Hermann Ohlthaver – NMMU ICT Engagement 2016

Report on Semester 1

Introduction

This year we will work with two schools in New Brighton, Port Elizabeth namely Kama and Charles Duna Primary. Extensive consultations were held between the respective school management teams and Prof. Andre Du Plessis, Dr. Ron Beyers and Preston Geswint. Dr. Beyers will work with Kama Primary and Preston Geswint at Charles Duna Primary. The ICT training will involve basic as well as intermediate to advanced computer skills. The programme will be designed around a skills audit to be conducted at the two schools. Later during the year, we intend to introduce the concept of 'scientific literacy' to both the teachers and learners of both schools. The aim is for learners to use ICT's when conducting investigations especially in the learning area of Natural Science.

Charles Duna Primary School – Reported by Preston Geswint

The school has been investing in ICT infrastructure for the past three years. It has a networked computer lab of 40 computers for use by the learners. A staff resource of eight networked computers with internet access is also available. Two teachers are involved in a science technology program which focuses on taking ICT into the classroom. They use a data projector and tablet during lesson delivery. The school enrollment for this year is 1086 learners. There are 30 teachers employed at the school. The school also has a number of volunteers working there.

During the consultation process with the school it was agreed that our programme will focus on the following:
- Working with teachers of Mathematics, Natural Science and Technology.
- Assisting teachers find internet based resources that will enhance the teaching and learning of science process and design skills. After collecting and evaluating the resources, the effective deployment of these resources in the classroom will follow. The computer lab forms part of this process.
- Mathematics teachers from grades 1 to 7 will be orientated in the computer lab to familiarize themselves with software such as TuxMath and Mathemagic. The aim is for all Mathematics teachers to take their own learners to the computer lab for working with the mentioned software.
- All teachers will be introduced to Cartoon Story Maker, a language literacy program. This program will be used by learners to practice creative writing skills.
- Work with learners in developing science process skills using physical apparatus as well as the digital resources collected by the teachers.
- Train learners to access on-line resources (internet connection permitting)
- Conduct research on the impact of ICT-use by learners of grades 5 and 6 in developing scientific literacy.
- Assist the school in developing a roster for use of the computer lab in conjunction

with the lead ICT teachers.

- Assist the school with technical maintenance of the ICT resources.

Progress to date

An ICT skills survey was conducted amongst the staff. Twenty nine teachers responded and the processing of the data is still underway. Once completed, the data will be made available to the school. This will form the basis of a staff development plan regarding the use of ICT at the school.

Two sessions were held to introduce all staff members to the current resources in the computer lab. The first, with the Foundation Phase teachers, was to show how to use TuxMath for mental Mathematics activities. The group was also introduced to Cartoon Story Maker.

The second session, with the Intermediate and Senior Phase teachers, introduced the teachers to Mathemagic. Here we showed how the program could be used as a diagnostic tool in assisting learners with difficulties in Mathematics.

Foundation (left) and InterSen Phase (right) undergo orientation of the software in the computer laboratory.

After these sessions a plan was devised with one of the lead ICT teachers, as to how the computer lab use could be fitted into the existing timetable of the school. Thus far the foundation phase learners were introduced to the lab, working with TuxMath. Further planning is still required to fit all learners of the school into the timetable.

Grade 1 learners busy with a mental maths acivity using TuxMath. Volunteer, Noncedo Nkayi, assists in the computer lab.

The school has decided to deploy a volunteer, Ms. Noncedo NKayi, who is a trainee ECD practitioner to oversee the computer lab on a full-time basis. She will provide assistance to the teachers when their classes visit the lab. She has good basic computer skills and we will provide ongoing training to her to enable her to understand the subject specific software.

Two sessions were held to date with the Intermediate and Senior Phase teachers of Mathematics and Natural Science focusing on searching the internet for resources of science process skills. Five teachers are being trained in using a web browser in search of relevant content which is also grade specific. Part of the training involves downloading and saving content in specially created folders. The use of bookmarks for later follow up of interesting and useful websites forms part of the training. The teachers were able to download useful worksheets that teach the skill of measurement thus far.

Kama Primary School – reported by Dr Ron Beyers

The Principal was approached by Associate Prof Du Plessis and Dr Ron Beyers to request permission to work with the school regarding ICT training. Toward the end of the term the Principal discussed the matter with his staff and indicated that they wished to have training in MS Word and Excel relating to how this can be used in the classroom. Time was spent in the computer lab to resurrect as many PCs as possible – 14 working units at the time.

After a shaky start, training began with instructions from the principal to start with Excel as the term was drawing to an end and teachers were about to prepare mark sheets. On the 10th of May Dr Beyers arrived and started the training session with 14 teachers.

Teacher training in mouse skills at Kama Primary School

It soon became evident that some of the teachers were not computer literate at all. On enquiry, the vast majority had not touched a mouse before and training had to be customized to address this issue. For the remaining 2 hours the focus was on using the mouse to play Solitaire, Hearts and Minesweeper, as many were not comfortable with

holding the mouse. This allowed time to give on-on-one attention to those who needed further instruction.

Further training is scheduled through the Principal for during the June exams.

The proposed program for next term at Kama Primary will focus on the following:

- Mathematics, Natural Science and Technology with an emphasis on the use of the internet and other resources in the classroom
- All teachers will be introduced to Cartoon Story Maker to encourage learners to develop creative writing skills.
- Train learners to access on-line resources
- Conduct research on the impact of ICT-use by learners of grades 5 and 6 in developing scientific literacy (time permitting).

Conclusion

Our Paterson ICT rural project in 2015 concluded in November. We are indeed extremely happy to report that two students who assisted with ICT, Mathematics and Science at the rural school, were appointed in positions in UKZN and in Port Elizabeth.

Mr Kepu was appointed at Westering High in Port Elizabeth, an ex-Model C school. He stated that the ICT experience during the Herman Ohlthaver engagement at Paterson and what we taught them assisted him to obtain the post. He is teaching Mathematics and use ICT as tool.

These results reveal how much the Herman Ohlthaver Trust has enabled ICT development in schools and students from disadvantaged contexts to thrive. We would like to thank Mr Alan Appel and the Herman Ohlthaver Trust for the continuous support.