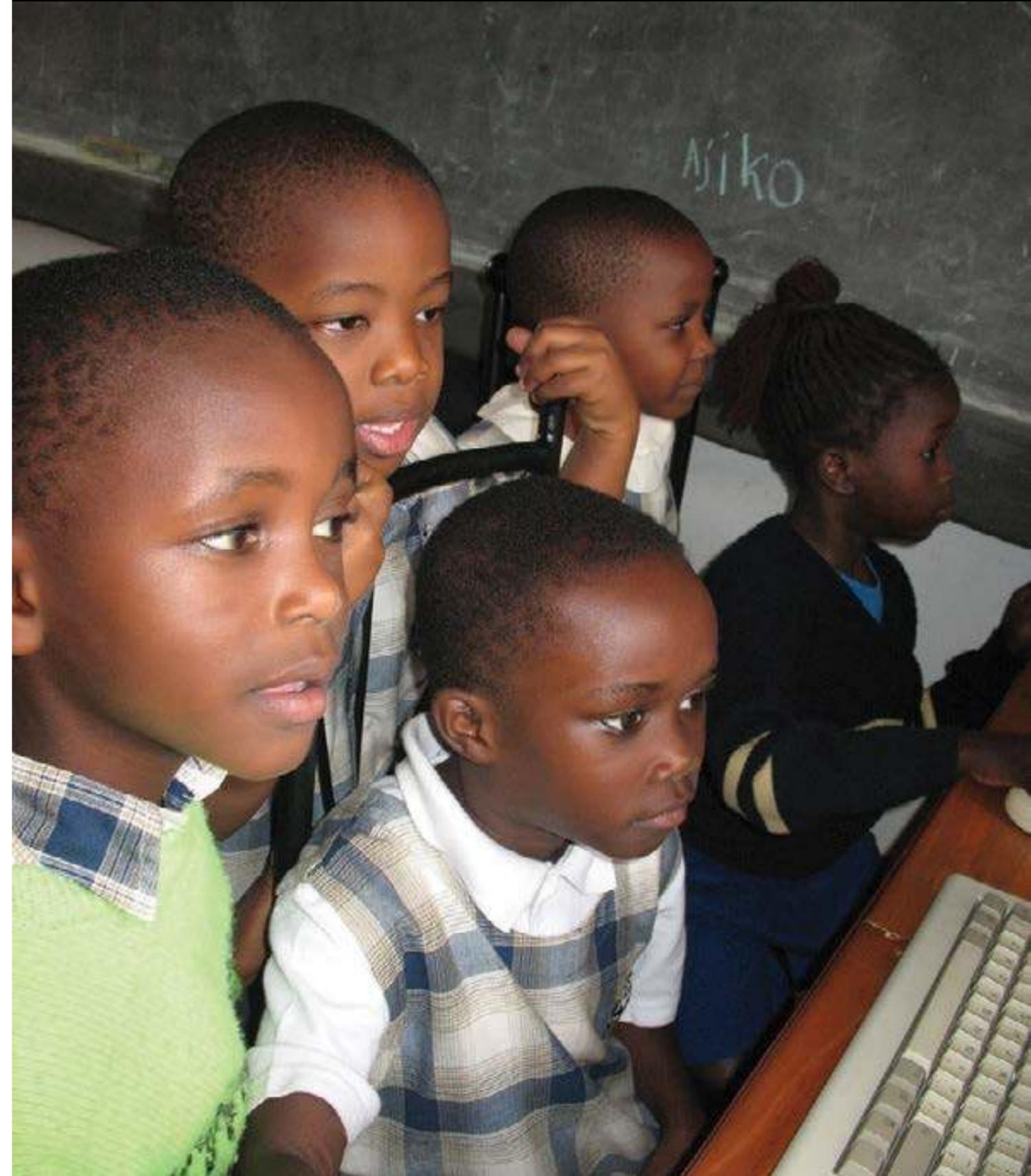




*“It is not enough to teach children how to read, write and count. Education has to cultivate mutual respect for others and the world in which we live, and help people forge more just, inclusive and peaceful societies.”*

— Ban Ki Moon, Secretary General of the United Nations.



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### Photos:

Front cover: Zuhura Khamis  
Salim, Marketing Manager for  
Camara Kenya.

Page before: Computer class-  
room in Kenya.

# INTRODUCTION





## Chairperson's Report

Maria Mahon  
Chairperson of Camara Education

Camara experienced a very successful year in 2012, with approximately 50% growth on 2011. This means we made a significantly greater impact by delivering a better education to those that have much less than we are accustomed.

It was great to have the addition of our US hub which holds significant potential for sourcing computers. In Africa, we welcomed Camara Tanzania into the network; a country which very much fits the Camara profile and has huge demand for affordable ICT in Education. Operations in Uganda and Rwanda continued to be impacted by the refurbished computer bans but all operations in Africa, Jamaica and Ireland made considerable progress, with the establishment of sub-hubs in a number of these countries.

The challenges we face in operating in these territories are considerable. We need to continue making progress in measuring our impact through Monitoring and Evaluation, delivering an even better offering to schools through improved training, educational content and support, along with strengthened hubs.

The progress made with partners was a pleasing aspect. This contribution, which comes in the form of financial resources, technology and time, enables Camara to continue making such an impact. Our achievements would not be possible without our talented team and those who generously volunteer their time. It is always hugely motivating to walk into any Camara hub and see such dedicated people giving their time and skills towards our goal of alleviating poverty.

Speaking of which, I would like to thank my fellow Board members for delivering guidance and support to the executive team in 2012. We were fortunate to be joined by Julian Davis at the end of the year, who has made a great addition.

Finally, on behalf of the 500,000 students who have gained Digital Literacy as a result of Camara, I would like to thank you. With your continued support, we can turn half a million educated students into several million educated students, all better equipped to relieving the poverty they find themselves in.



## Treasurer's Report

Deirdre McCooey  
Treasurer of Camara Education

Camara recorded a net surplus of €388,471 in 2012 compared to €123,589 in 2011. Incoming resources in 2012 increased by 46% to €1,671,979 mainly due to extra voluntary income and self-generated income. Resources expended by Camara in 2012 increased by 25% to €1,283,508, which reflected the ongoing growth and development of Camara.

Camara's cash position at year end increased to €390,137 in the bank, compared to €116,327 in the previous year. The financial reserves at 31 December 2012 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 2012 represented 86% of our total resources expended, which is 5% higher than previous years, due mainly to the increased activities in the African Hubs. The balance of our costs in 2012 consisted of Governance Costs (7% of the total) and Costs of Generating Voluntary Income (7% of the total).

### Summary of our major financial results is presented below:

	2012 (€)	2011 (€)
Total Incoming resources	1,671,979	1,148,407
Total Resources Expended	1,283,508	1,024,818
Net Income Resources	388,471	123,589
Cash at Bank (year end)	390,137	116,327
Staff Costs	617,358	589,056
Costs of Generating		
Voluntary Income	94,487	113,945
Governance Costs	82,852	81,895
Charitable Activities	1,106,169	828,978

Left: Diell Betigill School student, Addis Ababa, Ethiopia.



Right: Inspire Academy student, Lusaka, Zambia.



# Chief Executive Officer's Report

John Fitzsimons  
CEO of Camara Education

The year 2012 was hugely successful for Camara Education. Not only did we train more teachers and install more computers in schools, we did it at a higher level of quality than previous years. The focus on quantity and quality means we are maximising our impact for those that we serve; disadvantaged students who want to have a better education and greater opportunities to improve their circumstances.

In Camara, we very much see ourselves as facilitating motivated individuals and organisations who share the same beliefs; poverty is unacceptable, education is the key in its eradication and technology has the ability to transform education. As a member of the 'Camara community', this report is very much *yours* and the achievements are thanks to your continued contribution.

This is what we achieved collectively in 2012; **16,330** computers were donated by thousands of individuals and organisations. **8,961** met our specification (the others being recycled) and were shipped to our education hubs. **7,700** computers were dispatched into schools (up 47% on 2011) and crucially, **3,092** teachers were trained to use these tools to provide a better education and livelihood skills (up 55% on 2011). This was also the first full year of operation for our resource centre in the US and our education hub in Tanzania (a personal highlight given I previously lived in Tanzania).

However, it is not just donations of computers that make this happen. Financial support from partners such as the Iris O'Brien foundation, Irish Aid and Dell, amongst others, ensures we deliver a very affordable offering to under-resourced communities. We have a number of key partners, such as Encyclopaedia Britannica, Intel and Salesforce, who provide educational content, training content and system support. There is a huge amount of effort put in by the employees across the Camara network to deliver the end product and support to schools. On top of the staff, there are over 250 volunteers that share our beliefs and contribute everyday to serving our customers. It is an inspiration to work alongside such talented and motivated people.

This is just the start. We have started to map out our strategy for the next three years. Central to this will be proving the impact we are having and delivering an even better quality offering to schools. We have made great strides on our training and now need to ensure we have context specific educational content that can enable teachers to do an even better job. In addition, we need to ensure that our engagement with schools does not end at the training and dispatch, but rather is the start of a long term relationship supporting schools. Key to this will be the continued strengthening of our education hubs.

Together we have delivered a better education and the 21st century skill of Digital Literacy to over 500,000 students. These students now have the opportunity to create and form their own opportunities.

In order to achieve our ambitious goals, we need your continued support. As Charles Darwin said, 'It is the long history of humankind those who learned to collaborate and improvise most effectively have prevailed.'

Enjoy the read.

“Education lights every stage of the journey to a better life, especially for the poor and the most vulnerable.”

— UNESCO



Mbheni School computer classroom, Mombasa, Kenya.

# WHAT WE DO



*Camara uses technology to improve education and livelihood skills in disadvantaged communities around the world.*

# About Camara

Camara is a social enterprise that improves the quality of education and improves livelihood skills in disadvantaged communities through the use of technology. Camara does this by installing eLearning centres in schools, colleges and community centres and by training the teachers how to use technology as an effective educational tool. An enriched education gives marginalised people a brighter future and leads to the development of greater employment opportunities. Camara achieves this through three channels:

- **Education Hubs**

Delivering technology (both hardware and software), teacher training, technical support and recycling to educational institutes

- **Service Centres**

Providing support and governance to the education hubs

- **Resource Centres**

Sourcing financial and/or technical resources to deliver affordable hardware to the Education Hubs

Established in Dublin in 2005, Camara has grown to have operations in 12 countries around the world. Along with the base in Ireland, Camara has Hubs in Ethiopia, Jamaica, Kenya, Lesotho, Northern Ireland, Tanzania, Uganda, UK, USA, Rwanda and Zambia. There are plans to explore opening a hub in Haiti in 2013. Camara's Africa Service Centre is located in Mombasa, Kenya.

Camara Education Limited is a registered Irish Charity (CHY 16922). Camara Learning Limited is a registered UK Charity (1135540). Camara Education Inc is currently awaiting confirmation of its charitable status in the USA.

camara  
transforming education



## Camara - Name and Logo

The name Camara comes from the Bantu dialect of West Africa, which means "teacher" or "one who teaches with experience"

The new Camara logo was unveiled in 2012. It features a symbol known as 'Ananse Ntontan' which is an Adrinkra character originally found in Ghana. It signifies wisdom and creativity, ideals that Camara embraces in its pursuit of a higher quality of education for all. The previous logo featured an image of Africa and the new one was introduced in order to recognise the greater international dimension Camara has reached.

## Dóchas Code of Conduct

Camara is a signatory to the Dóchas Code of Conduct, which is a set of guiding principles ensuring NGOs maintain a level of responsibility regarding images and messages.

Making this commitment means that Camara must make sure that images used are a genuine reflection of the particular issue being covered, giving the appropriate recognition to those who are pictured. This framework is in place in order to avoid stereotypical images of the developing world being used out of context in order to sensationalise stories.

Ensuring dignity and respect is vital and the Dóchas Code of Conduct works to keep this a priority. Camara is eager to comply with the Dóchas Code of Conduct.



Photo: Schoolgirl from Children's Home, Mombasa, Kenya.

# €962,261

provided by our generous donors in 2012

# 151,274\*

students became digitally literate

# 16,330

computers were sourced by Camara

# 8,961\*\*

computers refurbished & shipped to our education hubs

# 7,700

computers dispatched into schools & community centres

# 3,092

teachers trained to use ICT in education



\* See page 92 for Camara Impact Calculation.

\*\* 321 shipped from US and 8,640 shipped from Ireland.

# Camara's Supporters

Funded by:



Partnering with:



Supported by:

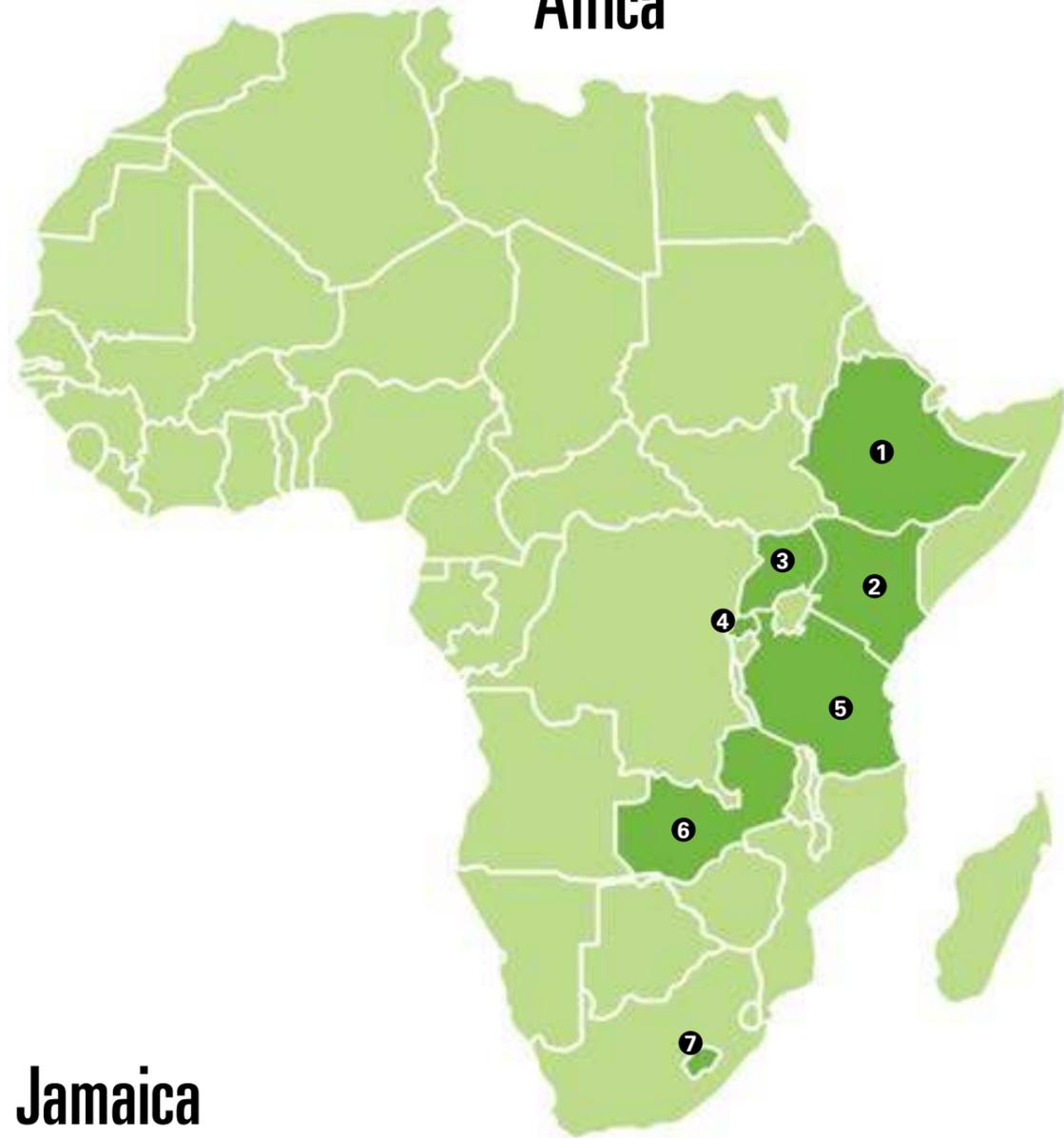


# OPERATIONAL UPDATE



Volunteers unloading container at Camara hub. Mombasa, Kenya.

## Africa



## Jamaica



## Ireland



### 1 Ethiopia

Population: 87.3 million  
Internet usage: 1%  
Literacy rate: 42.7%

#### KPIs

Computer sent: 2,288  
School receiving: 119  
Number trained: 536

### 4 Rwanda

Population: 11.6 million  
Internet Usage: 7%  
Literacy Rate: 70.4%

#### KPIs

Computer Sent: 0  
School receiving: 0  
Number trained: 0

### 7 Lesotho

Population: 1.9 million  
Internet Usage: 4%  
Literacy Rate: 84.8%

#### KPIs

Computer Sent: 55  
School receiving: 7  
Number trained: 86

### 2 Kenya

Population: 43 million  
Internet usage: 28%  
Literacy rate: 85.1%

#### KPIs

Computer sent: 1,266  
School receiving: 102  
Number trained: 1057

### 5 Tanzania

Population: 46.9 million  
Internet Usage: 12%  
Literacy Rate: 69.4%

#### KPIs

Computer Sent: 350  
School receiving: 17  
Number trained: 6

### 8 Jamaica

Population: 2.9 million  
Internet Usage: 55%  
Literacy Rate: 71.4%

#### KPIs

Computer Sent: 912  
School receiving: 84  
Number trained: 224

### 3 Uganda

Population: 33.6 million  
Internet Usage: 13%  
Literacy Rate: 66.8%

#### KPIs

Computer Sent: 4  
School receiving: 0  
Number trained: 15

### 6 Zambia

Population: 13.8 million  
Internet Usage: 11%  
Literacy Rate: 80.6%

#### KPIs

Computer Sent: 1,851  
School receiving: 166  
Number trained: 826

### 9 Ireland

Population: 4.7 million  
Internet Usage: 77%  
Literacy Rate: 99%

#### KPIs

Computer Sent: 974  
School receiving: 56  
Number trained: 342

# Education Hubs



## Camara Kenya

**Located:** East Africa  
**Population:** 43 million  
**Area:** 581,309 km<sup>2</sup>

Camara Kenya dispatched 1,266 computers to 102 schools and trained 1,057 teachers, volunteers and members of the public in 2012. Training figures were the highest in the Camara network, showing positive responses to new courses introduced, such as the Intel Teach program.

The project to dispatch to 40 schools in Western Kenya sponsored by a Member of Parliament was successfully completed, bringing ICT in Education to one of Kenya's poorest regions. Camara's sub-hubs in Lamu and Bungoma continued to service the schools in their regions with enthusiasm and determination.

Camara Kenya also established a number of successful public-private partnerships with NGO's and corporates. The tenancy agreement at the hub's location in MITC was not extended at the end of the year. Camara Kenya will expand operations during the move to new premises and plans to become a Cisco Training Academy.



## Camara Lesotho

**Located:** South Africa  
**Population:** 1.9 million  
**Area:** 30,355 km<sup>2</sup>

Lesotho proved a challenging environment for Camara to operate in 2012. Governmental restrictions on fee structures for schools remained firmly in place, limiting Camara's abilities to grow. Despite this challenge, the Lesotho hub dispatched 55 computers and trained 86 teachers. A nationwide food shortage saw the diversion of funds away from education projects to help avert a national food crisis.

SchoolNet, Camara Lesotho's operations centre, remained at St Monica, Leribe in the north of the country. A partnership with Nedbank resulted in the installation of a networked eLearning Centre at Maputsoe Community School, with 40 Camara refurbished computers in place.



Regib School, Addis Ababa, Ethiopia.



## Camara Tanzania

**Located:** East Africa  
**Population:** 46.9 million  
**Area:** 945,203 km<sup>2</sup>

Camara Education Tanzania officially launched in September 2012, dispatching 350 computers. Teacher training began in late November meaning numbers were a relatively low 6, but 2013 figures should accurately reflect the work that has been put in.

The team held numerous meetings with the Ministry of Education and Vocational Training in order to outline Camara's long-term ambition for the Government of Tanzania to transform its Education system through the use of ICT. A Memorandum of Understanding and a Proposal were drafted and forwarded to the Ministry of Education and Ministry of Science & Technology for their review and input. Recommendations were subsequently written and sent to the Ministry of Education for their action with the hope of receiving a response once the Parliament Session concluded. Camara was granted NGO status, which proved to be a significant achievement.

The year 2012 saw the formation of many important partnerships. Along with the Ministry of Education and its subsidiaries, Camara Education Tanzania built relationships with the District and Regional Educational Coordinators, Porticus, IT Zanzibar, Tanzania Institute of Education, Young Scientist Tanzania, TanzEd, ViaFrica and several others. A partnership with Smiles Communications was also established which will give free internet access to Camara schools and ensure students' learning experience is heightened even further.

During 2012, two volunteer programme intakes were completed and one member of staff was recruited. Camara Education Tanzania plans to hire four members of key staff in 2013 to maintain smooth operations and provide support to the CEO and the organisation as a whole.

Head Teacher, Bondeni  
Primary School, Mombasa,  
Kenya.



Teacher from Mahatma  
Gandhi School, Lusaka,  
Zambia.



### Camara Ethiopia

**Located:** East Africa  
**Population:** 87.3 million  
**Area:** 1,104,302 km<sup>2</sup>

Over the course of 2012, Camara Ethiopia successfully provided 2,288 computers to 119 institutions and trained 536 teachers.

A new agreement with the Afar Region was signed and delivered in 2012, as it is a priority region for the Federal Ministry of Education. This new agreement represented an improvement from previous ones as it included further cost sharing, articulated the responsibilities of each party while also committed Camara Ethiopia and the Education Bureau to 3 years worth of continued services.

Camara Ethiopia benefited greatly from being part of the African Service Centre and received a large amount of support. This meant that the hub was able to receive equipment from Dell, as well as build relationships with education content and training providers such as Intel, Wikipedia, RACHEL and Khan Academy. Camara Ethiopia was also able to utilise established relationships with e-waste handling companies and end-of-life solutions.

Camara Ethiopia has been in discussion with with a number of partners including UNESCO-IICBA, GESCI, the UK Department for International Development (DFID) and the Ministry of Education regarding teacher development and hopes to embark on a series of programmes in 2013, ensuring another successful year for Camara follows.



### Camara Uganda

**Located:** East Africa  
**Population:** 33.6 million  
**Area:** 236,040 km<sup>2</sup>

The government's ban on used computers continued in 2012 and Camara Uganda focused on training teachers and maintaining computers that were already donated to schools. The hub relocated to Uganda Pentecostal University during the year, who gave Camara free premises for their container and office. Camara Uganda succeeded in training 15 people who were unable to continue their studies due to financial reasons.

*"This has benefited me greatly as I have access to research and can learn from others. Camara must continue imparting knowledge to teachers & pupils for Zambia to stay in line with the computer age."*

— Terence Miselo, English teacher at SOS Children's Village, Zambia.



### Camara Rwanda

**Located:** East Africa  
**Population:** 11.6 million  
**Area:** 26,338 km<sup>2</sup>

Camara Rwanda had a quiet year in 2012, with the office closing in December 2011. High standards for computer imports were introduced in 2011 by the Rwandese government (Bureau of Standards). These remain in place although Camara succeeded in having high level meetings to discuss possible solutions to continuing to offer the Camara model in Rwanda once again. A part-time Camara trainer and technician remain for school visits and E-Waste collection.

*"I like the fact we now have a computer lab in our school. Before we didn't have one, I used to be envious of the schools that had computer labs. We learn a lot thanks to Camara."*

— Agness Mwandangi, 12, Student at Mirambo Primary School, Dar es Salaam, Tanzania.



### Camara Zambia

**Located:** South Africa  
**Population:** 13.8 million  
**Area:** 752,618 km<sup>2</sup>

Camara Zambia experienced a strong year in 2012. In total, 1,851 computers were dispatched to 166 educational institutions and 826 teachers were trained. In February, Camara Zambia opened a sub-hub at SOS Children's Village in Lusaka, responding to the demand from educational institutions in the Lusaka Province for Camara services. Initiated by a change in management, a mid-year evaluation took place and strategies to focus on quality of service delivery were developed to support the successful sales figures. A training programme review was carried out assessing the relevance of Camara's training programme to the Zambian education system. New training processes and standards were brought in to accommodate Camara's Learning Framework.

Work on a new Irish Aid sponsored programme cycle also began in 2012. There were many highlights, including the delivery of the first Intel Getting Started course and training of hub trainers as Intel Master trainers. Camara Zambia also carried out a baseline study of digital literacy levels amongst Zambian students in the Copperbelt, Lusaka and Southern Provinces. In December, the hub in Kitwe College of Education closed and central operations moved to Lusaka, with plans to open a new sub-hub in the Copperbelt in 2013 to support the large network of schools in the Province.



## Camara Jamaica

**Located:** South America  
**Population:** 2.9 million  
**Area:** 10,991 km<sup>2</sup>

Camara Jamaica Foundation successfully dispatched 912 computers to 84 schools in 2012, training 224 teachers in the process. The year was primarily focused on further developing internal processes and operational infrastructure, while ensuring new relationships were formed and existing partnerships strengthened.

The partnership with the Digicel Foundation continued with a renewed commitment for the final year of contract. Likewise, the Ministry of Education training programme remained strong with discussions to extend the programme to Browns Town. New partnerships were formed with the Scotiabank Foundation, the country's second largest commercial bank, and the Environmental Foundation of Jamaica (EFJ), a partially government funded organisation that provides environmental oversight.

These strategic partnerships continued to build a solid foundation for growth despite several significant challenges in 2012. The declining Jamaican economy limited school ICT budgets. In addition, the Government Technology Funding Agency's tender policy, which restricts the use of refurbished systems, reduced the number of computers Camara was able to import.

The Memorandum of Understanding, a critical document for establishing Camara's reputation for education and technology service delivery, remained unsigned. By the end of the year though, plans had already begun to address all of the highlighted challenges.



## Camara Ireland

**Located:** Europe  
**Population:** 4.7 million  
**Area:** 70,273 km<sup>2</sup>

Camara Ireland's second full year in operation was in 2012 and marked an increase in impact across all measures. The hub achieved a 30% increase in the numbers of computers shipped, sending a total of 974 computers to schools, community and youth centres. Even more importantly, the numbers of educators receiving training from Camara Ireland increased by 70% to 342.

In March, with the support of funding from Social Entrepreneurs Ireland and the Ireland Funds, the hub hired its second member of staff. With this addition, the hub has been able to improve and augment the training we provide - offering more courses, covering more hours, and costing less for the end recipient. 'TechSpace' was established in 2012, a new program focused on the informal education sector. With a consortium of organisations involved including Foróige and the Adobe Foundation, the TechSpace programme is moving from strength to strength.

Challenges in 2012 have also been plenty. The education sector continued to be affected by major cuts pushing the integration of ICT in Education down the priority list for schools and youth centres. Raising funds to assist organisations with their ICT needs has also become even more difficult. However, with the help of supporters like the Croke Park Community Fund, State Street Bank, the Ireland Funds and the Dublin Bus Community Fund, the hub has tried to support as many schools and youth centres as possible.

Student from a Primary School in Jamaica.

# Resource Centres



## Camara N.Ireland

**Located:** Europe  
**Population:** 1.8 million  
**Area:** 13,843 km<sup>2</sup>

Camara's Northern Irish hub took big steps forward in 2012. In April, a new CEO of Camara in Belfast was appointed after a decision was made to focus on computer sourcing and fundraising. An ambitious campaign was launched in October to find '1,000 computers in One Week'. Targeting the general public, as well as the business and public sectors, meant that thanks to help from our hard working volunteers, a total of 1,200 computers were sourced. This included substantial numbers from Belfast City Council and Bombardier. Catholic and Presbyterian churches across Northern Ireland also got behind the campaign, gathering up 150 computers.

2012 also brought funding success, with Comic Relief funding secured from The Community Foundation for Northern Ireland to work with residents from the local areas of the Shankill and Falls Roads, where our hub is based. This project, to be run in 2013, will help teach computer refurbishment skills to locals from socially deprived communities in Northern Ireland.

The Board for the Belfast hub was also strengthened and 2013 looks like an exciting year for the Belfast hub, with substantial growth and development of ever increasing computer sourcing lines.



## Camara UK

**Located:** Europe  
**Population:** 62.74 million  
**Area:** 243,610 km<sup>2</sup>

The year 2012 was very successful for Camara UK, seeing fundraising income rise to above £200,000 and enabling a significant contribution to be made to the core work of Camara Education globally.

A large part of this success was due to the support of our eLearning centre event in October. The Camara UK Board and a small group of "Camara Friends" were largely responsible for making this event a huge success with a return on investment ratio of 20:1. The generosity of the guests (both individuals and companies) who gave their support and donations



meant sponsorship for over 50 eLearning centres across Ethiopia, Kenya, Tanzania and Zambia was gained. The dedicated team of volunteers who helped organise and run the event also contributed significantly to the event's success.

The donations of a few of these supporters were subsequently doubled through The Big Give Christmas Challenge, in which Camara UK was supported by the Reed Foundation as a Charity Champion. Support was also received from a number of other trusts and foundations, including grants from The Waterloo Foundation for Camara's work in Lesotho, LUSH supporting eLearning centres in Zambia, funding towards Technology Enhanced Learning from the Jill Franklin Trust and support for our work in Kenya from The Bower Trust.

Corporate support from Juniper Networks, Eglemoss and EMC<sup>2</sup> was ongoing in 2012. New funding was generated from Futures for Kids, SDS Security and Wild Frontiers, all of whom support eLearning centres across Camara's Africa network. Possible routes to setting up a refurbishment centre in the UK were explored but no feasible solutions were found within the year. However this project continues to push forward with the hope to establish a centre by the end of 2013. The UK office worked closely with Camara Education in Dublin, with the Senior Fundraiser supported by volunteers based in Ireland. Together, partnerships with key stakeholders and funders are being built with the intention of growing a sustainable income for the whole Camara network over the next few years.



## Camara US

**Located:** North America  
**Population:** 316 million  
**Area:** 9,826,675 km<sup>2</sup>

The principal objective of Camara in the US is to engage with educational and technology organisations to attract resources for the wider Camara network. Camara moved into new premises in Silicon Valley, San Jose, California in May and quickly began to attract computer donations. Camara in the US is entirely a volunteer-led effort. The strong efforts of Board members, technical experts, PR consultants, friends of Camara and the hard-working volunteers ensured Camara was able to make solid preparations for its first two shipments to Jamaica in 2013.

Attracting financial resources is also one of the primary aims for Camara US; this is essential as the wider Camara organisation significantly expands its proven model of eLearning in schools across disadvantaged communities. Camara US has had many small donors and is steadily building up an impressive network of future supporters.

Jazz Pharmaceuticals has proven to be the largest and most consistent donors of computers. Camara is also grateful to The Digicel Foundation, Enterprise Ireland (Going Global Grant) and many individual donors for providing the initial capital for this new start-up. Dell has given considerable support, in terms of computers and funding, for Camara's new education Hub in Tanzania. Stanford's Graduate School of Business and their Alumni Consulting Team (ACT) carried out a study on the viability of delivering the Camara package to low income schools in the Bay Area – something that could develop further in 2013 as Camara US hopes to make an even bigger impact for the wider network.

Photo: Students from Scoil Mhuire in Shankill, Dublin, Ireland.



The Camara Workshop in Dublin, Ireland.

## Camara Dublin

### Technology Deployment

In 2012, Camara Education sourced 16,330 computers from Dublin, Galway and Belfast. After refurbishment, 8,640 computers were shipped out in 9 containers. This was an increase of 13% on the previous year. Approximately 40% of computers sourced were sent for recycling as they did not meet the minimum requirements. The high standards required by Camara ensures that each computer dispatched lasts for five years.

The market for computer reuse remained extremely competitive in 2012. Camara has risen to the challenge of sourcing computers with various organisations vying for the same share of the market.

Camara is the largest organisation in Ireland for computer reuse.

In 2012, Camara continued to campaign for the Irish government to introduce legislation regarding the reuse of computers. The Minister of Environment, Community and Local Government, Phil Hogan, stated that 'we need to continue our efforts to educate both businesses and individuals of the environmental benefits of reusing ICT equipment'. This followed the publication of a Camara survey in September, detailing the figures of unnecessary disposal of computer equipment.

### Shared Services

During 2012, Camara Shared Services continued to provide high quality, low cost services within Camara Education and to other entities within the network.

- Human Resources: Shared Services oversaw the recruitment and management of 12 staff in Dublin, 8 staff in the Africa Service team and 45 in the overall network.
- Volunteering: 2012 saw the recruitment of a total of 163 workshop and office interns through structured programmes, as well as dozens more who regularly offer their assistance to Camara. This resulted in over 34,000 volunteered hours.

- Logistics: Shared Services successfully managed the transportation of 9 containers including all related data and documentation.
- Facilities Management: The changing of electricity provider in June 2012 reduced energy costs significantly.
- IT: Shared Services effectively managed the communication channels including phones, emails, internet and back-up.

# Technology Enhanced Learning

Camara currently offers the following courses as part of their Learning Framework for Teachers, Technicians and School Principals. The courses are either Instructor Led Courses (ILT), eLearning courses or a blended approach.

- **Teachers Focused Courses:** ICT Skillbuilder for Teachers, Intel Getting Started for Teachers, Intel Teach Elements, Using Moodle to Connect Students for Teachers
- **Principals and School Leaders:** Educational Leadership in the 21st Century
- **School Technicians:** PC Maintenance for School Technicians, Networking for School Technicians, Systems Administration for School Technicians

Camara Education fundamentally changed the approach to Teacher Training in 2012, focusing primarily on the ICT enhanced Teacher Development model (ICTeTD). Camara identifies teachers as the critical element in ensuring that a school or a country's strategy of ICT in Education is realised to its full potential. Each school has varied levels of competencies regarding ICT – some teachers have previous access to basic training, some have a high level of competence in specific aspects, such as maintenance, or others have had no access to any ICT equipment.

Camara follows a learning framework to identify competency levels and provide a progressive learning path for teachers to deal with individual competency gaps. Camara's commitment to each school is to bring teachers to a level where they each have the capacity to transform education through ICT.

- **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, and choosing the most appropriate tools for a particular task, and using these tools in combination to solve real problems.

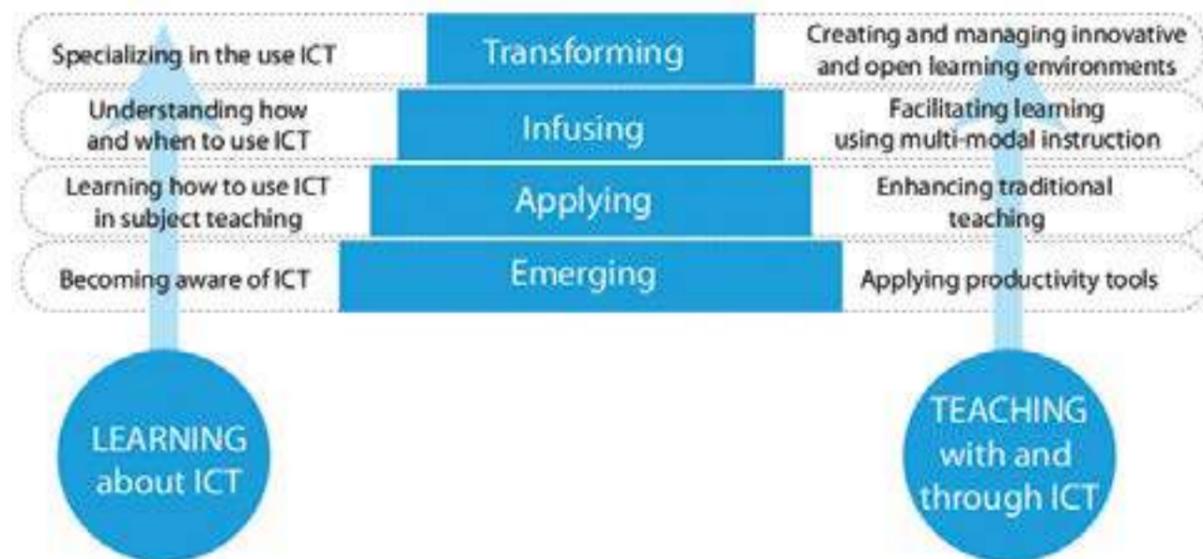
- **Transforming stage:** Teachers are themselves master learners and knowledge producers who are constantly engaged in educational experimentation and innovation to produce new knowledge about learning and teaching practice.

This model provides Camara with a framework to develop a course curriculum structure and a competence development path that assists teachers in moving between each of the levels. From addressing the fundamental aspect of bringing teachers through the emerging stage, up to having teachers who are knowledge creators with 21st Century Skills and are Transforming Education through ICT in their classrooms, the Camara Learning Framework endeavors to provide learning opportunities to teachers throughout the world to achieve their goal of being 21st Century teachers in a 21st Century classroom.

The Resource Centre achieved several important goals in Training and Education in 2012;

- Successfully supervised the Camara in Africa hubs in quality roll-out of progressive ICT in Education training path. This involved implementing a new 'Camara ICT Skillbuilder' course for teachers, as well as integrating an 'Intel Getting Started Course'.
- Supported the development of a relationship with Ministry of Education in Zambia to deliver Camara ICT Skillbuilder and Intel Getting Started course as part of standard in-service teacher development path for ICT in Education.
- Improved existing relationship with Intel, which resulted in extending the training that is offered in each operational country.
- Created partnership with Cisco Networking Academy to provide quality technical training to school staff to maintain ICT infrastructure in schools. This was established with the ambition of having 150 technical staff per operational country per year.
- Supported the development of Memorandum of Understanding with Camara Tanzania and the Ministry of Education, focusing in particular on the teacher development approach.
- Introduced an internal policy and processes structure for Training operations. This ensured that standardised training protocols were established in all countries serviced by Camara through the provision of better curriculum quality, Human Resources support and improved administrative processes.
- Supported Irish Aid programme on the impact of on the Zambian education system.

Photo: Tadele Mengistu,  
Technical Manager, Camara  
Ethiopia.



Mapping ICT stages onto learning and training for teachers (UNESCO 2010)

## Hub Accounts

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 2012.

1. Accounts have been converted into € using the respective FX rates of 31st December 2012 (Northern Ireland on 31st May 2012).
2. Camara Ireland is part of Camara Education Limited and so does not produce separate accounts.
3. Northern Ireland has a year-end of 31<sup>st</sup> May 2012.
4. Due to size, some hub accounts are unaudited to-date.

	Income (€)	Expenditure (€)	Surplus/Deficit (€)
Ethiopia	205,903	207,862	-1,959
Jamaica	145,307	112,219	33,088
Kenya	80,900	77,246	3,654
Lesotho	16,420	19,698	-3,278
Northern Ireland	40,505	46,953	-6,448
Rwanda	5,672	41	5,631
Tanzania	35,042	26,590	8,452
Uganda	317	7,704	-7,387
UK	276,027	286,192	-10,164
US	88,268	33,023	55,245
Zambia	142,574	178,673	-36,099
<b>Total</b>	<b>1,036,935</b>	<b>996,201</b>	<b>40,734</b>



# Camara Milestones

**2005**

Founded in November by Cormac Lynch in Dublin, Ireland.

**2006**

Developed Camara Wikipedia & HIV/AIDS Awareness multimedia cd.

Moved to larger workshop premises in Dublin's docklands.

**2007**

Camara honoured by President of Ireland, Mary McAleese.

Developed Camarabuntu operating system & application software.

Camara computer workshop opens in Mombasa, Kenya.



**Computers dispatched:** 1,200  
**Teachers trained:** 450

**Computers dispatched:** 3,250  
**Teachers trained:** 1,000

**2008**

Moved to new premises at the Digital Hub in Dublin.

Refurbishing & training centres established in Ethiopia, Kenya, Lesotho & Uganda.

Won the David Manley Award.



**2010**

Moved to new premises in Chapelizod, Dublin.

Won the Arthur Guinness Social Entrepreneur Award.



**Computers dispatched:** 5,231  
**Teachers trained:** 1,500

**Computers dispatched:** 4,365  
**Teachers trained:** 700

**2009**

Camara Ireland established.

**Computers dispatched:** 6,546  
**Teachers trained:** 1,500

**2011**

Camara Jamaica opens.

25,000th computer shipped.

**Computers dispatched:** 7,619  
**Teachers trained:** 1,992



**2012**

Camara Tanzania opens.

**Computers dispatched:** 8,961  
**Teachers trained:** 3,092

Refurbishment Centre in Silicon Valley, California, US, opens.

## February

### Camara reaches another milestone – ships 30,000th computer

In February, Camara Education marked a significant milestone as the 30,000th computer since establishment in 2005 was shipped. Her Excellency Catherine Muigai Mwangi, The Kenyan Ambassador to Ireland and Camara Board member, joined the team to mark the occasion and noted that it signified 'a momentous achievement for an organisation in its sixth year of operation.'



Of the 30,000 computers shipped, 7,423 were sent to schools in Kenya, benefiting over 130,000 students and giving them the digital literacy skills needed for the 21st century. The Ambassador went on to highlight the vital work of Camara by saying "the value that it brings to the children is immeasurable, both in terms of what they can actually learn but also what it means to them as human beings, it gives them a sense of hope, they can visualise another life".

## April

### Camara honoured for outstanding service by the Lord Mayor of Dublin

Camara received a prestigious honour at the annual Lord Mayor's Awards in April, in recognition of its use of technology to improve education in disadvantaged communities around the world, along with its protection of the environment through the re-use of technology. The award, given to individuals and organisations that make an outstanding contribution to society, was a strong validation of Camara's work.



The Lord Mayor, Andrew Montague, who has been to Africa three times with Camara, acknowledged the significant educational impact Camara has made. On accepting the award, CEO John Fitzsimons paid special recognition to the volunteers who work with Camara, stating that the Lord Mayor's award "acknowledges the dedication and commitment of our loyal army of volunteers who strongly believe that poverty can be alleviated through technology enabled education".

## February

### Irish Cricket Team visits Camara in Kenya

In February, Trent Johnston, John Mooney and Alex Cusack of the Irish Cricket team visited the Camara Education hub in Mombasa, Kenya.



Johnston and his teammates were in Kenya for the World Cricket Cup Qualifiers when they visited the hub to gain an insight to the work Camara carries out in Africa. They were able to witness the ICT training of both teachers and volunteers and visited The Good Life Orphanage, who have received computers and ICT teacher training from Camara.

No stranger to the work of Camara, the Irish Cricket captain previously volunteered his time to help pack a 40ft container with computers for disadvantaged communities which was shipped from Camara in Dublin back in May 2011. Johnston commented 'It was great to see Camara's hub here in Kenya and to see the computers in use in schools'.

## March

### Camara's Austerity Appeal

In March Camara launched an austerity friendly donation appeal, where the target was not money but instead a share of the 250,000 used computers that Irish people dispose of every year. Camara Education CEO John Fitzsimons commented, 'We need Irish businesses and the Irish public to take the lead and insist that all used computers are reused for education'. This fresh approach was warmly received and helped to further raise the profile of Camara's work.



## May

### Sandymount 10km run

The annual Camara Education 10k run took place along Sandymount Strand in May and was a great success. This was the third time the run took place and Camara was delighted to retain the support of Irish World Cup finalists Trent Johnston and Max Sorenson, who both attended the launch. Johnston commented that 'the education that Camara provide with the computers is of utmost priority. It's an amazing job they do'. Walkers, joggers and runners took part in the event and managed to raise over €8,000. This was put towards funding Camara Education's Irish School's Programme which supplies Irish schools with computers and also trains school teachers in ICT.



## August

### Silicon Valley Event

Camara Education held its first public event in the United States in August at the Plug and Play Tech Center in Silicon Valley, the global epicentre of high-tech.

The main priority for Camara US in 2012 was securing corporate and institutional donors, along with recruiting volunteers to implement the program. The organisation was invited to exhibit at the Plug and Play Tech Center to collect donated computers from some of the 300 companies in residence and to raise awareness in the process. Founder Cormac Lynch and volunteers Susan Satya, Noona Giridharadas, and Prianka Giridharadas represented Camara at this event.



## July

### New Camara website launched

The new international Camara website ([www.camara.org](http://www.camara.org)) was launched in July. This site is designed to cover all aspects of the organisation; from detailing how Camara operates as a social enterprise to giving news updates from the hubs around the world. It also provides information regarding internships and volunteer placements and introduces the people who work for Camara. The aim of the new website is to underline the reasons behind Camara's work and reiterate that poverty can be alleviated through the provision of a higher quality education.



## September

### Camara Survey Results

Camara Education carried out a survey of Irish organisations in September, revealing astonishing low awareness of the benefits of reuse. The research discovered that only 3 out of 10 businesses consider reuse as an option when disposing of their IT equipment. Recycling of used computers is widely favoured over the more environmentally friendly reuse option utilised by Camara

The Minister of Environment, Community and Local Government, Phil Hogan, T.D. commented that the research 'highlights that we need to continue our efforts to educate both businesses and individuals of the environmental benefits of reusing ICT equipment.'

The survey underlined the need for Ireland to develop a reuse culture and to increase the level of reuse. The Minister also commented, 'It is both useful and timely that Camara has undertaken this research, and the findings may feed into Ireland's current preparations to develop a regime which will allow us to increase the percentage of ICT and other household equipment we reuse.'



## September

### Camara opens new hub in Tanzania

In September, Camara Education opened a Hub in Tanzania. The ceremony in Dar Es Salaam was officiated by the Deputy Minister for Education and Vocational Training, the Honourable Philip Augustino Mulugo. Also in attendance were Ambassadors from six embassies and representatives from local schools, regional educational institutes and Camara's partners Dell, along with members of the NGO community.



The initiative will facilitate training to teachers on ICT in Education across the country to give Tanzanian students the essential 21st century skill of digital literacy. According to Camara Tanzania's CEO, Ms. Edna Hogan, 'This educational advantage will ultimately enable these individuals to improve their livelihoods and consequently drive development within their local communities.'

At the opening ceremony, the Honourable Philip Augustino Mulugo commented, 'We are delighted today to be commencing our partnership with Camara. Schools in Tanzania will now have access to resources that they badly need. We look forward to working with Camara over the next five years to deliver on the targets we are setting together'.

## December

### Kenyan students march for ICT

In December, Students and teachers from Mbheni Girls Primary School and Bondeni Girls School in Mombasa, Kenya took part in a 'Walk for Information Technology' to raise funds for the installation of Camara eLearning centres. Along with local dignitaries, the students demonstrated their desire to have access to ICT equipment which will improve their education and livelihood skills. It also highlighted the lengths they and other schools in Africa are willing to go to raise the funds necessary to realise their dreams.



Farid Ali, Camara's Technical Director in Kenya, commented, 'I am amazed at the lengths schools will go to, to start computer classes at their schools and how proactive they can be to arrive at their goals. It is nothing short of inspiring and a lesson to all schools who are struggling to get started with IT'.

## November

### Deloitte Fast50



Camara Education was yet again recognised in the annual Deloitte Technology Fast50 awards in November. These awards 'recognise and honour business growth, originality and entrepreneurial spirit.' Camara finished 32nd on the ranking list, acknowledging the respect that has been earned by the Technology Industry in recent years and highlighting the great progress that has been made.

## December

### World Computer Literacy Day

World Computer Literacy Day took place on December 2nd and the Camara team pledged to go without technology for its duration, while challenging others to do the same. It was launched in 2001 with the aim of highlighting the digital divide that exists in the world; lack of modern information technology is a major barrier to development. By gaining a foothold in affordable ICTs, disadvantaged communities can access the knowledge and services needed to boost their livelihoods. Participating in this campaign helped to underline how much technology is relied upon by the developed world on a daily basis, further reiterating the importance of Camara's aim to provide digital literacy.



# CAMARA 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 2012.

## Objectives and Activities

A) Camara is a volunteer organisation dedicated to using technology to deliver education more effectively and deliver the livelihood skill of Digital Literacy to disadvantaged communities in Africa, Ireland and the Caribbean.

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 2012.

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 seven hubs in Africa (located in Kenya, Lesotho, Tanzania, Uganda, Zambia, Rwanda and Ethiopia), one in Jamaica and one in Ireland. 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 seemingly disparate activities is technology.

G) Computer Reuse is carried out by our Dublin hub. Camara collects redundant computers from Irish organisations and individuals. These computers are refurbished by Camara and loaded with educational software before being shipped out to our hubs in Africa, Jamaica and Ireland from where they are set up in 'eLearning Centres' in schools, colleges and community centres. Any equipment that cannot be reused in this fashion is recycled in Ireland according to the EU WEEE Directive. Between 2005 and 2012, Camara processed approximately 70,327 redundant Irish computers, of which 38,400 have been reused as educational tools with the remaining 31,927 being recycled. Reused computers are shipped, in bulk by container to our partner hubs in Africa 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 they receive from Camara Dublin. These machines are then installed in eLearning 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 eLearning 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 use Information and Communications Technology (ICT) to teach other subjects such as science and maths.

- Technical Support. For selected teachers this would include: basic computer maintenance; networking; administration of the eLearning 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) Results in 2012

During the year ended 31 December 2012, Camara:

1. Refurbished and sent out 8,961 fully working computers to the education hubs.
2. Supported our hub network to train 3,092 teachers and dispatch 7,700 computers from hubs in schools, both significantly up on the previous year.
3. Setup a new hub in Tanzania and established a number of sub-hubs in the existing Camara countries.
4. Setup a refurbishing workshop at the US hub in Silicon Valley to source and refurbish equipment for the Caribbean.
5. Came onto the Irish Aid programme, which will provide an investment of €1m over four years.
6. Redesigned our logo.
7. Launched our new international website [www.camara.org](http://www.camara.org)
8. Became Dell Giving partner and a donation partner for used technology.
9. Won the Dublin Lord Mayor's Award and a Deloitte Tech Fast50 Award.

## 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: grants from Irish Aid; private donations; own fund raising activities and certain revenue generating activities such as computer reuse and sale of computers to hubs. The vast majority of its funding is generated in Ireland.

Wages and salaries are the biggest expenditure followed by the cost refurbishment of computers and support to our hubs.

Camara finished the financial year with a surplus of **€388,471**.

---

## Current Board

Maria Mahon  
John Brown  
Joe Carthy  
Jonathan Kelly  
Catherine Muigai Mwangi  
Cormac Lynch  
Deirdre McCooey  
Julian Davis (appointed 10th Dec 2012)

## 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: **€388,471**.

## Important Events Since the Period End

1. Developed a formal partnership with Intel to use their Teacher Training programme.
2. Camara South Africa has been registered as a new hub.
3. Commenced setting up a refurbishment hub in London, UK.
4. Commenced setting up an education hub in Haiti

## 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 2009. 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.

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## 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:** 19<sup>th</sup> June 2013

# Auditor's Report

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We have audited the financial statements of Camara Education Limited for the period ended 31 December 2012 on pages 47 to 53. These financial statements have been prepared under the historical cost convention and the accounting policies set out on page 49. 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 auditors' 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.

## Respective Responsibilities of Directors and Auditors

As described in the Statement of Directors' Responsibilities on page 43, the company's directors are responsible for the preparation of the financial statements in accordance with applicable law and the accounting standards issued by the Accounting Standards Board and promulgated by the Institute of Chartered Accountants in Ireland (Generally Accepted Accounting Practice in Ireland).

Our responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland).

We report to you our opinion as to whether the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland and are properly prepared in accordance with the Companies Acts, 1963 to 2009. We also report to you whether in our opinion: proper books of account have been kept by the company; whether, at the balance sheet date, there exists a financial situation requiring the convening of an extraordinary general meeting of the company; and whether the information given in the directors' report is consistent with the financial statements. In addition, we state whether we have obtained all the information and explanations necessary for the purposes of our audit and whether the company's balance sheet and its profit and loss account are in agreement with the books of account.

We report to the members if, in our opinion, any information specified by law regarding directors' remuneration and directors' transactions is not disclosed and, where practicable, include such information in our report.

We read the Directors' Report and consider the implications for our report if we become aware of any apparent misstatement within it.

## Basis of Audit Opinion

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgments made by the directors in the preparation of the financial statements, and of whether the accounting policies are appropriate to the company's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

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## Opinion

In our opinion the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland of the statement of the company's affairs as at 31st December 2012 and of its surplus for the year then ended and have been properly prepared in accordance with the provisions of the Companies Acts, 1963 to 2009.

We have obtained all the information and explanations 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 on pages 41 to 44 is consistent with the financial statements.

24 - 26 City Quay  
Dublin 2  
Ireland

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

**Dated:** 19 June 2013

# Statement of Financial Activities

Year ended 31<sup>st</sup> December 2012

INCOMING RESOURCES	Note	Unrestricted Funds (€)	Restricted Funds (€)	Total 2012 (€)	Total 2011 (€)
<b>Income resources from generated funds</b>					
<b>Voluntary income</b>					
- Iris O'Brien Foundation		250,000	-	250,000	250,000
- Arthur Guinness Fund		-	-	-	50,000
- Other Donations		44,336	-	44,336	70,171
- Dell Foundation		37,467	105,205	142,672	-
- eLearning Centers Grant Events		-	208,797	208,797	-
- The Ireland Fund		15,000	13,712	28,712	-
- CCT Corporate Nominees Limited		-	-	-	41,000
- Google Trainee the Trainee Prog.		-	-	-	16,866
- Google – SSA Laptop Initiative Prog.		-	-	-	10,855
- Juniper Networks Foundation Fund		-	18,486	18,486	14,502
- Social Entrepreneurs Ireland		-	-	-	10,000
- Equitable Charitable Trust		-	-	-	9,491
- State Street Foundation		-	-	-	7,175
- Civil Society Third World Fund		-	8,000	8,000	7,500
- Vodafone		-	-	-	5,788
- Electric Aid Grant		-	7,280	7,280	-
- Donations in Kind		-	174,000	174,000	-
<b>Activities for generating funds</b>					
- Recycling		121,452	-	121,452	187,707
- Sale of computers (Africa & Jamaica)		211,757	-	211,757	98,446
- Sale of computers (Irish Schools)		158,504	-	158,504	123,505
- Shared Services		37,191	-	37,191	20,228
<b>Income resources from charitable activities</b>					
- Irish Aid		-	244,055	244,055	150,000
- FAS		-	9,922	9,922	9,922
- Africa Volunteers		-	-	-	60,524
<b>OTHER INCOME</b>					
Investment income		508	-	508	21
Revenue refund		6,307	-	6,307	4,678
<b>Total incoming resources</b>		<b>882,522</b>	<b>789,457</b>	<b>1,671,979</b>	<b>1,148,407</b>
<b>RESOURCES EXPENDED</b>					
<b>COST OF GENERATING INCOME</b>	<b>4</b>	94,487	-	94,487	113,945
<b>CHARITABLE ACTIVITIES</b>	<b>5</b>	-	1,106,169	1,106,169	828,978
<b>GOVERNANCE COSTS</b>	<b>6</b>	82,852	-	82,852	81,895
<b>Total resources expended</b>		<b>177,339</b>	<b>1,106,169</b>	<b>1,283,508</b>	<b>1,024,818</b>
Net income resources		705,183	(316,712)	388,471	123,589
Transfers between funds		(316,712)	316,712	-	-
Total funds at beginning of year		198,159	-	198,159	74,570
<b>Total funds at end of year</b>		<b>586,630</b>	<b>-</b>	<b>586,630</b>	<b>198,159</b>

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

# Balance Sheet

As at 31<sup>st</sup> December 2012

	Note	2012 (€)	2011 (€)
<b>FIXED ASSETS</b>			
Tangible assets	<b>7</b>	4,465	5,954
<b>CURRENT ASSETS</b>			
Debtors	<b>8</b>	257,547	121,385
Cash at bank		390,137	116,327
		647,684	237,712
<b>CREDITORS: Amounts falling due within one year</b>	<b>9</b>	(65,519)	(45,507)
<b>NET CURRENT ASSETS</b>		<b>582,165</b>	<b>192,205</b>
<b>TOTAL ASSETS LESS CURRENT LIABILITIES</b>		<b>586,630</b>	<b>198,159</b>
<b>FUNDS</b>			
Restricted funds		-	-
Unrestricted funds		586,630	198,159
<b>TOTAL FUNDS</b>		<b>586,630</b>	<b>198,159</b>

These financial statements were approved by the directors and are signed on their behalf by:

**Maria Mahon** - Chairperson **Cormac Lynch** - Secretary - **Dated:** 19<sup>th</sup> June 2013

# Cash Flow Statement

Year ended 31<sup>st</sup> December 2012

	Note	2012 (€)	2011 (€)
Net cash (outflow) from operating activities	<b>11</b>	273,810	(107,842)
Capital expenditure and financial investment		-	(7,442)
Increase/(Decrease) in cash for the year		273,810	(115,284)
<b>RECONCILIATION OF NET CASH FLOW TO MOVEMENT IN NET DEBT</b>			
Increase/(Decrease) in cash for the year		273,810	(115,284)
Net opening cash		116,327	231,611
Net closing cash		390,137	116,327

# Accounting Policies

Year ended 31st December 2012

## 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:

Equipment	-	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 2012 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:

	2012 (€)	2011 (€)
Directors' remuneration	-	-
Depreciation	1,489	1,488
Auditors' remuneration	7,380	7,380
	=====	=====

## 2. EMPLOYEES AND REMUNERATION

The average number of staff employed by the company during the year was 17 (2011:18). Staff costs were as follows

	2012 (€)	2011 (€)
Wages and salaries	573,516	546,680
Social welfare costs	43,842	42,376
	-----	-----
	617,358	589,056
	=====	=====

The basic and performance related payments for the CEO was €71,667 in 2012. There were no pension contributions made to any staff members during 2012.

## 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 2012 (€)	Restricted 2012 (€)	Total 2012 (€)	Total 2011 (€)
Rent	4,144	-	4,144	6,387
Salaries	67,639	-	67,639	83,669
Fund Raising	15,678	-	15,678	14,274
General expenses	7,026	-	7,026	9,615
	-----	-----	-----	-----
	94,487	-	94,487	113,945
	=====	=====	=====	=====

## 5. CHARITABLE ACTIVITIES

	Unrestricted 2012 (€)	Restricted 2012 (€)	Total 2012 (€)	Total 2011 (€)
Rent	-	33,979	33,979	29,091
Wages & Salaries	-	500,331	500,331	458,262
Shipping & Packaging	-	65,612	65,612	72,530
Africa expedition	-	-	-	41,209
Insurance	-	5,531	5,531	2,187
Repairs & Maintenance	-	7,017	7,017	681
Depreciation	-	1,146	1,146	1,146
Motor & Travel	-	15,123	15,123	17,289
Printing, postage and Stationery	-	1,465	1,465	2,334
General expenses	-	23,574	23,574	10,462
Bank Charges	-	660	660	783
Training	-	1,676	1,676	73
Telephone	-	10,256	10,256	7,885
Marketing	-	2,198	2,198	1,221
Consultancy fees	-	-	-	5,787
Workshop expenses	-	31,256	31,256	62,031
Multimedia expenses	-	2,836	2,836	291
African Hubs	-	111,781	111,781	39,463
Regional Irish Hubs	-	31,062	31,062	14,365
Africa Service Centre	-	52,143	52,143	56,572
Cost of Computers Donated	-	174,000	174,000	-
Bad debt provision	-	30,000	30,000	-
Bad debt write off	-	4,523	4,523	5,493
Foreign exchange	-	-	-	(177)
	-----	-----	-----	-----
	-	1,106,169	1,106,169	828,978
	=====	=====	=====	=====

## 6. GOVERNANCE COSTS

	Unrestricted 2012 (€)	Restricted 2012 (€)	Total 2012 (€)	Total 2011 (€)
Rent	3,315	-	3,315	3,085
Auditors fees & Payroll Services	11,050	-	11,050	10,041
Wages & salaries	49,389	-	49,389	47,124
General expenses	19,098	-	19,098	21,645
	-----	-----	-----	-----
	82,852	-	82,852	81,895
	=====	=====	=====	=====

## 7. TANGIBLE FIXED ASSETS

	1 <sup>st</sup> Jan-12 (€)	31 <sup>st</sup> Dec-12 (€)
<b>COST</b>		
Fixtures & fittings	24,388	24,388
Motor vehicles	4,050	4,050
	-----	-----
	28,438	28,438
	=====	=====

	1st Jan 2012 (€)	Charges (€)	31st Dec 2012 (€)
<b>DEPRECIATION</b>			
Fixtures & fittings	18,434	1,489	19,923
Motor vehicles	4,050	-	4,050
	-----	-----	-----
	22,484	1,489	23,973
	=====	=====	=====

	2012 (€)	2011 (€)
<b>NET BOOK VALUE</b>		
Fixtures & Fittings	4,465	5,954
Motor vehicles	-	-
	-----	-----
	4,465	5,954
	=====	=====

## 8. DEBTORS

	2012 (€)	2011 (€)
Trade debtors	285,197	113,811
Provision for bad debts	(30,000)	-
Prepayments and accrued income	2,350	7,574
	-----	-----
	257,547	121,385
	=====	=====

All amounts are receivable within one year

## 9. CREDITORS: Amounts falling due within one year

	2012 (€)	2011 (€)
Taxation and social security	18,163	8,838
Other creditors	32,793	25,933
Accruals and deferred income	14,563	10,736
	-----	-----
	65,519	45,507
	=====	=====

# Detailed Statement of Financial Activities

Year ended 31<sup>st</sup> December 2012

## 10. COMMITMENTS UNDER OPERATING LEASES

Land and Buildings	2012 (€)	2011 (€)
Operation leases which expire:		
Within 1 year	41,438	41,438
Within 2 to 5 years	41,438	41,438

At 31<sup>st</sup> December 2012 the company had annual commitments under non-cancellable operating leases as set out above.

## 11. RECONCILIATION OF OPERATING CASH FLOW

	2012 (€)	2011 (€)
Surplus/ (Deficit) for the year	388,471	123,589
(Decrease) /Increase in creditors	20,012	(200,560)
(Increase)/ Decrease in debtors	(136,162)	(32,359)
Depreciation	1,489	1,488
	-----	-----
<b>Net cash (outflow) from operating activities</b>	<b>273,810</b>	<b>(107,842)</b>
	=====	=====

## 12. MOVEMENT IN FUNDS

	Opening Balance (€)	Income (€)	Expenditure (€)	Transfers (€)	Closing Balance (€)
<b>Restricted funds</b>	-	789,457	(1,106,169)	316,712	-
<b>Unrestricted funds</b>					
General reserve	198,159	882,522	(177,339)	(316,712)	586,630
	-----	-----	-----	-----	-----
	198,159	1,671,979	(1,283,508)	-	586,630
	=====	=====	=====	=====	=====

## 13. LEGAL STATUS OF THE COMPANY

The company is limited by guarantee and has no share capital. At 31<sup>st</sup> December 2012, 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 2012 financial information or inclusion of a note thereto.

## 15. CONTROLLING PARTY

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

	Cost of generating income (€)	Charitable activities (€)	Governance costs (€)	2012 (€)	2011 (€)
<b>Core costs</b>					
Rent	4,144	33,979	3,315	41,438	38,564
Wages and salaries	67,639	500,331	49,389	617,358	589,056
Fund raising	15,678	-	1,363	17,041	15,515
Shipping and packaging	-	65,612	5,705	71,317	78,837
Africa expedition	-	-	-	-	41,209
Insurance	674	5,531	540	6,745	3,462
Repairs and maintenance	856	7,017	685	8,557	914
Depreciation	223	1,146	119	1,488	1,488
Motor and travel	465	15,123	1,356	16,944	23,412
Printing, postage and stationery	179	1,465	143	1,787	3,387
Auditors fees & Payroll Services	-	-	11,050	11,050	10,041
General expenses	-	23,574	-	23,574	10,462
Bank charges	79	660	64	804	1,097
Training	-	1,676	146	1,822	79
Telephone	1,251	10,256	1,001	12,508	10,614
Marketing	1,927	2,198	359	4,483	2,447
Consultancy fees	-	-	-	-	5,787
Workshop expenses	-	31,256	2,718	33,974	67,425
Multimedia expenses	1,372	2,838	366	4,575	388
African Hubs	-	111,781	-	111,781	39,463
Regional Irish Hubs	-	31,062	-	31,062	14,365
Africa Service Centre	-	52,143	4,534	56,677	61,491
Cost of Computers Donated	-	174,000	-	174,000	-
Bad debts provision	-	30,000	-	30,000	-
Bad debt write off	-	4,523	-	4,523	5,493
Foreign exchange	-	-	-	-	(177)
	-----	-----	-----	-----	-----
	94,487	1,106,169	82,852	1,283,508	1,024,818
	=====	=====	=====	=====	=====

# MONITORING & EVALUATION



# Introduction

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In 2012, Camara distributed a total of 7,700 computers to 551 schools and community centres, and trained 3,092 teachers through eight international hubs (Ethiopia, Ireland, Jamaica, Kenya, Lesotho, Tanzania, Uganda, Zambia). As a result of Camara's work, over 160,000 children received access to an improved quality of education. These children also gained digital literacy which will provide them with far greater livelihood skills and employment opportunities.

Camara's primary objective is to contribute to the advancement of the national education systems in the countries in which it operates, by improving access to Technology Enhanced Learning (TEL) to students in a sustainable and cost effective manner. Camara's mission facilitates the UNESCO goal of 'improving all aspects of the quality of education and ensuring excellence of all so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.'

Camara achieves this with the introduction of technology into the classroom, initially through supported eLearning centres and teacher training in ICT and maintenance. By providing the inputs that would normally be unaffordable or inaccessible, such as quality equipment, training and advice, Camara greatly reduces number of obstacles schools in marginalised areas face. Further, by operating as a social enterprise, Camara places the needs of schools, teachers and students at the heart of its model.

As both technologies and the requirements of schools change, Camara's model promotes adaptability in order to provide a demand-led and high-quality service to its users. 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. Ultimately, through ongoing training, upgrades and support - in collaboration with Ministries of Education - teachers are able to use ICT as a powerful tool to empower and enhance the education curriculum.

Through striving to specialise in the delivery of quality Technology Enhanced Education, Camara has the ultimate aim of poverty alleviation. By enabling students to improve their livelihood skills they can subsequently drive development within their local communities and lift themselves and their families out of poverty.

# The Camara Model

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The Camara network takes the 'Social Enterprise' principle and applies it to tackling development issues.

This involves firmly placing educational institutions as customers at the centre of its model, ensuring that Camara services and products meet their exact needs and requirements. This alternative to the donor/beneficiary service provision puts the precise needs of the end user in the driving seat of the organisation. Sustainability is central to the Camara model, as the holistic package has been designed to ensure the longevity of the computer lab 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 Ministry of Education, local education and government bodies, along with other key Ministries, organisations and bodies, Camara aims to ensure that its goals and outcomes are harmonised with domestic educational policies and initiatives. It is through these relationships that the advantages of ICT in Education can be brought to the most marginalised areas and communities where it is most needed, in the form of an affordable, effective, sustainable and long-lasting initiative.

The following is the Camara model in its principle; a later section will discuss the challenges faced to achieving the model.

## Software

Camara provides equipment loaded with a customised version of Edubuntu, an Open Source operating system. The installation includes OpenOffice (which contains all the office packages) and a huge volume of educational software, resources and tools, including Maths, English, Science and Geography learning tools, an offline version of Wikipedia, along with typing, keyboard and mouse training software.

Advantages of using Open Source operating systems include no required license fee, few viruses and the availability of educational content at no cost. Edubuntu has a light build and runs much faster than other operating systems (when comparing machines with the same specification). Additionally, many Windows programs (eg. MS Office, Photoshop, CorelDraw) can be run on Edubuntu. By offering and promoting a secure and free operating system, Camara is able to substantially reduce the cost to the school and actively discourage software piracy.

## Hardware

Camara equipment is sourced, tested and refurbished in Ireland and the US before being shipped to one of the Camara hubs. Suppliers of Camara computers include large businesses, small and medium businesses and private individuals. Some Camara hubs also source hardware in-country.

All equipment is tested in Camara hubs and only computers meeting Camara standards in quality and specification are provided to educational institutions. Our minimum specification is Pentium 4 processor and all computers are branded machines. Many schools also receive a high specification server PC with educational content, software repositories and eBooks. When the lab is networked, all Camara computers are able to access this content.

All computers received are tracked through a unique code and serial number, enabling Camara to identify where each computer is, be it in a school, in storage or the e-waste facility. Camara-supplied schools are contractually obliged to return all end-of-life computers to Camara and all end-of-life equipment is sent to internationally accredited recycling facilities for disposal in line with international regulations (the Basel Convention and the European Commission's Waste Electric and Electronic Equipment).

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## Teacher Training

A key focus area of Camara is to enable schools to support the transformation of educational objectives and enable curriculum delivery through ICT. We recognise the vital importance of competence development of all school personnel who engage with the e-Learning Centre. Therefore, Camara offer a comprehensive Learning Framework that supports the ICT Competence Development of Teachers, Principles and School Technicians to truly allow for a 21st Century school embracing ICT in Education. As part of this Learning Framework, Camara in coordination with Intel and other Internationally recognised educational bodies, offer a wide range of ICT focused courses. These courses focus on elements such as Basic ICT Skills, Technical Skills and importantly, how to enable ICT in Education. Our training is provided by skilled experienced instructors through modern pedagogical techniques.

## Support

Educational institutes must designate a room for the eLearning centre and prepare it to Camara's standards in safety and security. These criteria have been developed over the past few years for the local context, in order to extend the life of the lab as far as possible and thereby maximise the benefit to students.

All Camara packages include maintenance for a minimum of 6 months, which includes the replacement of any non-working computers. Thereafter, the school can purchase additional maintenance contracts for the lab, which are made as affordable as possible. Maintenance either takes place in the educational institution or in Camara's facilities. Educational institutions receive ongoing training and are able to purchase upgrades and additional services such as lab networking.

## The Camara Model: Process Flow for Educational Institutions

### 1. Application

Education Institutions must apply to Camara and provide the appropriate documentation.

### 2. School and Lab Vetting

Educational Institutions are visited and the eLearning centre facilities inspected for suitability.

### 3. Teacher Training

The Educational Institution must commit teachers for training with Camara before they can receive equipment.

### 4. Dispatch

The Educational Institution receives equipment loaded with Open Source operating systems and software. Schools sign a contract stating that the equipment is for educational purposes, cannot be resold and must be returned to Camara for recycling when obsolete.

### 5. Maintenance

The Educational Institution receives a maintenance contract (including a replacement of non-functional equipment) for a period of 6 months. Further maintenance contracts can be purchased.

### 6. Monitoring & Evaluation

The Educational Institution is visited to carry out Monitoring & Evaluation and to provide additional support and services (eg. Networking).

### 7. End of Life

The Educational Institution must return obsolete equipment to Camara where it is sent for recycling in line with international standards and regulations.

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# Methodology

## Rationale/Objective of the monitoring and evaluation of computers dispatched in 2011\*

1. To determine the reported usage of Camara computers in each school who received computers from Camara in 2011.
2. To determine the perception of the value of the computers received from Camara from the students, teachers, principals and lab managers of schools who received Camara computers in 2011.
3. To collate perception data around detailing: the effectiveness of training, effectiveness of Camara educational content, usage of content and rates of maintenance required for computer upkeep.

\* The reporting period only covers computers dispatched and teacher training conducted in 2011, however the reporting period itself is from 2011 - to date as we are tracking rates of computer usage, attrition rates, trained teacher retention rates etc. from 2011 to date.

## 1. Methodology of the monitoring and evaluation 2011/2012 – qualitative and quantitative data collection.

This evaluation was conducted by visiting Camara partner schools who received computers through Camara in 2011 and administering questionnaires with students, teachers, and principals/lab managers. Three separate questionnaires were designed for this purpose and can be found as annexes to this report. The evaluation managed, within time and budget constraints, to visit all schools who received computers in 2011 and deliver questionnaires to teachers who use computers for teaching, students at the schools who access computers for learning and principals/lab managers who are responsible for overseeing the computer lab.

## 2. Training for data collection team

Training sessions for questionnaire administration were conducted with field staff in all countries who participated in the data collection in order to ensure they had a good knowledge and understanding of the research instrument, objectives of the research, methodology for administering questionnaires, administering questionnaires and data collation, along with collation and management. Training was conducted through Skype using learning materials provided through email and involving simulated questionnaire administration. In addition, the central M&E officer was available to offer mentoring, assistance and support (again through email and Skype) once data collection began and to deal with specific questions as they arose.

## 3. Data collection Team(s)

The data collection teams were put together and managed by the individual hub. They each had the responsibility of contacting schools and arranging visits, conducting visits and administering questionnaires, collecting and collating data to be sent to the central M&E Officer in Dublin for tabulation and analysis. Each team's supervisor was to be responsible for continuous management of the team during the whole process of making appointments with schools, going onsite for visits, collecting and collating data.

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## 4. Data collection methodology

### Quantitative survey:

Questionnaires were designed for students, teachers and school principals/lab managers. These questionnaires were administered to students, teachers and principals/lab managers at the schools where Camara computers and trainings were delivered in 2011. The teams visited a minimum of 2 to 3 schools a day to administer the questionnaires- they choose one class, one teacher and one principal/lab manager in consultation with the school they were visiting.

- Team members went to the class where students have been identified by the school as having access to the computers and administered the questionnaires.
- The team member asked the students to fill in the questionnaire, first explaining the questions so each student had the same understanding of the questions and was instructed on the proper way to fill in the questionnaire.
- After filling in the questionnaire, the students submitted them to the team member and the team member checked to ensure the students had completely and competently filled in the questionnaire.
- At the same time, teachers' and principal/lab managers' questionnaires were administered to the designated teacher and principal/lab manager. These questionnaires had more open ended questions that required higher level answers from respondents than those of the students as explained below.

## 5. Research Instrument

Three questionnaires were developed (see annexes) to be administered to students, teachers and school principals or lab managers respectively. The questions were designed to be as basic as possible and to capture information related to the perceptions of use, maintenance and impact of Camara computers and computer laboratories. The questions asked were, in the main, closed statements to which respondents were asked to agree or disagree using likert scaling (strongly agree, agree, neutral, disagree, strongly disagree). This was particularly the case for the student questionnaires as they were designed to be as simple and specific as possible and to allow for standard answers across all hubs. In the teachers questionnaire and principal/ lab manager questionnaire there were some open ended questions such as "Please indicate the biggest challenges faced by your school in using Camara computers" which were added to enable them to respond on a higher level and elaborate on their opinions of Camara's work. These answers were then analysed to try and identify any common patterns which featured that could indicate specific areas of good practice that needed improvement, as can be seen in the results analysis. In addition to using the data to spot overall trends relevant to the Camara model for all countries who participated, the questionnaires also provided information that was more relevant to local hubs (highlighting specific areas of good practice or that needed improvement) which weren't replicated in all hubs.

### Research Questions

1. What is the rate of usage of Camara computers?
2. What educational software and resources are used and how often?
3. How effective is Camara teacher training?
4. How effective are Camara hubs?
5. What challenges are most commonly identified in implementing the Camara model in partner schools?

---

### Usage

1. What are the average hours of computer usage per student?
2. What is the average class size and number of children per computer in each school?
3. Perception of benefits and challenges from having Camara computers installed in schools?

### PC Management

1. Usage numbers of educational apps and content on Camara computers?
2. What is the attrition rate (breakage rate) of the computers that were dispatched in 2011?
3. Amount of maintenance assistance received from Camara hubs?

### Teachers

1. How effective was Camara's training of teachers?
2. Average number of teachers trained per school?
3. Retention rates of trained teachers?

## 6. Data Analysis

The data was collected from the field by teams of data collectors who had received training from Camara's M&E Officer on data collection and recording, questionnaire administration and data entry. After this, it was sequentially coded before being entered into standardised spreadsheets by individual hub staff then collated by the Camara's central M&E officer. Then the data was tabulated and analysed to produce the below results.

## 7. Limitations and Challenges

Documenting the impact of computers and other technology for student learning in Camara's partner schools for M&E reporting purposes has notable limitations. The current focus is on measuring computer and related technology use in terms of self-reported teacher and student anecdotal and perception based information. This is in the absence of systems to track and collate real-time usage data. While it is a relatively simple task to measure access to computers in schools who were supplied with computers by Camara in 2011 (counts of computers by locations within schools), measurement of actual usage is a much more challenging, but potentially more insightful, task.

In line with previous M&E reporting and due to the lack of a systematic M&E Outcome Results Framework with defined targets, indicators and data sources, Camara is still relying on self-reported and perceptual data gathered at one point in time, thereby often missing the larger context and confounding variables that influence whether technology is actually used in the classroom. However, collection of this data is still meaningful as it allows for review of partner school's perceptions and gives them room to provide feedback about the efficacy of the Camara model. This information can be evaluated and used to refine and improve Camara's priorities and methods of delivery.

Challenges to the successful implementation of this exercise included time constraints (the process coincided with school holidays in some countries, Jamaica, and important exams coming up, Ireland), human resources to conduct school visits (the tight timeframe left a very hectic schedule of recruitment, training, conducting school visits, collating data and reporting), financial resources for hubs to visit all schools who received Camara computers and training in 2011. Mitigation strategies to deal with challenges were developed by individual hubs to accord with their own specific contextual challenges. Data from Jamaica had been collected and collated but due to a delay in receiving the information and staff turnover in the Jamaican hub, it was not dispatched in time to be included in data tabulation and analysis. In addition, the lab manager/principal questionnaire in Ireland did not record the information of all respondents and has thus been excluded from the analysis.

# Principal Report

## A. Respondents

	Zambia	Kenya	Rwanda	Ethiopia	Uganda
<b>Role of Respondents</b>					
Principal	51%	74%	0%	.	.
Lab Manager	49%	26%	100%	.	.
<b>Gender of Respondents</b>					
Male	71%	53%	100%	84%	83%
Female	29%	47%	0%	16%	17%
<b>Age of Respondents</b>					
Average age	39	47	28	34	36
Youngest age	19	30	25	19	28
Oldest age	63	59	32	55	47
<b>Average Total</b>	42	36	4	50	24

Table 1: Description of respondent

In Zambia, 49% of the respondents were laboratory managers and 51% were school principals. The average age of the respondent staff was 39 years old. The proportion of male respondents was higher than the female with 71% male and 29% female. In total 43 school principals and laboratory managers were interviewed in Zambia.

Of the respondents in Kenya, 74% were school principals and 26% were laboratory managers. Moreover, 53% of them were male and 47% were female. The youngest staff interviewed was 30 and the oldest was 59 years old. The average age was 47 years old.

In Rwanda, all four laboratory managers interviewed were male. Their average age was 28 years old. While in Ethiopia, 84% of the respondents were male and 16% were female. The average age of the staff interviewed was 34 years old.

In Uganda, out of the 24 respondents, 83% were male and 17% were female. The average age of the respondents was 36 years old. The youngest age interviewed was 28 and the oldest was 47 years old.

## B. Teachers

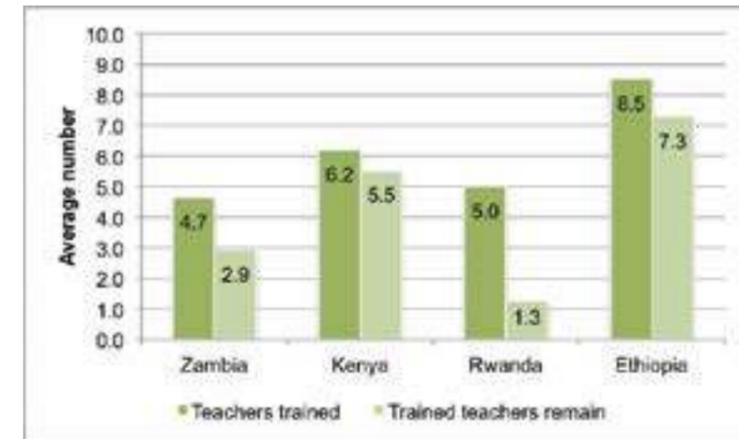


Figure 1: Mean number of teachers trained

The figure above shows the average number of teachers that were trained by Camara and the average number of these trained teachers who are still working in the school. Uganda, which is not in the figure, reported that no teachers were trained by Camara during 2011.

The average number of teachers trained in Zambia is 4.7 since the start of Camara hub support and at present the average number of trained teachers remaining in schools is 2.9. A total of 66 trained teachers left schools in Zambia as reported by the school principals or laboratory managers interviewed for this study.

Ethiopia has the most number of teachers trained by Camara hub with an average of 8.5 teachers per school. The average number of trained teachers still teaching in schools is 7.3 with a total number of 74 teachers reported to have left.

Rwanda reported the highest turnover of trained teachers leaving schools. The average number of teachers trained was 5 per school and the average number of trained teachers still working with their respective schools was 1.3. As reported by the respondents, 15 trained teachers out of 20 have left the school after being trained by the Camara hub.

In Kenya, the average number of teachers trained was 6.2 per school and the average remaining trained teachers was 5.5. A total number of 34 trained teachers left the schools.

	Teachers trained	Teachers trained still working in school	Teachers trained left the school	N
Zambia	163	97	66	35
Kenya	211	177	34	34
Rwanda	20	5	15	4
Ethiopia	359	285	74	42
Uganda	0	0	0	24
<b>Total</b>	<b>753</b>	<b>564</b>	<b>189</b>	<b>139</b>

Table 2: Movement of teachers trained

Each respondent was asked if their school has IT teachers and the figure below shows the proportion of schools interviewed for each hub that have IT teachers.

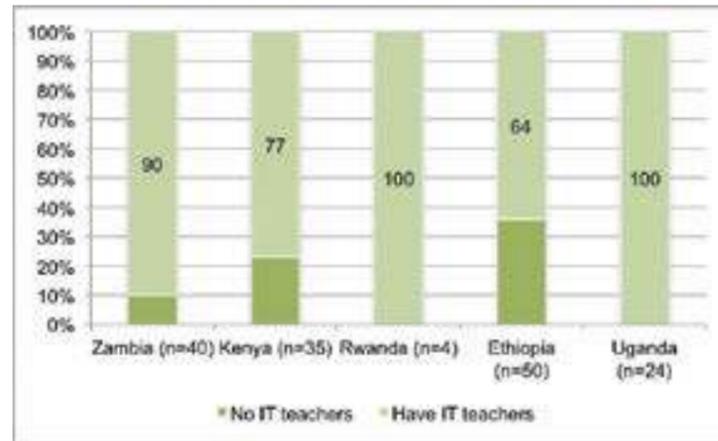


Figure 2: Proportion of IT Teachers by country

In Zambia, only 10% of the schools interviewed have no IT teachers and 90% have IT teachers. And the average number of IT teachers per school was 2.

Among the schools interviewed in Kenya, 77% have IT teachers and 23% have no IT teachers. Each school has on average 3 IT teachers.

Ethiopia has the most schools with no IT teachers (36%), and of the 64% with IT teachers, the average number was 3 per school.

Meanwhile in Rwanda and Uganda, all of the schools have IT teachers. For both hubs the average number of IT teachers per school was 2.

	Mean	St. Dev.	Minimum	Median	Maximum	Sum	N
<b>Average number of IT teachers</b>							
Zambia	2	1.5	1	2	7	84	36
Kenya	3	3.9	1	2	21	81	26
Rwanda	2	1	1	3	3	9	4
Ethiopia	3	2.4	1	2	10	66	24
Uganda	2	2	1	1	10	45	24

Table 3: Summary statistics of IT teachers

In Zambia, the majority of schools said that teachers (either IT or non-IT teachers) have access to use the computer laboratory in their schools for class or research. About 10% said that school principals also used the computer laboratory.

In Kenya, about 60% of the schools gave access to both IT and non-IT teachers in using the computer laboratory for class or other school work. More than 30% said that no one has access to the computer laboratory. A very small proportion said that school principals use the computer laboratory.

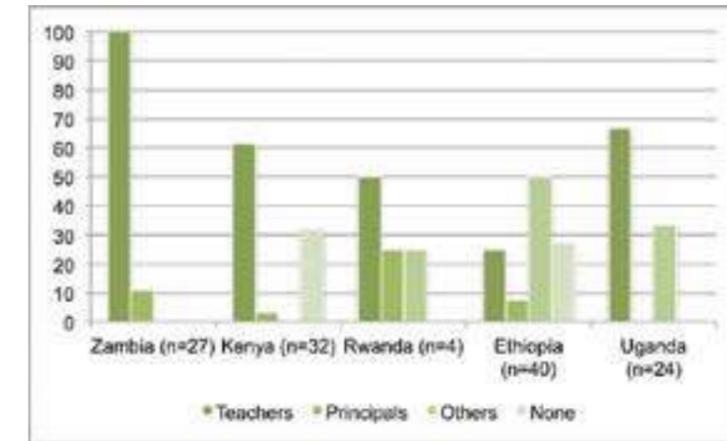


Figure 3: Proportion of who has access to IT laboratory

About half of the schools in Rwanda said that teachers have access to the computer laboratory. More than 20% said school principals also have access to the laboratory as well as other staffs.

In Ethiopia, more than 20% of the schools said that teachers have access to use the computer laboratory in their school and half of the school said other staff or students have access to the lab.

The figure above shows the proportion of usage of the computer laboratory between IT teachers and non-IT teachers. The schools who have both IT and non-IT teachers were asked to give the percentage of usage of the computer laboratory among IT teachers and non-IT teachers.

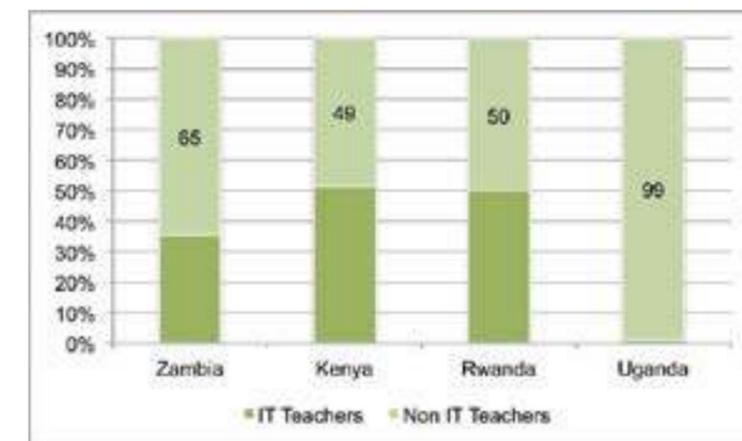


Figure 4: Proportion of IT and Non IT teachers usage of IT laboratory

In Zambia, non-IT teachers use the computer laboratory more than the IT teachers (65% and 35% respectively). In Kenya and Rwanda, both IT and non-IT teachers have almost the same usage level of the computer laboratory. In Uganda on the other hand, non-IT teachers dominate the usage of computer laboratory compared to IT-teachers (99% and 1% respectively).

Ethiopia is not included in this figure as they have not recorded the responses to the question accurately. The question was misinterpreted and not administered correctly.

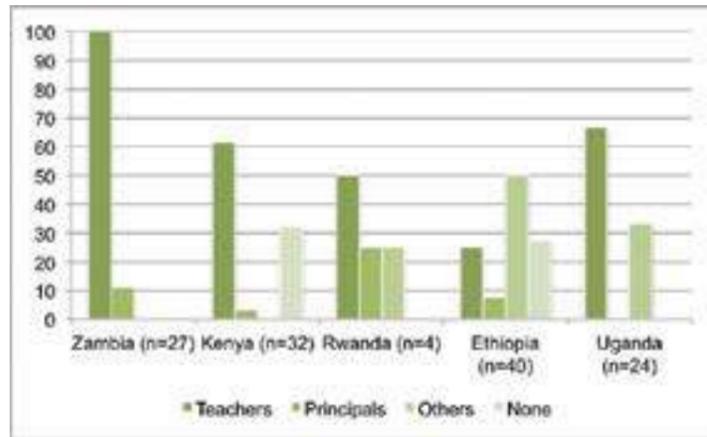


Figure 3: Proportion of who has access to IT laboratory

About half of the schools in Rwanda said that teachers have access to the computer laboratory. More than 20% said school principals also have access to the laboratory as well as other staffs.

In Ethiopia, more than 20% of the schools said that teachers have access to use the computer laboratory in their school and half of the school said other staff or students have access to the lab.

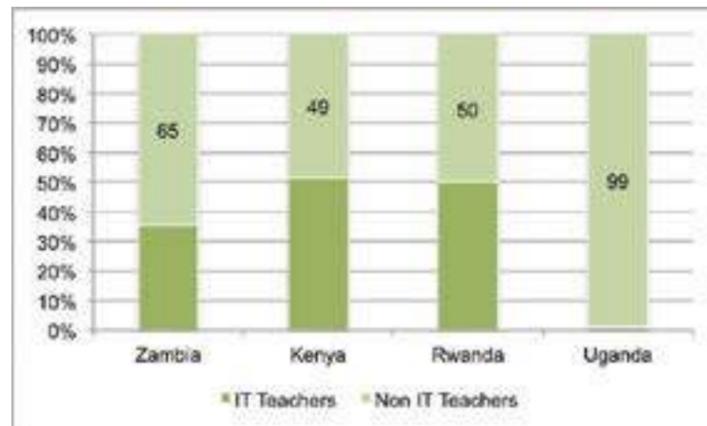


Figure 4: Proportion of IT and Non IT teachers usage of IT laboratory

The figure above shows the proportion of usage of the computer laboratory between IT teachers and non-IT teachers. The schools who have both IT and non-IT teachers were asked to give the percentage of usage of the computer laboratory among IT teachers and non-IT teachers.

In Zambia, non-IT teachers use the computer laboratory more than the IT teachers (65% and 35% respectively). In Kenya and Rwanda, both IT and non-IT teachers have almost the same usage level of the computer laboratory. In Uganda on the other hand, non-IT teachers dominate the usage of computer laboratory compared to IT-teachers (99% and 1% respectively).

Ethiopia is not included in this figure as they have not recorded the responses to the question accurately. The question was misinterpreted and not administered correctly.

### C. Computers

The figure below shows the average number of computers received by each school, computers that are still working and the number of computers broken between being received and responding to the questionnaire (at least 15 month period). In Zambia, the average number of computers received was 16 per school. At the time of the survey, each school had on average 11 computers still working and on average had 5 broken computers.

In Kenya, the average number of computers received was 15, the average number of computers still working at the time of the interview was 13. This gives an average of 2 broken computers per school.

Rwanda has the highest average of broken computers among hubs with 7 computers broken on average. Each school on average received 20 computers from Camara and at the time of the survey each school had on average 13 computers still working.

Ethiopian schools received the most number of computers from Camara with an average of 23 computers per school. Only 4 computers per school (average) were broken leaving each school with an average of 19 computers still working.

Lastly, Uganda's schools received on average 16 computers from the hub. When asked how many computers were still working, the average number per school was 13 computers. This means that each school had on average 3 broken computers.

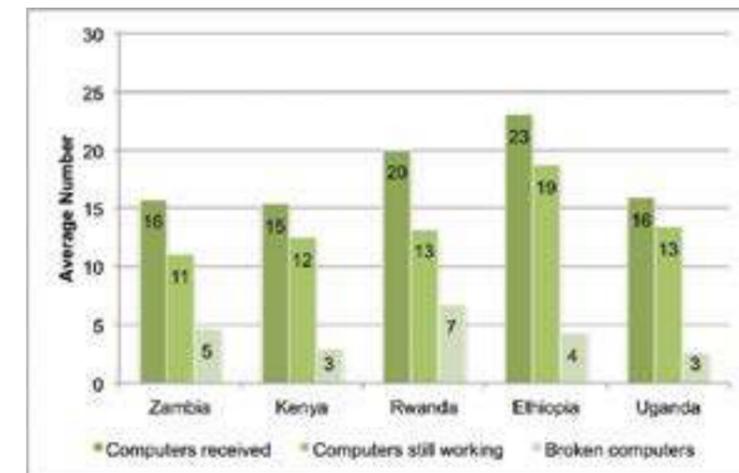


Figure 5: Movement of computers from Camara to schools

The table below shows the total number of computers dispatched to schools, computers still working and broken computers as reported by the school principals/laboratory managers interviewed in this survey. Not all schools gave data on this section, 141 schools between 5 hubs gave complete data out of a total of 156 schools who were administered questionnaires.

	Computers received	Computers still working	Broken computers	N
Zambia	646	454	192	41
Kenya	494	400	94	32
Rwanda	80	53	27	4
Ethiopia	923	750	173	40
Uganda	383	322	61	24
Total	2526	1979	547	141

Table 4: Movement of computers from Camara

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The attrition rate percentage for Camara's computers per hub is thus as follows:

- Zambia 29.72%
- Kenya 19%
- Rwanda 33.75%
- Ethiopia 18.74%
- Uganda 15.92%

The total overall attrition rate for Camara computers was 21.65%.

## D. Satisfaction and Impact of Camara Hubs

### Q9. Please describe the impact having Camara computers from 2011 has had on your school.

#### Zambia

- Improved access to academic materials which improved the academic performance of the students.
- Students, teachers and community members became computer literate. They now have at least basic computer skills.
- Helped students and teachers with their research (academic and personal).
- Helped teachers with their lessons (aid in teaching) and administrative work.
- The computers have contributed to improved school standards in terms of learning. It has also added to the curriculum of the school.

#### Kenya

- The computers have improved teaching as teachers use it to teach and become more familiar and comfortable with using computers, while students are learning to use computers so they are not left behind.
- Camara computers have enhanced and changed teaching and learning in all subjects. It helped create positive attitudes towards learning among students and teaching among teachers.
- Camara computers have helped us to train the student and also gave us access to some important materials.
- It has positively enabled the learner to become computer literate which in turn has helped them in researching (Google) their assignments in all subjects.

#### Rwanda

- Teachers have improved their knowledge and they use them in their daily work.
- Improved in the classification of schools and availability of better materials for students to improve their knowledge.
- It has improved the performance of students in the class since there is an offline Wikipedia for research

#### Ethiopia

- It helps the teachers and the student to get basic knowledge about computers.
- The students are scoring better results from using the computers.
- Students were able to use the computer and also to find and get more information.

#### Uganda

Did not record any data for this question.

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### Q10. Please describe the impact having teachers trained by Camara in 2011 has had on your school

#### Zambia

- Many teachers have become computer literate and are now able to use the computer for typing and securing tests and papers.
- Improved teaching & learning aid. The teachers improved on their teaching as they are able to use computers to get information. Their skill of teaching computers to pupils improved.
- There was no positive impact because the training was not adequate only concentrated on the basic i.e. system and hardware.

#### Kenya

- The impact is also low because the teachers are not trained fully so they are unable to handle all programmes of the computers.
- Camara computers and training have made teaching easier.
- It enables the teacher to also teach the learners on IT related matters. It also improved their way of keeping records e.g. pupil's progress record and other professional documents as required.
- The teachers who have received training by Camara have been able to teach others who then become teachers and are now helping out in teaching the students.

#### Rwanda

- Not all schools received training.
- Improvement in their lessons and ability to facilitate and prepare student's courses.

#### Ethiopia

- The teachers improved their skills in using and teaching about computers.
- It helps with their teaching by improving knowledge and understanding of computer usage.

#### Uganda

- Camara computers and training have improved the computer skills of both teachers, and in turn, students.
- Teachers have improved their typing skills and ability to manage documents.
- It has improved the teaching and information processing among teachers.
- It has increased the level of performance in making reports.

### Q11. Please outline your E-waste strategy

#### Zambia

- Obsolete and broken computers will be sent back to Camara hub in the country.
- Obsolete and broken computers were kept in boxes and storage rooms.

#### Kenya

- Stored in a room for future repair or disposal.
- Camara has been responsible in discarding the e-waste.
- Collect them and recycle the material.

## Rwanda

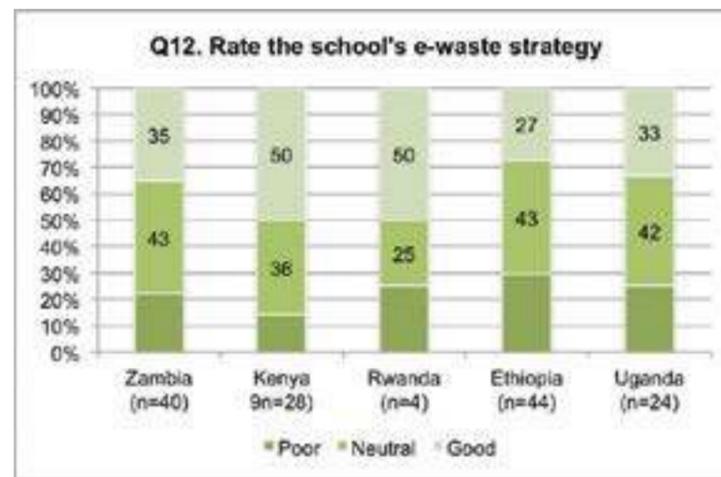
- Damaged computers are kept at school in provided room as storage.
- Collect them and check them for the possibility of recycling (reusable ones).

## Ethiopia

- No e-waste strategy because no e-waste yet.

## Uganda

- Camara can take those computers and replace them with working ones.
- We can remove working hardware and Camara can take other parts which are not working.
- Keep the broken computers in a storage and some can be used for practical repair lessons.



The respondents were asked to rate their e-waste strategy as very poor, poor, neutral, good and very good. The figure above shows the opinion of the respondents. The responses were consolidated to three categories.

In Zambia, 35% of the respondents think that their e-waste strategy is good and only 22% think that their strategy is poor, with 43% opting for neutral.

Kenya is one of the hubs where a higher proportion of respondents gave positive ratings on their e-waste strategy (50%). Only 14% think that they have a poor e-waste strategy, with 36% being neutral.

Rwanda is another hub where half of the respondents think that their e-waste strategy is good. Meanwhile, Ethiopia has a higher proportion of respondents who think that they have poor e-waste strategy (30%), with only 27% who gave a positive rating for their strategy.

Lastly in Uganda, 33% are happy with their school's e-waste strategy and think that they have a good strategy, while only 25% think that their strategy is poor, with 42% being neutral.

## Q12. Please describe the level of support you have received from your local Camara hub in maintaining your computers and computer lab

### Zambia

- Some schools have never received any local Camara help in maintaining the computers since 2011.
- Some schools had at least some and at times low levels of support from the local Camara hub.
- Some schools received good support but reported it to be not very consistent.

### Kenya

- A minority of schools reported a lack of support from the local Camara hub with computer maintenance - they indicated that they had received no support at all since receiving the computers.
- A greater number reported receiving the required assistance.
- Most reported receiving sporadic assistance and experiencing some delay of service delivery.

### Rwanda

- Some schools reported receiving no support from Camara's Rwandan hub.
- Most other schools reported receiving sporadic support.

### Ethiopia

- Camara support was received by a large number of schools but was also deemed time consuming and slow in many cases.

### Uganda

- Camara reportedly struggled to fix computers in some schools.
- In general the support was regarded as adequate though schools observed irregular contact from Camara and delayed support in some cases.
- Some schools reported having no visit from Camara for maintenance purposes while others reported receiving assistance once per term.

## Q13. Please indicate the biggest challenges

### Zambia

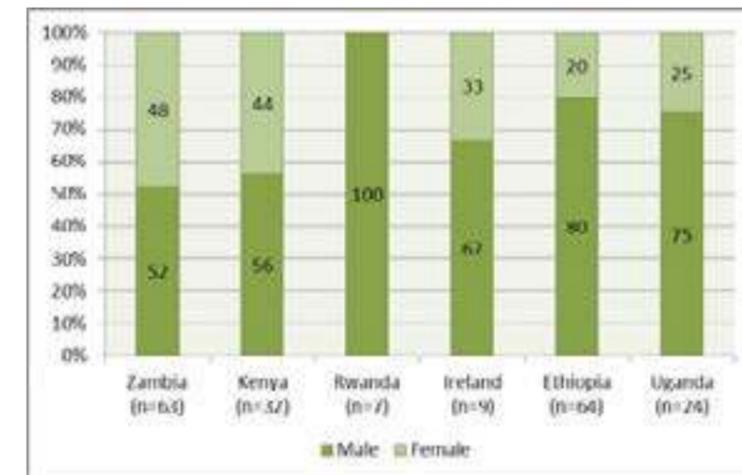
- Not enough computers for the students
- The challenge especially with Camara computers is that they are not compatible with ordinary computers. Printing from Camara to other computers or transfer is impossible.
- The biggest challenge is the internet connectivity. The wireless connection which was installed recently is unable to respond to Camara computers.
- Power supply is sometimes a challenge.

### Kenya

- Computers are not enough and the lab is also small.
- The hub assisted us in setting up this computer lab with basic requirements and safety measures but it has failed to carry out maintenance practices and repair.
- We lack enough trained manpower to handle computer classes.

# Teacher Report

## A. Characteristics of Respondents



There were more male teachers interviewed within each country although the differences between the proportions were not big as shown by the figures above. In Zambia, 63 teachers were interviewed with 52% of respondents being male and 48% female. The average age of the teachers was 36 years old.

The number of teachers interviewed in Kenya was 32 and 44% were female with 56% being male. The average age among the teachers was 34 years old.

100% of the teachers interviewed in Rwanda were male and the average age of these teachers was 29 years old. Compared to other countries, Rwanda has the youngest average age among the teachers (it also had the smallest sample size of any country) there were only 100 computers supplied to schools in Rwanda during the period covered by the questionnaire, as The Rwandan Government introduced a ban on the importation of refurbished computers in June 2009.

In Ireland, 33% of the 9 teachers interviewed were female and 67% were male. The average age of the teachers was 35 years old. While in Ethiopia, 80% of the 64 teachers were male and 20% were female and their average age was 32 years old.

Of the teachers interviewed in Uganda, 75% were male and 25% were female. The average age of the teachers was 32 years old.

Country	Mean Age	St. Dev.	Minimum Age	Median Age	Maximum Age	N
Zambia	36	7.32	24	36	54	63
Kenya	34	8.86	23	31	58	32
Rwanda	29	3.48	25	28	34	7
Ireland	35	8.46	25	35	48	8
Ethiopia	32	9.4	21	29	55	63
Uganda	32	6.05	25	30	47	24

### Rwanda

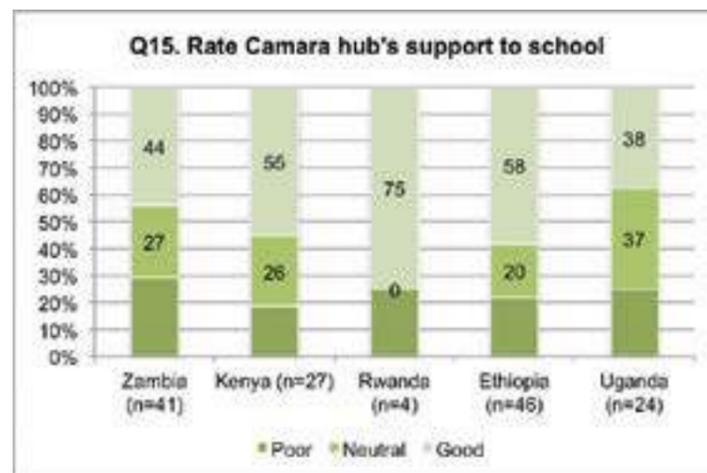
- Computers are not enough.
- No access to internet.
- Computers can be slow.

### Ethiopia

- Not all teachers are using the lab.
- Not enough trained teachers.
- Not enough computers.
- The software(Ubuntu) is not the same with the book prepared by Ministry of Education, problem in installing the software.

### Uganda

- The biggest challenge is that computers are not enough compared to the number of students.
- Lack of servicing and maintenance of the computers.
- Linux Operating system is hard and not examined and sometimes you cannot find some functions if you use Windows.
- Lack of enough training about Linux.



The respondents were also asked to rate the support they received from Camara on a scale of very poor, poor, neutral, good and very good. In Zambia, 44% said that the support is good and 29% said the support is poor with 27% being neutral.

Among the respondents in Kenya, 55% think that Camara Hub's support to school is good while 19% were not happy with the support given to their school with 26% being neutral. In Rwanda, 75% were happy with the support from Camara hub and 25% said the support was poor.

In Ethiopia, 58% of the respondents think that Camara hub gave good support to their school and 22% rated the support as poor with 20% being neutral.

Uganda has the lowest recorded proportion of respondents who were not happy with the support they got from Camara hub (38%). 25% reported that the support was poor and 37% were neutral.

## B. Teaching and use of Computer Laboratory

In Zambia, the average number of classes taught per week using the computer laboratory was 3, according to the respondents. The maximum number of classes was 16 per week and the minimum number of classes was one class per week. Ireland had the highest average number of classes using computers per week (8), while Ethiopia and Zambia had the least number of classes (3).

### Q1. Average number of class per week

	Mean	St. Dev.	Minimum	Median	Maximum	Sum	N	Missing
Zambia	3	3.01	1	2	16	157	49	14
Kenya	6	6.36	1	3.5	33	162	28	4
Rwanda	5	3.2	1	4	11	33	7	0
Ireland	8	11.09	1	5	33	58	7	2
Ethiopia	3	3.89	0	2	17	117	41	29
Uganda	4	2.05	1	4	8	103	24	0

The missing column reflects the questionnaires received with no data inputted- i.e. no answer given.

For each class, the average number of minutes spent teaching using the computer laboratory is shown in the table below. In Uganda the average number of minutes for each class as reported by the teachers interviewed was 135 minutes, Rwanda reported 129 minutes, Kenya reported 80 minutes, Zambia 71 minutes, Ireland 67 minutes and Ethiopia 45 minutes. The top five subjects taught using Camara computer laboratories were: IT/ICT, Maths, English, Science and Life Skills.

### Q2. Number of Minutes per class

	Mean	St. Dev.	Minimum	Median	Maximum	Sum	N	missing
Zambia	71	36.45	14	60	180	3464	49	14
Kenya	80	64.32	35	60	360	2385	30	2
Rwanda	129	22.68	120	120	180	900	7	0
Ireland	67	28.83	39.6	60	120	469	7	2
Ethiopia	45	10.6	2	45	60	1276	28	42
Uganda	135	36.48	60	120	180	3240	24	0

Examining the number of students per class reveals that Ethiopia had the highest average with 46 students per class followed by Kenya with 41, Rwanda with 30, Zambia with 28, Uganda with 25 and Ireland with 24.

### Q3. Number of students per class

	Mean	St. Dev.	Minimum	Median	Maximum	Sum	N	missing
Zambia	28	13.67	4	25	55	1369	49	14
Kenya	41	39.41	5	30	225	1259	31	1
Rwanda	30	2.89	25	30	35	210	7	0
Ireland	24	20.16	5	20	70	196	8	1
Ethiopia	46	8.83	25	47	61	2158	47	23
Uganda	25	11.4	10	23	55	598	24	0

## C. Number of broken computers

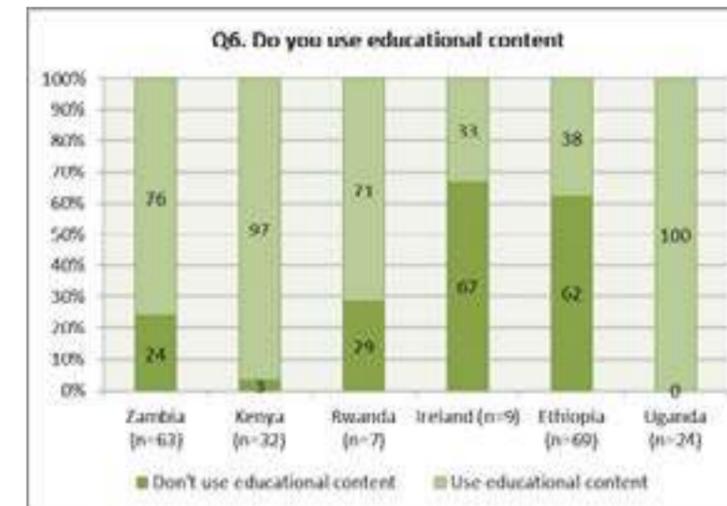
The country that reported the highest average of computers being broken during the reporting period was Rwanda with 6 per school, followed by Kenya with 5, Ireland, Ethiopia and Zambia all reported an average of 3.

### Q5. Number of broken computers

	Mean	St. Dev.	Minimum	Median	Maximum	Sum	N	missing
Zambia	3	3.52	0	1	17	171	63	0
Kenya	5	12.34	0	2	60	116	23	9
Rwanda	6	1.22	4	6	7	30	5	2
Ireland	3	2.42	0	0.5	6	10	6	3
Ethiopia	3	2.99	0	3	12	45	14	56
Uganda	4	1.97	1	4.5	8	103	24	0

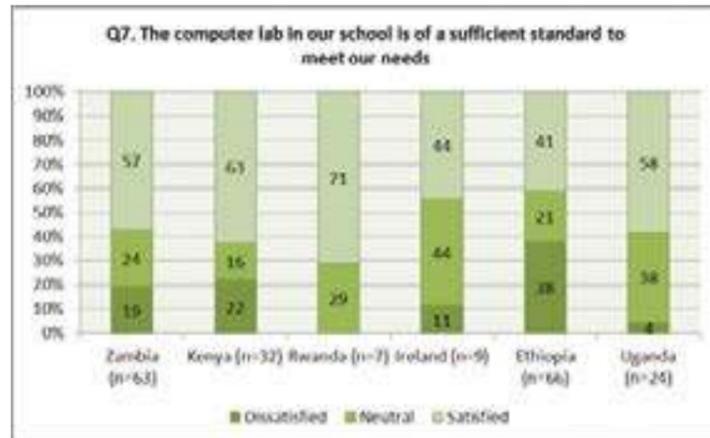
## D. Educational Content Usage

In Zambia, 76% of the teachers said that they used the educational content on Camara's computers, while 24% reported not using the educational content. Ireland and Ethiopia had a lower proportion of teachers using the educational content with only 33% and 38% of the teachers reporting using the available content respectively. Rwanda reported a high usage rate of 71%, while Kenya reported 97% usage- Uganda reported the highest usage rate of 100%. In all countries, the most used educational content was: Wikipedia, Tuxmath, Geogebra and Tuxtyping.

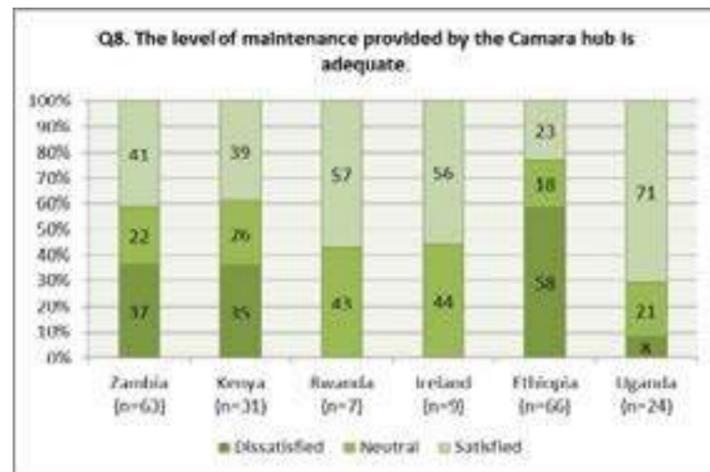


## E. Satisfaction with Camara Hub

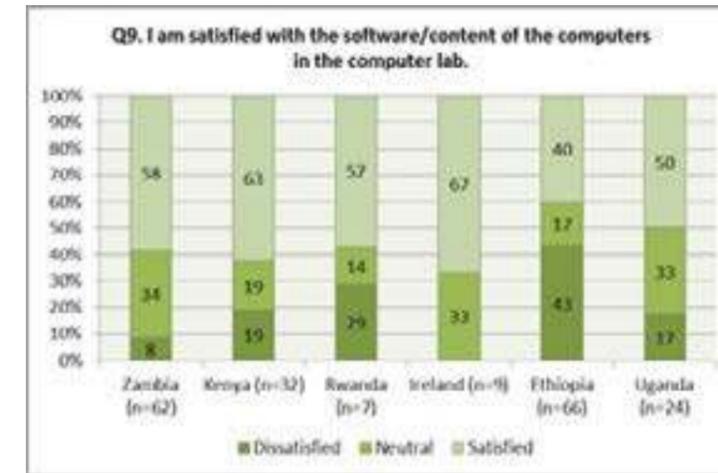
In Zambia, 57% of the teachers were satisfied with the standards of the computer laboratory in their school, 24% were neutral and 19% were not satisfied. In Kenya, a higher proportion (63%) reported that they are satisfied with the standards of the computer lab while 16% were neutral and 22% were not satisfied. Rwanda reported 71% of teachers who are satisfied and 29% neutral, Uganda reported a 58% satisfaction rate with 38% dissatisfied and 4% neutral, Ireland reported 44% satisfied, 44% dissatisfied and 11% neutral and Ethiopia reported a satisfaction rate of 41% with 38% being dissatisfied and 21% neutral.



In Zambia, 41% of the teachers reported being satisfied with the level of maintenance provided by the Camara hub, while 37% were not satisfied. The highest satisfaction rates were reported in Uganda, Rwanda and Ireland, with 71%, 57% and 56% satisfaction rates respectively, while Ethiopia reported the highest rate of dissatisfaction at 58%. Kenya reported a satisfaction rate of 39% and a dissatisfaction rate of 35%.



When asked about their satisfaction with the software or content of the computers in the laboratory, 58% of the teachers in Zambia said that they are satisfied. Over 50% of teachers in Kenya, Rwanda and Ireland also reported satisfaction with the content (Ireland having the highest reported satisfaction rate of 67%). While in Ethiopia, only 40% were satisfied and 43% were not satisfied.



The figure below shows the percentage of teachers by country who agreed or disagreed with the statement about Camara computers improving teaching and learning at their school. The majority of the teachers interviewed in Zambia, Kenya, Rwanda, Ireland and Ethiopia think that Camara's computers have improved teaching and learning in their schools. Ethiopia has the lowest proportion of teachers agreeing with the statement (53%) compared to other countries who all reported at least 60% or above agreement. Ethiopia also had the highest percentage of respondents who disagreed with the statement (29%) with only two other countries reporting any disagreement, namely Zambia (13%) and Kenya (6%).



# Student Report

## F. Recommendations (Other support and Services Needed)

### 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

### Training

- More trainings for the teachers, longer term trainings, regular trainings if possible
- Camara staff should visit schools once a year to educate all the teachers in computer literacy and administer tests with certificates of competence/completion for those who pass
- Trainings on computer maintenance, use of computer lab, Camara and related programmes 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)

## A. Characteristics of Students Sample

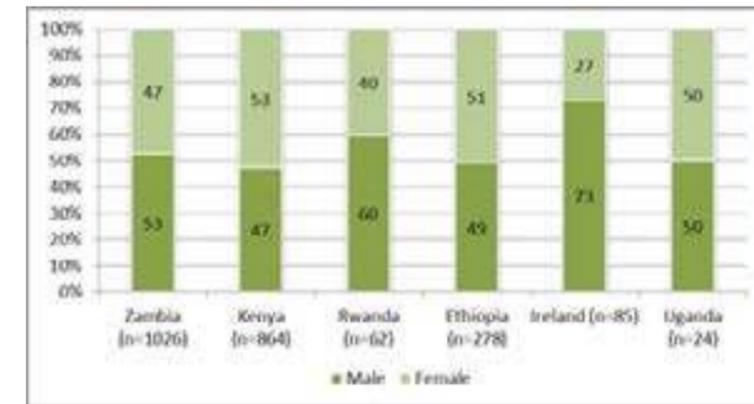


Figure 1: Gender Distribution of Students by Country

### 1. Zambia

In Zambia, the total number of students interviewed was 1,026, 53% of these students were female and 47% were male. The difference between sexes is not significant which could mean that there's equal opportunity for male and female students to be interviewed or to access the computer laboratory. The average age of students interviewed in Zambia was 17 years old. The youngest student interviewed was six years old and the oldest was 36 years old.

### 2. Kenya

In Kenya, a total of 864 students were interviewed from different schools. The average age of the students interviewed was 15 years old, the youngest to be interviewed was 9 years old and the oldest was 36. Kenya's respondents were composed of 47% female students and 53% male students.

### 3. Rwanda

Rwanda had a higher proportion of female students interviewed than the other countries, although the total number of students interviewed is considerably lower at 64. There was a gender differential of 20% with 40% of respondents being male and 60% being female. The average age of the students interviewed was 20 years old. The youngest student interviewed was 9 years old and the oldest was 35 years old.

### 4. Ethiopia

In Ethiopia, 278 students were interviewed from 15 schools. Among the students interviewed, 49% were female and 51% were male. The youngest student interviewed was 11 years old and the oldest was 20 years old. The average age for the sample is 15 years old.

### 5. Ireland

A total number of 85 students were interviewed in Ireland. Among these students, 27% were female and 73% were male. The youngest student interviewed was 9 years old and the oldest was 14 years old. The average age for the sample is 11 years old.

### 6. Uganda

In Uganda, 50% of the 24 students interviewed were female and 50% were male. The youngest age of the student interviewed was 10 years old and the oldest was 26 years old. The average age for the sample is 17 years old.

Age	Mean	St. Dev.	Minimum	Median	Maximum	N	missing
Zambia	17	4.43	6	16	36	1009	17
Kenya	15	2.52	9	14	36	863	2
Rwanda	20	3.07	13	20	35	62	0
Ethiopia	15	1.68	11	15	20	275	5
Ireland	11	1	9	11	14	85	0
Uganda	17	4.63	10	16	26	24	0

Table 1: Average age of students by country

## B.1. Daily Computer Usage

The figures below show the percentage of students (vertical side of chart) and the reported amount of time they spent using the computer laboratory for their class and school work per day (in minutes, horizontal side of chart).

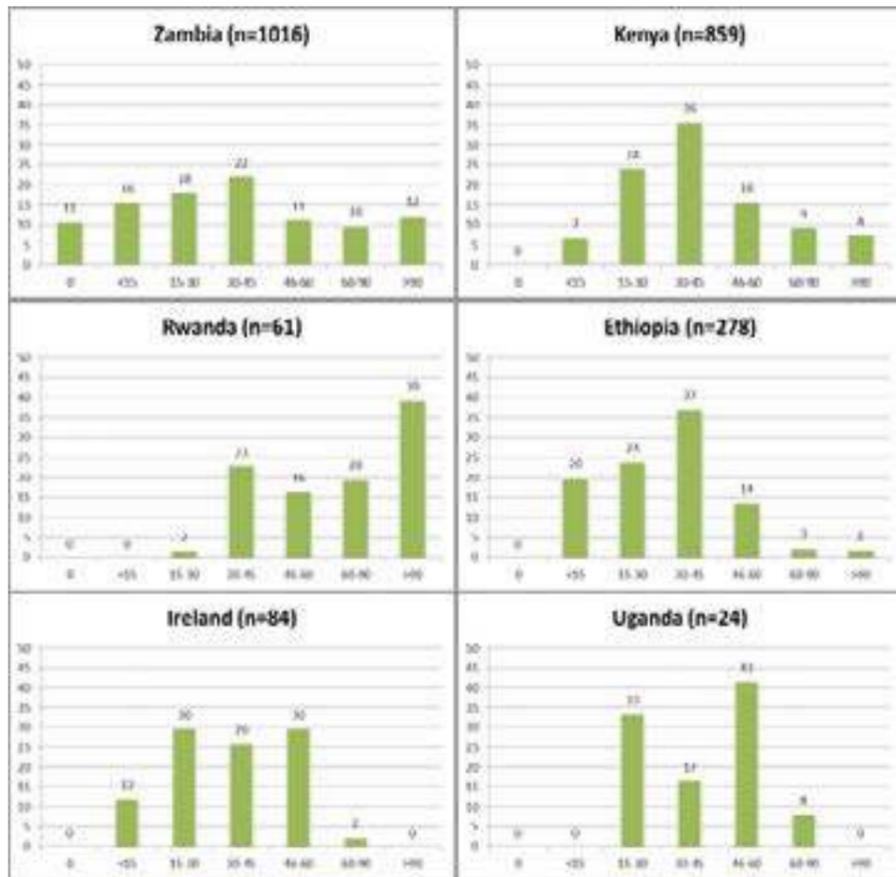


Figure 2: Number of minutes using Camara computer per day

### 1. Zambia

In Zambia 22% of 1,026 students reported using the computer for 30 to 45 minutes in a day. 22% used the computer for an hour or more and a small proportion of 11% reported not using a computer. Of those who reported using a computer, 60% said that they had to share with another student the last time they used it, while 40% did not have to share. Schools in the Copperbelt, Lusaka and Southern provinces each have more than 50% of students reporting sharing a computer at last usage, compared with Central province where almost 80% of students reported having enough computers to be able to use one without sharing with another student, at last usage.

### 2. Kenya

Thirty-six percent of 865 students interviewed used the computer for 30 to 45 minutes in a day, while 31% used

it between 1 to 30 minutes and 34% used the computer for 45 minutes or more per day. Seventy-one percent of those who used a computer had to share the computer with another student, while only 29% used the computer by themselves. A higher proportion of students in Western province had to share a computer than students in Coast province. This information demonstrates that the Coast province had a better ratio of computers to students allowing for more individual access to computers for the students to use, in comparison to the Western province.

### 3. Rwanda

Out of 62 students in Rwanda, 41% reported that they used the computer less than an hour in a day while 59% reported their usage is more than an hour in a day. The majority (98%) of the students had to share the computer the last time they used them.

### 4. Ethiopia

In Ethiopia, 45% of 280 students used the computer for less than 30 minutes in a day while 36% used computers between 30 to 45 minutes and only 19% used a computer for more than 45 minutes. For those who use the computer, 74% had to share with another student the last time they used and only 26% did not have to share. This indicates that schools in Ethiopia that were interviewed for this study are lacking sufficient access to computers to allow students individualized computer time.

### 5. Ireland

Out of 84 students in Ireland, 98% reported that they used the computer for an hour or less in a day while only 2% reported their usage is more than an hour in a day. The majority (58%) of the students had to share the computer the last time they used them.

### 6. Uganda

Out of 24 students in Uganda, 92% reported that they used the computer for an hour or less in a day while only 8% reported their usage is more than an hour in a day. The majority (100%) of the students had to share the computer the last time they used them.

	Male	Female	Total
Zambia	2.7	3	2.8
Kenya	3.4	3.1	3.2
Rwanda	4.9	4.4	4.7
Ethiopia	2.7	2.5	2.6
Ireland	2.7	3.1	2.8
Uganda	3.3	3.2	3.3

Table 2: Time spent using computer per day

The table above shows the mean score for each country by gender and aggregate in terms of usage of computer in a day. The scale is from 0 to 6 where: 0 = never used, 1 = used less than 15 minutes, 2 = used from 15 to 30 minutes, 3 = used from 30 to 45 minutes, 4 = used from 45 to 60 minutes, 5 = used from 60 to 90 minutes, and 6 = used more than 90 minutes. Looking at each country, Rwanda reported the highest usage time compared to other countries with a 4.7 mean score which represents a daily usage time of 60 to 90 minutes- this is consistent with the findings of the teacher questionnaire which reported that Rwanda also had the highest length of class time using computers. Meanwhile, Ethiopia has the lowest mean score (2.6) which means they have lowest daily usage of computers, again this is consistent with the answers teachers provided in the teacher questionnaire. The overall average for Camara's partner schools was 3.3 meaning that students in responding to our questionnaire used Camara computers an average of 30 to 45 minutes per day. The difference between reported mean usage for genders were low and do not indicate any statistically significant differential.

## B.2. Frequency of computer use in a week

This section discusses 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 percentage students responding to the questionnaire reported to have used the computer once in the last week.

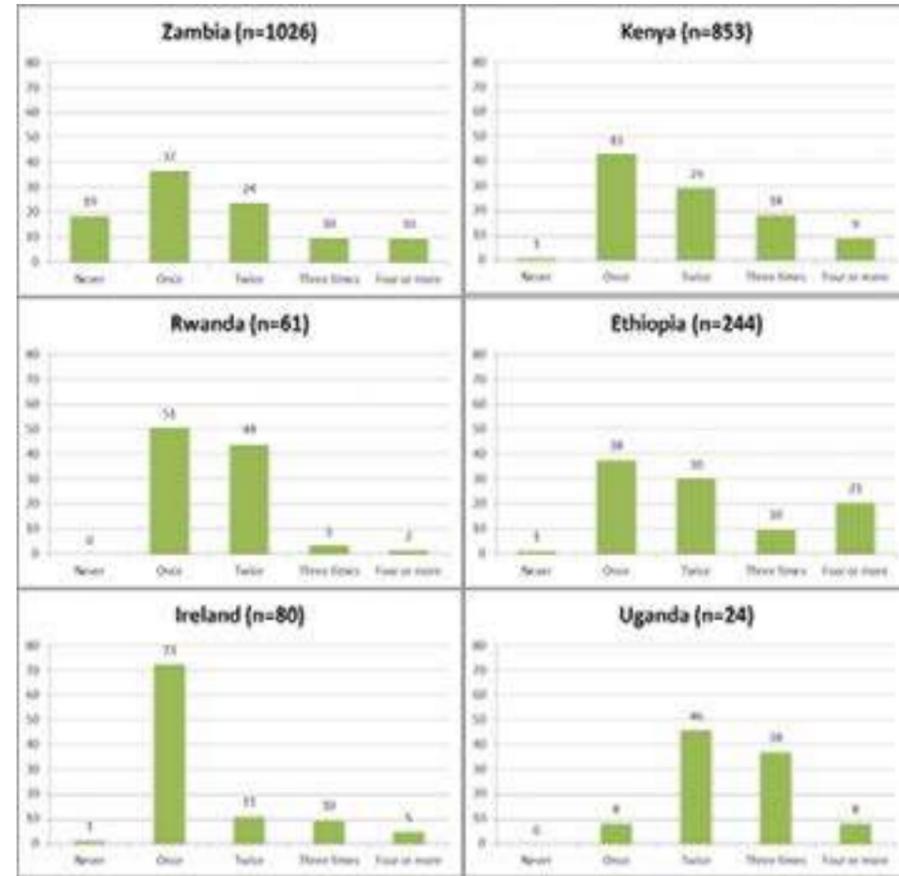


Figure 3: Frequency of use in a week

### 1. Zambia

The figure above shows the frequency of computer usage for the last week as reported by 1,026 students interviewed in Zambia. Thirty-seven percent used the computer laboratory once in the last week, 24% used it twice, 11% three times and 10% for more than 3 times. A proportion of 19% had not used a computer in the last week.

### 2. Kenya

In Kenya, 43% of 865 students said that they used the computer once in the last week, 29% used it twice, 18% used it for three times and 9% used it four times or more. No students reported not using the computer at all in the week prior to being administered the questionnaire.

### 3. Rwanda

Out of 62 students interviewed, 51% have used the computer in the laboratory once in the last week while 49% used it more than once. No students reported not using the computer at all in the week prior to being administered the questionnaire.

### 4. Ethiopia

In Ethiopia, 37% of the students used the computer once in the last week, 30% used it twice, 10% used it three times and 21% used it more than three times. One percent students reported not using the computer at all in the week prior to being administered the questionnaire.

### 5. Ireland

Out of 80 students who answered this question, 73% have used the computer once in the last week. One percent of the students reported not using the computer in the last week.

### 6. Uganda

Of the students interviewed in Uganda, only 8% have used the computer once in the last week. The majority reported using them at least twice in the last week.

### B.3. Computer Programme Usage

	OpenOffice Word	Spreadsheet	Firefox
Zambia	0.9	0.5	0.5
Kenya	1.5	1	0.7
Rwanda	1	0.3	.

Table 3: Average number of times using programs per week

Students from each country were asked how many times they used OpenOffice word, spreadsheet and Firefox in the last week. The table above shows the average number of times of use for each program by country. Ethiopia did not have data on this indicator. Zambia has an average of OpenOffice word used 0.9 times, spreadsheet used 0.5 times and Firefox used 0.5 times per week. Kenya reported higher usage rates as can be seen in the above table, while Rwanda reported a slightly higher rate of OpenOffice word usage but a lower rate of using spreadsheets and Firefox. Only three countries gave the number of times they have used these programme in the last week.

### C. Perception on Computer Laboratory

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

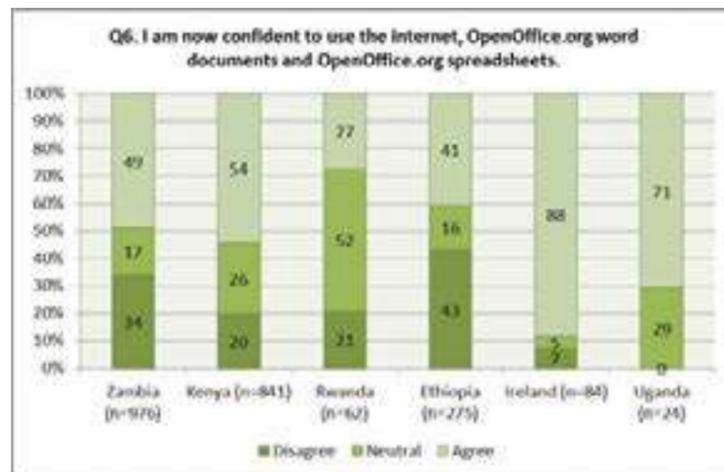


Figure 4: Students confidence using internet and OpenOffice

Among the students interviewed in Zambia, 49% reported that they are now confident in using the internet, OpenOffice word documents and spreadsheets. 34% are not confident with 17% being neutral.

Kenya, on the other hand, had 55% of the students reporting that they are now confident in using the internet, OpenOffice word documents and spreadsheets. Although 20% still don't have confidence and 26% are neutral.

In Rwanda, only 27% of the students agreed to the statement that they are now confident in using the programs (internet, OpenOffice Word, and spreadsheet), 52% are neutral and 21% disagreed.

Ethiopia has the highest proportion of students (43%) who feel that they are still not confident in using the computer programmes mentioned above. While 40% reported feeling confident, with 16% being neutral.

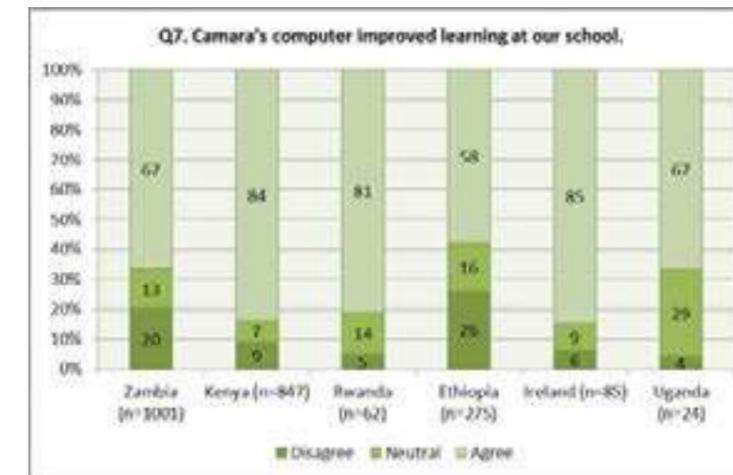


Figure 5: Perceptions of Camara computers improving learning at school

The figure above shows that Camara's computers have improved learning at schools according to the students interviewed - each country reported a positive majority of students believing that their learning had been improved by access to and use of Camara computers. In Zambia, 67% agreed with the statement about Camara's computers improving learning in school, 13% are neutral and 20% disagreed.

In Kenya, a large majority (84%) felt that learning at their school had improved because of the computers in the laboratory provided by Camara, 7% neither not agree nor disagreed with the statement and 9% disagreed with the statement.

In Rwanda, 81% agreed that Camara computers improved learning at their school, 14% were neutral and 5% disagreed with the statement.

58% of respondents in Ethiopia felt that computers provided by Camara had improved learning in their school, 16% were neutral and 26% disagreed on the statement. Among the countries, Ethiopia has highest proportion of students who did not believe that Camara computers had improved learning in their school.

In Ireland, 85% of students agreed that Camara computers had improved learning at their schools, 9% were neutral and 6% disagreed.

In Uganda, 67% agreed, 29% were neutral and 4% disagreed.

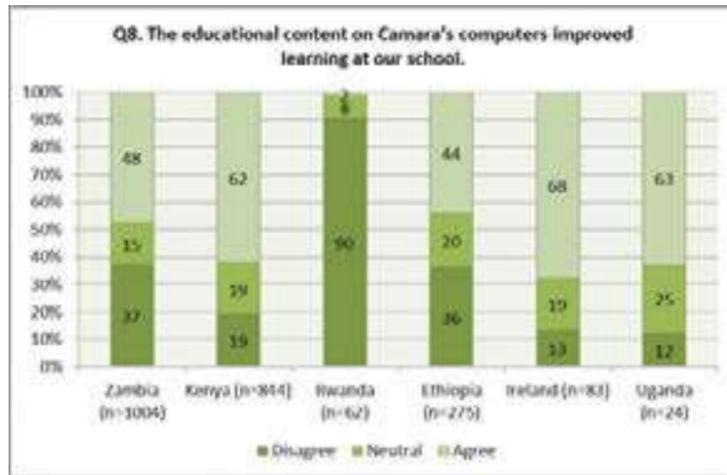


Figure 6: Perceptions of the educational content of Camara computers improving learning at school

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 Zambia, 48% of the students agreed, 15% are neutral and 37% disagreed with the statement.

In Kenya, 62% of the students think that the educational content on the computer improved learning at their school, 19% are neutral and 19% disagreed with the statement.

A clear majority of the students (90%) interviewed in Rwanda disagreed with the statement that the educational content on Camara computers improved learning at their school, 8% were neutral and only 2% agreed.

Ethiopia, on the other hand, reported 44% of its students interviewed who think that learning in their school was improved because of the educational content on Camara computers, 20% are neutral and 36% didn't think that it improved learning.

In Ireland, 68% agreed with the above statement, 19% were neutral and 13% disagreed.

In Uganda, 63% agreed with the statement that the educational content on Camara computers helped to improve learning at their school, while 25% were neutral and 12% disagreed with the statement.

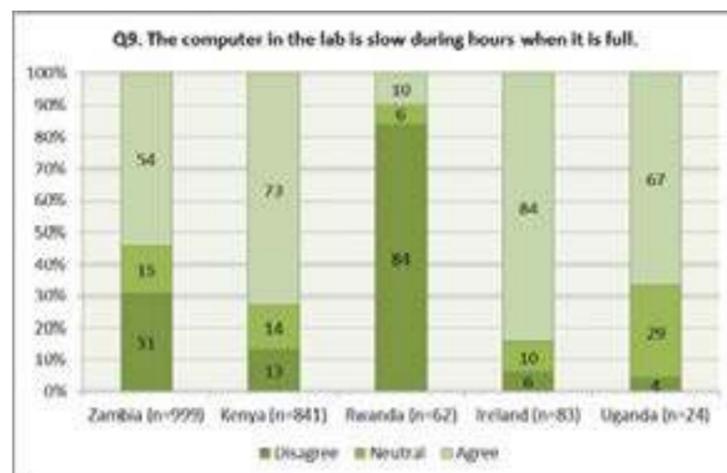


Figure 7: Speed of computer during peak lab hours

In Zambia, 54% of the students thought that the computers in the lab slowed down during hours when it is full, 15% are neutral and only 31% think there is no problem with the speed of the computer.

Kenya seem to experience problems with computer speed during busy hours as 73% of students agreed with the statement above, 14% are neutral and 13% think that the computer is not slow during hours when it is full.

84% of the students interviewed in Rwanda disagreed on the statement, 10% thinks that computers are slow during busy time and 6% are neutral.

Ethiopia did not record any data for this question.

In Ireland 84% of students agreed with the statement, 10% were neutral and 6% disagreed.

In Uganda 67% of students agreed, 29% were neutral and 4% disagreed.

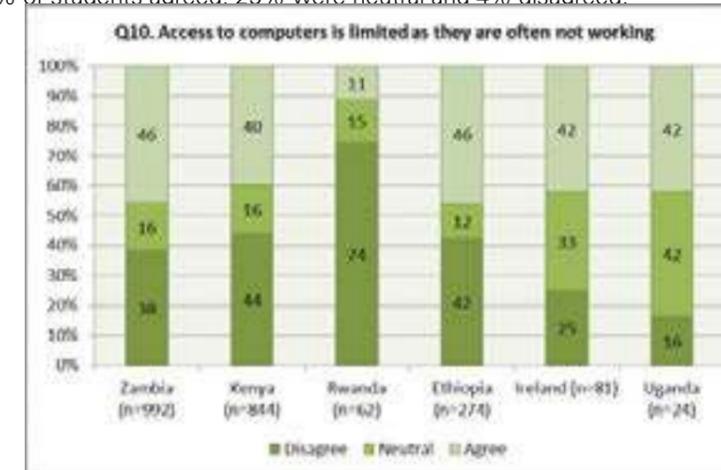


Figure 8: Accessibility of computers

In terms of access to computers, in Zambia, 38% of students thought that access was not limited while 46% thought that there was not enough access to the computers as they were often not working and 16% were neutral.

In Kenya, 40% of the students thought that access to computers was limited as they are often not working, 16% were neutral and 44% disagreed with the statement.

Rwanda, on the other hand, does not report the same level of problems accessing computers as 74% of the students disagreed with the statement above, 15% were neutral and only 11% thought that access was limited.

In Ethiopia, 46% of students agreed that access to computers was limited, 42% disagreed and 12% were neutral.

In Ireland, 42% of students agreed that access to computers was limited, 33% disagreed and 25% were neutral.

In Uganda, 42% of students agreed that access to computers was limited, 42% disagreed and 16% were neutral.

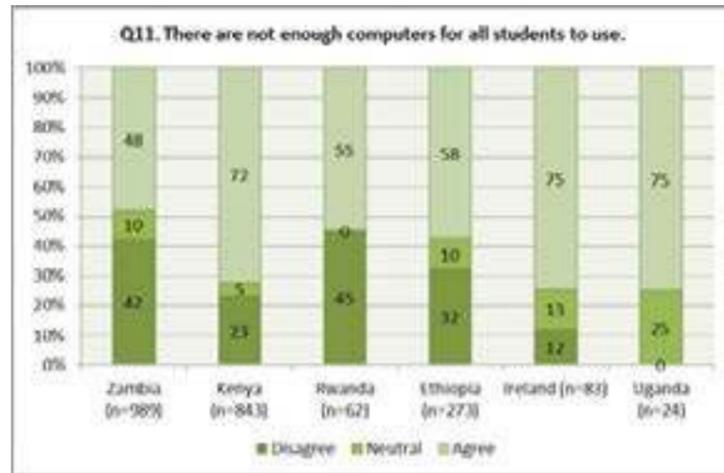


Figure 9: Adequate number of computers at school

In Zambia, 48% of the students think that there are not enough computers for all students to use in their school, 10% are neutral and 42% think that there are enough computers for all students.

The majority of the students (72%) in Kenya thinks that there are not enough computers for all students to use and 23% believed differently, only 5% are neutral.

In Rwanda, 45% of the students believed that there are enough computers for all students to use in their schools while 55% think that there are not enough computers.

In Ethiopia, 58% of students disagreed with the statement about having not enough computers in school, 32% on the other hand believed that there is enough computers for all students and 10% are neutral.

In Ireland 75% of students agreed that there was not enough computers for all students to use while 13% were neutral and 12% disagreed.

In Uganda 75% of students agreed that there was not enough computers for all students to use while 25% were neutral.

## 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) or having opened recently. 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. While not achieving its computer dispatch target, it exceeded significantly on the training. Camara Kenya knocked Camara Ireland into second place and still scored very strongly. Camara Ethiopia put in another strong performance moving from fourth to third, dispatching the most computers than any other hub in the network. Camara Zambia remained steady scoring 69% for the second year in a row. Both Camara Jamaica and Camara Lesotho had challenging years and scores fell. Due to the computer refurbishment bans, Uganda and Rwanda continued to score low based on restricted activities.

Category	Question	Max score	Kenya	Zambia	Lesotho	Ethiopia	Rwanda	Uganda	Jamaica	Ireland
Training	Teachers trained versus target	15	15	15		12			8.0	15
	Teachers per PC dispatched(target 1:4)	5	5	4	5	3		5	3.0	4
	Training course quality	10	7	6	3	5		2	3.0	5
	Total teachers trained versus average (386)	5	5	4	2	3		1	2.0	3
	PCs dispatched versus target	6	3	4		5			3.0	5.0
Technology	% of PCs received that were dispatched	5	3	3		6			4.0	
	% of PCs still functioning from M&E	5	4	2		4	2	4		4
	% of PCs dispatched with €5 held for recycling	3	3	1	0	3	1	0	2	3
	PCs recycled from schools	2	2	1	0	0	0	0		
	Total PCs dispatched versus average (962)	4	4	4	0	4			3	3
	Number of schools visited for M&E versus total	5	3	4	0	4	1	2	0	0
	Quality of data back from hub	5	4	3	1	3	1	1	2	5
Management & Governance	Timeliness and quality of weekly/monthly report	3	2	2	1	2	1	1	2	2
	Timeliness and quality of financial report	3	2	1	0	2	1	1	1	3
	Hub profitability	5	3	3	0	3	3	0	3	3
	Financial sustainability	5	3	2	1	3	1	0	2	4
	External audit	3	1	1	0	3	0	0	1	3
	Staffing versus plans	2	2	1	1	2	1	1	1	2
	Communication with CEL	3	3	3	1	3	1	1	2	
	Minuted Board meetings	3	3	3	1	2	1	1	2	
	Adherence to tax and legal obligations	3	3	2	1	3	2	2	2	3
<b>Total Possible Score</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>69</b>	<b>100</b>	<b>50</b>	<b>70</b>	<b>93</b>	<b>87</b>
<b>Actual Score</b>			80	69	17	75	16	22	46	67
<b>% Performance</b>			80	69	25	75	32	31	49	77



# CONTACT US



Children's Home, Mombasa, Kenya.

## European Contacts

### Camara Dublin

Camara Education  
Chapelizod Industrial Estate  
Dublin 20

email: [info@camara.org](mailto:info@camara.org)  
tel: +353 (0)1 6522665

### Camara Galway

Galway (NUI)  
18 Distillery Road  
Galway

email: [galway@camara.org](mailto:galway@camara.org)  
tel: +353 (0)91 495336

### Camara Belfast

Camara Education  
Unit 10 Townsend Enterprise Park  
Townsend Street  
Belfast BT13 2ES  
Northern Ireland

email: [belfast@camara.org](mailto:belfast@camara.org)  
tel: +44(0)28 905811812

### Camara UK Learning

Camara Learning  
241a Portobello Road  
London W11 1LT  
England

email: [londoninfo@camara.org](mailto:londoninfo@camara.org)  
tel: +44 (0)207 2437402

## American Contacts

### Camara US

Suite 102  
1020 Commercial Street  
CA 95112  
USA

email: [bayareainfo@camara.org](mailto:bayareainfo@camara.org)  
tel: +1 6504756794

## Education Hubs

### Camara Ireland

email: [ireland@camara.org](mailto:ireland@camara.org)

### Camara Ethiopia

email: [ethiopia@camara.org](mailto:ethiopia@camara.org)

### Camara Kenya

email: [kenya@camara.org](mailto:kenya@camara.org)

### Camara Rwanda

email: [rwanda@camara.org](mailto:rwanda@camara.org)

### Camara Lesotho

email: [lesotho@camara.org](mailto:lesotho@camara.org)

### Camara Uganda

email: [uganda@camara.org](mailto:uganda@camara.org)

### Camara Zambia

email: [zambia@camara.org](mailto:zambia@camara.org)

### Camara Tanzania

email: [tanzania@camara.org](mailto:tanzania@camara.org)

### Camara Jamaica

email: [jamaica@camara.org](mailto:jamaica@camara.org)

For more info visit: [camara.org](http://camara.org)

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

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