

Report to Fondation Eagle **Malawi IT Labs donated (2013 – 2018)**

Summary

This report provides data analysis from IT Schools Africa's IT labs and the impact in three key areas; the number of students accessing IT, the computer share ratio and study time using the computers.

It is clear that the quality of IT education has improved; the majority of students now use a computer on their own and study time per student has more than doubled in all of the schools. Whilst the number of students receiving IT education has increased, we acknowledge that there are still some barriers preventing more students accessing computers.

Introduction

Between 2013 and 2018 Fondation Eagle funded *11 of IT Schools Africa's IT Lab Projects in secondary schools in Malawi. We used the grants to renovate each school's classroom; installing a total of 510 computers and equipping each lab with the necessary equipment to run structured IT classes in line with the national curriculum.

In that time over 10,000 students have benefitted from using the computer facilities to improve their education.



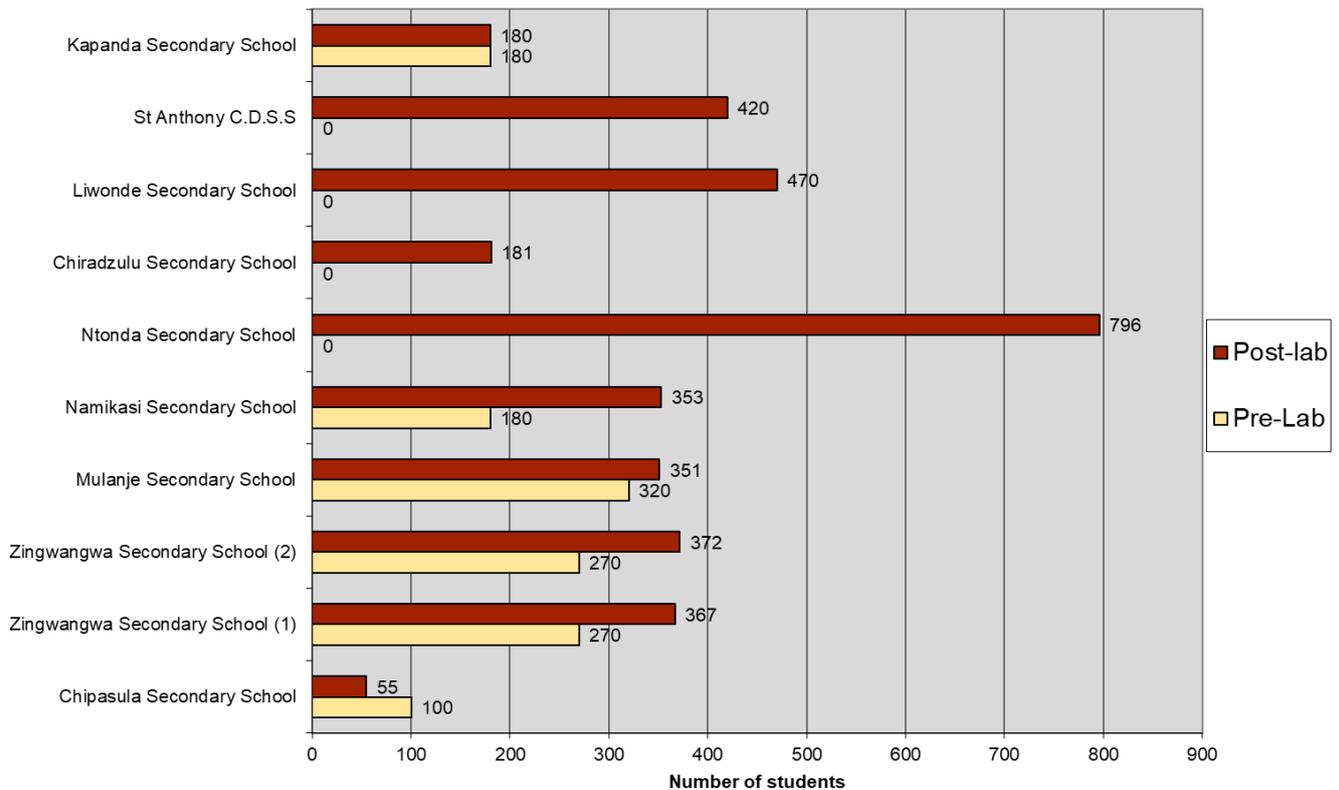
* The research covers 10 of the schools funded, we are yet to receive data from Dzenza School the most recent project (Oct 2018).

Results

1) The number of students per year receiving IT lessons

All schools, with the exception of Chipasula Secondary School (the first IT lab ITSA installed), have experienced a positive trend for the number of students receiving IT lessons in school. Four schools, Ntonda, Chiradzulu, Liwonde and St Anthony had the most significant increase as prior to their lab donation they had no computer facilities for the students to use.

Students receiving IT lessons (av. per year)



We expected the numbers of students attending IT lessons to be greater at all schools. Our research has pinpointed the following issues:

Shortage of teachers with IT training

We found that at nearly all the schools there are inadequacies not only with the number of IT trained teachers, but also the number of teachers that have even basic IT knowledge. The situation is compounded by the Ministry of Education who frequently move teachers and head teachers from school to school. This is hugely frustrating when we have trained teachers and built good relationships with the teachers and heads.

The lack of specially trained teachers impacts the students not only in their learning but in their motivation to learn. At the stage when students in the higher grades (3 and 4) choose their subject options, they need to be encouraged to learn about ICT as many of them view it as a difficult subject and/or not relevant to their studies (this is particularly true in the rural schools).

Additionally, students that attend school in the afternoon (known as open school, which enables often older students who left school early or perhaps never enrolled as a child), typically bear the brunt of the lack of teachers as they may have no access to the labs. Most IT trained teachers teach another subject, because the majority of schools have only a few or no computers; it's simply a means of utilising teachers most effectively. Open school in the afternoon runs for a shorter period than day school and consequently the timetable is more often focussed on traditional subjects, like maths, science etc.

Power cuts

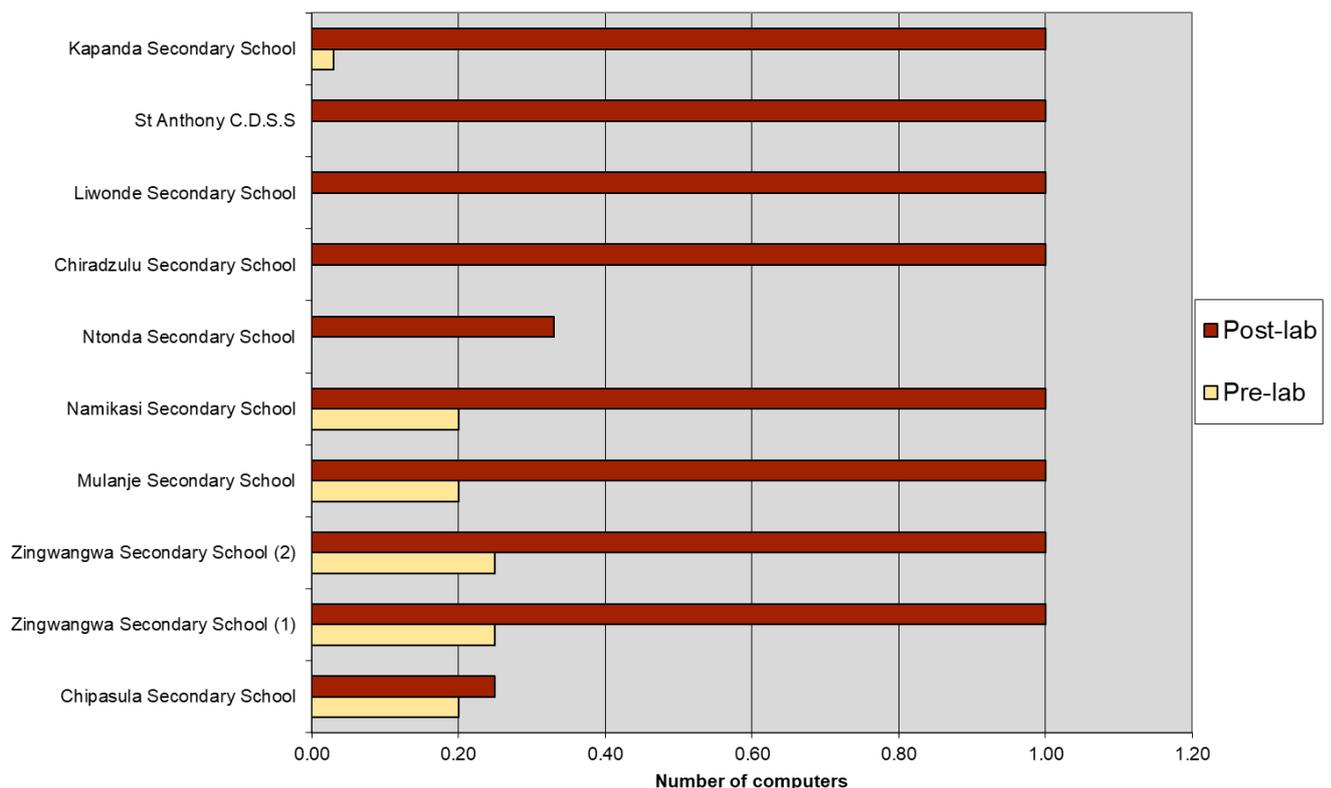
All of the country suffers from power outages and some parts of southern and central Malawi are severely affected. This regularly disrupts IT classes; not only does it impact the actual lessons, it has a longer term effect on the older students and their subject selections. They only have 4 subject choices so they may be put off selecting ICT, a practical subject when they see the equipment isn't working all the time.

We have found that ICT is popular among the younger students (1 and 2) and most of these will be having regular lessons. When the students reach grade 4 many choose not to take ICT as a subject; therefore, we see a decline in numbers. We know that the students that attend open school would like to study ICT but often can't due to a lack resources and teachers.

2) Computers per student in lessons (computer share ratio)

The majority (80%) of schools, students are now using a computer on their own. This is in huge contrast to before the schools had labs and students were sharing a computer with 2 or 3 and up to 33 students (Kapanda). For the schools that had no computers prior to the lab, the results show a complete transformation.

Computers per student in lessons



The two anomalies are Ntonda and Chipasula School. Ntonda is one of the few schools that facilitates access for all its students, for day school and the open school. Consequently, the ratio for students is 3:1 as they have 800 students using a lab with 40 computers. Chipasula has a different problem; they have fewer working computers unfortunately due to a break-in where some computers have never been recovered. Miraculously, the school still manages to teach IT and the students remain some of the most motivated out of all the schools.

3) Study time: computer hours per student per week

Students now have longer periods a week to study using a computer; 50% of students access for 90 minutes or more and 40% spend 2 hours on a computer*.

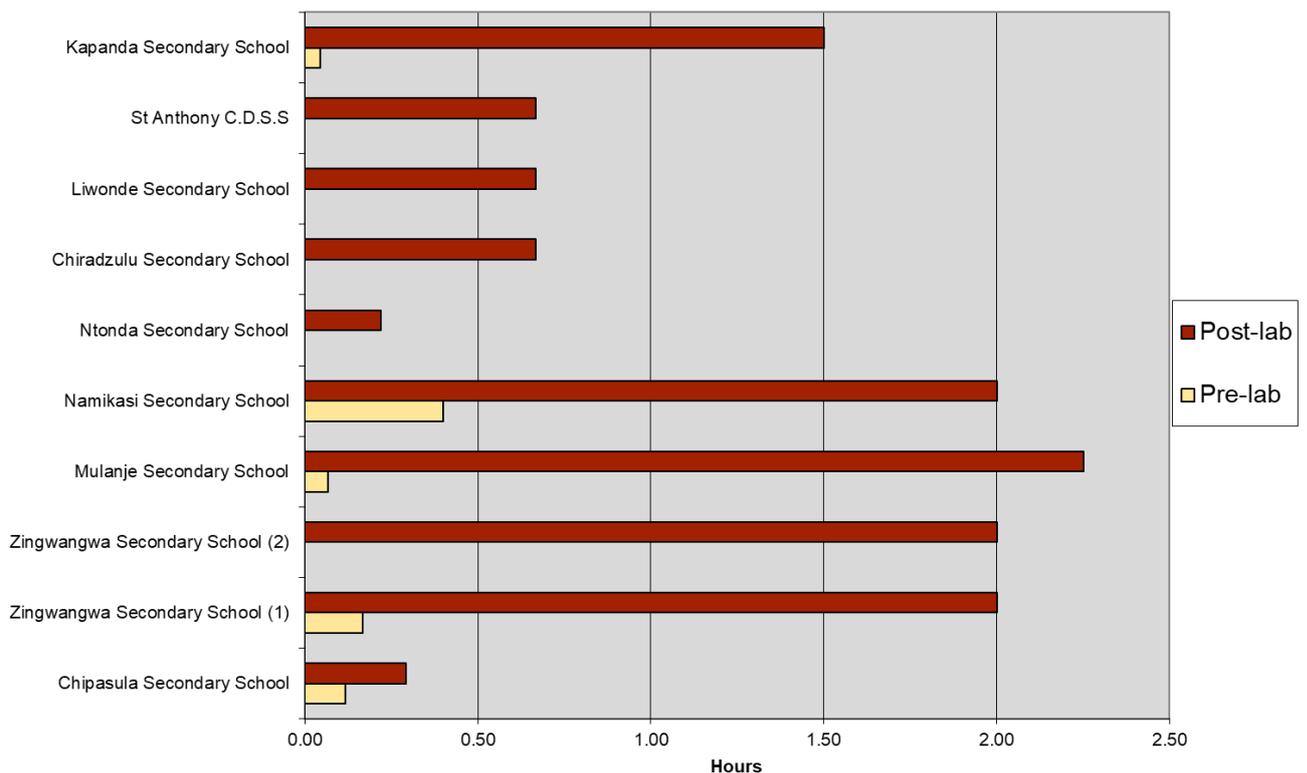
*This includes timetabled lesson time and does not factor in any time outside of classes that students may get to use the computers.

With the exception of Chipasula, the schools with the oldest labs manage their facilities most effectively and therefore the students experience longer study sessions per week. Ntonda has the lowest figure for study time which again relates to the number of students accessing the lab per week.

We recognise that there is a balance between providing quality access (length of study time) and maximising the number of students that can use the lab. However, with the appropriate number of trained teachers and properly organised schedules all the schools should be able to give students sufficient access to the lab for them to gain basic IT education and the capacity to use IT for research and other subjects.

Other factors contribute towards the students' study time, such as power cuts and the number of IT trained teachers or teachers with IT knowledge.

Computer hours per student per week



Conclusion

We are delighted to see the impact the labs are having, in particular enabling students to study alone on a computer is a considerable achievement and one we are proud of. Furthermore, significantly increasing study time for students is a positive step towards improving digital literacy at all the schools.

We do, however, recognise the challenges that schools are facing in providing IT education for all students. As I've mentioned in this report, the salient factors hindering progress are lack of IT trained teachers, power cuts and poor organisation.

I have been discussing our next steps with Sabina and we are focusing on how we can get more teachers trained in IT. One possibility is that we work with a teaching training organisation to support them with the necessary IT facilities to train all their teachers in ICT.

We have asked the Director of ICT from the Malawian Ministry of Education Science and Technology, to prevent IT teachers from being moved from schools where we have installed IT labs. We are hopeful that we will receive positive feedback as the new Director has acknowledged the issues we've mentioned and has been enthusiastic about our plans so far.

We are also taking steps to ensure that any new lab projects will have the necessary infrastructure to sustain a generator, as well as invertors installed so that security is always maximised even when there is no power.

We are committed to improving access to e-Learning in Malawi and we hope that Fondation Eagle will continue to support our programmes there.

With warm regards



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