



Siavonga Visit February 2022

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Version

Description

An overview of our 2022 visit for the Learning to Learn Project

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Purpose of visit

There were three main objectives to the visit but as always other things cropped up. In no particular order they are:

1. To check the Teachers were confident with the equipment.
2. To investigate and if possible improve the internet access in order that Teachers could attend the Zoom sessions.
3. Meet stakeholders in person.

Sunday 20th February PM

Zaninge Guest House

As always we stay at the Zaninge Guest House.

Florence our host has helped us secure transport and is very involved with our projects, particularly the Bees project. She and Esnely formed a women's group that we support via our Beekeeping project. They were very successful with their hives last year. They produced more than 70 litres of honey which they sold for a good price. As a result of their success the Ministry of Agriculture is working with them to establish a cooperative. The ministry has provided the materials to make further hives and encourages them to share their knowledge with others in the area. We do hope this will include the schools in the project. As an



anecdote, coincidentally, there was a colony of bees in a tree just outside her boundary. We explained how she could tempt these bees into one of her hives. Time will tell.

Sunday 20th February PPM

Meeting – Lake Safari Lodge

Met with Grant and Shereena regarding buffet for Meet and Greet

Grant is the General Manager of Lake Safari and has always supported what we do even though we never stay there. He understands our commitment to the local community.

He offered to provide the buffet for the meet and greet at a very good price. Thank you Grant. Shreena is the Catering Manager so I must also thank her for her fine efforts.

Monday 21st February AM

Tech Meeting - Siavonga Resource Centre

9:00 Distribution of kit.

The Raspberry Pi 400 and the Tablet were given to the attendees for the use of the teachers on the Learning to Learn project. It was pointed out that these items were the property of the School and at the completion of the project or when the participant left the project they became the property of the school and should be returned to the school for redistribution.

Access to the Internet

The effectiveness of routers was explained. It was pointed out that a mobile router worked best outside a building but since this made it vulnerable to the elements and theft it was preferable to install an external antenna and secure that outside. Such an antenna worked best if it was in line of site to the mast (tower). Several antenna were distributed with the intention of using them to determine which worked best and then procuring that type for permanent installation. It was pointed out that antenna are subject to interference from metal objects, including corrugated rooves, so care should be taken when positioning them.

Using the Pi 400

The Raspberry Pi 400 was demonstrated and the importance of connecting all the accessories before turning on the power was emphasised. This is particularly important when it comes to the monitor/TV. There will be a series of Zoom sessions on Thursdays to further demonstrate the use of this computer. All were invited to attend. It is not just for technical people.

Short meeting with DEBS.

During this morning session DEBS appeared and Wendy talked to her and arranged a meeting with GiaKonda Solar Schools for the Friday morning. DEBS also agreed to us using her Land Cruiser for the school visits on Thursday.

Wendy also mentioned the absence of a representative from Manchamvwa Lakeshore. Because of this and other issues it was decided to invite Kabuyu School to join the project instead.

Monday 21st February PM

Meet and Greet- Lake Safari Lodge

Lake Safari Lodge put on a very nice buffet for us at very reasonable cost.

We all met at the Lodge around 12:30, straight after the morning session.

It was good to see Beth and Lisa were able to join us via Zoom

Each person present introduced themselves and their school.

This was followed by a Project overview from the now legendary duet of Beth and Lisa.

They continued by taking everyone through the Base Line Data Collection form. This was recorded on paper which the participants completed and photographed. The paper copies were then collected and the attendees agreed to complete the online forms.



Figure 1: Collecting Baseline Data

Following the formal part of the proceedings we all sat down to a veritable feast and chat



Figure 2: Meet and Greet Lake Safari Lodge

Tuesday 22 February AM

Maintenance visit – Siavonga High School

We delivered several hard drives we had brought with us from the UK for use by the computer department of the school. We replaced the failing drives in their server with new greater capacity drives. This required a repair of Server which was caused by continued improper shutdown because of load shedding. This work was successfully completed.

We installed the latest version of the Raspberry Pi and RACHEL and connected this to their network. Several of their switches had failed possibly due to overheating or maybe lightning.



Figure 3: Helping fix things in Siavonga High School

While this was going on Wendy met with the Head Teacher to outline the project and she supported this work as she thought there was a great need for it. She would like to see the project available to her school.

Wednesday 23rd February All Day

Boat ride – Munyama High School

We visited the remote Munyama community to check their communications capacity and LTS signal measurement 8.6iDb (an acceptable level). We were pleased to see the RACHEL resources were readily available and obviously being used.

Hopefully issues raised by the Head Teacher and Staff will be successfully addressed in the next visit.

Of course as well as the technical aspects of our work there was another chance to hear the wonderful Munyama Choir, Conductor Mr Trevor Tembo.



Figure 4: Munyama School Choir

Videos of this wonderful choir can be seen on our YouTube channel.

Thursday 24th February All Day

School visits - Land Cruiser to various schools

As usual the DEBS gave us the use of her land cruiser for the day. We were pleased to see the GEWEL logo on the vehicle, they support vulnerable girls with school fees up to Grade 12. Of course the New Dawn government has provided all pupils to Grade 12 with free education so what happens now, we'll have to find out.

The schools visited were

Siamwiinga

Chaanga

Sianyoolo

Kabuyu

Due to time constraints we were unable to visit Dibbwi which was a shame because Daniel has done a lot of work for us, particularly collecting the equipment from the ZRA.



*Figure 5: DEBS Land Cruiser.
Vehicle of choice*

Siamwiinga

This is the latest school that we have installed Solar Power to so it was good to see how it was coming together. Like most schools in rural areas the government have given them several PCs, in their case four. I pointed out to them that running these PCs would in all probability damage their batteries. The Raspberry Pi PC on the other hand posed little or no threat. We replaced their old RPi with the latest version.

They also installed what we hoped will be one of our best antenna. Following a test via Zoom in the UK it looks like this has worked! But it's early days yet.



Figure 6: Experimental Antenna at Siamwiinga School

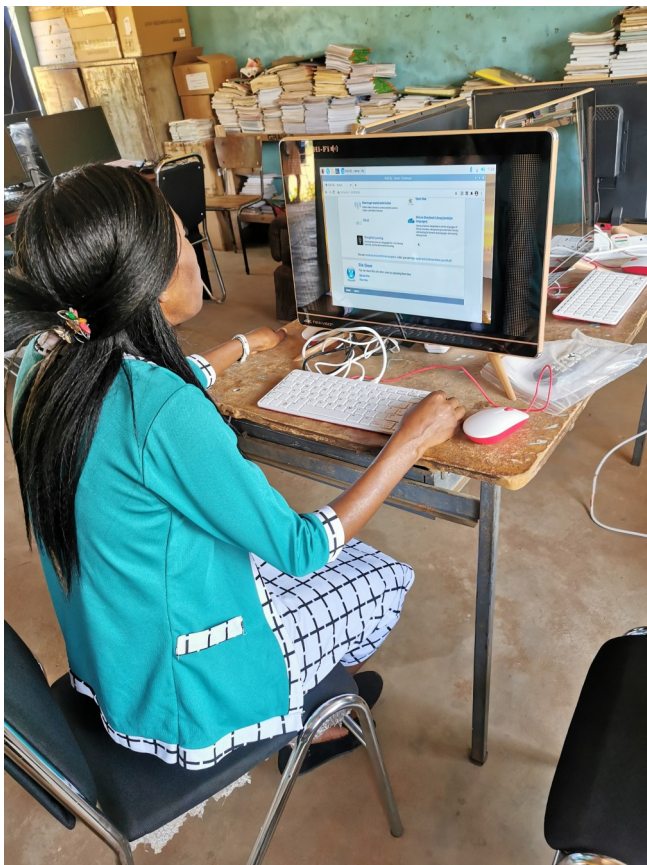


Figure 7: Bridget checking RACHEL configuration

Chaanga

This school is a large Secondary school with its own Solar Power setup. We looked at the possibilities of improving their broadband and have decided to look into putting an antenna on the top of their water tower. There is already power to this. This will be quite a significant challenge so we will leave this until our next visit in July 2022.



Figure 8: Water tower, a possible site for an antenna



Figure 9: Using the Raspberry Pi

While at Chaanga Wendy spoke with the Head Teacher who mentioned the boarding provision available to vulnerable girls at the school.

Sianyoolo

A school we have previously supported. We recorded an Airtel signal strength of 83iDb at the rear of the school so this is where we will place the antenna. Surprisingly they were in line of sight of two masts.

At Sianyoolo we also met with Daniel from Dibbwi and Macloud from Kabuyu. Daniel was having problems with his router which I have taken to repair, Macloud was here in case we didn't get the chance to visit his school, which of course we did. There is a bus which goes from Kabuyu to Siavonga and back, It leaves Kabuyu at six in the morning and returns late at night.

Kabuyu

We have never visited Kabuyu because it is very far away and on previous attempts to visit there has been flooding on the road.

We were keen to see the school because Macloud who teaches there regularly attends our Zoom sessions. Kabuyu is a school like so many other rural school with very little in the way of infrastructure. In order for this school to participate effectively in the program we will need to provide at least one 350 watt solar panel, an appropriate battery, a router, antenna and lighting. Don't you think that flagpole would make a great mast.



Figure 10: Kabuyu School. The most remote of the schools in this project

Friday 25th February 2022 AM

Meeting with DEBS – DEBS Office

9AM meeting with the DEBS is always a pleasure She is such a welcoming person. We covered many topics but the key issues were

Safeguarding

This is something we wanted to be clear about for this and all our projects. She outlined the processes used by the district and gave us and our colleagues direct access to her office for any issues. I also mentioned the challenges of ensuring proper access to equipment we provide although she has a list of all the equipment we have provided over the last 7 years!

Issues raised by DEBS

Next Schools for support

The DEBS was very keen for us to look at funding for the 3 remaining Secondary Schools in the Area. Looks like more grant applications!

Repair / Making of desks

Due to the governments policy of free education for all up to Grade 12, the enrolment in schools has not surprisingly gone through the roof. This has led to an acute shortage of desks. One unintended consequence of this is girls absenting themselves from school. When asked about this girls say its because boys take the desks and they have to sit on cardboard on the floor.

DEBS told us about Siavonga High School's woodworking classes repairing their own desks. This had to be investigated!

Airport Tax

We told DEBS of the challenges we experienced bringing equipment from the UK. We buy almost everything in Zambia but the Raspberry Pi computers are just not available here. She promised to help with this issue.

Friday 25th February 2022 PM

Maintenance of Server – Siavonga High School PM

Update of RACHEL

Wendy Social media blogging

Head Teacher and desks



Figure 12: Siavonga High School Woodworking



Figure 11: Siavonga High School Woodworking



Figure 13: Desks repaired and awaiting repair

Saturday 26th February 2022

Meeting with Aaron Chanza NAQEZ – NAQEZ Kafue office

Aaron is the Executive Director of the National Association for Quality Education (NAQEZ).

NAQEZ is a very influential with the government. We have demonstrated to some of the NAQEZ membership the resources available on the Raspberry Pi and its versatility as a desktop computer. The NAQEZ leadership team has had chance to visit schools in Monze using the RACHEL resource on the Pi.

During our discussions three key points were brought up.

1. The Learning to Learn program, supported by our Memorandum of Understanding.
2. The government donation of PCs to Schools in rural areas was flawed by the lack of power to make use of them. Raspberry Pi consumes less than a tenth of the power of these PCs so would make a much more suitable solution. Aaron told us he could introduce us to the Ministry of General Education, MoGE to discuss this.
3. Possible setting up of an office in Zambia

After this meeting we made our way to the Fairview Hotel in Lusaka

In Lusaka we always make a point of staying at the Fairview Hotel run as a training centre for the Zambian Tourism Training Institute.

Sunday 27th February 2022 AM

Meeting with Future is Female – Levy Mall

The Future is Female is a partner with the Learning to Learn Project, based in Lusaka. We met up with them in Levy Mall not far from our hotel.

Their role is to find suitable Role Models who can join the online sessions at appropriate times.. It is their intention to form permanent links with the schools as the program continues. We have a Memorandum of Understanding with them to this effect.



Appendix

Kit Supplied to All Seven Schools

Raspberry Pi 400 + power supply, Micro HDMI cable, 64 Gb O/S SD card with additional software, Micro HDMI to VGA converter, Mouse.

Android 11 ten inch tablet with additional apps installed, Zoom and Firefox-ESR.

Bluetooth mouse and keyboard to make it easier to do office work.

A variety of Antenna were given to some schools as an experiment.

Learning to Learn Partners and Participants

Participants

School	Head Teacher	Teacher
Munyama	Richard mabunde	Kenny Kalimina, James Lwipa
Chaanga	Eugene Choonga	Arnold Nyakalesi, Abisha Siafunda
Syanoolo	Douglas Chambwede	Namachila Withus, Fidelis hamaundu
Dibbwi	Daniel Mangwende	Amos Susu
Kabuyu	Canisius Choosa	Ian McLoud
Siamwiinga	Nawiko Lungowe	Farai Kazangarare
Kawila	Humphrey Chikoondo	Rita Kabbudula

Partners

Organisation	Representative
National Action for Quality Education in Zambia (NAQEZ)	Aaron Chanza CEO
Future is Female (FiF)	Rita Mkandawire
Department of Education Siavonga Board	Ephe Ngolwe DEBS