Report on KZN's Newcastle Helpdesk

Course: Deploying Student Technical Support Solutions (Helpdesk)

Date: 13 – 17 July 2009

Introduction

It is said that there is a shortage of technical skills in South Africa. This training has just empowered 29 educators and two officials from KZN Department of Education with such skills. It should be noted that many generous organizations or companies that donate computers to schools do not fund ICT training to these schools in order for them to be used effectively giving schools technical support is yet another issue. If they do give them such technical support, it is not continuous and this is understandable because it is expensive when schools use their own limited funds to seek technical support from commercial companies. It therefore makes sound sense to equip these schools themselves with technical skills in order for them to be able to maintain their own computer labs. The KZN DoE has kindly donated computers to most of the schools that have attended this training. The department went a step further by financing this unique technical training delivered by SchoolNet SA. This was the first group in KZN that the department funded to attend this training. In so doing these educators will be able to maintain their own computer labs so as to be used effectively. The KZN DoE has been trying to organize this training from early 2007 but due to some hindrances then, it was only possible for this to happen in 2009. In 2007 Microsoft funded this Help Desk technical training for five schools, where learners were also involved. This training was at Tshanibezwe Secondary school in Bergville, KZN. When SchoolNet SA visited the school, the principal was delighted by the visit and emphasized that learners who attended the Helpdesk training were very helpful at the computer lab.

Report on the Training

Participants:

All participants at the Newcastle workshop were computer literate. They were all involved in computer labs in their respective schools which were a mixture of secondary schools and primary schools. Apart from educators, there was a district CAT & IT subject advisor who attended the whole training. Also attending the full training was Mr. Reggie Masondo (DCES, Maths, Science, Technology & ICT Directorate) from KZN Department of Education. He was joined by Mr. M.T. Mfusi who is his colleague. Mr. Mfusi was scheduled to be at the workshop for a day but decided to stay for two days. On Thursday, Mr P. Dikgomo who is the manager for Maths, Science, Technology & ICT in KZN Department

of Education also visited the workshop. The presence of these departmental officials had a big impact to the educators. They felt very important and they could not hide their joy.

Training - Day 1

All participants arrived on time and they were more than 30 as was planned. Mr. Reggie Masondo used the opportunity to address educators on eLearning issues for about half an hour. After that the trainer introduced himself and started a week long workshop. The trainer introduced all the chapters that were going to be covered during the workshop.

Chapter 1 (*Planning Your School's Help Desk*) which is about forming Helpdesk teams back at their schools and its components e.g. its team leaders, its goals, its scope etc, was lightly covered. This was because forming a Helpdesk team was not expected from this group. This is only covered if learners are also part of the training. The trainer then moved the trainees to the class room *(shown on the right)* that was going to be used for most activities since the computer room was not suitable for these.

Chapter 2 (*Understanding Hardware*) which is about hardware components that make up a computer. The trainer had brought all kinds of computer components, 30pin 386 SIMS RAM, DIMMS, 486 processors (DX33 @ 33MHz speed), Pentium 4 processors (@ 1,75GHz speed), 750MB hard drives, 40GB hard drives, CD ROMs, Motherboards, expansion cards, etc. Some were working and some were not. Each and every desk in that classroom had at least three components on it. When trainees entered the room, they were taken by surprise when they entered it full of computer components. They were then given a chance to play around with these components before getting to know what they were and what they were for *(left photo).* Trainees were asked to identify these components before the trainer could tell them. They could identify some, like a CDROM and floppy drives, but they could not identify some internal components like RAM and processors. At the end of this chapter they were able to identify all components that were in the classroom. Each component was discussed thoroughly, that is its name and its use. That process took longer and the trainer had to leave at that until the following day.

Training - Day 2

The trainer continued to identify these components in the morning. After being shown how to connect a computer, they were asked to form seven groups. Each group was then given a computer to dismantle. Five of these computers were working and two were not. They were asked to take each and every component out (RAM, all drives, data cables, processors, all card, etc) but leave the motherboards since they are the last components in the case. They did so with caution since they had been told about safety precautions to themselves and to the components as well. After doing so they were asked to identify the components from their computers which they did so well. *The above photo shows one of the groups after a successful dismantling.*

Training - Day 3

The trainer gave them tips that were hardware related, e.g. that solids (metal in this case) shrink when it is cold and expand when it is hot. They were told that because of this some components may end up losing contacts and this may cause the computer not to work. Then they were told to re-sit these components periodically so that their computers will continue working. They had dismantled these computers the previous day so the trainer gave them safety tips to reassemble them. They were then asked to reassemble them. They did so with caution. Surprisingly enough all computers that had been working continued to work after reassembling and those two that had not been working could not work because of hardware problems like a bent processor pins. All this exercise was not only exciting but also an achievement for the trainees.

Chapter 3 (*Installing Windows XP Professional*) was started. As computer technicians there are times when one has to repair or reinstall an operating system, Windows XP in this case. The trainer told them things that they need to know about preparing to install. Things like disk partitioning, formatting, file system etc. This introduced them to the planning and installation of Win XP. The trainer had brought a PC that would be used to install Windows XP as the operating system. Planning and installation was done as one group while the trainer was explaining every step. Installation was done successfully. The trainer then identified some tools that are found in the control panel and demonstrated their use.

Training - Day 4

Chapter 5 (*Supporting Hardware*) was started. This chapter gave them more understanding of hardware and how it works as the trainer had been introducing this chapter bit by bit during previous chapters However, this chapter concentrates more on hardware drivers. They came to understand that any computer hardware needs a proper driver in order to work. They were shown *device manager* from the control panel. They were also shown how to update, rollback, delete drivers and some hardware configurations. Installation of printer drivers was also shown becasuse printing problems are the most common driver related problems.

Chapter 6 (*Supporting windows XP Professional*) was started on this day. Since most problems are caused by a malfunction in an operating system (Win XP in this case), a lot of time was spent in discussing common problems with Win XP and how to tackle those problems. Win XP's special tools like safe mode, system restore, etc were shown and demonstrated. After this chapter a laptop with windows Vista was connected to demonstrate that there is no difference between XP and Vista; they both have the same tools to troubleshoot the operating system.

Training - Day 5

Chapter 7 (*Supporting Networked Computers*) was started. An introduction of TCP/IP was made since it is the common language that computer network devices use to communicate with each other. IP addressing, subnet mask, gateways, DHCP & DNS servers were explained. A lot of time was spent practicing. They were then taken to the computer lab for more demonstrations and practices. Practices included recording IP addresses for other computers and "pinging" them. It was then when they realized the power of computer networking.

Chapter 4 (*Introduction to Troubleshooting*) was done. This chapter is about the way one arrives at where the problem is likely to be. However, it was covered at the end of this training, after hardware, software and networking had been covered. The trainer gave them some tips e.g. when the computer does not boot up at all when plugged in to power. In such a case a technician would pull out ram and/or processor and put it back in again which is called re-sitting a component and the computer will, in most cases, work normally again. Components may lose contact because of variation in temperature, as mentioned earlier. An external technician can charge a lot of money just for re-sitting and might even tell the school that parts need to be replaced in order to be paid more. This chapter took more time because trainees had a lot of questions and the trainer had to come up with a number of scenarios for them in order to be effective trouble-shooters. They were asked to come up with computer problems that they might have experienced or they had at their schools. They did come up with some.

Troubleshooting methods that were learnt in this chapter were used to pinpoint the possible problem in such a way they ended up solving their own problems with guidance from the trainer.

Chapter 8 (*Supporting Security Needs*): Since software and hardware security is very important, they were taught the methods of securing them. Software security may mean installing and updating antivirus software. Hardware security might be securing electronic devises from static electricity damage or physical securing of hardware by using clamps.

Chapter 9 (*Performing Maintenance and Completing special Projects*): Not much time was spent on this last chapter since it is self explanatory and considering the fact that they were all adults

Helpdesk Database: The student database is used by the Helpdesk team to track their work. As mentioned before that they were not expected to form such teams, this chapter was not covered but was talked about for those who could be interested.

Photos:

There are more than 200 photos from here or copy and paste the following link to your browser to view them. http://picasaweb.google.com/schoolnetsa/20090513SekusileHD

Closing ceremony:

On the last day of the training, there was a closing ceremony where participants were given certificates by Mr. Masondo. The trainer was given a lovely present that was bought by the whole group. Photos of this can be viewed on the above photo site.

Trainee Comments:

Below are all comments extracted from the teachers' course evaluation forms;

- *I have developed an insight of networking which I never had before. The programme was fruitful because as an educator I can solve problems which I could not before, only the technician was able to solve them. There is going to be less frustration on my part as an educator, problems such as passwords, printing problems, freezing of computers etc can now be sorted out. I can load an operating system and even repair it without being charged by the technicians. We had an excellent facilitator, combining theory & practical; dismantling and reassembling computers without a problem.*

- *I would like to thank everybody who was involved in organizing for such a workshop. It was so fruitful to me. I can do much about troubleshooting, networking of computers. Before I couldn't touch or open a computer, and see what is inside, what components are there, what is a hard drive, CPU, RAM, now it's all like ABC. The trainer himself was so patient and he was willing and prepared himself for teaching us. He is a born teacher. I wish I could get another chance to attend such a workshop.*

- *The skills learnt during the training will be helpful in the following ways: Empower individual educators during their (skills) application. Minimize problems experienced when using computers on a regular basis. Save time and money for repairs. Promote networking amongst educators. Improvements can be achieved in the following ways: More workshops conducted. All educators having attended share knowledge with other stakeholders.*

- *We were privileged to have a workshop facilitated by Mr Mabaso. He had enough answers as if he expected or knew what question you were going to ask. The workshop training has helped to put life into more perspective for me getting to do things I never thought I could. I am prepared to go out there and train others on support skills. I wish we could have more training like this.*

- *This has been an experience of a life time that I never thought I would be able to do. The training has equipped me with the knowledge that the school will use, without having to spend money they have spent. The trainer was exceptional, and could lead us if he saw that we not clear. I hope such training would avail itself to help teachers.*

- *To SchoolNet I would like to say we were honored to have this training and to have a facilitator like Themba, and he knows what he is doing. He allowed us to communicate with him during the session, and we were involved in all the activities, especially the practical activities. Having been given a chance to dissemble the computer and reassemble it, it was interesting and we gained confidence. I personally went home and repaired my computer on the third day of the course, and it was interesting. I feel one week was not enough but we gained a lot. Thank you to SchoolNet and our wonderful facilitator Thembakuye Mabaso.*

- *Firstly I thought computers are very hard to fix but now I know that is not. I find it interesting to dismantle a compute and reassemble it with ease. The facilitator interacted good with his class (lot of individual attention + support). Lot of problems I had with computers at school are going to be fixed by myself (no longer calling a technician). I didn't expect such a support at first, because I thought is gonna be too much of a theory rather than practical. I now feel full confident about technical part of a computer.*

- *I am grateful for the lesson learnt, and to have a person like our trainer who taught me almost everything about computers and I feel confident to help others such as my colleagues when I go back to school.*

- *The course was helpful because at the beginning of the workshop, I wasn't able to do simple troubling knowledge or skills, but at the end of it, I have skills that I have gained. Those skills will not help only me but others would also gain this knowledge, and should be able to pass it to other people or neighboring schools that have technical problems. This course or workshop was free, but the knowledge that we have gained was supposed to be expensive, because we have gained world class skills, that will make sure that our schools use ICT effectively.*

- *The course was very helpful more especially to us who are the beginners in computers. The support we got from the trainer was very good and also challenging. Due to the nature of our training we are grateful that from now on we can apply the knowledge we got to good use. I also thank the department for offering such an opportunity it's great and helpful.*

- *I enjoyed the course sine there were some aspects in computer that I did not but at the end of the training I realized that these problems have been solved and now I can support my school with technical problems.*

- *I wish such training continues because it is very challenging and helpful in such a way that you can do thing that cost the school a lot of money. But now when you have to attend here you are the solution to all the computer problems.*

- *Before, I did not know to do computer support. I'm confident with computer ICT skills. I gained a great knowledge in this training. Now I can repair a system. The trainer gave us a good practical examples and he brings parts of internal components of the computer to learn it very well, now I know it.*

- *I knew very little about the components (hardware), software ,etc. But now, I know everything related to a computer. The training was beneficial to us all, as it was the first of such kind. We hope we will be able to train other educators and have a technology advanced society. We can appreciate if we can receive/get extra time to learn even more than we have learned in these five days. Our facilitator has done a wonderful work for the society as a whole. We will appreciate if we can be given a chance to recap what we have done before. Maybe after six months from now, or every beginning of the year.*

- *The course was interesting. I learned so many things which enhance my learning and teaching programs. Now I will be able to know where the problems in the computer and able to rectify the problem without calling a technician. I also will be able to download the software myself. I wish to have this golden opportunity with the same trainer to further my knowledge.*

- *We need more raining to run, to support each other on what we have learnt. We ask for a follow up training, so that we share information on how we started practical work from schools and were we able to solve problems after training. We are happy that the organizers did invite primary schools to a programme because we felt neglected when it comes to help. I gained confidence, now I feel I will solve the problems at schools. We were free to ask questions from our free, flexible trainer.*

- *The training was valuable to us. It gave light to most of the problems and how to solve them without calling a technician. I feel that we need to have more time so that we can do more practicals during training. What I liked about the trainer, is his practical approach, which made*

it easy for us to understand issues of technical support. I feel we need to have gained from the training, and some remedial if necessary.

- *The training was very fruitful towards upgrading my computer skills. I will now be able to apply knowledge that I have acquired at my school without waiting for a technician from outside sector. School funds will now to be limited towards computer maintenance. I will now be able to help my colleagues in terms of operating computer and fixing them. Our trainer was very friendly, allows questions and explained everything with great patience, Keep up your good spirit.*

- *The training was developmental as it developed me to be able to understand the problems that we face day to day when using computers. It has helped me to understand and be able to apply trouble shooting as well as solving other problems. The training has helped me to replace and remove different parts of the computer. The training also helped me to be able to solve other people's problems which they encounter, such as restoring information and loading systems.*

- *I gained more knowledge on this training to fix the computer and to find the problems. More information was given to us more than the text book or hand book. The trainer availy to us. He knows his work and well prepared, and very helpful.*

- *The practical use of dissembling computers and assembling them with success was the core part and excellent. Safety was also well emphasized. Troubleshooting became simple and easy to be done due to excellent presentation style by facilitator.*

- *The course was wonderful to me because I gained a lot of knowledge on how to operate a computer. The trainer of this course was very supportive and he knows what he was doing. In my life, was the first time to saw a trainer like that, because he knows the work, and loves his students. I request SchoolNet to make another opportunity like this.*

- *The training gave me the skill that I needed to address the technical problems. As this course was the first one in KZNDOE, SchoolNet should make sure that it provides effective and efficient trainers like Themba. The training material was good, and Themba was able to provide additional quality knowledge from his own personal experience. I suggest that similar training be done in other districts in the same province, and that SchoolNet continues to provide quality services.*

- *This training gave me more insight on the hardware, and also software. I am able to identify the components of a PC. I will be able to fix problems confidently. We need more training of this nature, as they empower us, and we will be able to empower others. The trainer was confident with his work, and this made us more confident too. All my problems with the PC's were answered.*

- *To me, the training helped me a lot, and I achieved more even what I expected, especially on IT skills, and I am looking forward for more training like this to be involved. It was a good opportunity to me to be involve and to participate in this training.*

- *The workshop was helpful and was an eye opener. I gained a lot when it comes to fixing and identifying problems. The trainer taught us about opening a hard ware and identifying the components and he also helped us about safety. Most of us are confident about being the technicians and we are planning to form groups.*

- *The trainer was approachable, and was able to simplify problems that I had. My colleagues were able to explain some problems to me during the workshop. The training was an eye opener to me. This training must be done in the near future.*

- *The training was fruitful, as I've gained a lot of experience, since we are experiencing problematic computers at schools, now I am going to fix them.*

- *The trainer was able to answer challenging questions about computers that I had for a long time. The trainer was friendly and knows what he was doing. He answered most of the questions asked, in a more clear and interesting manner. The trainer was able to do away with the misconceptions about building a computer from scratch. The trainer has inspired me to start a small computer business that includes building and selling computers.*

- *The training was meaningful. The content made one a very confident user and a great technician. The tips and methods of solving common problems will benefit me and the school greatly. The facilitator was able to impart to us all relevant hardware and software contents. One would recommend refresher trainings in the future.*

- *The trainer should be afforded an opportunity to conduct a follow up programme of whether the educators are putting these skills into practice. More educators should be equipped with the technical skills on computers as to avoid skills shortage in our schools. Such programmes should also be used to empower learners at an early stage. Local trainers should be identified in order to speed up the process of empowering learners as well as educators with technical skills on computers. Local trainers must service various districts.*

Conclusion and Recommendations:

Looking at trainees comments above, it is evident that they did not only enjoy the training but also benefited a lot from it. They showed enthusiasm throughout the training and some were reporting to the class that they went back home and solved their own problems that they had with their computers. For them that was the beginning of being not only normal educators at their schools but computer technicians as well. The issue of knowledge sustainability at their schools was somewhat compromised

because only two educators were chosen from each school to attend. That might have a negative effect if these newly trained technicians were to leave the school. It is strongly advised that learners get involved in such trainings so as to form Helpdesks teams at their schools. In that case such knowledge can be sustained. Most of these schools are struggling with technical support because it is expensive as they lack knowledge of this kind of support. One would have to pay a lot for a small thing like re-sitting Processor/RAM. It is therefore suggested that more schools also get a chance to attend such training. In that case fewer problems, if any will be found in schools' computer rooms and thereby integrating ICT effectively inside the classroom. It is a good thing that officials from the KZN Department of Education were also present to witness the nature of the training and the impact that it will have to these schools and their neighboring schools. It was also good to hear the participants deciding to meet occasionally to update each other on their progress and give each other support. In conclusion, the training was a success and comments from these trainees say it all. Hopefully this is not going be to be the last in KZN. It will be good if the department can follow up on these technicians and organize a one day update workshop sometime in 2010, as they suggest in their comments.

SchoolNet SA Trainer (Themba Mabaso)

July 2009