

# **Tanzania Training M&E Report 2009**

## **Introduction**

The surveys were administered in paper format to trainees in two schools directly after the Africa '09 training. Respondents were asked to give their names, and the volunteer team both delivered the training and administered the surveys which compromises the data somewhat. Nonetheless, respondents seem to have been quite frank, and the data obtained is certainly useful. Unfortunately volunteers did not administer a baseline perceived self-efficacy survey, but the findings of that section provide a valuable insight into the complexity of the context in which Camara works.

## **Section One- All respondents**

### **1. Trainee Profiles**

Total number of respondents	52
Male	32 (62%)
Female	20 (38%)
Mean Age	30
Median Age	28
Age range	16- 65
Number of teacher respondents	25 (49%) <sup>1</sup>
Number of school student respondents	9 (18%)
Number of school administrator respondents	4 (8%)
Number of respondents with no school function	13 (25%)
Male teachers	21 (84%) <sup>2</sup>
Female teachers	4 (16%)

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<sup>1</sup> Of 51 respondents. One respondent did not specify their occupation.

<sup>2</sup> Of the 25 teachers who responded.

Considering that Tanzania was the only Africa '09 country without a Hub the trainee profiles are quite positive. While the gender balance is decidedly skewed, there was sizeable female participation which can be developed in the coming years. However, what was notable was the fact that all of the school students who responded were male. Even more pressing was the fact that only 16% of the teachers who participated were female.

The fact that such a sizeable proportion of the respondents were teachers, students or school administrators (75%) is very positive. The other respondents included a hospital laboratory technician, a librarian, three monks, two novices, two postulants, two nurses, one religious sister, and a pharmaceutical assistant. One of the teachers who attended the training was also deputy-vice principal in his school. The vast majority of respondents from schools had either received or been promised Camara computers, which is clearly positive.

Number school respondents from recipient schools	27 (69%) <sup>3</sup>
Number of respondents from schools that were not recipients	3 (8%)
Number of school respondents who were unsure	9 (23%)

## 2. Training Modules

Total number of courses attended by respondents	66
Intermediate Skill-builder	10 (15%)
Networking	2 (3%)
Basic Skill-builder	38 (58%)
PC Repair and Maintenance	6 (9%)
Moodle	10 (15%)
Respondents who attended one course	36 (72%) <sup>4</sup>
Respondents who attended two courses	12 (24%)
Respondents who attended three courses	2 (4%)

<sup>3</sup> Of 39 respondents. 13 respondents were not associated with schools.

<sup>4</sup> Of 50 respondents. Two did not specify the courses they attended.

The data regarding what training courses were attended is quite useful in several respects. Firstly, it implies that a large proportion of the respondents were very inexperienced in ICT and needed to attend the basic Skill-builder course. Secondly, it suggests that only 28% of respondents chose to do more than one course, despite presumably having the option to do more. This is particularly interesting given the fact that there was considerable demand for more training, and that training was given free-of-charge. There is certainly some basis to conclude that respondents were either unaware of the additional training available, or else that they were offered additional modules but declined. The obvious solution is to ask the volunteers involved.

### 3. Distances travelled for training

Less than 5km	35 (69%) <sup>5</sup>
5-10km	4 (8%)
10-40km	0
40-100km	5 (10%)
100-200km	5 (10%)
Over 200km	2 (4%)

Naturally a large proportion of the trainees were from the local area. This is probably inevitable, and in no way undermines the project provided the trainees are primarily teachers from schools that have received Camara computers. Surprisingly there were no respondents from 10km-40km from the training centres, which is very difficult to explain. It would be interesting to find out how the course was advertised. The fact that two teachers whose schools had received Camara computers travelled over 200km to receive training is very positive. However, the regular training over long periods which Camara is considering would be very logistically difficult for these teachers. There is a strong argument for giving computers to schools in geographical clusters to facilitate proper training, maintenance, and monitoring. All respondents reported that they had attended all four or five days (depending on the school) of the training course. Again, this should be verified with the volunteers.

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<sup>5</sup> Of 51 respondents. One did not specify the distance travelled.

#### 4. Trainee Course Timing Preferences

Respondents who want future training to be full-time	45 (88%) <sup>6</sup>
Respondents who want future training to be part-time	6 (12%)
Respondents who want future training to last 1 week	1 (2%) <sup>7</sup>
Respondents who want future training to last 2 weeks	4 (8%)
Respondents who want future training to last 1 month	11 (22%)
Respondents who want future training to last 3 months	15 (31%)
Respondents who want future training to last 6 months	10 (20%)
Respondents who want future training to last over 6 months	8 (16%)

The responses for preferred length of future courses are surprising. The fact that two-thirds of respondents want training courses to last three months or more is very encouraging at first sight as it suggests that a more long-term programme would be warmly received. However, there is some reason to believe that respondents answered their preferred length without considering external obstacles. This is clearly a cultural or linguistic quirk, since all of the trainees were in some form of full-time employment and could not possibly complete six months of full-time training. The fact that the training was free was presumably an influential factor.

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<sup>6</sup> Of 51 respondents. One did not specify.

<sup>7</sup> Of 49 respondents. Two did not specify.

## Section Two- All respondents

### Self-Efficacy

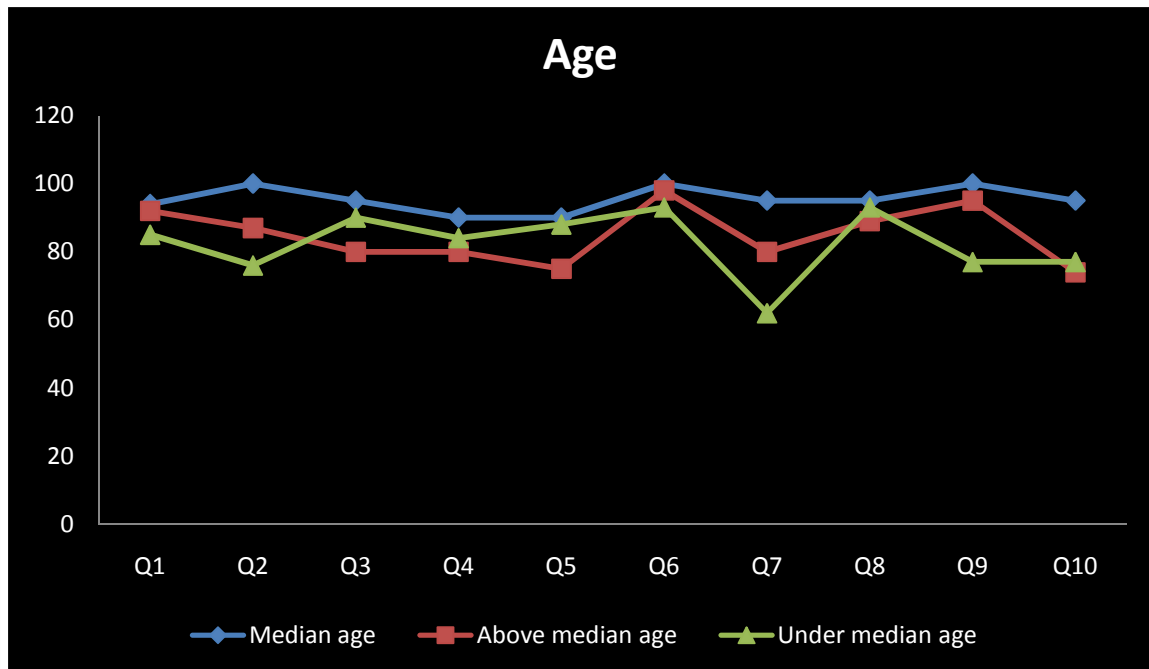
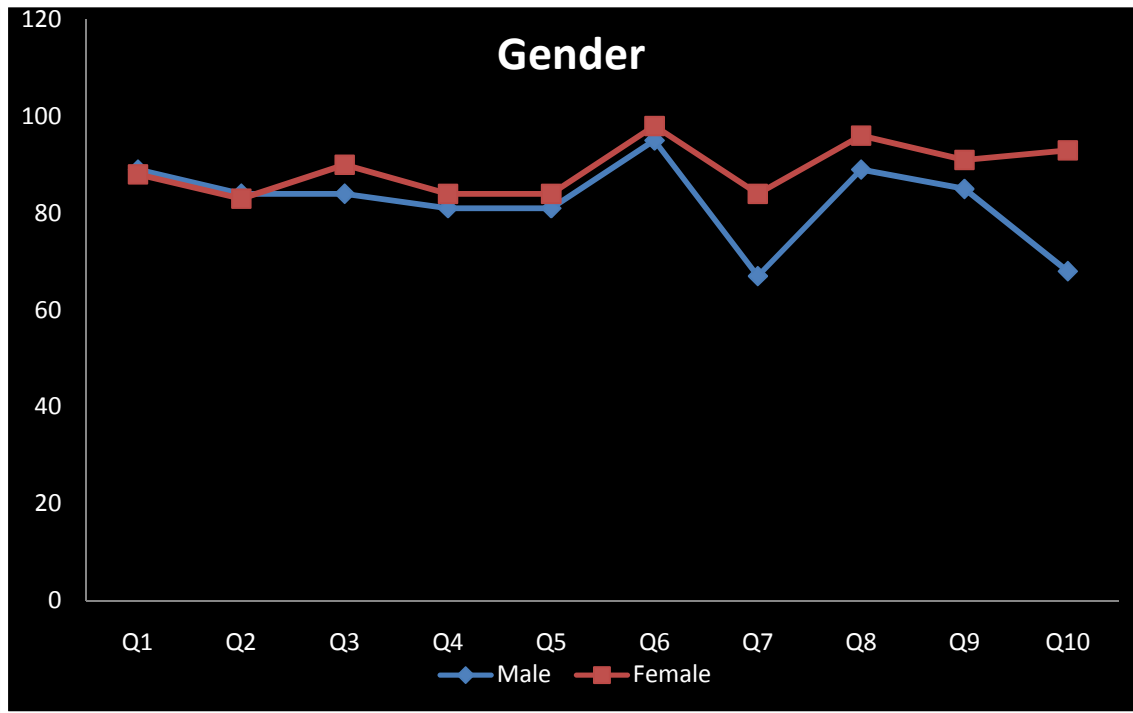
Perceived self-efficacy can be described as self-belief in one's abilities to succeed in specific situations. It has been shown to have ramifications in terms of how people approach problems, perseverance, and resilience to adversity.<sup>8</sup> The self-efficacy section of the survey was introduced in view of the fact that without direct testing objective measures were unachievable for 2009. Unfortunately, the survey is limited by the fact that a baseline was not established prior to the training. Nonetheless, there are valuable insights apparent in terms of average gender, age, and occupational differentials. The respondents were asked to rate how true each of ten statements were for them. To quantify the data, a score was then allocated to each answer as the statement became increasingly true. The questions are standardised and extremely robust, though volunteers reported some linguistic issues. The findings are graphed overleaf. The scores were allocated as follows:

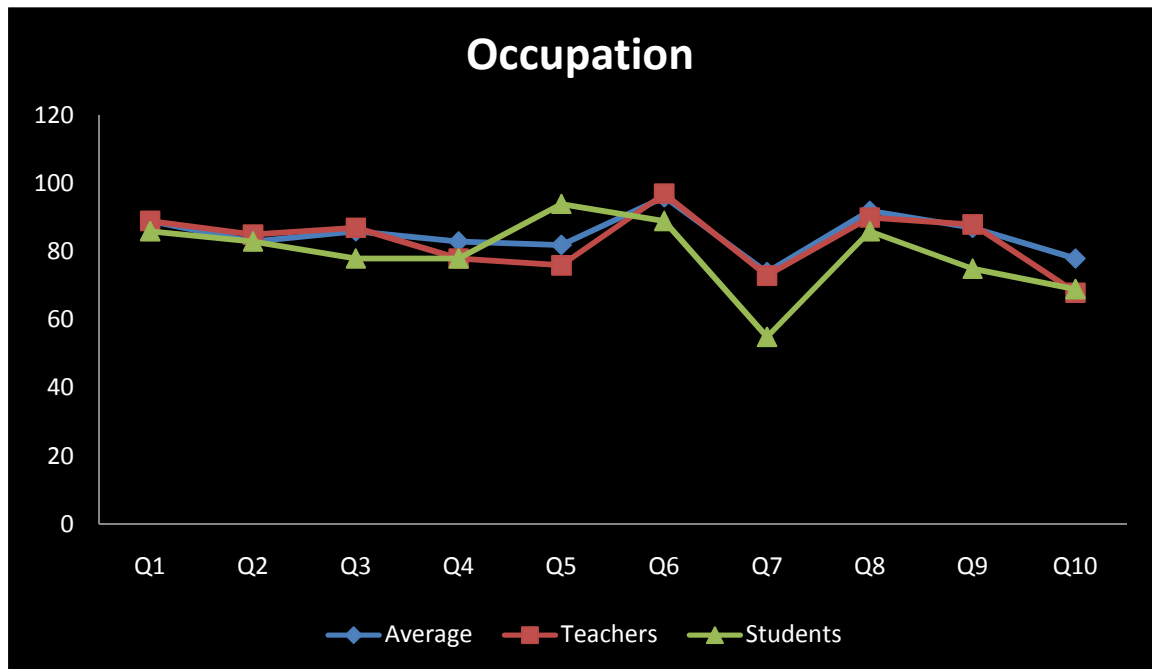
Exactly true	100 points
Moderately true	75 points
Hardly true	50 points
Not at all true	25 points

### Questions:

- 1. I can always manage to solve difficult problems if I try hard enough.**
- 2. If someone opposes me, I can find the means and ways to get what I want.**
- 3. It is easy for me to stick to my aims and accomplish my goals.**
- 4. I am confident that I could deal efficiently with unexpected events.**
- 5. Thanks to my resourcefulness, I know how to handle unforeseen situations.**
- 6. I can solve most problems if I invest the necessary effort.**
- 7. I can remain calm when facing difficulties because of my coping abilities.**
- 8. When I am confronted with a problem, I can usually find several solutions.**
- 9. If I am in trouble, I can usually think of a solution.**
- 10. I can usually handle whatever comes my way.**

<sup>8</sup> For more on self-efficacy read <http://www.des.emory.edu/mfp/BanEncy.html> Accessed 22<sup>nd</sup> September 2009.





Despite the research limitations, the findings are extremely interesting. The most notable aspect was the fact that gender, rather than age or occupation, was the biggest determinant of self-efficacy. Even more surprising was the fact that female respondents reported higher levels of perceived self-efficacy in eight of the ten questions. This is highly contradictory to what would have been expected, and is very difficult to explain. In this regard it would have been particularly useful to have undertaken a baseline study so as to ascertain what impact the training had in this regard. Notably, the two questions where women scored significantly higher than men in terms of perceived self-efficacy both concerned coping abilities.

A disaggregation of age also provided significant insights into the self-perceptions of the respondents. Older respondents scored higher than younger respondents in terms of being able to solve difficult problems and overcome opposition from others. Younger respondents perceived themselves as being more able in terms of accomplishing goals, dealing with unexpected events, and handling unforeseen situations. The major differential between the two age groups was younger respondents' low perceptions of their own coping abilities.

The median age of the respondents was 28, and the 5 trainees of this age reported the highest perceived self-efficacy of any group. Whether this was a function of their age or a response to the ages of other trainees in the group is difficult to ascertain. The median age respondents reported on average 90 points or over for every question. In three cases all five respondents reported that the statements were exactly true. These variances in perceived-self efficacy according to age are significant, and should be considered in the design of Camara's TEL (technology-enhanced learning) framework.

The occupational variances in perceived self-efficacy are also notable. Teachers had remarkably similar perceived self-efficacy levels to adults in other professions. Students, however, reported significantly lower levels for several questions. These questions pertained to the accomplishment of aims and goals, coping with difficulties, and finding solutions to problems. Students reported significantly higher than both teachers and the average in terms of self-perceived resourcefulness and handling unforeseen situations. This corresponds with Camara's experiences in Africa, and the readiness among students to embrace Linux.

## Section Three- Teachers Only

### 1. Relevance and Delivery

The purpose of section three was to ascertain how useful the training was for the 25 teachers specifically. Of the teachers who responded to the survey 21 were male and only 4 were female. They were asked to rate the training content, its delivery, and its relevance to their teaching requirements. Points were allocated to each rating:

Score	1	2	3	4
Content relevancy	Very relevant	Quite relevant	Not very relevant	Not at all relevant
Content rating	Very useful	Quite useful	Not very useful	Not at all useful
Delivery rating	Very good	Quite good	Not very good	Very poor

Consequentially, an average rating approaching one is optimal whereas an average rating of four is the least desirable possible score. On this basis the average course content, delivery, and relevancy ratings are all very positive

Content rating	1.2
Delivery rating	1.17
Relevance of content to teaching requirements	1.52

### 2. Confidence in using computers

Teachers were also required to rate their confidence in using computers both before and after the training. Again scores were allocated to each answer and an average rating was determined. The possible answers and their scores are detailed below, followed by the disaggregated results:

Score	1	2	3	4
Confidence	Very confident	Quite confident	Not very confident	Not at all confident

<b>Group</b>	<b>Confidence before training</b>	<b>Confidence after training</b>	<b>Points change</b>
Teacher average	3.22	1.54	1.68
Male teachers	3.32	1.55	1.77
Female teachers	2.6	1.4	1.2
Median age	3	1	2
Above median age	3.08	1.64	1.44
Below median age	3.38	1.5	1.88

The reported changes in confidence using computers are very interesting, and entirely contradict conventional wisdom. Female teachers reported higher confidence prior to training than their male counterparts. After training, gender had virtually no impact on reported confidence in using computers. It is very difficult to ascertain the reason underlying as to why females were more confident prior to training. The fact that there were only four female teachers suggests those who did attend training were necessarily driven and interested. The fact that reported confidence levels matched so closely after training (within 0.01 points) suggests that whatever gender discrepancy had existed was addressed.

Another interesting finding, which corroborates the self-efficacy results, was that respondents of the median age were more confident than any other age group. They also reported the highest increase of confidence in computer use of any group, and all rated themselves as being very confident after training. Notably, respondents above median age reported slightly higher levels of confidence prior to training than those below it. However, the participants below 28 reported significantly higher increases in confidence levels and overall higher levels of confidence in computer usage after training. What is very positive to note is that all groups reported significant increases in confidence after the course.

### 3. Frequency of use

Teachers reported that they planned to use computers in the classroom on average once a week after the training. However, there was a wide discrepancy between some responses, with two teachers reporting that they would only use computers in the classroom several times a year. Frequency of use is an important variable that should be addressed in the contracts with schools.

Frequency	Number of citations
Several times a week	12 (50%)
Once a week	4 (17%)
Several times a month	6 (25%)
Once a month	0
Several times a year	2 (8%)
Once a year	0
Never	0

### 4. Difficulties in attending

Teachers reported relatively little difficulty in attending the courses. Given that it was a week long and there was no cost this is probably to be expected. Possible difficulties were listed and teachers were asked to tick the difficulties that they encountered. Only one teacher ticked multiple boxes. The selections were as follows:

Difficulty	Citations
Cost of the training	0
Distance travelled to attend	5
Getting time off work	3
Cost of accommodation and food	0
Leaving family for the duration of the training	2
Other difficulties not listed	0
No real difficulties attending	16

## 5. Cost/ Benefit assessment?

Teachers were asked to assess as to whether the course was worth the time and cost incurred. This was the question that respondents seem to have had most difficulty with. Given the fact that the course was free, that virtually all respondents specifically asked for more time, and that participants were highly satisfied with the content and delivery, the number of negative responses seems high. The question was the last on the survey and in all likelihood was answered incorrectly by several respondents. For future surveys the phrasing and sequence will be changed, and the results cross-checked. Given that the biggest complaint was that the course was too short, there is a possibility that teachers took this question as an opportunity to assess whether the time allocated was appropriate. It is important to stress that answers for this question were entirely contradictory to the rest of the responses.

	<b>Citations</b>
Definitely worth the time and cost	11 (45%) <sup>9</sup>
Probably worth the time and cost	1 (4%)
Probably not worth the time and cost	2 (8%)
Definitely not worth the time and cost	10 (42%)

## 6. Suggested improvements

This was the only open-ended question in the entire survey. Of the 25 teachers 17 specifically said that the training should be longer. The primary rationale underpinning this suggestion was that teachers wanted more practice with computers, and to cover more material. In some cases it is apparent that teachers did not get individual access to computers, and this needs to be addressed. One teacher suggested that a Camara contact person should have been picked earlier, and that training should be timed around the school holidays. Another teacher suggested that trainees should get notes. Generally the comments were very positive, and the suggestions should be taken in that context.

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<sup>9</sup> Of 24 respondents. One teacher did not respond.