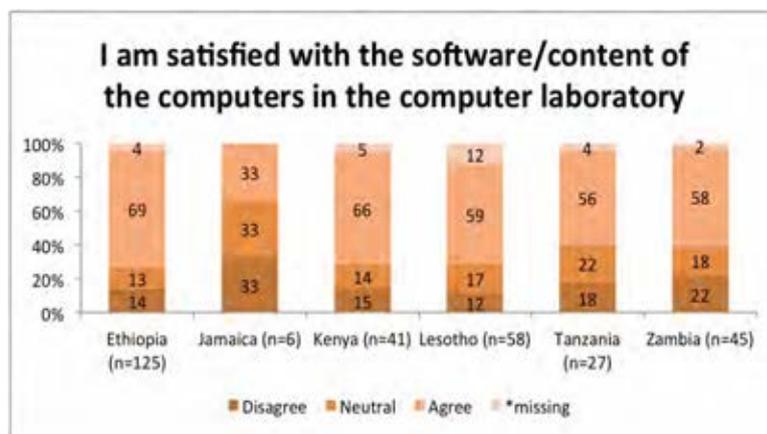


Figure 7: Satisfaction with software/educational content of Camara computers

When asked about their satisfaction with the software or educational content of the computers provided by Camara, 69% of the teachers in Ethiopia said that they are satisfied, 14% reported being unsatisfied, 13% were neutral and 4% of respondent answers were missing or incomplete. In Jamaica 33% of respondents were satisfied, 33% neutral and 33% reported being unsatisfied with the software/educational content of Camara computers. While in Kenya 66% of respondent teachers were satisfied, 15% were neutral and 15% were not satisfied and 4% of respondent teacher answers were incomplete or missing.

In Lesotho 59% of teachers were satisfied with the software/educational content of Camara computers, 17% were neutral with 12% being unsatisfied and 12% of respondent teacher answers missing or incomplete. Tanzania reported a satisfaction rate of 56%, dissatisfaction rate of 18% with 22% of respondents being neutral and 4% of teacher respondents answers being missing or incomplete. Lastly, 58% of the teacher respondents in Zambia were satisfied with the educational content while 22% were not satisfied and 18% were neutral with 2% missing or incomplete.

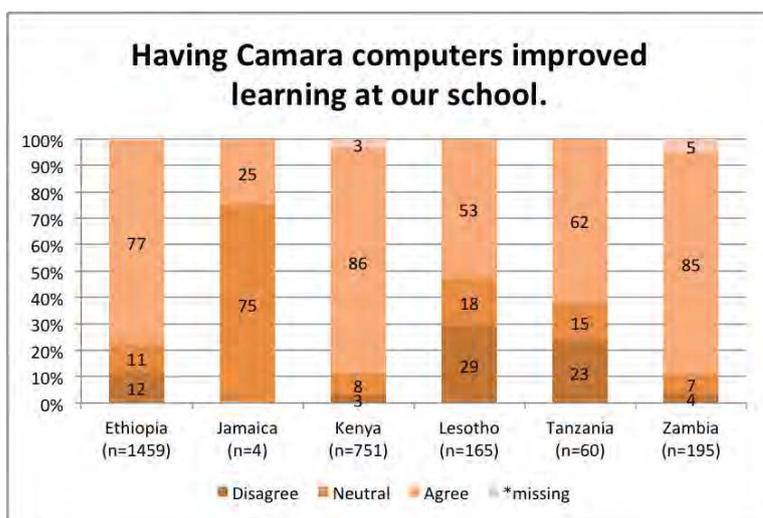


Figure 8: Impact of Camara computers on teaching and learning

The figure above shows the proportion of teachers, by country, who agreed or disagreed with the statement on Camara computers improving teaching and learning at their school. The majority of the teachers interviewed in Ethiopia (85%), Jamaica (83%), Kenya (66%), Lesotho (66%) and Tanzania (56%) reported that Camara’s computers and computer labs have improved teaching and learning in their schools. Tanzania has the lowest proportion of teachers agreeing with the statement (56%) compared to other countries who all reported at least 60% or above agreement with the positive statement. Lastly, a higher proportion (76%) of respondents in Zambia believe that Camara computers have improved teaching and learning in their school while only 9% believe otherwise with 11% being neutral and 4% of answers missing or incomplete.

E. Challenges and Recommendations

Teachers were asked to report on the biggest challenges or difficulties they faced when using Camara computers for education and also what support they envisaged needing from Camara in terms of future collaboration. The responses to these questions are detailed, by hub, below.

Challenges

Ethiopia

The most common challenge reported by teachers in Ethiopia was using the operating system installed in the computers. They reported that students have never used the system before so they are not familiar with it. Some also reported that it is not user friendly and it will take time to get used to it. Others also commented that students have difficulty understanding how to use the operating system and even some teachers reported having the same problem. Below are some direct comments from respondents that represent the main trend of responses from Ethiopia.

- Built-in Operating System (UBUNTU/Linux) not user friendly
- Not enough computers for the students and teachers to use
- There is no available (or limited) maintenance service or skills
- Limited application software that are compatible with the operating system

Jamaica

Teachers reported having a gap between the number of computers available and the number needed to ensure access for all students. There were also issues around computer maintenance and ensuring they were up-to-date and running smoothly.

- Insufficient computers (poor ratio of students to computers)
- Difficult to update computer programmes (some software is not compatible with the OS)

Lesotho

Lesotho also reported a gap between the number of computers available and the number needed, in addition to maintenance issues and challenges around the operating system's user friendliness.

- The computers available for use are not enough to large number of students during a class. Students have to share while learning
- Lack or limited supply of maintenance and technical services. There are a lot of computers that are no longer working
- The operating system is not user friendly. It is difficult to update the computer programmes/software

Tanzania

Similarly to Jamaica and Lesotho the gap between numbers of computers available and numbers needed per student was commonly identified as a challenge and limitation to the work of teachers using ICT for educational purposes.

- Computers are fewer compared to the number of students in a class
- Camara computers are loaded with Ubuntu while the syllabus requires students to learn through windows
- The space of the computer laboratory is limited while the number of students and teachers using them is bigger
- Some computers are not used due to insufficient parts (mouse, power supply, keyboard, etc.)

Zambia

The gap between numbers of computers available and numbers needed per student was commonly identified as a challenge and limitation to the work of teachers using ICT for educational purposes in Zambia. Another limitation is the accessibility of the computer laboratory.

- There's not enough computers that can accommodate the number of students who's going to use them in a class
- Some schools lack a decent computer laboratory
- The programs installed in the computers were not user friendly and not common to students

Recommendations

In addition to identifying challenges teachers gave feedback from their practical experience on how Camara can improve its services, particularly in relation to the context of their school and the national education system under which they operate. The below suggestions are the most frequently identified suggestions and recommendations across hubs.

Maintenance of the Computer

- Frequent and regular maintenance service from Camara Hub
- Efficient servicing and updating of the computers
- Regular follow up on the maintenance of the computers every after three months, Camara hubs should be communicating with partner schools and ensuring they receive updates detailing their maintenance needs- communication between hubs and partner schools should be regular

Training

- More trainings for the teachers, long term trainings, regular trainings
- Camara staff should visit schools once a year to teach all the teachers computer literacy
- Trainings on computer maintenance, use of computer lab, Camara and related programme and network set-up

Accessories

- Updated accessories such as flat screen monitors, desktops, laptops, printers and projector
- Updated and relevant software (computer programme, windows, internet)

Number of Computers

- Give more computers (this was an issue that was noted across all hubs by respondents with the suggestion that increasing the number of computers dispatched per school would have a beneficial effect on the ability to use computers for teaching)

Student Report

A. Characteristics of Students Sample

A total of 2,640 students submitted responses to the questionnaire; although 6 student questionnaires were incomplete and therefore the total number of student respondents for this evaluation was 2,634. The table below shows the breakdown of student respondents by hub. Ireland has no respondents as it was school break when this exercise was conducted. Ethiopia has the highest proportion of student respondents for this evaluation making up 55.4% of the total sample.

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
No. of Student Respondents	1,459	4	751	165	60	195	2,634
Percent	55.4%	0.2%	28.5%	6.3%	2.3%	7.4%	100%

Table 1: Distribution of student respondents by hub

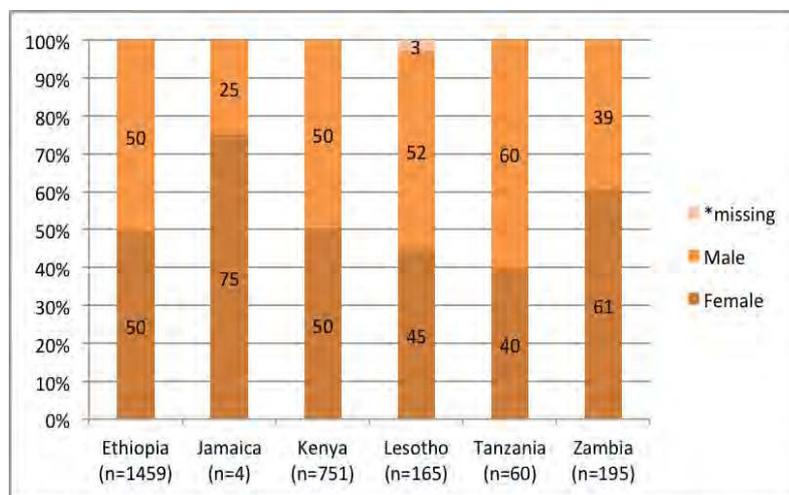


Figure 1: Gender disaggregation of student respondents by hub

1. Ethiopia

In Ethiopia, the total number of students interviewed was 1,459, 50% of these students were female and 50% were male. The average age of students interviewed in Ethiopia was 14 years old. The youngest student interviewed was six years old and the oldest was 49 years old.

2. Jamaica

Only four students were interviewed in Jamaica, from one partner school. The average age of the students interviewed was 11.5 years old, the youngest to be interviewed was 11 years old and the oldest was 12. Jamaica's respondents were composed of 25% female students and 75% male students.

3. Kenya

In Kenya, 751 students were interviewed from different partner schools. Among the students interviewed 50% were male and 50% were female. The youngest student was 8 years old and the oldest was 38 years old. The average age for the sample was 15.5 years old.

4. Lesotho

A total number of 165 students were interviewed in Lesotho. Among these students, 52% are female and 45% are male with 3% unaccounted for. The youngest student interviewed was 6 years old and the oldest was 22 years old. The average age for the sample is 13.3 years old.

5. Tanzania

In Tanzania, 60% of the 60 students interviewed are male and 40% are female. The youngest student interviewed was 13 years old and the oldest was 19 years old. The average age of the sample is 16.3 years old.

6. Zambia

A total number of 195 students participated in this exercise and 61% of these students were female making Zambia the hub with the highest proportion of female respondents. One hundred percent of the students were aged less than 25 years old.

	Average	SD	Minimum	Median	Maximum	N (number)
Ethiopia	14.2	3.3	6	14	49	1443
Jamaica	11.5	0.6	11	11.5	12	4
Kenya	15.5	3.6	8	15	38	739
Lesotho	13.3	3.8	6	14	22	165
Tanzania	16.3	1.3	13	16	19	59

Table 2: Average age of students by country

B. Computer Usage

B.1. Daily Computer Usage

1. Ethiopia

In Ethiopia, the highest proportion of student respondents (49%) reported using the computer for 31 to 45 minutes a day while only 26% used the computer for 15 to 30 minutes. Furthermore, 24% of the students reported using a computer for more than 45 minutes daily. Of those who reported using the computer in the last week, 86% said that they shared the computer the last time they used it. The most common number of students sharing the computer was 2 students. Only a small proportion (17%) reported an average of one student using the computer. This indicates that schools in Ethiopia that were interviewed for this study are lacking sufficient access to computers to allow students individualised computer time.

Did you share the computer with someone else last time you used it?	
No	13%
Yes	86%
*missing	1%
On average, how many students share the same computer?	
One	17%
Two	53%
Three	18%
Four and more	10%
*missing	2%

Table 3: Reported sharing of computer (Ethiopia)

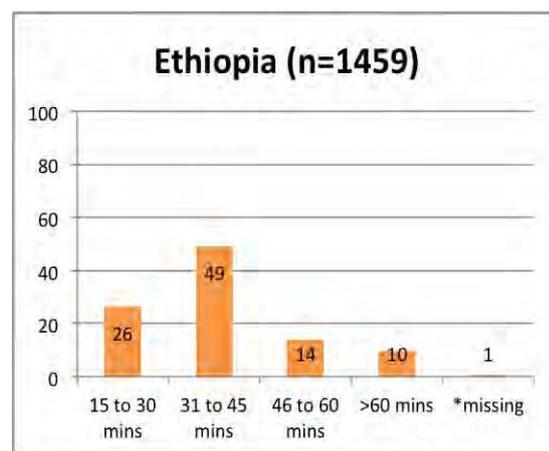


Figure 2: Reported daily computer usage per student

2. Jamaica

All of the students interviewed (100%) reported using the computer for 15 to 30 minutes in a day. All of them have also reported sharing the computer during their last use. The average number of students who shared the computer was reported as three students.

Did you share the computer with someone else last time you used it?	
No	0%
Yes	100%
*missing	0%
On average, how many students share the same computer?	
One	0%
Two	25%
Three	75%
Four and more	0%
*missing	0%

Table 4: Reported sharing of computer (Jamaica)

3. Kenya

Out of 751 students in Kenya, 9% reported that they used the computer less than half an hour in a day while 57% reported that their usage is between 31 to 45 minutes in a day. The majority (83%) of the students reported sharing the computer the last time they used them and a high proportion (60%) shared between two students.

Did you share the computer with someone else last time you used it?	
No	15%
Yes	83%
*missing	2%
On average, how many students share the same computer?	
One	8%
Two	60%
Three	18%
Four and more	13%
*missing	1%

Table 5: Reported sharing of computer (Kenya)

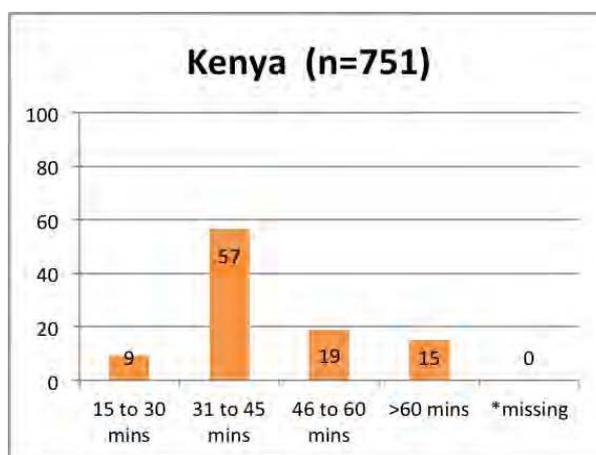


Figure 3: Reported daily computer usage per student

4. Lesotho

In Lesotho, only 2% of 165 students used the computer for less than 30 minutes in a day while 31% reported using computers for between 31 to 45 minutes, 32% used computer for 46 to 60 minutes and another 33% used a computer for more than an hour with 2% missing/incomplete answers. For those who used the computer, 74% reported having to share with another student the last time they used with the highest proportion reporting sharing one computer between two students (64%).

Did you share the computer with someone else last time you used it?	
No	24%
Yes	74%
*missing	2%

On average, how many students share the same computer?	
One	22%
Two	64%
Three	3%
Four and more	10%
*missing	1%

Table 6: Reported sharing of computer (Lesotho)

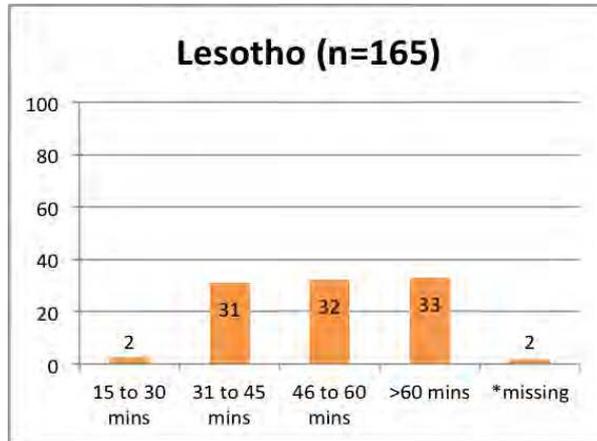


Figure 4: Reported daily computer usage per student

5. Tanzania

Out of 60 students administered questionnaires in Tanzania, 24% reported that they used the computer for less than 30 minutes in a day, 25% used computers for 31 to 45 minutes, another 18% used for 46 to 60 minutes and the highest proportion of 33% reported their usage is more than an hour in a day. Fifty-three percent (53%) of the students interviewed reported having to share the computer the last time they used them. The highest proportion (49%) of the students reported that on average 2 students share the computer.

Did you share the computer with someone else last time you used it?	
No	47%
Yes	53%
*missing	0%

On average, how many students share the same computer?	
One	28%
Two	49%
Three	18%
Four and more	5%
*missing	0%

Table 7: Reported sharing of computer (Tanzania)

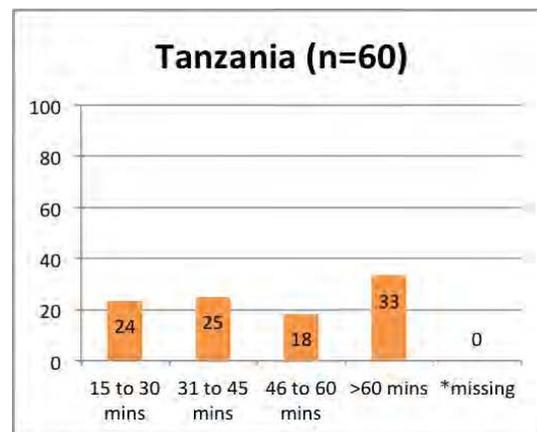


Figure 5: Reported daily computer usage per student

6. Zambia

In Zambia 38% of the 195 students reported using the computer for 30 to 45 minutes in a day. 23% used the computer for 15 to 30 minutes, 14% used it for 45 to 60 minutes and another 24% reported using a computer for more than an hour daily. Of those who reported using the computer in the last week, 53% said that they shared the computer the last time they used it. The most common number of students sharing the computer was 2 students.

Did you share the computer with someone else last time you used it?	
No	46.5%
Yes	53%
*missing	0.5%

On the average, how many students share the same computer?	
One	24%
Two	48%
Three	13%
Four and more	5%
*missing	10%

Table 8: Reported sharing of computer (Zambia)

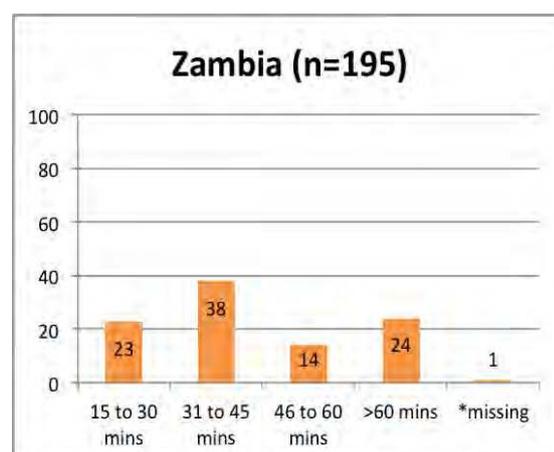


Figure 6: Reported daily computer usage per student

B.2. Frequency of computer use in a week

This section details the percentage of students and the frequency of use of computers or the computer laboratory in a week by country. For each country the highest proportion of students responding to the questionnaire reported to have used the computer once in the last week. Please note that some respondents treated the question on frequency of use of computers as different entity to questions on frequency of use by subject. As a result, some students reported to have used the computer once in a week but also reported to use the computer for more than one subject in a week. A refinement of questionnaire clarity and training for enumerators so they can explain clearly the meaning of each question will improve the ability of the respondent to give coherent answers that address the specifics of the question asked.

1. Ethiopia

The figure below shows the frequency of computer usage for the last week as reported by students interviewed in Ethiopia. Forty-one percent used the computer laboratory once in the last week, 26% used it twice, 15% three times and 17% more than 3 times. ICT was the most popular subject to be taught using computers with 82% of students reporting to have at least one ICT class on computers in the last week.

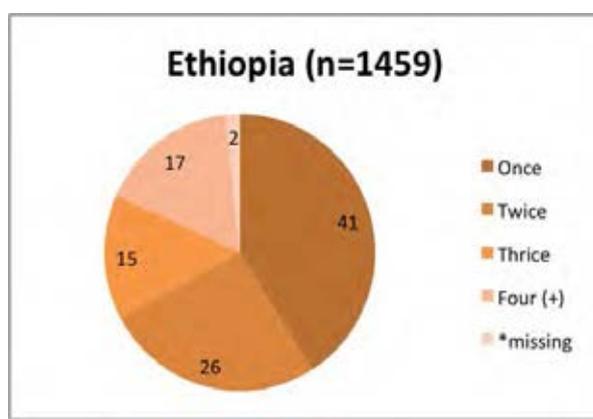


Figure 7:
Frequency of use in
a week

	Science	English	Maths	ICT	Others
Never Used	55%	61%	70%	17%	45%
Once	18%	14%	12%	34%	19%
Twice	13%	9%	7%	27%	14%
3 and more	13%	13%	9%	21%	21%
*missing	1%	3%	1%	1%	1%

Table 9: Reported proportion of usage by subject (Ethiopia)

2. Jamaica

All four students interviewed said that they used the computer once in the last week. Among these students, 50% have used the computer for an ICT class once, 50% for Maths, and 25% for English. The students were asked for each subject therefore the proportion is not equal to 100%.

	Science	English	Maths	ICT	Others
Never Used	100%	75%	50%	50%	75%
Once	0%	25%	50%	50%	0%
Twice	0%	0%	0%	0%	25%
3 and more	0%	0%	0%	0%	0%
*missing	0%	0%	0%	0%	0%

Table 10: Reported proportion of usage by subject (Jamaica)

3. Kenya

Out of the students interviewed, 35% reported using the computer in the laboratory once in the last week, 37% used it twice, 7% used it three times and 19% used it more than 4 times. No students reported not using the computer at all in the week prior to being administered the questionnaire. The most common subject where students reported using the computer to learn was ICT with 74% of students interviewed reporting using computers for ICT class in the last week. The next most popular subjects were Science, followed by English then Maths.

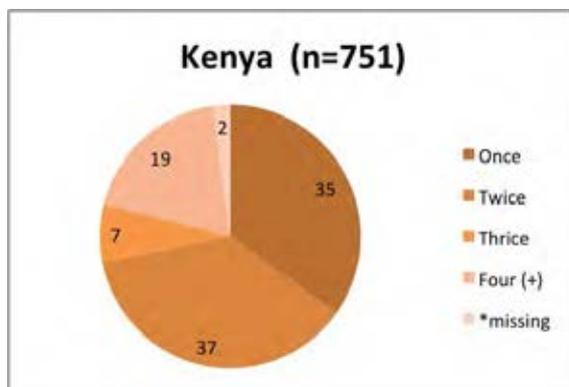


Figure 8:
Frequency of use in a week

	Science	English	Maths	ICT	Others
Never Used	0%	0%	0%	0%	1%
Once	17%	13%	11%	31%	46%
Twice	21%	10%	7%	26%	24%
3 and more	8%	7%	9%	19%	14%
*missing	54%	70%	73%	24%	15%

Table 11: Reported proportion of usage by subject (Kenya)

4. Lesotho

In Lesotho, 50% of the students reported using the computer once in the last week, 9% used it twice, 22% used it three times and 19% used it more than three times. No students interviewed reported not using the computer at all in the week prior to being administered the questionnaire. Out of the students who used the computer 61% reported to have used for it for their ICT subject class. The next most popular subjects were reported to be Science and Maths (44% each).

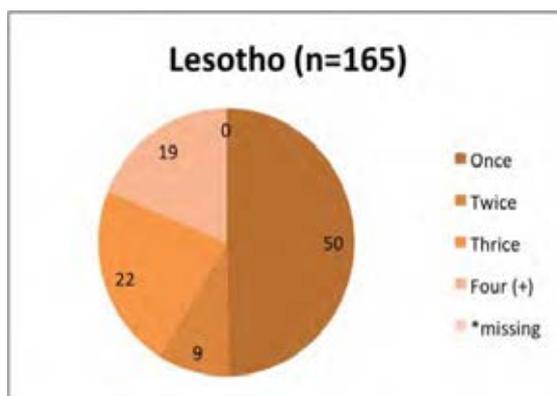


Figure 9:
Frequency of use in a week

	Science	English	Maths	ICT	Others
Never Used	56%	61%	56%	37%	2%
Once	36%	13%	30%	54%	25%
Twice	5%	3%	4%	5%	5%
3 and more	3%	22%	10%	2%	5%
*missing	0%	2%	0%	2%	61%

Table 12: Reported proportion of usage by subject (Lesotho)

5. Tanzania

All the students interviewed in Tanzania reported to have used the computer at least once in the last week. The figure below shows the proportional breakdown of students by frequency of use. Thirty-seven percent used the computer once, 25% twice, 28% three times and the last 10% reported usage of more than three times in the week. The most common subject which they used the computer for was ICT (67%), followed closely by Science (with 65%), then English (55%) and lastly Maths (33%). The proportion does not equal one hundred percent since the respondents gave multiple answers.

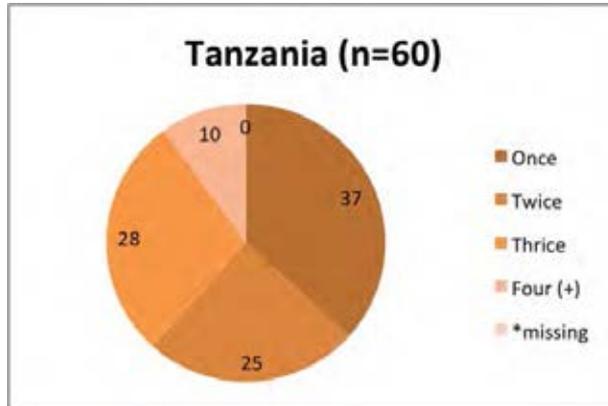


Figure 10:
Frequency of use in a week

	Science	English	Maths	ICT	Others
Never Used	35%	45%	67%	33%	10%
Once	36%	24%	17%	20%	54%
Twice	17%	18%	8%	22%	18%
3 and more	12%	13%	8%	25%	18%
*missing	0%	0%	0%	0%	0%

Table 13: Reported proportion of usage by subject (Tanzania)

6. Zambia

In Zambia, 41% of the students reported using the computer once in the last week, 25% used it twice, 31% used it three times and only 4% used it more than three times. Out of the students who used the computer 85% reported to have used for it for their ICT subject. The next most popular subjects were reported to be Maths (56%) and English (53%).

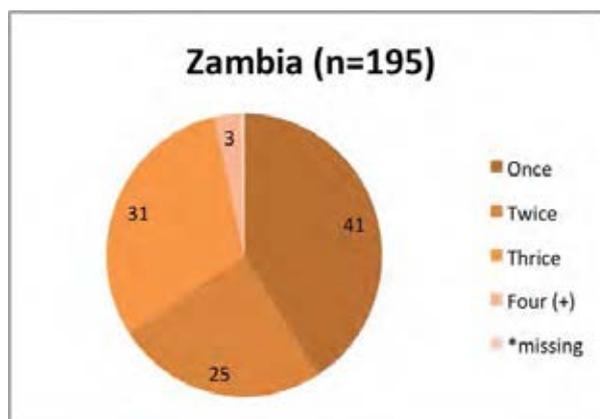


Figure 11:
Frequency of use in a week

	Science	English	Maths	ICT	Others
Never Used	55%	46%	37%	13%	3%
Once	21%	30%	31%	30%	58%
Twice	12%	8%	12%	25%	12%
3 and more	11%	15%	13%	30%	19%
*missing	1%	1%	7%	2%	8%

Table 14: Reported proportion of usage by subject (Zambia)

B.3. Computer Program Usage

Students from each country were asked how many times they used OpenOffice word, Spreadsheet and Firefox in the last week. The tables below show the proportion of student usage and average number of times of each use for each program by country.

1. OpenOffice Word

In total, 79% of the students interviewed reported to have used OpenOffice Word at least once for the last week, 9% reported to have not used the program, while 12% have not answered the question. Lesotho has the lowest proportion of students who have used the word program in the last week (59%) with 41% of answers missing/incomplete.

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
Never used	13%	0%	3%	0%	2%	11%	9%
Used	79%	100%	81%	59%	98%	74%	78%
*missing	8%	0%	16%	41%	0%	15%	13%
N	1,459	4	751	165	60	195	2,634

Table 15: Proportion of students reporting using OpenOffice Word in previous week

The student respondents who reported using the word program were asked how many times in a week they use the program and the figure below shows the average rate of usage per week by hub. Kenya has the most frequent usage of word program with an average of 2.2 times of use in a week. Ethiopia has an average of 1.8 usages, Lesotho has an average of 1.9, Zambia has a usage average of 1.9 per week while Tanzania with only a 1.3 usage averages has the lowest reported usage per week save for Jamaica which reported a usage rate of once per week.

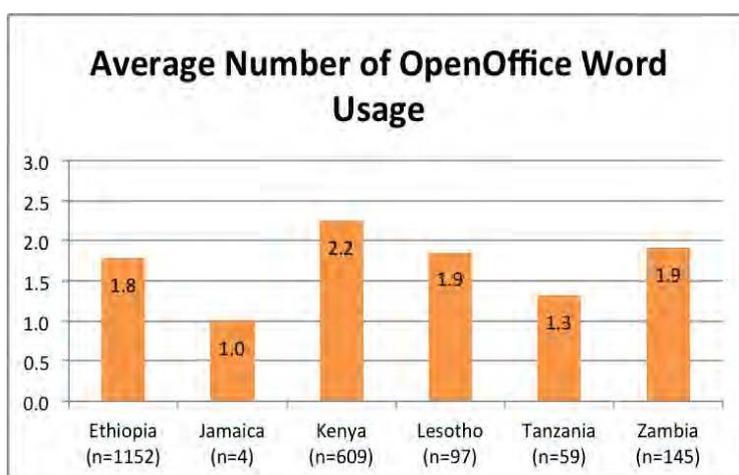


Figure 12: Reported frequency of OpenOffice Word usage by hub

2. Spreadsheet

Of the total sample size administered questionnaires, more than half (57%) of students interviewed reported using Spreadsheet at least once in the last week. In Lesotho, a majority of the students interviewed did not give any information on their Spreadsheet usage. After Jamaica (100%) Tanzania has the highest proportion of students who reported having used Spreadsheet in the last week (98%), followed by Kenya with 62%, then Ethiopia with 57% of the students interviewed.

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
Never used	30%	0%	5%	0%	2%	35%	20%
Used	57%	100%	62%	17%	98%	50%	57%
*missing	13%	0%	33%	83%	0%	15%	23%
N	1,459	4	751	165	60	195	2,634

Table 16: Proportion of students reporting using Spreadsheet in the previous week

Among those who have reported using Spreadsheet in the previous week in Ethiopia, the average number of times of usage reported was 1.7, Jamaica was 1.0, Kenya was 2.0, Lesotho was 2.8, Tanzania was 1.3 and Zambia was 1.8. Lesotho reported the highest frequency of usage average per week, although only 28 students (17%) among the respondents reported using the Spreadsheet program.

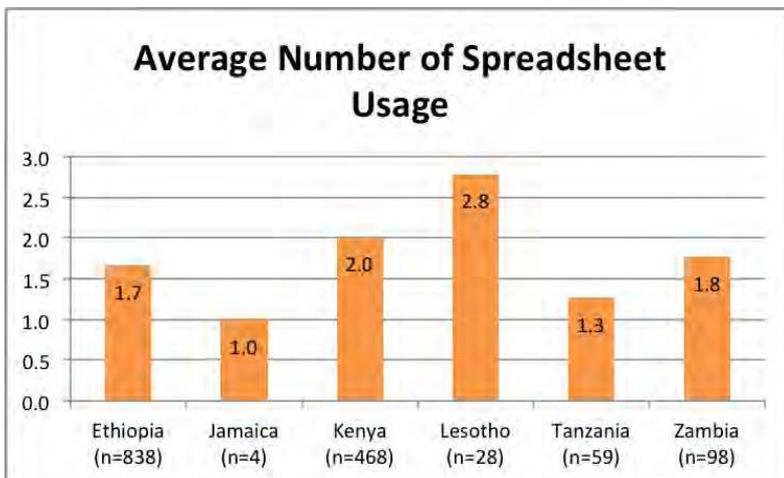


Figure 13: Reported frequency of Spreadsheet usage by hub

3. Firefox

In Ethiopia, 52% of the students interviewed reported having used Firefox in the last week and 33% reported no usage with 14% of respondent answers missing or incomplete. Tanzania reported the highest proportion of students interviewed who have used the program in the previous week with 98%. Lesotho reported a usage proportion of 25% of students with 75% of respondent answers missing or incomplete; no Jamaican student respondents reported using Firefox while 53% of student respondents from Zambia reported having used Firefox in the last week.

	Ethiopia	Jamaica	Kenya	Lesotho	Tanzania	Zambia	Total
Never used	33%	100%	6%	0%	2%	39%	23%
Used	52%	0%	49%	25%	98%	53%	51%
*missing	14%	0%	45%	75%	0%	8%	26%
N	1,459	4	751	165	60	195	2,634

Table 17: Proportion of students reporting using Firefox in the previous week

The figure below shows the average number of times Firefox was reportedly used in a week by students who reported to have been using Firefox. In Lesotho, among a handful of students who use the program, the average number of times they used it was 2.4 in a week while Jamaica reported a usage rate of 0 in the last week, Ethiopia 1.9, Tanzania 1.1, Kenya 2.0 and Zambia 1.7.

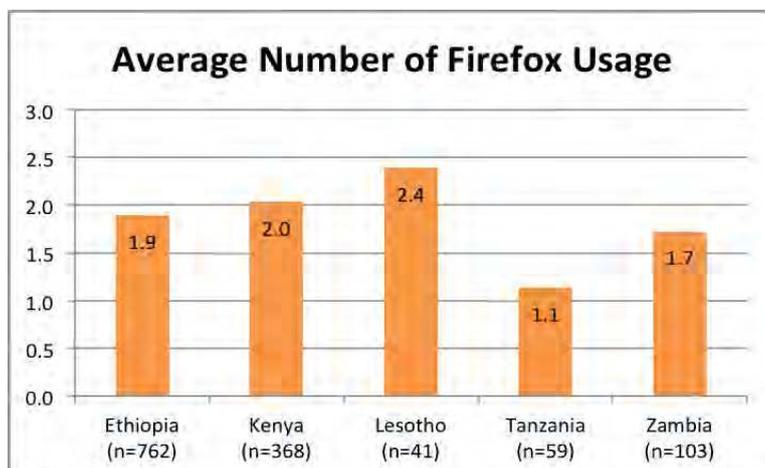


Figure 14: Reported frequency of Firefox usage by hub

C. Perception on Computer Laboratory

This section presents perception based data from students on their confidence in using computers, the impact of the computer laboratory in learning and teaching at their school and on the accessibility and maintenance of computers.

1. Confidence in using OpenOffice program and the internet

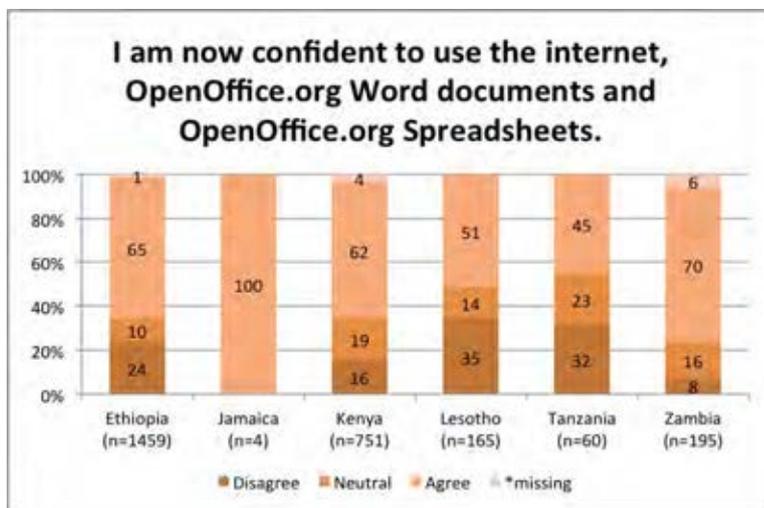


Figure 15: Reported confidence in using specific computer programs

Among the students interviewed in Ethiopia, 65% reported that they are now confident in using the internet, OpenOffice Word documents and Spreadsheet. 24% are not confident with 10% being neutral and 1% of respondents missing. The proportion of students interviewed who are confident in using the programs was highest in Zambia (70%) followed by Ethiopia (65%)- if we exclude Jamaica which has an extremely small sample size.

In Jamaica, 100% of the students interviewed agreed to the statement that they are now confident in using the programs (internet, OpenOffice Word, and Spreadsheet).

Kenya, on the other hand, had 62% of the students reporting that they are now confident in using the internet, OpenOffice Word documents and Spreadsheet. Although 16% still don't have confidence and 19% are neutral with 4% missing.

Lesotho has the highest proportion of students interviewed (35%) who feel that they are still not confident in using the computer programs mentioned above. On the other hand 51% of the students reported feeling confident and 14% being neutral.

In Tanzania, 45% of the students reported having confidence in using the OpenOffice programs and internet, while 32% are not confident and 23% reported being neutral. In the previous section a clear majority of the students reported using one or more of the programs in the previous week but as the figure above shows, there is still room for improvement for students to be more confident in using the programs available to them.

As noted above Zambia has one of the highest proportions (70%) of respondents who feel confident in using the OpenOffice Word documents and Spreadsheet and the internet, while only 8% reported not having confidence using these programs, with 16% neutral and 6% missing.

2. Impact of Camara computers on learning

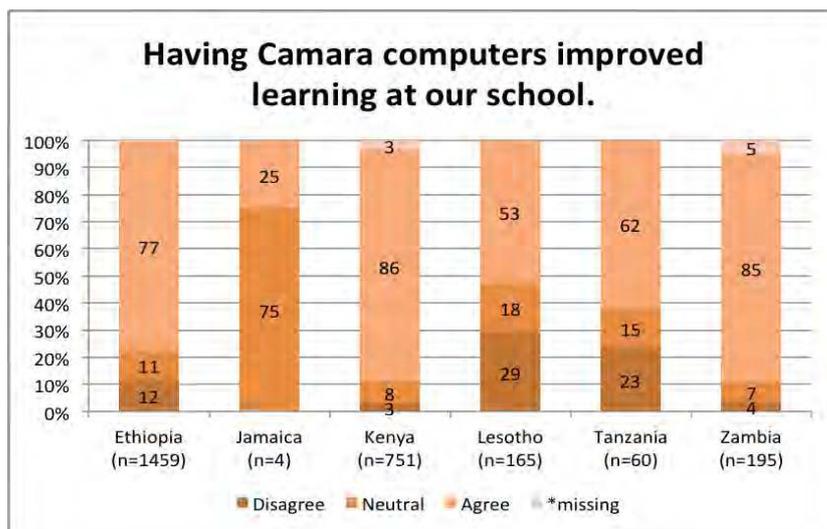


Figure 16: Reported utility of Camara computers in schools

The figure above shows that Camara’s computers have improved learning at schools according to the students interviewed as most of the country hub’s reported a positive majority of students believing that their learning had been improved through access to and use of Camara computers. Except for the hub in Jamaica where 75% of the students were neutral, though again the negligible sample size from Jamaica means it’s next to impossible to draw accurate conclusions from the data.

In Ethiopia, a large majority (77%) felt that learning at their school had improved because of the computers in the laboratory provided by Camara, 11% neither not agree nor disagreed with the statement and 12% disagreed with the statement.

In Kenya, 86% of the students interviewed agreed that Camara computers improved learning at their school, 8% were neutral and only 3% disagreed with the statement with 3% of answers incomplete/missing.

In Lesotho, 29% of the students interviewed (the highest among hubs) did not agree that Camara computers have improved their learning at school and 18% were neutral. More than half (53%) have seen a positive effect on their learning due to access to Camara computers.

Sixty two percent (62%) of respondents in Tanzania felt that computers provided by Camara had improved learning in their school, 15% were neutral and 23% disagreed with the statement. Among the countries surveyed, Tanzania has the second highest proportion of students who did not believe that Camara computers had improved learning in their school.

Lastly, a clear majority (85%) of the student respondents in Zambia agreed with the statement that having Camara computers improved learning in their school, while a much smaller proportion of 4% reported feeling that the Camara computers did not have a positive effect on learning in their school.

3. Frequency of using educational content

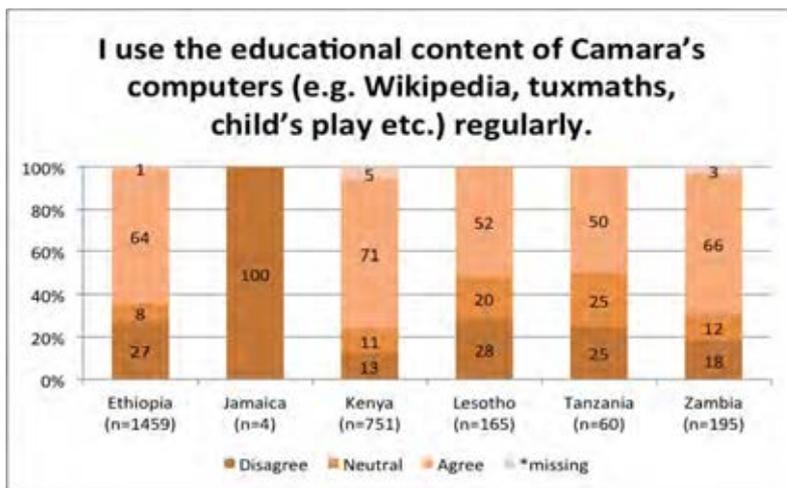


Figure 17: Reported frequency of use of educational content on Camara

In Ethiopia, 64% of the students interviewed reported using the educational content on Camara’s computer on a regular basis, 8% were neutral and 27% think that they are not using it regularly.

The highest proportion (71%) of students interviewed in Kenya also agreed with the statement on regular use of the educational contents, only 13% disagreed while 11% were neutral with 5% of answers missing/incomplete. Kenya reported the highest overall proportion of respondents who use the educational content of Camara computers regularly.

Of all students interviewed in Lesotho, 28% think that they are not using the educational contents regularly, while 52% reported using the educational content regularly and 20% were neutral.

In Tanzania, 25% of the students interviewed disagreed with the above statement on frequency of use of Camara educational content, while 25% were neutral and 50% said that they are using the educational content in their Camara computers regularly.

Lastly, 66% of the respondents in Zambia reported using the educational content regularly, 12 were neutral and 18% think that they are not using it regularly.

4. Effect of education content on learning

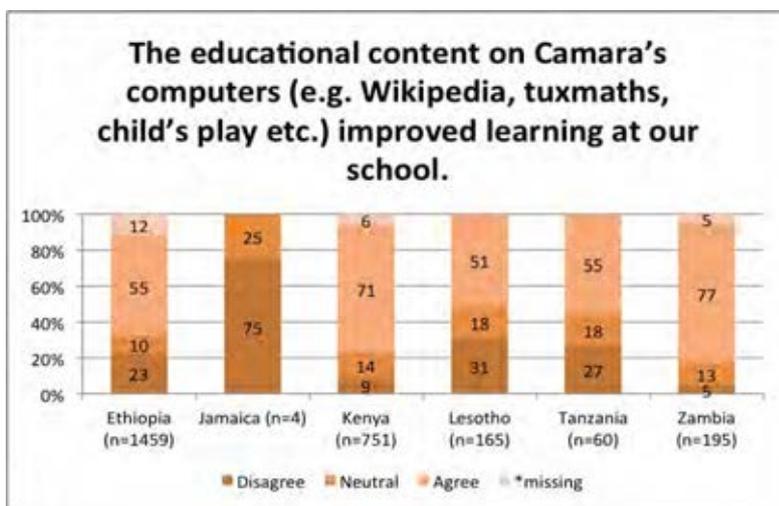


Figure 18: Reported utility of Camara computers educational contents

Students were also asked if they agreed or disagreed with the statement that 'educational content on Camara's computers improved learning at our school'. In Ethiopia, 55% of the students agreed, 10% were neutral and 23% disagreed with the statement with 12% of answers being incomplete/missing.

A clear majority of the students (71%) interviewed in Kenya agreed with the statement that the educational content on Camara computers improved learning at their school, 14% were neutral and only 9% disagreed with 6% of answers missing/incomplete.

Lesotho, on the other hand, reported 51% of its students interviewed who think that learning in their school was improved because of the educational content on Camara computers, 18% are neutral and 31% did not think that it improved learning.

In Tanzania, 55% of the students think that the educational content on the computer improved learning at their school, 18% are neutral and 27% disagreed with the statement.

Lastly, the highest proportion of respondents (77%) in Zambia reported that the educational content on Camara computers had improved learning in their school. Only 5% did not agree with statement that the educational content on Camara computers improved learning in their school with 13% neutral.

5. Access to computers

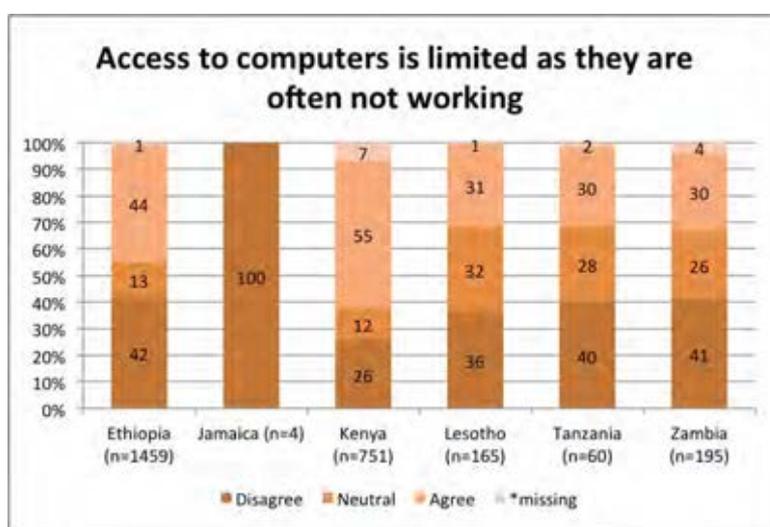


Figure 19: Reported access to Camara computers

In terms of access to computers, in Ethiopia, 42% of respondents think that access is not limited and computers often work while 44% think that there is not enough access to the computers as they are often not working and 13% are neutral.

In Kenya, 55% of the students think that access to computers is limited as they are often not working, 12% are neutral and 26% think that the access they have to computers is enough with 7% of respondent answers missing/incomplete.

In Lesotho 36% of the students do not report having a problem with access to computers, 32% are neutral and 31% reported thinking that access is limited.

Forty percent (40%) of the students interviewed in Tanzania disagreed with the statement on limited access to computers, while 28% are neutral and 30% think that there are not enough computers to use/ access is often limited because they are not working.

Lastly, only 30% of the respondents in Zambia said that access to computer in their schools is limited due to maintenance problem, 26% were neutral and 41% did not agree with the negative statement with 4% missing/incomplete.

6. Sufficient number of computers

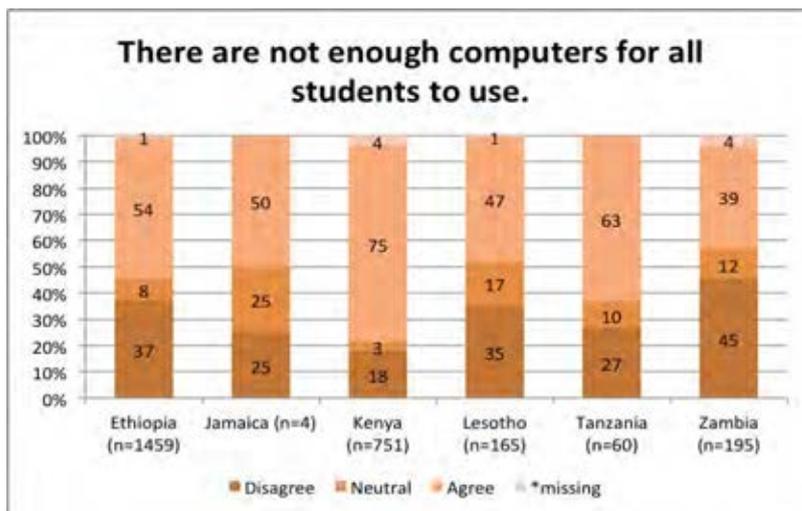


Figure 20: Reported satisfaction with number of computers in school/

In Ethiopia, 54% of the students interviewed think that there are not enough computers for all students to use in their school, 8% are neutral and 37% think that there are enough computers for all students.

A majority of the students (75%) in Kenya thinks that there are not enough computers for all students to use and 18% believed differently, only 3% reported being neutral to the statement.

In Lesotho, 35% of the students believed that there are enough computers for all students to use in their schools while 47% think that there are not enough computers with 17% reporting being neutral.

In Tanzania, only 27% of students believe that they have enough computers in school, 63% on the other hand believed that there is not enough computers for all students and 10% are neutral.

Lastly, 39% of the respondents in Zambia agreed to the statement that there are not enough computers to accommodate all students in their schools, while 45% think that they have enough computers for every student.

2013 Hub Audit

Methodology

Each year as part of Monitoring and Evaluation each of our Education hubs are evaluated by Camara Education and scored based on a range of criteria. Some hubs had lower planned level of activity due to refurbished computer bans (Uganda and Rwanda) and were not included. Some did not have targets set and some were not expected to be engaging in eWaste yet. Hence some criteria for some hubs is not applicable.

Results

Camara Kenya has come from fifth performing hub in 2011 to become the most effective hub in 2012 and again in 2013. While not quite achieving its computer dispatch target (99%), it exceeded significantly on the training by a significant margin (185% of target). Camara Ireland again came in second place scoring very strongly leveraging a lot of the services from Camara Education. It will be interesting to see whether this hub maintains its strong score after it becomes and an independent entity. Camara Ethiopia put in another strong performance holding third position, dispatching the most computers than any other hub in the network and exceeding its training target. Camara Zambia slipped slightly scoring 64% down from 69% the previous year. Camara Lesotho rose from 25% in the previous year to 53% representing solid progress. Camara Tanzania in its first full year of operation scored poorly at 48% and there have since been significant management changes. Camara Jamaica slipped slightly from 49% to 48%, again representing the many challenges that Camara face there. While overall progress has been made, it is indicative that the ranking of hubs has not changed significantly indicating that perhaps there are environmental variables driving the level of success in each country.

Category	Question	Max score	Kenya	Zambia	Lesotho	Tanzania	Ethiopia	Jamaica	Ireland
Training	Teachers trained versus target	15	15	8	12	4	15	9	15
	Teachers per PC dispatched(target 1:4)	5	5	5	5	4	4	5	5
	Training course quality	10	6	6	5	5	5	2	7
	Total teachers trained versus average (386)	5	5	4	3	3	5	3	4
Technology	PCs dispatched versus target	6	6	3	2	4	5	4	6
	% of PCs received that were dispatched	5	5	5	5	5	5	5	N/A
	% of PCs still functioning from M&E	5	3	3	3	3	3	1	1
	% of PCs dispatched with €5 held for recycling	3	1	2	1	0	1	1	2
	PCs recycled from schools	2	2	1	0	0	0	N/A	N/A
	Total PCs dispatched versus average (962)	4	4	3	1	4	4	3	4
	Number of schools visited for M&E versus total	5	5	1	1	1	5	1	1
Management and Governance	Quality of data back from hub	5	4	3	2	3	2	2	5
	Timeliness and quality of weekly/monthly report	3	3	2	3	1	3	2	2
	Timeliness and quality of financial report	3	2	2	1	2	3	1	3
	Hub profitability	5	4	3	1	3	2	1	5
	Financial sustainability	5	4	4	1	3	2	1	5
	External audit	3	0	0	0	0	3	0	0
	Staffing versus plans	2	2	1	1	1	2	1	2
	Communication with CEL	3	3	3	3	0	3	2	N/A
	Minuted Board meetings	3	3	2	1	2	N/A	2	N/A
	Adherence to tax and legal obligations	3	3	3	2	0	3	1	3
Total Possible Score		100	100	100	100	100	97	98	87
Actual Score			85	64	53	48	75	47	70
% Performance			85%	64%	53%	48%	77%	48%	80%

Evaluations	Percent
A. Excellent Performance - innovative model for HQ and the other Hubs	100%
B. Good Performance - achieves most things but room to improve	75%
C. Average Performance - substantial performance gaps	50%
D. Poor Performance - achieving very little in the area	25%
E. No Performance - has done virtually nothing in the area	0%

Components	Proportion
Training and Education	35%
Hardware Delivery and Support	25%
Management and Governance	40%

Notes

- Only includes Education Hubs
- Haiti not opened yet
- Rwanda and Uganda do not have enough categories to be scored

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**Back cover photo: Students
from Tum School, Lusaka,
Zambia.**

**Our special thanks to the
numerous volunteers who
contributed the photographs
for this Report.**



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