Participation figures

April 2011 - September 2012

ICT for Education and Democracy Building in Malawi
a NICE & FAIR Project

The following report describes the activity at 5 educational computer centers in Malawi. The centers were setup in April 2011 in a joint effort between Malawian organization NICE (National Initiative for Civic Education), FAIR Denmark (FAIR Allocation of Infotech Resources) and the individual center hosts. After 1½ years of activity, data was collected for all the centers at once.

Figures concern centers managed by the following:

- Chinsapo Secondary School
- Dowa Secondary School
- Nsaru Secondary School
- Robert Blake Secondary School
- Mchinji ICT Center – managed by Mchinji NICE Computer Club and co-funded by Mchinji District Office

The purpose of this report was mainly to gain insights on the overall status of the computer centers: How many people have been affected, and how has the overall impact on secondary school computer education been.

Behind the numbers

Wherever participants have been counted, there exists no data targeting individuals. The numbers say nothing about the quality of education, ie. if a participant has gained a valuable educational experience. The quality of experiencing the centers is out of scope for this study.

What the numbers mainly reflect is the effectiveness of management, the popularity of visiting the centers, the activity potential at such computer centers, and the very different outcome of each center. We emphasize that the centers have quite different contexts, and that an overall picture should always be kept with an understanding of the challenges encountered by each center.

Method and uncertainties

Only Mchinji ICT Center has maintained a log book since the first day, courtesy of the local NICE Computer Club. Therefore, all figures are subject to uncertainty, but all numbers are verified to be reasonable. Figures have been collected by email petitions and some by personal interviews.

Why collect these figures?

As a means of describing the NICE and FAIR concept of building secondary school computer centers, we want to know and understand their potential in terms of reaching out to students. One way to assess this issue is to ask each center how many students they have accommodated and what remarks they have to each figure. This is a part of the understanding between the hosting management and the NICE & FAIR project.

The figures and experiences are then shared with all the actors in the project.

Total figures and feeder schools

The project has accommodated **11,217 participants since April 2011**, however all centers have reported none or only partly finished figures for 2012-T2 (term 2). For the figures reported in 2011-T2, 2011-T3 and 2012-T1 (3 terms = a full year), there is a rough average of 3,444 participants per term, 689 per center.

There are 220 computers across the 5 centers with a rough estimate of 47 participants using each computer in a year.

Center	Average participants	Active feeder schools	Computers	Remarks
Chinsapo	102 (0% feeder)	0	50	Feeder school involvment has failed, and no civic activities have taken place.
Dowa	677 (65% feeder)	6	50	Average only spans 2011-T2 and 2011-T3
Mchinji	633 (22% feeder)	3*	30	Due to conflict with local District Office, the centers activity was very low in 2011-T3. School participation is low, but the center is open to other activities instead.
Nsaru	1039 (61% feeder)	5	50	Feeder school integration is almost optimal, and one feeder school is almost using the center as much as the cluster school itself.
Robert Blake	1009 (24% feeder)	5 + 1 primary school	40	Robert Blake has a very high extra-curricular and civic activity due to democracy club, computer club, teacher lounge and a local press club.

Table 1: Average no. participants in 2011-T2, 2011-T3 and 2012-T1.

Exam participation

From the set of Form 4 students participating in each center, we observe the number of students sitting for exams and passing exams. The hope is of course that as the computer center becomes well-integrated, and the quality of education increases, so will the number of students signing up for and passing exams.

Center	2011-T2		2011-T3		2012-T1	
	Enrolled In class	**Sat for exam**	**Enrolled in class**	**Sat for exam**	**Enrolled in class**	**Sat for exam**
Chinsapo	25	25 (? passed)	25	25 (? passed)	45	-
Dowa	85	10 (100% passed)	85 enrolled	7 (100% passed)	-	-
Mchinji**	-	-	-	-	-	-
Nsaru	92	0	92	0	91	0
Robert Blake	60	58 (98% passed)	20*	20 (90% passed)	40*	38 (100% passed)

Table 2: Form 4 participation in exams and their pass rate
**) Robert Blake had an acute shortage of computer studies teachers, hence the drop in 2011-T3.*
***) Mchinji is not a secondary school.*

We observe from the numbers that especially Nsaru and Dowa has not encouraged many students to sit for exams. However, in they state to be waiting for the first students to complete Form 1-4 with computer training, and Nsaru states that in 2012-T2 they will hold their first CS exams. Both Robert Blake, Chinsapo and Dowa had previously stocked a few computers, and CS exams have proceeded at all schools, Robert Blake being the only school to have dramatically increased the number of students sitting for exams. This points to a need of improvement at the other 3 centers of directly targeting examinations as we can see the potential clearly being present.

Gender issues

As with many other computer related educations from all over the world suffer from gender bias. This bias, however, does not necessarily show already in the early years of study (ie. secondary schools), and the gender issues affecting higher educations are not adequate to explain gender issues in primary and secondary educations.

Center	Girls avg.	Remarks
Chinsapo	30%	?/45 (unk. pass rate)
Dowa	11%	Dowa is a boys boarding school and a girls community day school. No figures for 2012-T1.
Mchinji	30%	Mchinji keeps a precise log book for every visit.
Nsaru	37%	Nsaru feeder school girls' participation was at 84% because a girls only feeder school was participating.
Robert Blake	6%	Robert Blake is a boys boarding school.

Table 3: Average amount of girls present in cluster school classes / Mchinji opening hours. Averages are from 2011-T2, 2011-T3, 2012-T1.

The figures are hard to assess, as the foundation (ie. the actual girls present at each school) is missing. We know that 42% is the nation-wide average of girls in Malawian schools, and as the total average is 32%, 32%, 50% for the three terms, we can at least say that overall, the project is aligned

to this figure and may note that the project does not suffer from a blatant bias, but perhaps has a some room for improvement in the sense that two of the centers are located at boys cluster schools.

Next generation

Many centers have introduced computer practice for Forms 1 and 2 even though no syllabus is available. This should lay ground for a better Form 3 and 4 education.

Center	**2011-T2**	**2011-T3**	**2012-T1**
Chinsapo	Form 3: 45 Form 4: 25	Form 3: 45 Form 4: 25	Form 1: 40 Form 2: 40 Form 3: 42 Form 4: 45
Dowa	Form 1: 75 (24 lessons) Form 2: 76 (24 lessons) Form 3: 80 (72 lessons) Form 4: 85 (72 lessons)	Form 1: 77 (24 lessons) Form 2: 81 (24 lessons) Form 3: 89 (72 lessons) Form 4: 90 (72 lessons)	-
Mchinji*	-	-	-
Nsaru	Form 1: 109 Form 2: 118 Form 3: 78 Form 4: 92	Form 1: 110 Form 2: 120 Form 3: 87 Form 4: 92	Form 1: 100 Form 2: 120 Form 3: 99 Form 4: 91
Robert Blake	Form 1: 89 (13 lessons) Form 2: 85 (14 lessons) Form 3: 105 (34 lessons) Form 4: 60 (36 lessons)	Form 1: 80 (12 lessons) Form 2: 84 (13 lessons) Form 3: 85 (35 lessons) Form 4: 20 (37 lessons)	Form 1: 82 (13 lessons) Form 2: 87 (15 lessons) Form 3: 87 (34 lessons) Form 4: 40 (35 lessons)

Table 4: Participants in each class. Where known, the number of lessons is outlined.
**) Mchinji is not a secondary school.*

The figures show that all centers show promise of improving education, with Chinsapo picking up a little late. Furthermore, from the frequency of lessons, we see that where numbers are present, the first term has a lower amount of activity (also in feeder school integration), which points to the establishment of an efficient scheduling for the center.

Feeder school integration

Center	**2011-T2**	**2011-T3**	**2012-T1**
Chinsapo	0 (0)	0 (0)	0 (0)
Dowa	240 (6)	240 (6)	-
Mchinji*	150 (5)	150 (5)	120 (4)
Nsaru	838 (5)	559 (4)	522 (4)
Robert Blake**	251 (5+1)	237 (4+1)	233 (4+1)

Table 5: Integration of feeder schools at each center. Format: Students (Number of feeder schools)

**) Mchinji has also invited 2 private secondary schools. The training is conducted by volunteers from NICE who have all received training and have a long background in providing computer training. However figures were not given as to the number of students in each class, so each feeder school has been put at 30 (the number of computers in the center).*
***) Robert Blake has one primary school*

Remarks about feeder schools

School	Cluster	Remark
Golong'ozi	Robert Blake	This is a feeder school with high attendance. They are very much willing to visit the center. They even submit their proposed dates for them to visit the center.
Mndunje	Robert Blake	There is no electricity at this feeder school, hence they do not offer computer as a subject. They come to the center just to learn some basic procedures.
Kambulu	Robert Blake	This feeder school is very far (the farthest) from the center. They have to hire a vehicle in order to access the center.
Nanthomba	Robert Blake	There is need to continue sensitizing this feeder school for the importance of visiting the center. It is the nearest to the center. Maybe their attendance is low because they have a number of computers (about 15 of them). However, their computers have windows as their operating system.
Kabuthu CDSS	Nsaru	The form ones and twos were not attending computer lessons because it was regarded as for senior class subject
APU Girls	Nsaru	APU Girls had a problem with teachers to teach computer lessons in terms two and three.
Mikundi CDSS	Nsaru	Mikundi CDSS had problems with transportation to the cluster centre in the 2011 – 2012 academic year
-	Chipsapo	No Feeder school has visited the center ever since the center was established. We tried to invite a number of feeder schools but none has come for a visit. We will still more try to convince them to start visiting the center.
Mchinji Secondary School	Mchinji	They have their own computer lab

Table 6: Remarks on feeder school participation

The above remarks should help understand what sort of challenges are faced. Especially challenges of transportation and teacher shortage are critical for a successful integration, but the cluster school also has to play an active role encouraging the feeder school to participate.

Activity level

To help guide the understanding of the participant count, we have also requested data about the number lessons held. Here, we summarize the number to see if there are gaps in the schedule, ie. room for more activities.

For each term, the number of lesson hours is compared to a total number of lessons possible (8 hours possible per day, 12 weeks per term = 480 hours per term).

Center	**2011-T2**	**2011-T3**	**2012-T1**
Chinsapo	120 (25%)	120 (25%)	-
Dowa	206 (43%)	206 (43%)	-
Mchinji	395 (82%)	416 (87%)	317 (66%)
Nsaru	Unknown	Unknown	Unknown
Robert Blake	168 (35%)	191 (40%)	189 (39%)

Table 7: Estimated hours of activity for each term. The full potential is put at 480 hours per term, and given this potential, the utilization % is put next to each figure.

After-school activities and civic education

The project also targets activities beyond secondary education. Adults should be able to train computer skills, and activities related to civic education and democracy clubs should take place with NICE as the main actor.

Center	**Computer Club**	**Democracy Club**	**Teachers**
Chinsapo	No*	No	Yes
Dowa	Yes	No**	Yes
Mchinji	Yes	Yes	No***
Nsaru	Yes	Yes	Yes
Robert Blake	Yes	Yes	Yes

Table 8: Establishment of clubs and teacher hours
**) A computer club has just been formed*
***) There has been political issues establishing a democracy club.*
****) 3 teachers are using the centers, however all schools have been informed of the center and are welcome during daily hours. But since the center is not located at a school, it's hard to compare it to such.*