Clifton Hill Primary School

Clifton Hill Primary School review provides an exemplary model of a negotiated review with a very specific focus. Strengths of the process included:

- Maximum use of the opportunity to reinforce and extend a current pedagogical partnership with a tertiary institution, in this case the Melbourne Graduate School of Education
- The strategic selection of critical friends with tertiary educational expertise in the chosen focus and their significant input into all parts of the process, including the review report
- The strong alignment of all elements of the process with the review purpose.

School Context

Clifton Hill Primary School is a large school located in the NMR close to Melbourne. B. Ed students from Melbourne University teach science at the school as a final year requirement.

Review focus

The review aimed specifically to refine the teaching and learning of science and investigate new resources, staff professional learning and innovative practices. Methodology involved a staged development of activities leading to the presentation of review findings and recommendations.

Highlights of the review process

The strong student voice: listening to and reporting their understandings and views of learning.

Extensive data collection including a rigorous analysis of curriculum documents, classroom observations of science lessons, discussions with relevant science and curriculum staff.

Targeted recommendations and the intended enhanced collaboration between the school and university on curriculum development to the mutual benefit of both parties.
Clifton Hill Primary School Negotiated Review Report

Prepared for

Clifton Hill Primary School
Northern Metropolitan Region

School Workforce Reform and School Improvement Division
Department of Education & Early Childhood Development
2009

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1.0 Executive Summary

The Melbourne Graduate School of Education has a long-standing relationship with Clifton Hill Primary School (CHPS). In the final year of the B. Ed program at the University of Melbourne, as part of their science course, 40 student teachers spend one morning per week over a period of six weeks, teaching science to small groups of primary age pupils. This clinical training in planning and executing effective science learning requires clinical school partners. CHPS is one of only four schools that provide this training. The science topic is identified by the class teacher and forms part of the curriculum unit planned for the class, but the nature of the science, the strategies used to teach it and the way in which it is assessed during this six week period is determined by clusters of student teachers with responsibility for a specific class under the supervision of the University and class teacher. This partnership has had major benefits for the children, school community and the beginning teachers who have often had little opportunity to teach science in their regular placements. Dr. Rod Fawns and Dr. Christine Redman, the critical friends engaged to assist with our Negotiated Review, used their educational expertise and knowledge of science to support curriculum development already occurring in the primary school. Data was gathered by various means including direct observation of teaching practice, discussion with relevant staff members, analysis of curriculum and surveys of students. The critical friends provided advice on the development of more effective teaching methods for the delivery of science curriculum and paved the way for further professional engagement with staff from the University of Melbourne.

2.0 Aim / Purpose

The aim of the Negotiated Review was to provide feedback on some of the suggested key improvement strategies and targets for student learning. The goal recommended in the School Self-Evaluation for inclusion in the Strategic Plan 2010-2013 is to enhance curriculum planning and delivery aiming to improve student learning outcomes. Two specific strategies are to refine the teaching and learning of science within the school curriculum scope and sequence and to seek out new resources, professional development and innovative practice to support teaching staff in implementing curriculum.

The critical friends were engaged to provide expert advice that will facilitate the proposed development of the science curriculum, building upon a pedagogical partnership already established with the Melbourne Graduate School of Education.

3.0 Methodology

The methodology for the negotiated review included surveying a sample of the student population about their current understandings of the role and importance of science and scientists in the world and their preferred methods of learning about
science. This qualitative survey was conducted by the school science coordinator. The parent community were informed via the school newsletter and website, given feedback on the student responses and invited to submit their thoughts about the science curriculum. School Council members received a presentation about the Negotiated Review process. The critical friends participated in a briefing for all staff members about the purpose of the Review, liaised with the science coordinator, curriculum coordinator and members of the Review Team and attended CHPS to observe science lessons being conducted by students from the Graduate School of Education. Finally, Dr Rod Fawns and Dr Christine Redman provided their findings and recommendations for inclusion in the Negotiated School Review Report. Members of the Review Team presented the Report to staff members and School Council.

4.0 Findings

The results of the survey of senior students clearly revealed their understandings of both the value of science and the breadth of scientific endeavour and influences in our world e.g. ‘science has endless boundaries’, ‘science helps us understand how the world works’, ‘without science humans wouldn’t be able to invent new things….we wouldn’t find solutions to problems’ and ‘scientifically proven things are facts so it isn’t just what people think’. In terms of curriculum content students overwhelmingly nominated practical, ‘hands-on’ activities as being most engaging and memorable and, by inference, more likely to facilitate meaningful learning e.g. ‘I like finding out more about how the world works and those questions …are interesting to try and understand’, ‘even when we are wrong it is fun and we progress’. Students also commented favourably about incursions with a science theme, the collaboration with the students from the Graduate School of Education and activities that involved links with the wider community such as the Science Talent Search and the School Science Show. It was apparent from student responses that there is a need for teachers to be more explicit in identifying the scientific concepts within various units of work. We can wrongly assume because the links with science are obvious to teachers when planning their curriculum that students will also automatically make the same connections.

The critical friends noted that scientific conversations in our classrooms could be more stimulating. From their examination of current curriculum content it appears the school has well-developed science units and activities but teachers are sometimes unsure how to move the children from the ‘hands-on’ to the ‘symbolic’ meaning. They acknowledged that teachers can feel the pressure of addressing VELS outcomes and therefore move too quickly to the scientific ‘answers’, missing applications and mediating moves that would engage children’s existing ideas, understandings and experiences and facilitate discussion, argument and further investigation.

5.0 Conclusions and recommendations

After a thoughtful appraisal of the science units being offered at all year levels within CHPS, discussions with the science and curriculum coordinators and observations of
the delivery of science lessons it was the recommendation of Dr Rod Fawns and Dr Christine Redman that the University staff develop a greater collaboration with the school when planning the execution of our science units to assist teachers to embed scientific understandings into both existing and new units. This support will include the provision of resource ideas such as the use of the Concept Cartoon (1998 Keogh, B. & Naylor, S.), a science conversation mediating strategy. The Concept Cartoon can be used to facilitate conversation around the science ideas that children have of an everyday phenomenon encountered in a class. The critical friends recommended such strategies as they allow teachers to hear, employ and develop the children’s scientific knowledge and practice in using scientific methodology.

University staff may also provide support through offering workshops or attending planning sessions with groups of teachers at different year levels, encouraging teachers to allocate increased time to the ‘exploring ideas’ phase, enabling the students to develop deeper understandings and better connections between their ideas. There is also the possibility of incorporating some demonstration lessons to support the learning theory. The feedback, guidance and suggestions provided by teaching staff to the pre-service teachers from the University are also seen as highly valuable. These interactions can be progressively developed and will be mutually beneficial as both groups collaborate on curriculum development. These and other strategies are developed into a goal, targets and key improvement strategies listed below. These will be incorporated into the Student Learning section of the School Strategic Plan 2010 – 2013.

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<th>Goal</th>
<th>Targets</th>
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| To enhance curriculum planning and delivery aiming to improve student learning outcomes in science. | • To ensure student outcomes in Years 3-6 for science show a spread of VELS progression points indicative of accurate and thorough assessment practices.  
• To ensure the percentage of students at the end of Years 4 and 6 achieving better than expected VELS in science reaches a minimum of 20% by 2013.  
• To improve the results on the ‘Curriculum Coordination’ variable of the Staff Opinion Survey. | • To seek out new resources, professional development and innovative practice, for example, the E5 instructional model, to support teaching staff in implementing effective science curriculum.  
• To rigorously use assessment for teaching to ensure the delivery of a differentiated science curriculum, meeting students’ needs.  
• To develop a science curriculum scope and sequence linked to our current curriculum and addressing the requirements of the National Curriculum.  
• To introduce initiatives included in the Blueprint Implementation Paper ‘Energising Science and Mathematics Education in Victoria’. |