



# Woodleigh School

Learning – Achieving - Caring

## SABBATICAL REPORT - TERM TWO 2015

To explore how schools are effectively using e-learning technologies to enhance teaching pedagogy and raise achievement outcomes for students, including priority learning groups

**Clyde Pearce**

**Woodleigh School**

**85 Brois Street**

**New Plymouth**

**Email: [principal@woodleigh.school.nz](mailto:principal@woodleigh.school.nz)**

## **ACKNOWLEDGEMENTS**

- I would like to acknowledge and thank Woodleigh School Board of Trustees for supporting my sabbatical application and study leave.
- I wish to acknowledge and thank Diana Kerslake, Deputy Principal, and Tony Williams, Associate Principal, at Woodleigh School for willingly and very ably taking on additional roles of leadership during my absence.
- Thank you to the principals, staff and students of schools visited in New Plymouth, Palmerston North and Wellington
- Thank you also to Heather Bell, Massey University Centre for Educational Development for her willingness to share her philosophy and beliefs

With this generous support in terms of time, expertise and funding I have been able to step outside the role of principal and refresh, observe, reflect and learn. It has been a time of growth, thinking, understanding and opportunity which I believe will ultimately enhance students learning and achievement at Woodleigh School.

## **PURPOSE:**

To explore how schools are effectively using e-learning technologies to enhance teaching pedagogy and raise achievement outcomes for students, including priority learning groups

## **RATIONALE AND BACKGROUND:**

Woodleigh School is a contributing primary school located in the Frankleigh Park suburb of New Plymouth with a current roll of 400 - 440 students. The school is well resourced with modern learning environments. The school's vision is to provide quality education in a caring and supportive environment, fostering personal excellence and lifelong learning, guided by trusted partnerships with students, parents and whanau. This vision is best captured in the ethos 'Learning, Achieving and Caring – The Woodleigh Way'.

My motivation in selecting this sabbatical topic is fuelled by my interest in how schools are utilising e-learning technologies to enhance teaching practice and raise student achievement.

Only recently has Woodleigh School achieved a robust ICT infrastructure in terms of hardware, Ultra-Fast Broadband, network upgrade and wireless capability. Prior to this milestone any initiative to utilise ICT to enhance teaching practice and raise student achievement has experienced frustration due to poorly performing infrastructure, quickly leading to disengagement. In anticipation of achieving a high performing infrastructure the Board of Trustees has invested heavily in hardware and professional development for teachers.

In terms of hardware the school has been through several waves of expenditure and development. All, at the time seemed to be logical and leading edge, only to be superseded by further advances in terms of functionality, capability, robustness, portability and usability. There is ample evidence that at each stage of development teachers were supported by well-considered but one size fits all professional learning and upskilling. Observations suggest that much of the PLD was focused on helping teachers understand the mechanics of using the hardware rather than on using hardware to enhance teaching practice and ultimately lift student achievement. There was also the belief that teachers inherently knew more about these new technologies than their students and that students would need to be taught how to use the hardware. In fact the reverse is the reality and students are intuitive users of technology and often their utilisation is hampered by well-meaning but linear modes of instruction and implementation.

In response to this historical position, in 2013 Woodleigh School entered into an in depth professional learning and development project with Massey University Centre for Educational Development, led by Heather Bell. The aim of this project was to enhance learning outcomes for students through the use of 21<sup>st</sup> century smart devices and tools. Initially iPads were purchased for use by students in classrooms, however, this was altered to allow staff to have a teacher device instead. The choice was made as we wanted to use the iPads to shift learning through evidence informed teacher inquiry, rather than just use the iPads to simply better engage students. This professional development initiative proved to be highly successful as it put mobile devices (iPads) in the hands of teachers with the specific purpose of enhancing teaching practice, capturing evidence of student learning and identifying logical next learning steps.

The success of this initiative led me to believe that Woodleigh was at a crossroads in terms of “Where to next?” in implementation of ICT strategy. What could we do to take advantage of improved infrastructure, hardware and accessibility? Our research had shown that ICT could play a valuable role in improving teaching practice and lifting student achievement.

## **LINKS TO E-LEARNING STRATEGIC PLAN 2014/2015**

- 1.1 Enhance teaching and learning programmes, using ICT equipment and e-Learning strategies to support the development of Woodleigh School's vision statement
- 1.2 Improve student achievement through the use of e-learning
- 1.3 Increase teachers ICT and e-learning capabilities through the provision of high quality professional learning and development (PLD)
- 1.4 Create an ICT infrastructure that supports effective teaching and learning
- 1.5 Raise parent and wider community awareness of the impact and educational benefits of using ICT tools and e-learning strategies

## **FOCUS QUESTIONS**

### **1. Resourcing classrooms with 21<sup>st</sup> century smart devices and tools**

*Focus questions: What e-learning hardware is available to teachers / students? Why have you chosen this equipment? How do teachers / students access e-learning devices and tools?*

### **2. Effectively supporting the professional learning of staff in the development of e-learning teaching practices**

*Focus questions: What PLD has been provided for teachers? How effective has this been in sustaining / enhancing practice?*

### **3. Using smart devices and tools to support effective pedagogy - Teaching as Inquiry**

*Focus questions: How has the availability of smart devices and tools modified teaching practice? How are teachers evidencing their development?*

### **4. Using smart tools and devices to accelerate achievement for priority learners**

*Focus questions: What approaches have been successful? What applications are used? What shifts in achievement have occurred that can be attributed to the use of smart devices and tools?*

### **5. Using smart devices and tools to empower students to take shared ownership of their learning**

*Focus questions: What practices are in place to empower students across the age levels? What are the success stories?*

## **ACTIVITIES UNDERTAKEN - METHODOLOGY**

There were four components to my sabbatical study:

- Professional Reading
- Reflection on effective e-learning practice in schools visited
- Reflection on conversations with consultants and professional learning and development providers
- Review and reflection on ICT practices at Woodleigh School

## **FINDINGS & IMPLICATIONS**

### **Resourcing classrooms with 21<sup>st</sup> century smart devices and tools**

Findings: Schools are using a range of platforms, often determined by what has historically been in the school. There is a move away from outright purchase and ownership to lease options, allowing schools to update regularly and not be encumbered with less capable and outdated technology. Price point and robustness are also key factors when acquiring hardware. There is an evident preference for mobility and hand held devices to take advantage of high performing wireless capabilities afforded schools through network upgrades. Whereas Interactive Whiteboards and other fixed point hardware is being effectively used, mobile devices are allowing greater flexibility and student ownership of learning.

Schools visited take advantage of Ministry of Education initiatives to provide teachers with laptops. Various options are used to allow students access to hardware with no clear preference or advantage noted. However everyone agreed that the ultimate was to achieve a ratio of one mobile device per student. While this ratio was the goal, principals and teachers speak of the benefits and importance of students collaborating and cooperating using one device, promoting interaction, developing key competencies and problem solving skills. No schools visited were actively using BYOD programmes.

Implications: Inevitably conversations come back to finances and getting the best value with available resources. There is no apparent best way to do business but all principals spoke of the importance of having hardware that supports 21<sup>st</sup> century approaches to learning. Some indicated that on arrival they inherited infrastructure and hardware that is no longer fit for purpose. All agreed that having an e-learning strategic plan is essential to effectively implementing e-learning and staying future focussed.

### **Effectively supporting the professional learning of staff in the development of e-learning teaching practices**

Findings: Principals agree that quality professional learning and development (PLD) is the key to fostering improved outcomes in terms of teacher practice and student achievement. Successful PLD models shared, tend to be whole school developments, with clear links to the school's strategic plan and teachers development goals. Several schools collaborate with neighbouring schools to fund PLD and to share good practice. Implementation of ICT hardware without purposeful PLD limits the effectiveness and impact, increases technical issues and often means equipment is not fully utilised or is used in a manner other than that intended. Effective PLD serves the purpose of covering the mechanics of using equipment and most significantly empowers teachers and ultimately students to use ICT equipment for educational gains. Schools are forming long term PLD relationships with providers so that there is continuity and consistency of personnel. In schools visited there is evidence that effective PLD has many

benefits including raising teacher confidence, greater collaboration, promoting evidence based teacher inquiry and reflection, increased curriculum knowledge, students having greater independence, voice, ownership of learning and awareness of goals.

Implications: Budgeting for effective PLD to support the implementation of ICT is essential to gain most value from the significant investment often made in hardware and infrastructure. How ICT is being used will dictate the nature of PLD and how it can be structured. Principals agree that empowering teachers is important, especially if ICT is going to be used as a tool to enhance practice. Neglecting to support teachers could mean that a valuable resource is not fully utilised. PLD is likely to be most effective when differentiated as teacher skill sets vary markedly.

### **Using smart devices and tools to support effective pedagogy - Teaching as Inquiry**

Findings: Mobile devices with video function are allowing teachers to capture evidence of practice to assist inquiry. Teachers are able to use footage of student learning and make decisions about teaching approaches and strategies that could be used to better meet student needs. Shared viewing of video evidence allows teachers to collaborate and share ideas and best practice. In essence it develops a learning community, helping teachers to build their professional knowledge as well as utilising the skills and strengths of others. It also means that students are supported by a significantly larger pool of professional knowledge. The use of video is allowing teachers to reference their practice to the Practising Teacher Criteria. Video is used to provide teachers with vivid feedback on their teaching and promotes discussion within the appraisal and goal setting cycle.

Implications: For some the use of video to gather evidence is new territory and implementation requires assurances that the process is about reflection, growth and change, rather than judgement. Collaborative appraisal and goal setting processes are the norm in schools visited and for it to work successfully adequate preparation and release time is required. It relies on a high level of trust. The adage that good things take time prevails and to get worth out of the process such an approach has to be adequately funded and resourced. Teachers are using video to build a body of information for inclusion in their professional portfolios.

### **Using smart tools and devices to accelerate achievement for priority learners**

Findings: Linked closely to Teaching as Inquiry teachers are using Narrative Assessment, a form of assessment that uses narrative descriptions of students' learning. Identifying a target (priority) student or small group of students, teachers using an iPad camera and video function capture narrative descriptions of learning that demonstrate what the student is capable of, as well as identify any barriers to learning with regards to a set numeracy or literacy goal. This strategy is useful in capturing evidence of learning through observation and conversation, especially for students who may struggle with more formal standard testing processes.

Teachers are able to work collaboratively to analyse the information captured in video footage. Such rich discussions help build teacher confidence with assessment and moderation practices. Teachers are also able to focus on the New Zealand curriculum, especially the key competencies and effective pedagogy elements. Once evidence of learning and barriers are identified, further

learning goals and teaching strategies can be constructed and put into practice. In addition to changes to teaching approaches, teachers are able to investigate how iPad applications (apps) can be utilised to directly assist students achieve next learning steps. Experience suggests that limiting the number of apps to four or five allows teachers to truly explore their merit and how they can be used effectively by students to support learning, and to instruct students on how to use the app. purposefully. Some apps lend themselves to being best used by an individual while others have small group and whole class benefits. Again iPads can be used to capture video evidence of shifts in learning.

Implications: Discussions with principals and teachers identify it is difficult to directly link improved students achievement to the use of smart devices and tools. However, there is a strong possibility the combined effect of modifications to teaching practice, programme development and purposeful use of apps will be enhancing student outcomes if the trials operating in schools are taken into account. There is certainly evidence of shifts in achievement, greater student confidence, collaboration, ownership of learning, self-reflection and very purposeful use of devices and applications. There is confidence that there is strategic use being made of devices rather than the devices accidentally enhancing outcomes.

Schools are continuing to grapple with the management of increasing capability in terms hardware in classrooms. The most often raised question is how do I manage to capture evidence, set goals, and modify practice for every student in every area of learning? Common sense dictates that having target individuals, or small groups is the most manageable solution. Knowing these students, knowing their needs and knowing the possibilities in terms of teaching practice and apps use is the key.

### **Using smart devices and tools to empower students to take shared ownership of their learning**

Findings: Schools visited have high levels of capability in terms of available hardware and infrastructure. Students benefit when:

- there are robust systems and protocols supporting implementation and use
- teachers have the necessary knowledge of technical issues and hardware use
- teachers are aware of the ways hardware and applications can be used to support learning programmes
- there is a culture of collaboration and inclusiveness
- best practice is shared: teacher to teacher / teacher to student / student to teacher / student to student
- there is a specific programme of PLD to support teachers implementing effective student use of ICT
- a climate of inquiry is fostered allowing students and teachers to explore possibilities
- ICT is fully integrated into classroom programmes rather than being viewed as an add on or stand-alone subject
- ICT is used in all areas of school operations including classroom programmes, assessment, reporting to parents

In one school students spoken to explained how they are using iPads to have shared ownership of their learning. Using the camera function, with a friend they record themselves talking about their next learning goal and what they will need to do to achieve this goal. With the support of the teacher they identify what activities, interactions and applications will enhance their chances of success. After a period of sustained application students use the camera function to talk about their progress with the particular goal and provide evidence to support their opinions. This is proving to be a powerful tool supporting learning. Teachers and students commented that benefits included:

- greater student confidence and risk taking (especially when using iPad applications)
- greater levels of motivation
- iPads provide a fresh approach to learning, especially for students who have difficulty with core reading and writing tasks
- greater student ownership, they enjoy talking about what they are doing and what they have achieved and gain satisfaction sharing with peers, teachers and family
- students feel they are successful learners, able to reflect on their progress and achievement, providing their own evidence
- feedback from peers is positive, Sharing their videos allows classmates the opportunity to see them being successful

Students using smart devices and tools (including e-portfolios) to share their learning with parents is the norm in many schools. Identified benefits include portability and accessibility, opportunities for student self-reflection using collected evidence, student ownership - leading conferences with parents and caregivers, increased levels of motivation and efficiency of data storage.

Implications: The ongoing challenge is to make effective use of this capability to empower students to take an increasing degree of ownership of their learning. Simply providing hardware does not ensure success. Comprehensive support is required by way of PLD to ensure teachers, teams and schools can utilise digital technologies to empower learners. Students generally have an affinity with digital learning and teachers require the strategy and confidence to harness this potential.

## **Conclusion**

E-learning is a game changer in education. Realising its potential to enhance teaching pedagogy and raise achievement outcomes for students is the challenge schools are embracing. Prerequisites for success include a robust and capable ICT infrastructure, a coherent and future focussed e-learning vision / strategy, a responsive and tailored programme of professional learning and development to support teachers and an attitude that ICT can enable students to be confident, connected, and actively involved lifelong learners. In schools where these prerequisites are in place there is authentic, meaningful, differentiated learning occurring. The historical model

of teacher to students programme delivery is being replaced by learning partnerships in which everyone can be a coach, a collaborator, a co-operator, a communicator, a creator. Students have shared ownership of their learning and are using ICT tools and systems constructively and intuitively. Teachers in these schools are well down the pathway of review and reflection, inquiry and exploration, they have an awareness that to truly engage learners and meet expectations in a dynamic 21<sup>st</sup> Century classroom the adoption and use of smart devices and technologies is essential.

## **References**

New Zealand Curriculum – Ministry of Education (2007) – Learning Media

Timperly, H., Wilson, A., Barrar, H., Fung, I., (2007) Teacher Professional Learning & Development: Best Evidence Synthesis Iteration (BES)

Digital natives, digital immigrants. Prensky, M. (2001). On the horizon, 9 (5).  
<http://www.marcprensky.com/writing/default.asp>

Woodleigh School ICT PLD: Review Report – Heather Bell Massey University Centre for Educational Development

The e-Learning Planning Framework – Ministry of Education

NZCER website - Information and Communication Technologies