The National Professional Standards for Teachers: Standard 3 Reflective Commentary and Action Plan

The National Professional Standards for Teachers states that teachers should be able to plan and implement effective teaching and learning. It states that this includes being able to plan, structure and sequence learning programs and using a range of resources to engage student learning.

Planning lessons and lesson sequences is a skill that will improve as I become more and more familiar advance as a teacher. During my teaching at SHS I was able to plan and construct a term planner, lesson plans and also daily work pads; examples can all be viewed on the website. I am a big user of lesson plans and this experience it was really good to be able to use the same lesson plans for my science classes as they were all doing the same topic. I used the daily work pad to write down reminders of what I had to do for each class, for example, if I needed to collect homework from students or I didn't finish what I wanted to in one class and so had to hold it to the next class. I used the term planner to determine what I was going to be doing each lesson on so I could construct the lesson plan. I like having lesson plans while I am starting out and I believe I will continue to use lesson plans at least for the first two years of my career, if not longer. The daily work pad is a tool I believe I will use throughout my career as it is brilliant at reminding you what needs to be done for each class and as all teachers know, there is always so much to remember, especially with five classes of possibly 30 students.

In terms of my lesson structure I would like to fine tune my timing of lessons as sometimes I do run out of time for lessons. I am getting better and more aware of time but this is a skill I believe will improve with more practice as a teacher. I have already seen an improvement in this aspect in my practicum at SHS. It was something I was conscious of and it was one of my goals to achieve good timing of my lessons. This practicum was especially good at improving on my teaching practice as I had three classes in science doing the same thing and so I could adjust lessons depending on what worked and what didn't with the other classes.

During my practicum I wanted to try out as many resources and use as many ICT's as I could. When arriving at the school the deputy principal said he is always excited to look at ICT's that student teachers use in the class while on their practicum. Based on what I have seen through all my school experiences schools are having a real push in implementing ICT's in their classroom.

One program I want to reflect on is called ChemBalacer. Balancing chemical equations is always a hard concept for students to grasp and a lot of effort can be made to produce 3-D structures or 2-D drawings to show students what is happening. There are a lot of concepts involved such as molecules, atoms, elements, compounds, reactants, products, mixtures and so on. What this program does is that it helps students visualise what is happening when you add numbers in front of molecules and helps visualise the reason we need to balance equations. It is a simple program and yet very effective and the best part of it is that it is free. Knowing the different abilities of the classes I still gave them the same task (taken from the ChemBalancer website) and I knew that some classes would complete it during school time but I knew some would take more time. This program is great in that I was able to set the activity for homework for those that did not finish and they still had the program as a tool to help them. When students use computers their engagement always increases. I observed time and time again that students who would moan about writing would gladly participate in computer work. A snapshot of the program can be found on the website.

Another ICT used was power points. This allowed me to add lots of colour and images when presenting topics to the class. Power points also allow me as a teacher an avenue to get away from the front of the class and walk around the room when presenting which adds as a bonus classroom management strategy.

Although I didn't get a chance to use them on my last practicum I would in the future like to use some applications that can be found on computer tablets. At SHS a student with a tablet was allowed to use it in the class if they had consent from the teacher and parents. I have been researching into applications that could be beneficial in learning and fun and engaging at the same time. For example in science there are some science applications available that can give students 'hands on experience' without physically doing the experiment. This is good because it provides opportunity for students to 'conduct' an experiment with the expense and the hazards of the experiment. I would still include physical experiments but it simply provides more opportunities for learning.

I didn't get to use a 'smart board' in SHS but I have used them before and have learnt a lot about them through university studies. 'Maths 300' and 'GeoGebra 4' are two programs I plan to use in my maths classroom. These programs provide interaction in the maths class and are particularly useful in allowing students to explore how certain formulas are created. It is important in maths to not teach by instruction but by exploration. For example it is not very beneficial to say pi is approximately equal to 3.14 and we use it to measure circles. It is much more beneficial for students to know how pi was calculated and why we use it to measure circles. I will not go into detail but once students know and understand what pi is and why we use it, they are less likely to forget it. I was able to show students using video what pi is but I believe it would be more effective if students could interactively engage to explore pi in more depth and detail and explore those 'what if?' questions for themselves. As it depends on the schools resources I cannot confidently say if and when I can implement this resource but if it is available I will become more familiar with it and implement it as of term 1 2013.