

**Science and Mathematics Education Centre**

**An Investigation into a Student-Centered Approach to  
Assessment and Self Reporting Using e-Portfolios**

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**This thesis is presented for the Degree of  
Master of Philosophy  
of  
Curtin University**

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## DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university

A handwritten signature in black ink that reads "Janet McCarroll". The signature is written in a cursive style with a large initial 'J' and 'M'.

Signature:

Date: 25/03/2014

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It all began when a group of enthusiastic St Mary's teachers gathered to discuss the possibility of completing a Masters Thesis. We explored puzzles of practice and theory at the nexus of technology and education, and a rich journey into new learning began...

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## ABSTRACT

The major purpose of this research was to investigate a student-centered approach to assessment and self-reporting using the assessment *for* learning process in an online learning story within an e-Portfolio. To achieve this, perceptions from students, teachers and parents were collected using both qualitative and quantitative data, focus group interviews with all stakeholders in the learning process, and surveys and questionnaires.

A future focused assessment practice promoting student agency, intrinsic motivation and student ownership of their learning is examined in this study, in the context of a New Zealand Primary school where the curriculum was re designed to develop student assessment capability. In this context, critical learning conversations are scaffolded and deliberate to allow time for students to self- report to teachers. The dialogic learning conversation between the student and the teacher, where the student provides feedback to the teacher on their progress and achievement is captured using web 2.0 tools. The reflective conversation is contained in a learning story which shows the formative assessment *for* learning process, including: the learning purpose, learning intention, co-constructed success criteria, artifact of learning, student reflection, incorporating feedback and feed forward from the teacher, peers and parents, shared in an e-Portfolio. The research findings are presented in the following themes: Reporting Progress to Parents, On Line Student Reflections, Adding Value to Student Learning and Teachers Support.

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## GLOSSARY

BoT	Board of Trustees
CFG	Child Focus Group
DANZ	Directions for Assessment in New Zealand
EHSAS	Extending High Standards Across Schools
e-TAP	Electronic Teaching Assessment Planning
ERO	Education Review Office
ICT	Information and Communication Technology
IT	Information Technology
KN	KnowledgeNET
LMS	Learning Management System
MLE	Managed Learning Environment
MoE	Ministry of Education
NZ	New Zealand
NZC	New Zealand Curriculum
PFG	Parent Focus Group
SMS	Student Management System
TFG	Teacher Focus Group
VLN	Virtual learning Network
WALT	We Are Learning To

## Chapter 1

### INTRODUCTION

#### 1.1 INTRODUCTION

The use of current and emerging technologies in New Zealand schools is increasing at the same time as schools grapple with the dilemma of integrating technologies to engage students and meet the needs of the New Zealand Curriculum whilst promoting effective pedagogy and assessment practice. This research focuses on how schools can become future orientated through a student-centered approach to self-reporting using the online environment.

The New Zealand Curriculum document (Ministry of Education, MoE, 2007) requires schools to design and implement localised curriculums driven by five Key Competencies: Thinking, Using Language Symbols and Texts, Managing Self, Relating to Others and Participating and Contributing. The research focuses on how a school uses the online environment to design and develop its own personalised curriculum, incorporating the competency of 'Thinking', through student self-reflection and self-reporting. Learning environments which best create cultures for thinking, student engagement and improving student learning outcomes provide the background concepts for the research.

The Vision of the New Zealand Curriculum desires that all young people will be confident, connected and actively involved lifelong learners. Alongside these capabilities for living and lifelong learning identified as Key Competencies, are Principles and Values which form the basis for a school to design its own curriculum, including learning experiences, learning environments and assessment practices, suited to the context and cultural identity of its particular community.

The use of Learning Management Systems (LMS) in New Zealand schools is increasing as schools utilise 'e-Portfolios' as a method of engaging students and to improve student learning outcomes through sharing with parents, students, teachers and peers student learning and assessment.

An e-Portfolio in simple terms can be described as an online collection of evidence or artifacts of student learning, which can include learning goals, reflections, feedback and feed forward provided by significant others including parents, teachers and peers.

Dr. Helen Barrett, an acknowledged expert in the field of e-Portfolios, defines e-Portfolios as:

An electronic portfolio uses technologies as the container, allowing students/teachers to collect and organise artifacts in many media types, (audio, video, graphic, text); and using hypertext links to organise the material, connecting evidence to appropriate outcomes, goals or standards. (Barrett, 2005, p. 5)

## **1.2 BACKGROUND AND CONTEXT**

### **1.2.1 Ministry of Education Expectations**

#### *1.2.1.1 The Curriculum*

*The New Zealand Curriculum* was launched in November 2007, following the publication of a draft curriculum in 2006. Schools were required to give full effect to the curriculum by February 2010. *The New Zealand Curriculum* provides the framework for school-based decision-making in English-medium settings, while *Te Marautanga O Aotearoa* provides the framework for Maori medium- settings.

The New Zealand Curriculum requires schools to design and implement localised curriculums driven by five Key Competencies: Thinking, Using Language Symbols and Texts, Managing Self, Relating to Others and Participating and Contributing. These competencies sit alongside a set of Principles and Values with eight essential learning areas that provide the framework for every school to personalise their

specific curriculum design. During the period from consultation and trialing of the draft curriculum until February 2010 when the NZ Curriculum became mandatory, schools made significant progress in reviewing values, principles, key competencies and pedagogy within their localised context. The national curriculum sets the direction for learning and assessment processes. Each school is author to shaping a curriculum that is designed to meet the specific needs, interests and circumstances of their community.

The introduction of the National Standards in 2010, a set of broad descriptions of expectations in reading, writing and mathematics, which required the school to report to parents twice a year in plain language, to indicate to parents whether a child is below, at, or above the standard was a significant development during the same time the NZ Curriculum became mandatory. The standards are time specific, setting out a guide for student attainment as they move through years 1 to 8 of the New Zealand Primary school sector. The standards do not depend on nationalised testing but rather place emphasis on teacher professional judgements and assessment for learning principles and practices.

The Ministry of Education produced a position paper for the schooling sector on Assessment in 2010. This paper, *Ministry of Education Position Paper: Assessment (Schooling Sector)* was designed to sit above policy, to inform and direct policy review and development relevant to assessment, raising student achievement and system wide improvement. The key principles the paper supports focus on the 'student at the center' of a system that develops assessment capabilities through quality interactions and relationships. Cyclical processes of continuous improvement where collaboratively the student and teacher can inquire, decide, adapt, transform in order to improve student learning. The position paper took advice from *'Directions for Assessment in New Zealand'* 2009, (commonly known as the *DANZ* paper) which had been commissioned by the Ministry in the context of a review of Assessment Strategy for New Zealand Schools.

### 1.2.1.2 ICT in Schools

An e-Learning Action Plan, *Enabling the 21<sup>st</sup> Century Learner. An e-Learning Action Plan for Schools*, was developed by the Ministry of Education to provide direction, key outcomes and actions for the schooling sector for 2006-2010. This e-Learning action plan built on two previous ICT strategies for schools- *Interactive Education* (Ministry of Education 1998) and *Digital Horizons* (Ministry of Education, 2002). The Ministry's overarching goal underpinning these frameworks was to build an education system that equips New Zealanders with 21<sup>st</sup> century skills through the increased use of e-Learning in schools.

The Ministry of Education have been involved, directing and promoting the development and use of a Managed Learning Environment in the New Zealand schooling sector to support their overarching ICT goal. A Managed Learning Environment (MLE) is a collection of software tools and digital content, which support learning. Two wide spread software tools in the schooling sector's MLE are a Student Management System (SMS), that controls the administration and management of student and staff information and a Learning Management System (LMS) that supports curriculum, assessment and pedagogical practices. 95% of New Zealand schools currently use an SMS and approximately a quarter of New Zealand schools use an LMS. However growth and interest in the use of an LMS or e-Portfolios is increasing significantly. The Ministry's key focus in the MLE is to ensure the 'interoperability' of these systems, to enable them to 'talk' to each other. Requirements from the MoE of vendors of these software products, to ensure 'interoperability' between the products and meeting the MoE's evolving standards provide a necessary framework. Interoperability means that schools can share resources and that students are able to learn in a digital environment both within and outside the formal hours of school instruction. Students are able to retain a digital record of their learning as they mature and move from school to school. The Ministry is funding the vendors to develop LMS products. The three New Zealand LMS products are Ultranet, KnowledgeNET and Moodle.

The MoE commissioned Ian Fox and Sandy Brittain in 2009 to research and publish *e-Portfolios- Celebrating Learning*. This document provided the schooling sector with an e-Portfolio selection criteria.

There are guidelines for schools around the use of e-Portfolios. The Ministry published *Digital Portfolios: Guidelines for Beginners* 2011, to support and encourage schools to use e-Portfolios. E-Portfolios are an online working environment that track the learning journey, collate and archive digital artifacts and resources, provide links to a variety of media formats and combine them in various ways to share with specific audiences. Case studies of eleven schools document their implementation of an LMS and outcomes for students, teachers and parents. The MoE document aims to outline how an e-Portfolio can *personalise* student learning. Ownership of the e-Portfolio lies with the student. An e-Portfolio is a conceptual approach to teaching and learning which supports the New Zealand Curriculum's vision that all young people will be confident, connected and actively involved lifelong learners. The New Zealand Curriculum encourages schools to "not only explore how ICT can supplement traditional ways of teaching but also how it can open up new and different ways of learning" (p. 36).

### **1.2.2 KnowledgeNET Learning Management System and e-TAP Student Management System**

The implementation of a Learning Management System (LMS) and a Student Management System (SMS) within St Mary's School necessitated the selection and implementation of various IT systems – in St Mary's case, KnowledgeNET and e-TAP were the chosen providers. However, the school's Leadership Team considered that of far greater importance than the systems themselves, was teacher buy-in and belief in the pedagogical theory that underpins and informs the use of these systems.

#### *1.2.2.1 Vision for the SMS and LMS within the school*

The vision for all teachers to utilise the capabilities of KnowledgeNET, was to use a whole school approach to report to parents using the Assessment *for* Learning process. A template or Learning Story was designed to demonstrate the purpose for the learning, the learning intention, success criteria, student evidence and student reflections on their learning activity or artifact and teacher feedback and feed forward. Using writing as the context for our MoE Target for 2009, the school

aimed to 'Personalise' the learning. St Mary's trialed the web 2.0 tool, *Jing*, an audio tool, to capture both student voice and teacher feed-back/feed-forward.

The pedagogical aim was to shift teacher belief and understanding towards valuing the voice of the students and to recognise the impact on learning outcomes when a student can articulate where they are in their learning, where they need to go to next and how to get there. (*McCarroll 2010*)

To support the implementation of the vision and the pedagogic belief that informs it, the following actions were taken by the Leadership Team:

- Professional Development on the use of KnowledgeNET, during which expectations of teachers in relation to Learning Story templates were articulated.
- The Principal, Senior Teachers, and ICT Leaders visited an Auckland school recognised as an ICT leader to gain insights in their use of a 'Reflective e-Portfolio' using KnowledgeNET as their LMS.
- Professional readings and discussions around the use of an e-Portfolio as a vehicle for capturing student reflection and sharing the 'assessment for learning process' were facilitated amongst all teaching staff
- Educational entrepreneur and founding director of KnowledgeNET Mark Treadwell presented at a Parent Information Evening, sharing 'the big picture' in relation to the rapid shifts in teaching and learning, and introduced KnowledgeNET to the wider community.
- Classroom release time was provided to teachers to enable the capturing of student reflections and the feed-back/feed-forward with each individual student.
- The school employed an IT support person to assist teachers in the scanning of evidence and the uploading into the templates.

### *1.2.2.2 Introducing KnowledgeNET Learning Management System*

KnowledgeNET was introduced in 2006, however during 2007/ 2008 St Mary's had used KnowledgeNET as a Learning Management System (LMS). KnowledgeNET was a participating software vendor that was working with the education sector as a part of a consultation group. As a result KN is now an approved LMS vendor for the MoE.

Throughout this period the use of the KnowledgeNET LMS within St Mary's School, had been minimal and not all teachers embraced the system for the intended purpose of improving Student Learning Outcomes. Senior Management used some of the KnowledgeNET capabilities, exploring functionality and establishing a resource portal. Each classroom teacher had/has access to a laptop and projector, and each classroom has access to between one and five computers.

KnowledgeNET is one of three MoE Approved Learning Management System (LMS) platforms. As at September 2011, 246 schools are using KnowledgeNET as their LMS provider. KnowledgeNET hold the second highest market share of seven providers. KnowledgeNET was conceived in 2001 with Mark Treadwell who is a director and business partner in a software development company that built KnowledgeNET. KnowledgeNET facilitates the sharing of resources, knowledge and communications between teachers, students, parents, administrators and cluster schools. KnowledgeNET is a web based, collaborative social media learning tool enabling an interactive online learning environment. KnowledgeNET started an interoperability pilot with MUSAC (an SMS vendor) in 2006. Currently KnowledgeNET has interoperability with the major SMS software providers to enable the sharing of data between the school's LMS and SMS. This functionality provides parents with online access to information about their children including, attendance and assessment data. KnowledgeNET were market leaders in developing e-Portfolio tools including e-reflections, learning stories, learning journals, forums, blogs and online calendars.

### *1.2.2.3 Introducing e-TAP Student Management System*

e-TAP, the chosen SMS was introduced to St Mary's in 2006. e-TAP was chosen as it was web based. The Principal and Deputy Principal at that time saw the benefits of future interoperability between the SMS and the LMS. (KnowledgeNET was introduced into the school also in 2006). Initially the SMS was used wholly by office administration. Teachers quickly saw the benefits e-TAP offered in classroom administration e.g. the drawing up of class lists. Teachers opposed the use of e-TAP for notices, as they didn't like the use of three portals, e-TAP, KnowledgeNET and email. The interface of e-TAP, was not well received by teaching staff, who struggled for some years in uploading assessment data to create school wide reports. With the requirement to complete an online attendance roll school wide in 2010, teaching staff have crossed a barrier into regular use and navigation around the SMS.

A Professional Development meeting in 2009 with e-TAP staff to explore the possibilities of using e-TAP for recording planning and summative teacher comments was confusing for teachers. The interface and shift in thinking required to see the link into reporting and interoperability with KnowledgeNET appeared overwhelming.

Entering student achievement data into e-TAP, Senior Management recognised the advantages in creating a personalised St Mary's wedge graph to enable teachers to record data from their Reading Running Records and PROBE, a diagnostic reading comprehension assessment tool. This graph would indicate the National Expectations and place St Mary's expectations above the National Expectations.

Teaching staff were all able to enter Diagnostic Assessment data into e-TAP by 2009. Office administration and Senior Management collated the data for school wide reports to report to Ministry and B.O.T. reporting. Office administration use the SMS on a daily basis for accounts, attendance, health and immunisation information, personal student details, bus records and to generate email lists for classes or groups – e.g. Parent Teacher Association.

### 1.2.3 St Mary's

St Mary's School is a decile 9 Integrated Catholic School, located in Tauranga city within the Bay of Plenty region.<sup>1</sup> School decile ratings are a way in which the Ministry of Education allocates funding to schools. The decile system determines the financial support a school receives from the Ministry of Education as an annual operational fund.

The school is sited on the Waimapu Estuary and was established and staffed initially in 1942 by the Cluny Sisters. The school has a roll of 410 students with an anticipated roll growth to a 500-student capacity, 2013 and beyond. The majority of children attending St Mary's have a European background. The school was originally organised into three syndicates-Junior (years 0, 1 and 2), Middle (years 3 and 4) and Senior (years 5 and 6). In 2011, the school was restructured into year level groups instead of the earlier syndicate based structure. The school has been externally reviewed by ERO (Education Review Office), and received positive reports from the last four visits to the school in 2001, 2004, 2007, and 2010, and is expecting a review in 2013. The school is structured into six areas:

- Principal and Senior Leadership
- Teaching staff
- Administration
- Support Staff
- Students
- Parents/Caregivers

The school is supported at governance level by a Board of Trustees, comprising elected community members, a teacher representative, and several Bishop's Representatives. A Parent Teacher Association fulfils fundraising and pastoral care roles.

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<sup>1</sup> School decile ratings are a way in which the Ministry of Education allocates funding to schools. A decile is a 10% grouping, there are 10 deciles and around 10% of schools are in each decile. The lower a school's decile rating, the more funding they receive to support their student's learning needs.

### 1.3 RATIONALE FOR THE STUDY

Effective pedagogy is at the heart of the decision making in shaping a personalised curriculum. The relationship between effective pedagogy and e-Learning is fundamental to the rationale for this study:

Schools should explore not only how ICT can supplement traditional ways of teaching but also how it can open up new and different ways of learning.

(Ministry of Education, p. 36)

This research study investigates how schools design their own curriculums to reflect the needs and interests of their communities, and the intent of the New Zealand Curriculum. Effective pedagogy and teaching are identified by educational research and the New Zealand Curriculum as the key ingredients in preparing our students for a rapidly changing world by becoming active, connected and lifelong learners. Formative assessment and assessment capabilities are recognised by the MoE and articulated in the NZC as learning processes which raise standards and improve achievement. Through actively involving students in their learning and assessment using the online environment, in Learning Stories with in an e-Portfolio, the emphasis is drawn away from the products of learning to the process of learning.

This study will evaluate the effectiveness of a curriculum which has been adapted to incorporate online student self-reporting and reflection. Assessment, teaching and learning are interwoven when assessment for learning processes are employed. For schools designing how a curriculum best meets the needs of the students, schools need to make decisions about gathering, analysing and using assessment information to improve student learning.

[The Curriculum] gives schools the scope, flexibility and authority they need to design and shape their curriculum so that teaching and learning is meaningful and beneficial to their particular communities of students. (Ministry of Education, p. 37)

This study will closely examine the experience of St Mary's School in the implementation of learning stories to self-report within these MoE Curriculum

guidelines. Surveys and interviews of key stakeholder groups within this community were designed to achieve this outcome.

## **1.4 AIM AND RESEARCH QUESTIONS**

### **1.4.1 Aim**

The New Zealand Curriculum promotes effective pedagogy including the use of effective teaching and learning using formative assessment practices and e-Learning. (Ministry of Education, 2007). These MoE expectations have been met at St Mary's school through the implementation of online learning stories as a part of its assessment and reporting system. The learning stories designed at St Mary's share the process of learning with parents (rather than focusing on the product), and actively engaging students in reflection and self-reporting. The aim of this study is to evaluate the effectiveness of online learning stories in adding value to student learning outcomes. In order to achieve this aim, several research questions were investigated and answered during interviews and surveys with the school community.

### **1.4.2 Research Questions**

To encourage all teachers to work within the web-based protected environment to improve student learning outcomes, the school's Leadership Team trialed the rollout of a Learning Story in Writing for every child in the school during June 2009. A writing template was designed to be adapted to each year level to showcase the process of learning, from the shared learning intention, the co-constructed success criteria, evidence of the draft student writing, and an audio or video clip of a 'critical conversation' which records both the student and teacher providing feedback and feed forward against a standard. The Learning Story template provided an opportunity for parents and teachers to make written comment on the learning process. The school then continued to showcase the process of learning using an online Learning Story from 2009 to the present, as part of the reporting to parents

process. The Learning Story development and school wide implementation led to this first research question.

1. How effective is using an 'online Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?

Teachers were directed to use an online audio tool or video to record their 'critical conversations' with students as key evidence of their learning achievement and progress. Some teachers were reluctant to expose their questioning techniques and even to be recorded, as they feared high accountability with parents. Some teachers reverted to using written comments from the students as their preferred method of recording and capturing student reflections about their learning. Thus the second question was:

2. How do students' best share their reflections about their learning to teachers, parents and peers in an online environment?

The online environment provides new and unique opportunities for collecting rich data that paper technologies cannot. The student voice is authentic and layered with a depth of feeling and intonation that provides the other key stakeholders in the learning process, the parents and teacher, with indisputable confirmation of where a learner is situated against an agreed standard. When a learner can articulate where they are at with their learning, where they have to go to next with their learning, a desired pathway to add to learning outcomes is achieved. Web 2.0 tools are continually under development and becoming available and appropriate to use in the schooling sector for the purpose of capturing student voice. Therefore the third research question was:

3. Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?

The need to further refine and improve teachers' questioning skills with the purpose to best encourage rich student reflections about their learning, will improve the quality of the critical conversation between the student and teacher to improve learning outcomes. Students will develop a sense of intrinsic ownership if they have choice in selecting artifacts of learning that best illustrate where their learning is at. Teachers as part of developing assessment capability in their students learning how to learn, will need to scaffold and support students to make decisions to identify evidence of learning. The development of assessment capability skills for both students and teachers provided the rationale for this research question:

4. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?

## **1.5 SIGNIFICANCE**

This study is significant for a number of reasons. First, it will identify the dispositions of both students and teachers towards developing a culture of 'thinking' in the online environment with particular focus on student reflection, as the learner provides feedback to the teacher in 'critical conversations' captured using web 2.0 tools as a method of self-reporting.

Key principles outlined in *The Ministry of Education Position Paper: Assessment (Schooling Sector) 2010* place the student at the center of assessment and reporting processes and identifies building assessment capability in both students and teachers where collaborative exchanges of information between participants occur as underpinning improved student learning.

Using documented conversations and observations as artifacts to be revisited (learning stories) can be useful, particularly in relation to dimensions of learning that are dispositional and complex... (p. 36)

By the end of 2016 it is forecast that 97.7 % of schools across New Zealand will receive ultra-fast broadband connections. This rollout will lead to an ever-increasing demand for pedagogical knowledge, content and online services so that schools can maximise digital learning opportunities. The proliferation of Multimedia tools such as, iPad, iPod, video, audio, mobile phones used by students in their lives outside school to collaborate, communicate, create and share makes it an imperative for schools to investigate the educational possibilities of using web 2.0 tools to network and provide opportunity for students, teachers, parents and peers to capture rich digital evidence of learning, view, comment, reflect and archive learning artifacts online within the school context.

Secondly, this study will be significant for schools as it explores the potential benefit of digital learning environments for *Assessment for Learning*- a formative approach to teaching, learning and assessment. The study examines the benefits of sharing the process of learning with parents in the format of *Learning Stories*, designed to actively involve and benefit the student and parent in the learning process. A digital learning story shares the Formative Assessment process, including: the purpose of the learning, the learning intention, success criteria, provides valuable information such as links to exemplars, standards and progressions, the selected evidence of learning in a choice of multimedia formats, the student reflection captured in a conversation with the teacher and provides opportunity for comments from parents, teachers and peers.

Black and William provide a detailed definition of formative assessment:

... [it] refers to all those activities undertaken by teachers, and by students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. Such assessments become formative when the evidence is actually used to adapt the teaching to meet the needs. (Black & William, p. 2)

The formative benefits of e-Portfolios cause deeper thinking, through effective feedback and the opportunity for reflection. The e-Portfolio or online learning environments open wide the possibilities for student reflection before, during and after learning through written, spoken, video or graphical representation. Critical conversations between teacher and student where effective feedback from both

participants is encouraged, will promote student thinking as the teacher questions, provokes and opens discussion leading to a consensus of what has been learnt and supports the next step in learning. As students develop their own assessment capability, on the scaffold of clear learning intentions and co constructed success criteria, the outcomes for the learner can be profound. The Assessment Reform Group echoes the value in engaging students in self-assessment and reflection:

...Much of this information will come as feedback from the teacher, but some will be through their direct involvement in assessing their own work. The awareness of learning and ability of learners to direct it for themselves is of increasing importance in the context of encouraging lifelong learning. [...] Assessment for Learning develops learners' capacity for self-assessment so that they can become reflective and self-managing. (Assessment Reform Group, *Assessment for Learning: Beyond the Black Box*, 1999 p. 7)

Thirdly, the study will explore the perceptions of students, teachers and parents of the benefits of students taking an active role in their learning by providing feedback to the teacher.

Feedback can be oral, written or even an audio or video response. Often feedback will be part of a learning conversation (Absolum 2006), or conference where learning is discussed together in a one on one situation between teachers and students, or students and students. This gives both parties the opportunity to explore ideas and concepts. (Rate, 2008, p. 15)

Finally, the study will extend the work of Absolum, Flockton, Hattie, Hipkins and Reid in their research paper *Directions for Assessment in New Zealand*.(2009) This study explores the learning benefits of shaping 'Assessment Capable Students', through the idea that all learners should be educated in ways that develop their capacity to assess their own learning. This study will have practical applications for New Zealand schools that are currently identifying and developing the concepts of 'assessment capable' students, parents, school leadership and teachers.

## 1.6 OVERVIEW OF METHODS

In this study, interviews and surveys were used in order to best identify perceptions of key stakeholders involved in using on-line learning stories, capturing student reflection, to share the process of learning as a method of reporting student progress to parents.

Reporting student progress to parents traditionally has involved the teacher reporting *to* parents with no involvement from the other two key stakeholders, students and parents. Using the online learning environment to actively involve and benefit the learner meets the expectations described in The New Zealand Curriculum (2007) for effective assessment and reporting practice.

It will be important to listen to the voices of students/teachers/parents as the key stakeholders affected by the fundamental change from reporting *to*, to reporting *with* stakeholders, which Charles Leadbeater describes as the single simple design principle that the culture of the web creates: “The web invites us to think and act *with* people, rather than *for* them, on their behalf or even doing things to them.” (Leadbeater, 2009, p. 5)

Focus interviews were designed to create opportunities for students, teachers and parents for deeper thinking to be shared through facilitation of discussion and reflection on how they experienced the collaborative nature of web 2.0 tools to improve student learning.

Quantifiable data/feedback was sought through surveys and questionnaires.

## 1.7 OVERVIEW OF THESIS

This thesis presents the results of research on a student-centered approach to assessment and self-reporting using e-Portfolios and is divided into eight chapters.

The first chapter of the thesis provides background to this study in the areas of Ministry of Education expectations, the New Zealand Curriculum, ICT in Schools, the introduction of both an on-line Learning Management and Student Management Systems into St Mary's Primary School, the context for the research to be undertaken. The rationale, aim, research questions, significance of the study and overview of the methods used are also outlined in this chapter.

Chapter Two is a Literature Review, examining and reviewing literature relating to formative assessment processes, feedback and self-reporting using an e-Portfolio. This chapter also reviews literature focused on 'future-oriented' schools, professional learning and the impact of e-Learning on education, as they directly relate to the research questions.

Chapter Three describes the methodology used in undertaking this research. The research title, questions and design are presented including methods of qualitative and quantitative data and collection methods of data and analysis. A section on ethical considerations is also addressed in this chapter.

Chapter Four presents findings from both qualitative and quantitative data to provide answers for the first research question which focuses on reporting progress to parents. Using qualitative data, deeper insights are sought from the three focus groups; parents, students and teachers as to their perceptions on using the on-line environment to report student progress to parents. A background to the implementation and school wide trial of learning stories as a method of reporting to parents is also included in this chapter.

Chapter Five discusses the concept of on-line student reflections and their place in the New Zealand Curriculum. The chapter also examines the development of St Mary's school's learning vision, 'to develop assessment capable students, teachers, school leaders and parents'. Findings from the participating students, teachers and parents as relating to the second research question are presented. The validity and reliability of the results are explored.

Chapter Six presents key ideas, results analysis and discussion relating to the third research question. The third research question examines measurable value added to learning outcomes, by recording student reflections in an on-line environment. This chapter presents the findings from both qualitative and quantitative results using both research methodologies in seeking to provide answers for the third research question.

Chapter Seven presents results analysis and discussions relating to the fourth research question, which focuses on teachers support. Key ideas which explore the shift from Professional Development to Professional Learning as relating to the fourth research question are also discussed in this chapter.

Chapter Eight outlines the conclusions of this research. It presents the major findings, implications, significances and limitations of this research. Ideas for extending this study with further research are also explored. Final comments are made on the reconceptualization of assessment practices using e-Portfolios, which build student assessment capability and develop autonomous learners who can lead their own learning.

## Chapter 2

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

This chapter examines and reviews literature relating to the thesis research questions exploring: assessment in the New Zealand context which includes an examination of a formative approach to teaching and learning, feedback and self-reporting, the New Zealand Curriculum, future-focused schooling, e-Learning, e-Portfolios and professional learning. The research literature is rich in providing recommendations for creating learning environments to engage and intrinsically motivate students and teachers as to the 'where to next', how teachers respond to evidence to inform next learning steps and how students respond to challenging learning goals co-constructed with teachers through the use of feedback and feed forward strategies. The literature reviewed in this chapter provides the knowledge and understandings to seek insights into how students can use the assessment strategies of self- reflection and self-reporting in the online learning environment to improve learning outcomes.

Ground breaking research was collated by Hattie (2009), in *Visible Learning A Synthesis of Over 800 Meta Analyses Relating to Achievement*, which sets out to summarise and synthesis the empirical research on the effects of various educational influences and interventions on student achievement. Hattie developed a barometer of 'what works best', and calculates effect sizes for 138 influences in the following areas of: student, home, school, teacher, curricular, and teaching approaches. Hattie presents the effect sizes in a graphical barometer and argues that only effect sizes higher than 0.4 fall into the nominated zone of desired effects of top ranking influences on student learning. Hattie claims that for most teachers, teaching is a private matter, 'it occurs behind a closed classroom door, and is rarely questioned or challenged' (p. 1). One aim of the book is to develop an explanatory story about the key influences on student learning. The mantra, what teachers do matters, is the simple message Hattie advocates. When dedicated, passionate teachers, teach in a deliberate and visible manner, measurable learning outcomes are achieved. These teachers see learning occurring or not occurring and intervene

in calculated, deliberate ways, facilitating new learning pathways to achieve specific and challenging goals. The overall message of the book is claimed by Hattie to be, “visible teaching and learning”.

Visible teaching and learning occurs when learning is the explicit goal, when it is appropriately challenging, when the teacher and the student both (in their various ways) seek to ascertain whether and to what degree the challenging goal is attained, when there is deliberate practice aimed at attaining mastery of the goal, when there is feedback given and sought, and when there are active, passionate and engaging people ( teacher, student, peers and so on) participating in the act of learning. It is teachers seeing learning through the eyes of students, and students seeing teaching as the key to their on-going learning. (Hattie, 2009, p. 22)

In Chapter 9, the contributions from teaching approaches- part 1, Hattie’s research identifies feedback as achieving an effect size of 0.7, ranking feedback highly in the zone of desired effects. A revealing insight into the power of the student providing feedback to the teacher about what they can or cannot do is examined, concluding that this feedback strategy is more powerful than when the teacher provides feedback to the student. The key focus of this thesis explores the reconception of the act of teaching using an assessment capable model, examining how feedback from the student to the teacher is explicitly designed for and undertaken within a student centered curriculum.

...increasing the amount of feedback in order to have a positive effect on student achievement requires a change in the conception of what it means to be a teacher; it is the feedback to the teacher about what students can and cannot do that is more powerful than feedback to the student, and it necessitates a different way of interacting and respecting students. (Hattie, 2009, p. 4)

This thesis examines the dialogic learning conversation between teacher and student with the key purpose of allowing the student agency through genuine voice, as the student informs the teacher of where they are at with their learning, using

evidence examined against a standard or rubric to determine the next learning steps or goals. The learning conversation is referred to as a 'critical conversation', which is collated and archived in an on-line Learning Story. The Learning Story is designed to share the process of learning, including: clear learning intentions, co-constructed success criteria, the learning artifact and an audio or video recording of the learning conversation between teacher and student with the capacity for parents to make an on-line comment in the learning story.

## **2.2 ASSESSMENT IN THE NEW ZEALAND CONTEXT**

The Ministry of Education developed a clear vision for the design of a successful system-wide educational improvement plan, to provide the New Zealand Government with policy advice. Recognising that effective assessment and quality teaching are one and the same, the MoE published a position paper on assessment, which outlines its position and vision for assessment in the New Zealand educational sector. The *Ministry of Education Position Paper Assessment Schooling Sector* (2011) sets out the vision for what an effective system-wide assessment landscape should look like. The key principles of this high level paper are:

- the student at the center
  - the curriculum underpins assessment.
  - building assessment capability is crucial to achieving improvement.
  - an assessment capable system is an accountable system.
  - a range of evidence drawn from multiple sources potentially enables a more accurate response.
  - effective assessment is reliant on quality interactions and relationships.
- (Ministry of Education Position Paper, 2011, p. 4)

Assessment is described in this paper as a process of 'inquiry, decision-making, adaptation, and transformation'. It is a learning process which informs the next steps

in teaching and learning. In this process for learning, information is gathered, and responded to in ways that make a difference to improve learning.

This process will include reciprocal learning conversations. For example in the classroom context, students, teachers and parents and whanau can each learn from and contribute to the process and collaborate in the setting of goals, targets, and success indicators to guide further learning. (Ministry of Education Position Paper, 2011, p. 13)

The research data in this thesis, examine the use of a Learning Story housed in an e-Portfolio to gain answers to the first Research Question, How effective is using an online Learning Story in showcasing the process of learning as a method of reporting student progress to parents? The Learning Story seeks to engage the three key stakeholders in the learning process, the student, the parent and the teacher to improve and promote learning outcomes.

The visionary MoE position paper draws from the research paper, *Directions for Assessment in New Zealand* (DANZ) report (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009). The paper places students at the center of the assessment process and champions the development of an assessment- capable system. (Absolum et al, 2009, p. 19) claim, 'all students should be educated in ways that develop their capability to assess their own learning'. Recognising that each student comes to the classroom with their own prior knowledge and widening cultural diversities, the authors are focused on the student being central to assessment processes and assessment decision-making as is the core premise of the paper.

Engaging them as active participants in assessment conversations where they are given opportunities to present-and have heard- their own perspectives on their efforts and achievements is one way of furthering this end. (Absolum et al., 2009 p. 7)

Research Question Two is, How do students best share their reflections about their learning to teachers, parents and peers in an online environment? This question seeks to understand and provide insight into strategies and skills required for both

students and their teachers to allow the student's perspective to be presented and heard in the critical conversation, recorded and collated in an online Learning Story.

Placing the 'student at the center' in the critical learning conversation develops quality interactions and relationships, which are pivotal to successful learning. Effective assessment is reliant on quality interactions, which are responsive, respectful and reciprocal. The critical conversation is entirely dependent on a culture of trust and respect for the learner to share their perspective on their learning. Jennifer Moon cited in Dr Helen Barrett's *The Reflect Initiative Researching Electronic Portfolios White Paper* (1995) identifies 'an emotionally supportive environment', as a necessary environment for learning conversations to foster deep learning. The Assessment Reform Group (1999) recognises that assessment for learning strategies including feedback from teachers to students in learning conversations should be 'sensitive and constructive because any assessment has an emotional impact.' This thesis seeks to examine the ideal conditions for the learning conversations where feedback is provided both from the student to the teacher and the teacher to the student. Identifying strategies that promote the students to reflect and self-report are the major focus of the thesis.

### **2.2.1 Assessment for Learning - A Formative Approach to Teaching, Learning and Assessment**

Assessment for Learning is a process that supports students to articulate where they are in their learning, where they need to go next and how to get there. This process is at the heart of effective teaching and learning. Absolum et al. (2009, p. 20) in the DANZ document, present their view on the learning to learn process, 'that students will only learn how to learn if they are active participants in the assessment of their own learning.' The authors claim that the act of learning itself may be the focus of assessment. To enable the student to discuss their learning strengths and gaps it is necessary for students to be equipped with the appropriate language.

Students need to acquire a language with which to discuss how they learn, and to gain insight into their own particular learning strengths and needs. Good assessment feedback is not only about the act of learning and its

immediate results; it can also strengthen students' learning capabilities when used to develop appropriate new challenges. (Absolum et al., 2009, p. 21)

As the student's perspective is given value and worth in the dialogic conversation, teachers, leaders and parents need to develop a shared language to discuss learning with the student.

Learners who are at the center of the assessment practices and are actively engaged and involved will develop the shared language to support their assessment capabilities and intrinsic motivation for learning. The role of the e-Portfolio in supporting learners' intrinsic motivation and ownership of their learning is examined in the literature reviewed.

Black and William (1998) in their publication *Inside the Black Box: Raising Standards through Classroom Assessment*, conclude that assessment for learning is one of the most powerful ways of improving student learning outcomes. In statistical measures, Black and William (1998) reviewed significant research studies to conclude that:

innovations that include strengthening the practice of formative assessment produce significant and often substantial learning gains....Typical effect sizes of the formative assessment experiments were between 0.4 and 0.7. These effect sizes are larger than most of those found for educational interventions. (Black & William, 1998, p. 3)

Classroom practice will require significant adaptation, to seek new ways to enhance the feedback between teacher and student propose Black and Williams (1998), for the assessment to function formatively, requiring teachers to act on the outcomes of the feedback and adjust their teaching on the basis of information articulated by the student. The ultimate user of assessment information elicited in dialogic learning conversations is the student. Empowering students to develop assessment capabilities and language is an imperative for the reconstruction of teaching practice. This thesis examines the effect of self- reporting practices that illustrate the

formative process in an online learning environment. Black and William (1998), recognise that the teacher can in fact inhibit the learning in these formative conversations through ineffective questioning or if the teacher lacks flexibility or confidence in allowing the unexpected responses from a student, controlling the dialogue and preventing free thinking and responses from the student capable of demonstrating deep learning.

Discussions in which pupils are led to talk about their understandings in their own ways are important aids to increasing knowledge and improving understanding. Dialogue with the teacher provides the opportunity for the teacher to respond to and reorientate a pupil's thinking. (Black & William, 1998 p. 7)

Research Question Four of this thesis, attempts to uncover strategies teachers will require to elicit the best reflections from their students to improve learning outcomes.

### **2.2.2 Feedback**

Research including the first synthesis of 134 meta-analyses of all possible influences on achievement (Hattie, 1992), explored in depth the power of feedback, to conclude that feedback ranked at the top of the most powerful influences on student achievement. Hattie reveals in reflection some years later that he made a crucial mistake in seeing feedback as something done by teachers to students with a predominance of behavioural and social feedback as opposed to learning centered feedback, as claimed was undertaken regularly in classrooms by the teachers.

It was only when I discovered that feedback was most powerful when it is from the student to the teacher that I started to understand it better. When teachers seek, or at least are open to, feedback from students as to what students know, what they understand, where they make errors, when they have misconceptions, when they are not engaged- then teaching and

learning can be synchronised and powerful. Feedback to teachers makes learning visible. (Hattie, 2009, p. 173)

St Mary's school incorporated this form of powerful feedback from student to teacher in the on-line Learning Stories that contained an uploaded audio file of the dialogic learning conversation.

Hattie (2009), claims that the focus must not be merely to apply dollops of feedback to students in the misguided assumption that this will correlate to improved student learning outcomes, but rather that the feedback should be based on suitably challenging learning goals, as then 'the amount and directedness is maximised'. Peer to peer feedback is a strategy increasingly employed and encouraged in classrooms and in the on-line environment. Hattie alerts teachers to awareness that this is not the recipe unless well scaffolded in an environment where students have developed assessment capable strategies.

As Nuthall (2007) has shown, 80% of feedback a student receives about his or her work in elementary (primary) school is from other students. But 80% of this student-provided feedback is incorrect! (Hattie, 2009, p. 4)

This thesis aims to examine the ideal conditions for a student to provide feedback to the teacher and to examine structuring of teaching opportunities to facilitate dialogic learning conversations and evaluate the strategies which 'entice, teach, and listen to students questioning of students'. (Hattie, et al., Roberts & Billings, 1999, cited in Hattie, 2009, p.183) and teachers questioning students, using questioning strategies to achieve this purpose.

The effect sizes reported in the feedback meta-analyses show considerable variability, which indicates that some types of feedback are more powerful than others. The most effective forms of feedback provide cues or reinforcement to the learner, are in the forms of video, audio or computer-assisted instruction feedback, or relate feedback to learning goals. (Hattie, 2009, p. 174)

The first research question of this thesis, 'How effective is using an online Learning Story in showcasing the process of learning as a method of reporting student progress to parents?', is evaluated in the context of the rich research outlined in this chapter and using the experiences of the case study school of this research. St Mary's school facilitates 'critical conversations' with teachers and students providing feedback to each other on a recent learning activity using clear learning intentions, success criteria and artifacts of learning as evidence for the conversation and subsequent feedback.

The dialogue between pupils and the teacher should be thoughtful, reflective, focused to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and to express their ideas. (Black & William, 1998, p. 8)

The feedback from the student to the teacher and teacher to student, in the learning stories described in this thesis, assumes an interpretation by the teachers that feedback to the student is a combination of new instruction, providing information relating to the learning intention and standards or rubrics used and relates specifically to the task or process of learning described in the learning story. Student and teacher together recognise the gap in the learning and co-construct the next learning goal.

The major feedback questions are "Where am I going?" (Learning intentions/goals/success criteria), "How am I going?" (self-assessment and self-evaluation), and "Where to next?" (progression, new goals). An ideal learning environment or experience is when both teachers and students seek answers to each of these questions.... As Sadler (1989) has convincingly argued, it is closing the gap between where the student is and where they are aiming to be that leads to the power of feedback. (Hattie, 2009, p. 177)

Feedback can only build on effective teaching and is recognised as one of the most powerful influences on learning. Greater focus and value must therefore be placed

on identifying strategies that refine and improve feedback techniques, for both teacher to student and from student to teacher and peers.

### **2.3 THE NEW ZEALAND CURRICULUM**

In November 2007 a revised National Curriculum was launched in New Zealand. *The New Zealand Curriculum* (NZC) (Ministry of Education, 2007) was developed through a lengthy and inclusive process with key stakeholders at all levels of the New Zealand educational sector. *The New Zealand Curriculum* is highly regarded by educators across the New Zealand context and lauded by International educationalists. New Zealand teachers greeted the curriculum with enthusiasm, viewing it positively and regarding it as a high quality document. Schools engaged with the new curriculum as teachers recognised and valued the opportunity afforded in the curriculum for schools to design a localised curriculum that meets the needs of their own students and addresses both national and local aspirations for learning.

It gives schools the scope, flexibility and authority they need to design and shape their curriculum so that teaching and learning is meaningful and beneficial to their particular communities of students. (Ministry of Education, p. 37)

Key aspects of the new curriculum, including competencies, values, teaching as inquiry, learning areas, partnerships and student agency were guiding principles for curriculum design. The new curriculum set aspirations for future focused goals for students and education in New Zealand. Goals for students include that they experience the most effective high quality teaching and are prepared for a complex changing world environment that will be their future. The goals for the education system are to build a 21<sup>st</sup> century curriculum that equips young New Zealanders to take their place in a global knowledge society of the future.

...a framework designed to ensure that all young New Zealanders are equipped with the knowledge, competencies, and values they will need to

be successful citizens in the twenty first century. (Ministry of Education, p. 4)

The assessment statement in *The New Zealand Curriculum* (2007) sets out some fundamentals of effective assessment: it benefits and involves students, it supports teaching and learning goals, it is planned and communicated, it is suited to the purpose, and it is valid and fair. This statement provides the foundation for schools to plan assessment practices that support student agency, formative assessment strategies, with the end goal of adding value to student outcomes. The third research question, Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?, uses this statement on assessment as the benchmark alongside data collected using quantitative and qualitative methodologies in the context of the case study school, to examine the potential benefits of the online learning environment to record student reflections.

The NZC document describes how schools should explore ICT to enhance classroom pedagogy and how it opens up new ways of learning. The curriculum encourages the exploration of the relationship between effective pedagogy and e-Learning, identifying the considerable positive potential of e-Learning on student learning outcomes. The New Zealand Curriculum vision for students is for lifelong learners who are confident and creative, connected, and actively involved. To achieve this vision and the goals of the new curriculum requires teachers to develop deep understandings about what constitutes effective pedagogy and its relationship with e-Learning and new assessment practices that support these goals. Teachers also require understandings of the elements of the curriculum such as values, learning areas, Teaching as Inquiry and Key Competencies.

### **2.3.1 Developing a Localised Vision for Learning**

St Mary's school developed a localised curriculum where Formative Assessment practices as effective pedagogy were introduced to teachers alongside the launch of the NZC. The Principal of St Mary's school at the time of the NZC launch recognised the opportunity provided by the new curriculum to engage and involve teachers, parents and students in the design of the school's curriculum and vision

for learning. Teachers were well supported through release from classrooms in teams to discuss the key elements of the document and design the framework of the school's curriculum, alongside the school leadership team. A St Mary's curriculum evolved with formative assessment practices including flexible group teaching where learning intentions were clearly defined for learners, success criteria co-constructed and feedback opportunities prioritised. Teaching staff were engaged and supportive of the shift in pedagogy, where the learners' needs were at the forefront of planning and teaching and learning decisions. Teachers recognised the imperative of student agency and the need for parent education, to inform parents of the shift of emphasis from standardised testing and summative assessment practices to a focus on the process of learning. Professional learning and development at this time under direction from the school leadership placed great importance on current research, which informed all curriculum decisions. The school developed the ethos of a learning community, placing the student at the center and learning the focus of dialogue. A Learning Management System, KnowledgeNET was introduced to the school in 2006. Formative assessment practices were well embedded across the school by 2009. With the desire for the school to embrace e-Learning and share the formative assessment processes with parents, the school leadership had a vision for the whole school to use the on line learning environment to report to parents by showcasing the formative assessment process. Guided by the assessment principles in the NZC, to engage and involve students in the assessment process and develop student reflection and self-reporting in on line critical learning conversations, the school used the LMS to report to parents for the first time in 2009. The school placed great emphasis on valuing the student voice and recognised the benefits to learning outcomes through student agency as supported in the school's localised curriculum.

The school's philosophy for learning was specifically influenced by the *Directions for Assessment in New Zealand* (DANZ) report (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009), which focused on developing assessment capabilities of students, teachers, school leaders and parents. During an external review by the Education Review Office (ERO) in 2010, the learning direction and vision were defined as, 'To develop assessment capable students, teachers, school leaders and parents.' It is a DANZ (2009) recommendation 'That all our young people be educated in ways that develop their capability to assess their own learning' (p. 23). Absolum, et al. (2009). In promoting the concept of the student at the center, suggests that students should

be as fully active in assessment as they are in learning. The authors recognise that most assessment decisions in classrooms are made by teachers on behalf of students. Their central premise is that all students need to develop the capabilities to assume control of their own learning and the ability to assess their learning. The authors identify that the primary function of assessment is 'to support learning by generating feedback that students can act upon in terms of where they are going, how they are going, and where they might go next'.

## **2.4 FUTURE FOCUSED SCHOOLING**

A required re-invention of schooling is challenging global educational thinking, as the current system designed to meet the needs of societies in the developed world over 100 years ago, no longer looks even vaguely appropriate in today's world. Radically innovative approaches are needed. Educational entrepreneurs around the world are examining how this transformation might look, including: school building design, the role of the teacher and personalised, collaborative, creative curriculum design and assessment approaches.

Schooling which engages students and their families into programs which are attractive, relevant, focused on challenges that people face in their lifetimes and making learning effective in the future will require a whole scale shift of emphasis at every level of the educational sector. Charles Leadbetter cited in *Supporting Future-Oriented learning & Teaching- a New Zealand Perspective Report to the Ministry of Education* (Bolstad, Gilbert, McDowall, Bull, Boyd & Hipkins, 2012, p. 16), argues

A new consensus needs to be forged about the kind of learning we should aspire to provide, a consensus that parents, children and teachers can buy into in the everyday life of going to school as much as policymakers designing the education systems of the future. (Leadbetter, 2011, p.6)

Charles Leadbetter, author and advisor to the British Government on ICT and a Knowledge driven society, recognises that to achieve a system wide paradigm shift

to a future oriented schooling system will require wide public awareness of the growing gap between the kinds of learning experienced by students in today's schools and the type of learning experiences they need to support their lives in a world already experiencing an unprecedented degree of change.

Social entrepreneurs such as Sugatra Mitra and his 'Hole in the Wall' experimentation, Bunker Roy founder of Barefoot College in Rajasthan, the Center for Digital Inclusion in Brazil, another school designed for the impoverished, are curriculum designs focused on enabling students to access ICT to focus on problem solving the issues facing their communities. These schools provide examples of disruptive innovation that the developed world could use as models to design radical schooling systems. Leadbetter believes we should look to learn from the extremes, where social entrepreneurs work with societies with huge needs but without the resources for traditional solutions: teachers, textbooks and schools. Leadbetter suggests the disruptive innovation required in schooling will come from the margins rather than the mainstream.

New technologies are the game changers of educational transformation. Schools are making significant fiscal investment into digital resources, but this alone will not re-invent the nature of schooling. Teachers and their belief systems into how a future oriented curriculum can engage and improve learning outcomes hold the key to revolutionise learning environments. Bolstad et al. (2012) suggests that as well as teachers recognising the affordances and capacities of ICT to underpin their identified 6 themes for a future oriented schooling system, that

...it is further dependent on schools having the infrastructure, inspiration, capability and opportunities for innovation to achieve these kinds of teaching and learning. (Bolstad et al., 2012 p. 6)

Six themes for a future oriented schooling system emerge from *the Supporting future-oriented learning& teaching- a New Zealand Perspective Report to the Ministry of Education* (2012). These themes or principles are identified as:

- Theme 1: personalising learning;

- Theme 2: new views of equity, diversity and inclusivity;
- Theme 3: a curriculum that uses knowledge to develop learning capacity;
- Theme 4: “changing the script” Rethinking learners and teachers roles;
- Theme 5: a culture of continuous learning for teachers and educational leaders, and
- Theme 6: new kinds of partnerships and relationships: Schools no longer siloed from the community

(Bolstad et al. 2012, p.9)

These themes are discussed and related to the research questions for this thesis in Chapter Six.

Leadbetter (2011), cited in (Bolstad et al., 2012, p. 61) suggests that a key task for an educational innovation strategy is “to create the demand for innovation and the conditions in which it can thrive”.

Salman Khan, founder of the Khan academy, exemplifies a radical model of education that is web based, founded on his vision to provide a free, world-class education for anyone, anywhere. Khan recognised that the existing model of schooling prevalent in the developed world was irrelevant. Through experimentation he accessed the scalability and accessibility of the new technologies through posting a maths lesson on YouTube. Khan created a transformational learning environment with a PC and a free software program, Microsoft Paint and his maths lesson videos. Khan started with one student in 2004, by 2012, the Khan Academy had grown to six million unique users per month. The Academy had become the most used educational platform on the Web. The secret to this extraordinary success lies in the ability for the student to be actively involved in a personalised, self-paced learning curriculum. Khan argues that his system of Mastery Learning empowers the learners to take responsibility for their own learning. Khan’s mantra *we educate ourselves*, involves the acceptance of responsibility. Khan’s belief is that all students are capable of learning to fulfill their potential, but the schooling system is the key barrier that inhibits a learner’s full development and potential. Like Leadbetter and other social entrepreneurs, Khan questions the standard Western

classroom model, identifying its one significant advantage in that it is there, in place and has tenure.

Go to a school building at seven or eight in the morning; sit through a succession of class periods of forty to sixty minutes, in which the teachers mainly talk and the students mainly listen; build in some time for lunch and physical exercise; go home to do homework. In the standard curriculum, vast and beautiful areas of human thought are artificially chopped into manageable chunks called “subjects”. Concepts that should flow into one another like ocean currents are dammed up into “units”. Students are tracked in a manner that creepily recalls Aldous Huxley’s *Brave New World* and completely ignores the wonderful variety and nuance that distinguish human intelligence, imagination and talent. (Khan, 2012, p. 64)

Daniel Pink a notable disruptive thinker and author, in his book, *A Whole New Mind* (2012), describes the shift from the Information Age to the Conceptual Age. Pink (2012) identifies six essential aptitudes on which he claims professional success and personal satisfaction will increasingly depend on. Design, Story, Symphony, Empathy, Play and Meaning. These dispositions may well apply to a future oriented curriculum, where schools foster creativity, values, learning narratives, connectivity of concepts taught in a conceptual curriculum. Personal satisfaction in the knowledge era is measured by the ability to acquire and to apply theoretical and analytical knowledge. Schooling systems in developed nations have focused on shaping left brain knowledge workers, people who are recognised and paid in alignment with what they learnt at school rather than for right brain creative dispositions. Pink’s (2012) dispositions for a Conceptual Age would find favour with British Academic and author, Sir Ken Robinson. Robinson (2006) in his TED Talk; *How Schools Kill Creativity*, argues that:

Many highly talented, brilliant, creative people think they’re not- because the thing they were good at school, wasn’t valued or was actually stigmatised. (Robinson, 2006)

Robinson champions a radical rethink of our education systems, to cultivate creativity and foster multiple types of intelligence. Robinson believes all students are born with an innate aptitude to be creative, but the school system educates creativity out of them. Robinson proposes disrupting the hierarchy of the current industrialised school system, to foster creativity rather than focus on academic ability.

Mark Treadwell, internationally recognised educator, author and developer of KnowledgeNET, has designed a groundbreaking framework for a conceptual curriculum. Treadwell, like Pink (2012) understands that industrialised curriculums delivered in chunks of knowledge or subjects are crying out for reform across the Western world. Based on the key Competencies and the Essential Learning Areas of the New Zealand Curriculum, Treadwell has designed a progressive rubric of concepts with examples of applicable learning intentions, across the schooling year levels

With increasing pressure on schools to develop teaching practices around the competencies and the development of principles and character the ever-ballooning curriculum needs some radical surgery to make room for these latest additions. The efficiency and effectiveness gains come from focusing on what the concepts are that they need to be understood and dispensing with traditional 3-5-10 week standard units of work and replacing them with clear learning intentions and units of work that last as long as it requires for the concept/learning intention to be learnt at the level required. (Treadwell, 2013, cited from:

[http://www.marktreadwell.com/Whatever\\_Next](http://www.marktreadwell.com/Whatever_Next))

The role of educators today is to educate our students for the future, finding inspiration and innovation from the edges rather than simply tweaking changes to the existing system. The status quo is not an option. Radical and courageous leadership is required at all levels for the required re-invention of schooling to occur.

## 2.5 e-Learning

The Internet is the disruptive technology that will have a non-reversible impact for good on education, if the opportunity it affords is rapidly explored and utilised. Schools in times of social and scientific change must initiate a paradigm shift in educational beliefs and values for their survival. Schools are information institutions, with structures monopolised by governments, political agendas, cultural and social forces. The grammar of schooling as we know it today, is deeply ingrained by these forces, requiring adaption before the rationale for the existing model to continue evaporates. In today's society, if information institutions have not adapted and transformed their service delivery, they have quickly become statistics in current commercial whirlwinds of change. Many industries including banking and finance, postal services, and the music industry, to name a few, have had to adapt rapidly in order to survive in the digital environment. As information institutions, schools are charged to adapt to the digital world their students inhabit, at the risk of otherwise failing these students. e-Learning which promotes creativity, collaboration and connection as natural as breathing will be the hallmark of schools which are relevant and flourish in the 21<sup>st</sup> century.

The ethic of the web 2.0 world is create, connect, combine and collaborate. The underlying principle of doing things *with* people rather than to or for them will breed very different organisations, services and experiences in virtually every field'. (Leadbetter, p. 5, 2009)

Schools are the last bastion of resistance, making their relevance questionable today. Students can learn anytime, anywhere with mobile devices outside school hours and structures, so unless students are provided with the opportunity to become agents of change, to learn about their real world and demonstrate their meaningful learning in the public domain, schools will no longer meet their needs. Nassaum-Beach, 2007, as cited in Fox, 2008, stated that 'We are the last generation of teachers who will have a choice whether or not to use or not to use the new technologies in the classroom' (p. 16). Technology use is so embedded into norms of being and doing in the real world outside the school gates, that this choice for teachers no longer exists, but is replaced by an ethical and moral obligation to open the portal to maximise the on-line learning environment of the web. Because

knowledge is ubiquitous, the world no longer cares about what you know but rather what you can do with that knowledge. Creativity, innovation and entrepreneurship are the hallmarks of the Internet, the preferred education provider for the *net* generation. On-line students can create, connect and collaborate which are desired learning triggers that students cannot access in 'sit and get' classrooms. Wagner, (2008) the Co-director of the Change Leadership Group at Harvard Graduate School of Education identifies seven skills for survival in the 21<sup>st</sup> century in his book *The Global Achievement Gap* (2008):

- critical thinking and problem-solving;
- collaboration across networks and leading by influence;
- agility and adaptability;
- initiative and entrepreneurship;
- accessing and analysing information;
- effective oral and written communication;
- curiosity and imagination.

Exposure and experience to the world of the web provides the learning environment for students to practice these seven skills. Wagner set about researching where innovation and entrepreneurship, beyond the identified seven survival skills, was to be found. Searching for patterns which identified teachers, parents, schools and learning institutions which exemplified the qualities of innovation and entrepreneurship, Wagner identified cultures of learning which promoted play, passion and purpose. Wagner believes every student should develop and own an e-Portfolio from the first days of schooling to university and beyond, where students are the architects of their own learning. Students posing their own questions, being coached and mentored, reflecting on their learning, collating evidence of their learning, giving and receiving authentic feedback, posing the problems that perplex them in their real world, developing empathy to connect with others and use their learning to make a difference to others. Using e-Portfolios, students lead their learning, as agents of learning and change. Wagner (2008) identified teachers who are the outliers in their practice, they were the teachers promoting change and working at the cutting edge of pedagogical change. Cultures of learning where risk taking is both encouraged and celebrated is where innovation in education will foster.

The technology itself, despite its seductive ability to engage learners, will not be the catalyst for the disruptive innovation required to re-imagine schooling for the 21<sup>st</sup> century. Rather it is the opportunity that e-Learning offers students to create meaningful connected work, valued by the learner and their community.

## **2.6 e-Portfolios**

### **2.6.1 Definitions and Purpose of an e-Portfolio**

An educational e-Portfolio is a collection of work that a learner has collated, reflected upon, selected, evaluated against a set of standards and presented to show growth and change over a period of time. The Northwest Evaluation Association (as quoted in Paulson, Paulson and Meyer (1991) cited in Barrett (1995) provides a similar definition of an e-Portfolio.

A purposeful collection of student work that illustrates efforts, progress and achievement in one or more areas (over time). The collection must include: student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student self-reflection. (Northwest Evaluation Association, 1991, p. 60)

This thesis focuses on a critical component of the educational e-Portfolio, the Learning Story, where learners reflections on an individual piece of work (often referred to as an artifact) are archived. The e-Portfolio described in the thesis, is contained in the LMS KnowledgeNET, designed for the purpose of sharing the process of learning with an invited audience as it captures in a Learning Story: the purpose for learning, success criteria, a set of standards or rubric, artifacts of learning which may be text or mixed media and a student reflection uploaded using an audio or video file. This student reflection is a dialogic learning conversation between teacher and student or student to student (also referred to as a critical conversation), and performs the assessment purpose of the student self- reporting to parents and families. The process of student self-reporting lies at the heart of this

thesis and the case study school, St Mary's where a learning vision was developed to enhance the assessment capability of all its students. A critical component of an assessment capable student is a learner who can articulate where they are and where they aim to be with their learning. The Learning Story, incorporating an audio or video file of the student self-reporting to their teacher is revealed as rich evidence of student progress and achievement, offering an in-depth insight of learners' strengths and learning gaps, used to inform next teaching steps and curriculum design. Herman and Winters (1994), cited in Dr Helen Barrett's *The Reflect Initiative Researching Electronic Portfolios White Paper* (1995), offer a succinct synopsis of an educational e-Portfolio.

Well-designed portfolios represent important contextualised learning that requires complex thinking and expressive skills. Traditional tests have been criticised as being insensitive to local curriculum and instruction, and assessing not only student achievement, but aptitude. Portfolios are being heralded as vehicles that provide a more equitable and sensitive portrait of what students know and are able to do. Portfolios encourage teachers and schools to focus on important student outcomes, provide parents and the community with credible evidence of student achievement, and inform policy and practice at every level of the educational system. (Herman & Winters, 1994, p. 48)

Other researchers including Stiggins (1994), cited in Barret (1995), identify an e-Portfolio as a means of communication to demonstrate student growth and development rather than a form of assessment. This thesis explores how the Learning Story collated in the e-Portfolio, uses student reflection in the critical conversation as credible assessment information to report to parents. Making student thinking visible through self-reporting in the process of learning, is explored as credible evidence including when high stakes assessments are required. St Mary's used Learning Stories to report an interim or half year report to parents in the first year of the National Standards implementation in 2010. A Learning story template was rolled out to each student's e-Portfolio to demonstrate the formative learning process, including an artifact of learning, a critical conversation, a teacher comment and the capacity for parents to provide feedback in a comment box.

Barrett (1995) provides rationale and support for the template design and process St Mary's school uses for Learning Stories to report to parents in the high stakes environment of National Standard testing:

To effectively use portfolios for assessment, a learning organisation needs to establish a culture of evidence. Evidence in an electronic portfolio is not only the artifacts that a learner places there, but also the accompanying rationale that the learner provides: their argument as to why these artifacts constitute evidence of achieving specific goals, outcomes or standards. Furthermore just because a learner makes the claim that their artifacts are evidence of achievement in "high stakes" environments, the evidence need to be validated by a trained reviewer, using a well-developed rubric with identifiable and specific criteria. (Barrett, 1995, p. 5)

The process used by the case study school to report to parents placing value on the student self-reporting, exemplifies practice beyond the standardised formula used by most schools when reporting National Standards to parents. St Mary's actively involved the student in the reporting process, which is a key indicator of successful assessment identified in both the *New Zealand Curriculum (2007)* and the *Ministry of Education Position Paper (2011)*.

The role of new and emerging technologies in changing the current learning environment landscapes, is dependent on shifting teachers beliefs and assumptions that ICT's can make a difference to their students' learning outcomes. For many teachers in an aging teaching force, the introduction of ICT's was initially seen as yet another silver bullet and was viewed as an add-on to their existing heavy workload.

The Millennial demographic (youth born in America between 1978 and 2000) or the 'We Generation' as coined by Greenberg and Weber (2008) in their book *How Millennial Youth are Taking Over America and Changing Our World Forever*, have globally begun to emerge as 'a powerful, political and social force. They are smart, well educated, and independent- politically, socially and philosophically. They are also a caring generation.

The first and most striking trait of Generation We is this:

*Generation WE is incredibly smart and driven by technology. They are profoundly shaped by and comfortable with the new technologies that connect people around the world electronically, and they have already played a major role in creating and shaping some of those technologies, such as social networking. (Greenberg and Weber, 2008, p. 24)*

Surveyed to rate a series of events or trends for their importance in shaping the attitudes and beliefs of their generation, the clear leader was “the rise of the Internet, cell phones, text messaging, email and similar advances in personal technology.’ (p. 24) With an average importance rating of 8.3 (where 10 the highest rating, represents extremely important, and 0, the lowest rating, represents not at all important.) Moreover, a staggering 48%, gave this trend a perfect 10 rating for its effect on their generation. (The next most important influence was the terrorist attacks of 9/11, with an average 7.9 rating and 36% giving it a perfect 10). Generation We like the new technologies and feel good about their impact on the world. As the tidal wave of change the millennials will spear head in every sector, learning institutions are compelled to adapt and re-invent the very concept of schooling. The current predominant aging teaching force in New Zealand will have no rationale to resist these changes despite the challenges of the necessary on-going professional development needs and support for the dominant baby boomer teaching workforce. It is only a matter of time.

Teachers in the case study school were concerned about the extra work load that e-Portfolios would create. Rate, N. (2010) identifies the need for teachers to adapt how they teach/learn/assess to facilitate use of the e-Portfolio as part of everyday practice.

e-Portfolios do not add to work load but we need to change some of the ways we have traditionally: given feedback, facilitated reflection, engaged learning in self and peer assessment and we need to: adapt teaching/learning/assessment practices so that the process and outcomes can be shared digitally in the portfolio platform. (Rate, N., 2010)

Teachers are creative and innovative by their very nature and if they can see the rationale for why the change to their existing use of technology is needed to improve learning outcomes, the change will occur from the ground up. Teachers require a culture that supports innovation and experimentation with the possibilities ICT affords for improving learning outcomes. This requires on-going professional learning opportunities, a culture of continuous learning using the teaching as inquiry process described below and in Chapter Seven.

The capacity for e-Portfolios to engage the learner through a genuine sense of ownership fosters an affective or emotional ownership to the learning process, which develops intrinsic motivation for learning. Placing the student at the center of the process is akin to the learner telling a story of their learning over time. Paulson & Paulson (1991) refer to e-Portfolios as stories of learning and the e-Portfolio as the vehicle that helps the learner tell their story using their own authentic voice. The capacity of the e-Portfolio to capture voice using audio and video files propels the e-Portfolio as a vehicle for 21<sup>st</sup> century assessment and reporting with no peer. This capacity to use multimedia elements redefines authenticity, student voice and is the rationale to closely examine the value to learning outcomes this opportunity affords. The Northwest Regional Educational Lab (6+1 Trait Writing Model), cited in (Barrett, 1995) defines voice as follows:

The voice is the writer coming through the words, the sense that a real person is speaking to us and cares about the message. It is the heart and soul of the writing, the magic, the wit, the feeling, the life and breath. When the writer is engaged personally with the topic, he/she imparts a personal tone and flavour to the piece, which is unmistakably his/hers alone. And it is that individual something- different from the mark of all other writers- that we call voice. (Barrett, 1995, p. 6)

This definition describes student reflections that are written in e-Portfolios. This thesis seeks to expand this definition to explore student reflections that are spoken and captured in dialogue with teachers or peers and collated in the e-Portfolio.

Barrett (1995) identifies two types of e-Portfolios, a positivist and a constructivist portfolio. The portfolios described in this thesis are constructivist models, which place great emphasis on the learning process as seen through the eyes of the learner. Positivism as described in Barrett (1995) assumes that meaning is constant across users, context and purposes. Barrett (1995) addresses the needs of an institution for an assessment management system while meeting the needs of learners for a reflective portfolio that supports deep learning. Barrett suggests an electronic portfolio system which incorporates: a digital archive of learner's works, a learner-centered electronic portfolio using the learner's authentic voice and an institution centered data base, or assessment management system, to collect faculty-generated assessment data based on tasks and rubrics. St Mary's school uses e-TAP, a Student Management System (SMS) as described in Chapter One to collect the institutional assessment data, which it shares with the LMS KnowledgeNET, through interoperability functionality

This thesis examines the impact of using the online environment of the e-Portfolio on improving student learning outcomes. An e-Portfolio has the capacity to support deep learning when its purpose is constructivist, supporting assessment *for* learning processes which value student voice in self-reporting progress and achievement.

## **2.7 PROFESSIONAL LEARNING**

The re-invention of schooling to enable a future-focused model of curriculum delivery will require fresh examination of approaches to professional learning and development for teachers and school leaders. Educators need stimulus of external ideas, exposure to innovative thinking and both support and challenge to current practice.

In Timperley's (2011) book, *Realizing the Power of Professional Learning*, a concept of professional learning is presented by Stoll and Earl as:

an internal process that requires active cognitive, emotional and practical engagement as teachers create professional knowledge in a way that challenges previous assumptions and creates new meanings. (Stoll, Earl 2011, p. xi)

Despite significant investment in professional learning and development programs in schools, research indicates that this investment has failed to engage teachers and improve student outcomes. One of the key findings of research in this field has been to identify that current models of traditional professional learning and development delivery have been of 'delivering to' teachers, where teachers have been passive participants at the receiving end of information in order to influence their practice. The shift in thinking from this delivery mode to one of learning 'with' teachers and seriously engaging teachers to challenge previous assumptions and create new meaning in an on-going and in-depth manner is identified by current research to make a difference to student learning.

Fundamental shifts in thinking about professional learning involve moving from professional development to professional learning, focusing on students, attending to requisite knowledge and skills, engaging in systematic inquiry into the effectiveness of practice, being explicit about underpinning theories of professionalism and engage everyone in the system of learning. (Timperley, 2011, p. 4)

Placing the student at the center of professional learning is a key shift in thinking about professional learning. Professional learning and development models of the past have traditionally been teacher driven rather than student driven. The focus is one of equity where the expectation is that every student is capable of learning. Schools are charged to develop learning communities, where all stakeholders, students, teachers, parents and school leaders are committed and engaged to learning.

Professional learning is an active process of systematic inquiry into the effectiveness of practice for student engagement, learning and well-being

and through this process become self-regulated learners. (Timperley, 2011, p. 7)

Teaching as inquiry as an effective model of improving student learning outcomes is delivered when teachers have a deep understanding of what their students know, their prior knowledge, their cultural backgrounds and social and emotional wellbeing. From this knowledge of their students, teachers engage in new professional learning that they can transfer to their students. Finally, a thorough and deep evaluation of the effect of changes made to teaching practices, examining the impact of these changes on student learning leads to the next cycle of inquiry. Teaching as a response to understanding where the students' learning is at and what their gaps and strengths are is developing assessment capable teachers who can co-construct challenging learning goals for students. Using an evidence-informed process designed to identify teacher's beliefs and practices linked to student learning needs will identify teacher's learning needs and further fulfil an assessment capable system.

Through engaging in on-going cycles of inquiry and building knowledge, teachers develop the adaptive expertise required to retrieve, organise and apply professional knowledge when old problems persist or new ones arise. (Timperley, 2011, p. 11)

Teachers need to revisit the changes they have identified and made to their teaching practice, to see what difference their changes are making. This is identified as an integral aspect of professional self-regulation.

Leaders like teachers must engage in systematic cycles of inquiry to ensure they become adaptive experts at the organisational level of the school. Teachers and leaders must work together on specific concerns about student learning, the knowledge and skills teachers need to meet these concerns and to provide the support through both internal and external facilitation.

When the professional learning is not driven by identified student and teacher needs, teachers might find the experience interesting but in the

absence of a need to solve a specific problem of practice or to improve a particular outcome for students, there is little urgency or motivation to change and improve. (Timperley, 2011, p. 47)

The implications for this research, indicates that the teachers' needs, in relation to solving specific issues in regard to student self-reflection and self-reporting in the on-line environment, are to be addressed through professional learning programs, as described by Timperley (2011), as part of their on-going problem solving cycles. Teachers and leaders undertaking teaching as inquiry cycles must include a close examination of the issues surrounding self-reporting from the student to the teacher, to build on the depth of research in this field and to apply this knowledge to changes in their classroom practice.

Robertson (2005), in *Coaching Leadership Building Educational Leadership Capacity through Coaching Partnerships* identifies that the educational leader and coach must make their values, beliefs and interests transparent to others. Leaders espoused theories and their leadership in action must be closely aligned. Leaders need to think about their work in terms of problems to be solved. This requires on-going reflective practice and adaptive action. Being reflective is an essential requirement for leadership in schools. In a schooling system charged to re-invent itself, the process of reflection for leaders is an imperative if the professional learning and development programs are to be designed to best meet the needs of both leaders and teachers to ensure students are able to realise the potential of the on-line learning environment.

Research undertaken by Hargreaves and Fink (2003), suggests that educational change is 'rarely easy to make, always hard to justify and almost impossible to sustain.' In their 2003 paper *Sustaining Leadership* (reprinted from Phi Delta Kappan 84 (9), May 2003, pp. 693-700), the notion that schools can be re-invented is significantly challenged, because the 'grammar' of existing institutionalised structures, beliefs and practices have been embedded for over 200 years in schools today. The researchers discuss the notion of sustainability in depth, addressing how specific initiatives can be developed without compromising the development of others in the environment.

Sustainable improvement develops and draws on resources and support at a rate that can match the pace of change. It does not let change outrun its resource base and deplete the reserves that are needed by others. Sustainable policies do not lavish resources on computer hardware when long term spending commitments cannot support continuing maintenance or updates in software. Sustainable policies in education don't squander all the resources on pilot projects, leaving little for everybody else or invest important funds in coordinators who disappear once the money has dried up. Sustainable improvement requires investment in long term capacity for improvement, such as the development of teacher skills, which will stay with them forever, long after the project money has gone. (Hargreaves and Fink, 2003, p. 693-700)

Hattie (2009) implies that what works best for students works best for teachers. He charges school leaders to create safe and trusting environments to engage in reflective dialogue to share evidence of teaching and openness to new learning experiences. Hattie believes that for real change to occur in schools, it will depend on schools adopting evidence-based research with a willingness by teachers to evaluate the effect of change on student learning and to discontinue the use of familiar practice. The realisation by Hattie (2009), that feedback from the student to the teacher was the most powerful teaching intervention to make a difference to student learning, has direct implications to the research conducted in this Thesis.

The rise of on-line virtual learning networks for educators is transforming the delivery of professional learning to teachers both in New Zealand and globally. *The Virtual Learning Network (VLN), He Kotuinga ako a-ipurangi* is an interactive resource provided by the Ministry of Education for all New Zealand educators. Networks of school clusters and learning institutions collaborate and build communities of expertise. The VLN is rapidly becoming the Ministry of Education's go to hub for ICT related educational resources and programmes in New Zealand. On-line communities as evidenced in the VLN are vibrant, future-focused and highly participatory platforms of collaborative learning. The Ministry of Education is currently targeting the use of these communities by school leaders and teachers, which will in turn illustrate the benefits and learning power of such social networks for students.

Exposure to external thinking to challenge and inspire shifts in educational beliefs and values is understood to be a critical component of professional learning and development for teachers, parents and school leaders. St Mary's school was fortunate to host Dr Scott McLeod as keynote speaker at a parent information evening held on 13<sup>th</sup> April 2011. Scott McCleod JD, PhD is the Director of Innovation for Prairie Lakes Education Agency in Iowa. He is also Founding Director of the UCEA Center for the Advanced Study of Technology Leadership in Education (CASTLE), and was the co-creator of the video series *Did You Know? Shift Happens*. McLeod challenged his audience to consider if they were really serious about educational technology. Gwen Dyer cited in McLeod's blog, *Dangerously Irrelevant* (<http://dangerouslyirrelevant.org>), comments:

Our intelligence tends to produce technological and social change at a rate faster than our institutions and emotions can cope with...We therefore find ourselves continually trying to accommodate new realities within inappropriate existing institutions, and trying to think about those new realities in traditional but sometimes dangerously irrelevant terms.

Traditional methods of teaching/learning and assessment appear 'dangerously irrelevant' to the next generation. Close examination of the relevance of traditional schooling is an imperative. This thesis examines new ways of conducting student-centered assessment and reporting strategies using the digital environment, and its potential impact on learning outcomes.

## **2.8 SUMMARY**

Trends, concepts and ideas that are influencing the development of a student-centered approach to assessment and self-reporting have been examined in this chapter. The major influences examined in the literature review include: formative assessment processes, feedback, and self-reporting using an e-Portfolio, 'future-oriented' schools, professional learning and development and the revolutionary impact of e-Learning on education.

Arguably the most profound trend and influence on schooling is the impact of the rise of the Internet and the rapid ubiquity of personal mobile devices. CORE Education's Derek Wenmouth annually identifies major educational IT trends. Wenmouth's List of Ten Educational Trends For 2013 includes: personalisation, user+ control, the smart web, virtual learning, data engagement, thinking 3D, digital citizenship, the social web, ubiquitous learning, and open-ness. This thesis explores the influence of the majority of these trends through the lens of the Learning Story in an e-Portfolio. Personalisation of learning using the e-Portfolio and Learning Stories to create student initiated learning pathways, User + control, on-line instruction as exemplified by Khan's Mastery Learning model, Virtual Learning, using on-line communities for professional development, data engagement using the open-ness of sharing data with parents, students and teachers in an e-Portfolio to improve learning outcomes and social learning, using the e-Portfolio to collaborate and share learning.

In a future-focused schooling sector, technology and instant communication is to be embraced, as this change is central to every aspect of our students' future lives: their education, relationships and future career and job directions. It is the responsibility of teachers, leaders, parents and students themselves to harness this potential for improving student learning outcomes for all.

The research studies described in this literature review provide a theoretical framework for detailed research undertaken in one school that has not been completed before. Research data gathered in the case study school, build on previous research, providing findings that arguably promote and defend a student-centered approach to teaching, learning and assessment in the digital landscape.

The next chapter describes the methodology used in this thesis. The research title, questions and design are presented including methods of qualitative and quantitative data and collection methods of data and analysis. A section on ethical considerations is also addressed in this chapter.

## Chapter 3

# METHODOLOGY

### 3.1 INTRODUCTION

This chapter focuses on the benefits of qualitative research and the rationale for using qualitative methodology in this research, quantitative data, the research title and significance of the study, the research questions, the research design, instruments that were used to gather data, procedures and administration, followed by a section addressing the ethical considerations.

### 3.2 QUALITATIVE RESEARCH

This study uses qualitative research methods, including structured interviews with small focus groups of students, parents and teachers and surveys in a New Zealand primary school. Qualitative research takes an in-depth approach to the phenomenon being investigated in order to understand it more thoroughly. Qualitative research can convey a richness and intensity of detail in a way that quantitative research cannot. Greater recognition is given to the individual and how they react, respond and are affected by the issue investigated in the research project. Important insights are gained on the very nature and appropriateness of the research questions, as the researcher, working closely with the focus groups is able to adjust the questions posed, as new information is unfolded within the dialogue. The ability to re-phrase a question to suit the audience and further develop the ideas elicited from the interviewee, allows a precision of meaning as the researcher fine-tunes the vision of the research questions in situ. The advantage of using qualitative research, in the case of this research is to ask questions that reveal and evaluate how the use of learning stories in the online environment impacted student learning outcomes as experienced by each of the focus groups.

This research used the distinctive focus group method. The focus group technique involves a moderator facilitating a small group discussion between selected individuals on a selected topic. This method is particularly suited to testing new

initiatives with users. The school involved in this research had initiated the use of 'learning stories' in an e-Portfolio, to showcase the process of learning to parents, teachers and peers by capturing 'critical conversations' between student and teacher and archiving the conversations as evidence of assessment in the password protected online environment of a Learning Management System.

Using qualitative methods, the human experience is revealed, enabling full and informative results. Interviews with focus groups of students, parents and teachers uses a dialectic process between the questions asked and the data observed. The structured focus interviews provided the stakeholders with an opportunity to talk freely and openly about their experiences. The students had the opportunity to voice their opinion about using the online learning environment KnowledgeNET, allowing them to reflect and further convey meaning. As a researcher it provided me the opportunity to clarify with the students their thinking and talk to them using the language used within the school as being an 'Assessment Capable Student' as related to their learning experiences in KnowledgeNET.

Using a qualitative research methodology, it is important for the researcher to understand the specific context of the research site and is able to spend time with the particular community one wants to research. This research study looks closely at one New Zealand school and the perceptions of all stakeholders, teachers, students and parents/caregivers. During 2011 when the qualitative data was collected, I was employed by the MoE as Deputy Principal, Leader of Curriculum and Assessment at St Mary's Primary School, New Zealand. In this role, I was a key staff member co constructing with the Senior Leadership Team, the pedagogical practice, strategic direction and learning vision of the school. As a member of the Senior Leadership Team I was also fully conversant with the available resourcing and leadership actions and initiatives that impacted on student learning, prior to the collection of data and during 2011.

Qualitative research methods lend themselves favourably to case studies, with smaller sample groups. As a researcher working within the localised learning community of St Mary's Primary School, it was easier to communicate and gather information from each of the focus groups. In my role as a colleague, teacher and school Leader, I encouraged honesty in participants' responses and set out to

create a non-threatening interview environment, through ensuring privacy and anonymity.

Although qualitative research may be time consuming to undertake, it offers a wealth of information in its depth. It can help the researcher see many different causes and actions, which lead to specific outcomes, perceptions and assumptions.

### **3.2.1 Participants/Respondents**

#### *3.2.1.1 Students and the Focus Groups*

Focus groups were chosen for the structured interview process as this allowed for groups of students to share ideas within a natural conversation around the researcher's questions. There were four Student Focus groups and each group consisted of four students who participated and responded to the interview questions. The groups and students who participated in the interviews were of mixed gender (male and female) and year groups (year 5 and 6). Students were accessed from four different year 5 and 6 classrooms (Rooms 11, 13, 14 and 15). It is important to note that all participants in the focus groups were a sample of convenience.

#### *3.2.1.2 Teachers*

Four focus groups of teachers were also established. Each teacher focus group consisted of three teachers, a total of twelve teaching staff. The teachers were grouped according to their availability. Teachers also responded to the online surveys used in this thesis. The surveys could be completed when it best suited the participant.

### *3.2.1.3 Parents*

Focus groups for parents consisted of four groups and ranged between two to four parents in each group, a total of 12 parents. These parents were also grouped and scheduled according to their availability. Parents in the focus groups were mostly parents of the year 5 and 6 students but there were also some parents from other areas of the school that participated in the structured interviews.

## **3.2.2 Interviews and Focus Groups**

### *3.2.2.1 Interview Questions*

The interview questions were taken directly from the relevant research questions (see section 3.5). The questions were analysed and questions that were suitable for the response of the participants were grouped together and reworded so that they were appropriate for each focus group. The children's focus group questions were adapted from research questions 1, 2, 3, and 4 and examples of how the questions were adapted are shown in Table 3.1

*Table 3.1 Research Questions Aligned with the Children Focus Group Questions*

<b>Research Questions</b>	<b>Children Focus Group Questions</b>
1. How effective is using an online 'Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?	My questions are around the learning stories and I would like to know how valuable you thought they were to share your learning with mum and dad and other people?
2. How do students best share their reflections and about their learning to teachers, parents and capture your peers in an online environment?	You did a writing learning story, and some of you used Jing to capture your voice. Do you think it was a good way to share your learning with your mums and dads?
3. Is there measurable value added to learning outcomes by recording student reflections in an online environment?	Your teacher asked you questions and you gave your thoughts about how you got on with your learning. Do you think that was a good way or an effective way of capturing where you were at with your learning?
4. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?	How valuable do you think it is to learn to upload scanned images, photographs, voice files and Jings to your own learning stories or homepage, and then for you to be able to choose what you would like to upload? Do you think it's important that you get to choose, rather than the teacher always choosing the evidence of your learning?

### **3.3 QUANTITATIVE DATA**

Questionnaires and surveys were used alongside the structured interviews in order to best identify the perceptions of all stakeholders involved in reporting student progress and achievement in the online environment. Surveys and questionnaires for parents and teachers were administered through using an open source survey application, Lime Survey Version 1.90+ Build 9642. Features of Lime Survey include basic statistical and graphical analysis with export facility. Data using surveys and

questionnaires was collected during 2008 to 2011. Some surveys required a scale response and there was opportunity to add a comment if the participant chose to do so.

### **3.3.1 Surveys**

School designed surveys were administered to parents and teachers to gather quantitative data while some surveys also provided qualitative data with optional comments. Some of the surveys were aligned to the school's strategic planning and requirements for the school leadership team's strategic planning at the time. This opportunity was used to gather feedback and data for use in this thesis. The surveys were beneficial in informing leadership decisions and justification for using the online environment to report student progress and achievement to parents. While some survey responses were not as high as we would have hoped, it provided valuable base line data so that we were able to design and target Professional Development, measure our progress, and identify areas of need and concern in relation to the online environment for showcasing assessment for learning to key stakeholders.

Table 3.2 provides an overview of the surveys that have been administered during 2009-2011 to the parent and teaching community, the target group and response rate to help discriminate and determine the validity of results.

*Table 3.2 Surveys and Submission Results from 2009-2011*

<b>Year</b>	<b>Target Group</b>	<b>Name of Survey</b>	<b>Responses</b>	<b>Response Rate</b>
2009	Parents	The New Role of ICT in St Mary's Catholic School (ID 39974), Appendix G	149	60%
2009	Teachers	Teaching Staff Review of the Online Writing Sample in KnowledgeNet (ID 84871), Appendix H	11	55%
2009	Parents	KnowledgeNet Survey (ID 63787) Appendix I	33	13%
2010	Teachers	Teacher 2010 Learning Stories (ID 33198) Appendix J	11	55%
2010	Parents	Learning Stories Parent Survey 2010 (ID 59256), Appendix K	15	6%
2011	Teachers	Nick Rate (ID 23778), Appendix L	21	100%
2011	Parents	KnowledgeNet Questionnaire May 2011, Appendix M	44	18%

(Benson, 2012, p. 50)

### **3.4 RESEARCH TITLE AND SIGNIFICANCE OF THE STUDY**

The title for this research is: *'An Investigation into a Student Centered Approach to Assessment and Self-Reporting Using e-Portfolios'*. A fundamental aim of the New Zealand Curriculum is to develop key competencies within a personalised curriculum, designed to meet the needs of students. This research sets out to investigate the use of learning stories in the online environment where student

*thinking* (a New Zealand Curriculum Key Competency) is captured, collated and archived, by assessing the perceptions of teachers, students and parents.

These competencies are “more complex than skills: they draw on knowledge, attitudes and values in ways that lead to action” (Ministry of Education, 2007, p.12). This research evaluates the effectiveness of web 2.0 audio tools as assessment evidence. Further, the evaluation of their effectiveness in offering opportunities for authentic student voice to selected key stake holders will be of interest.

Through the implementation of online ‘learning stories’ where these critical conversations are collated, the student is self-reporting their achievement against a standard and providing feedback about their learning to the teacher. This powerful feedback from student to teacher then provides the direction to inform next learning steps for the student and the design of future learning experiences within a personalised curriculum. St Mary’s’ practice has been guided by research from New Zealand educational experts such as Professor John Hattie.

It was only when I discovered that feedback was most powerful when it was from the student to the teacher that I started to understand it better. When teachers seek or are at least open to, feedback from students as to what students know, what they understand, where they make errors, when they make misconceptions, when they are not engaged- then teaching and learning can be synchronised and powerful. Feedback to teachers helps make learning visible. (Hattie, 2009)

Such assessment practices where a student provides feedback about their learning to the teacher, requires in the first instance that teachers have the capabilities to support students to assume control of their own learning. It is recognised by the school in this case study that teachers will need to have their own assessment capabilities strengthened. In collaboration with Review officers from an Education Review Office (ERO) team visit during the 2010-scheduled review, St Mary’s school Leadership team developed a Learning vision, “To Further Develop Assessment Capable Students, Teachers, School Leaders and Parents”. The research findings in *Directions for Assessment in New Zealand* (DANZ) report (Absolum, Flockton,

Hattie, Hipkins & Reid, 2009)", alongside the findings in *Visible Learning A Synthesis of over 800 Meta Analyses Relating to Achievement*, John Hattie (2009), were guiding principles in developing this learning vision. The foundational premise of the DANZ report is:

That young people should be educated in ways that support them to assume control of their own learning and that they can only do this if they develop the capability to assess their own learning. (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009, p.19)

Assessment requirements have been adapted at St Mary's school to provide opportunities for students to become *active* participants in the assessment process. Students have become active participants in the assessment and reporting process, valued as equal stakeholders in the dialogic assessment practice that constitutes a 'critical conversation' between teacher and student or student and student.

It is of interest to find out if the use of audio and video clips used in critical conversations between student and teacher add value to both student and teacher understanding where the students learning is situated at the time of the conversation. Does the students' self-reporting in this on line learning environment consistently help them move beyond their identified achievement level?

There is a global consensus that reforms to traditional education systems are required to meet the changing world our students inherit. In their 2012 report for the New Zealand Council for Educational Research, Bull and Gilbert identify that:

New approaches are needed if our young people are to develop the dispositions (to knowledge, thinking, learning and work) needed to productively engage in the 21<sup>st</sup> century world (Bull & Gilbert, 2012, p.4)

There is a general consensus in the extensive body of relevant research around ideas that identify characteristics of a 21<sup>st</sup> century curriculum. These ideas include: a personalised curriculum; a shift in the role of the teacher; and developing student-learning capacity as the foreground ideas to curriculum delivery. It will be of interest

to evaluate the use of learning stories that capture the active involvement of the student in the learning process. Involving students by discussing, clarifying, reflecting with teachers, peers and through self and peer assessment supports the New Zealand Curriculum characteristics of effective assessment.

New on-line learning academies, such as the Khan Academy, illustrate transformational alternatives to the 'one-pace-fits-all' curricula of contemporary classrooms and schools surviving today as remnants of the industrialised 19<sup>th</sup> century model of learning delivery. The use of modern technologies including videos, software and web 2.0 tools used by the Khan Academy to disseminate new learning, point to a fundamentally different future for education, where the student is active and can self-regulate their learning by being in control of their learning through developed assessment capabilities. In visualizing the educational phenomenon that is the Khan Academy, Kahn himself asks:

[...] did the Academy's way of teaching help people retain real understanding for longer? Did it consistently help students move beyond their grade level at school? Were the video lessons and interactive software most useful as an add-on to the conventional classroom, or were they pointing the way to a fundamentally different future for education - above all, an active and self-paced future? (Kahn, 2012, p.9)

The premise shared by Khan and other educationalists that formal education must change and be brought into closer alignment with the world as it actually is, provides reason to closely examine methods of assessment and learning which use the online environment for learning. By focusing on the adapted assessment practices in one school, it is hoped to provide a thorough overview and evaluation of new approaches to assessment using the online learning environment.

### 3.5 RESEARCH METHODS

Insights and answers to the four research questions are sought through collating and analysing data from both qualitative and quantitative research methodologies as outlined earlier in this chapter.

Research clearly shows that effective learning involves the learner in the process of learning as an active participant. The learning stories were designed to share the process of learning, through identifying a learning intention, including a teacher and student co-constructed success criteria, an artifact of student work and the feedback feed forward dialogue between teacher and student, captured in a learning conversation. The first research question seeks to explore if sharing this process of learning with the parents and other stakeholders is an effective method of reporting.

1. How effective is using an on line 'Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?

When a student engages in the formative assessment processes, this process is both interactive and reflective. When the learner connects the artifact with their own reflection, the artifact becomes a meaningful and valid assessment of their progress and achievement. The second research question seeks to explore the best methods for students to share their reflections with other significant stakeholders.

2. How do students best share their reflections about their learning to teachers, parents and peers in an on line environment?

It is interesting and important to explore if this method of reporting which utilises 21<sup>st</sup> century ICT tools adds measurable value to learning outcomes by recording student reflections as assessment evidence. The third research question investigates perceptions from students, teachers and parents supported by statistical data in answering this question.

3. Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?

The fourth research question seeks to examine how teachers can facilitate meaningful student reflection through the learner taking ownership of artifacts selected as evidence of the learning process.

4. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the Formative Assessment Process as a method of reporting to parents in an online learning environment?

### **3.6 RESEARCH DESIGN**

The initial planning and design of this research commenced in 2008, prior to the 2009 school wide roll out of using Learning Stories in the e-Portfolio to report to parents student progress and achievement. The background to the radical redesign of a reporting process was instigated by changes in curriculum design across New Zealand schools with the release in 2006 of *The New Zealand Curriculum: Draft for Consultation 2006*. During the same year, 2006, St Mary's school implemented the LMS KnowledgeNET to every enrolled student. During the period 2008-2011 qualitative and quantitative data were collected through the use of especially designed surveys. These surveys served multi purposes including review of MoE Targets, to inform Strategic planning and report to the Board of Trustees (BoT). Supplementary research questions were designed and administered during 2013, when the researcher was awarded an MoE study leave for teachers.

## **3.7 DATA COLLECTION AND ANALYSIS**

### **3.7.1 Procedures**

To best identify and assess the perceptions of students, teachers and parents, the key stakeholders using the e-Portfolio to collate and archive student reflections for reporting purposes, it was important to focus on the qualitative research method of using interviews with these focus groups. Interviews were recorded using a 'talk tracker', which recorded in mp3 format and were then able to be burned to a CD for transcribing. Surveys were created and responses were gathered through an e-survey tool, Lime Survey.

### **3.7.2 Administration**

#### *3.7.2.1 Interview administration*

Twelve focus groups of teachers, parents and students were prepared for the interview process by initially having the consent form (Appendix A) and information sheet (Appendix B) carefully explained to each group. Each participant was given a copy of the questions (Appendix C) and given time to read thoroughly, and ask any questions or seek clarification prior to the interview process. The interviews ranged between 15 and 44 minutes, and were on average 27 minutes in length. The interviews took place in a room designated for Board of Trustee and Senior Leadership meetings, meetings or interviews with parents, classroom release time for teachers and as the office of the Assistant Principal. Most participants were familiar with the room, located off the main entrance foyer to the school.

### **3.7.3 Data Analysis**

The qualitative data consisted of comments from the focus group interviews and some were taken from the written comments in the surveys and questionnaires. The comments from participants in the focus group were then transformed into quotes

and organised into themes that related to the research questions. These quotes are presented in Chapters 4, 5, and 6 grouped as results from the students, teachers and parents. The quantitative data were analyzed using Lime Survey for the teachers and parents. Statistics were generated to show a summary of all available fields and graphs were generated to align with the results.

### **3.8 ETHICAL CONSIDERATIONS**

As a researcher it is fundamental to consider the impact of your research on the participants involved. All research impacts both the researcher and the participants. Prior to the commencement of the research collation, it is necessary for the researcher to be fully aware of the responsibilities in regard to yourself as researcher and to the participants. It is also necessary that the researcher is aware of potential ethical issues and considerations during each stage of the research.

As a researcher you are both ethically and legally bound to protect the participant in your research from any potential harm or abuse of power as a consequence of that research. (Howitt, 2008, p. 4)

As the research collected in this thesis is human research, protecting the dignity of all participants including the children was the highest consideration of many ethical issues that the researcher examined.

#### **3.8.1 Ethical Issues Before Data Collection**

Permission was sought and obtained from Curtin University prior to the research commencing, to ensure the research to be undertaken met acceptable standards outlined by the university. A candidacy proposal and ethics form was submitted, reviewed and approved by the Curtin University Human Research Ethics Committee.

The school also had to approve and support the research being undertaken. The school maintained a close working relationship with the researcher who was working within the school at the time of collecting the research.

The Board of Trustees was notified of the research proposed to be conducted in the school during 2011 and was supportive of the research as it would provide valuable information to guide strategic direction and supported the Learning Vision, co constructed with the ERO Review Team, whilst undertaking their scheduled review of the school in 2010. The Ministry of Education supported the research by awarding the researcher a study leave award in 2013 to complete the research. For all the surveys used a description of the survey and a statement that read 'The information obtained through this survey will be used for self-review of our reporting practices at both BoT and Management levels, to help inform and refine our future school reporting processes and for publications regarding educational research'. This thesis is regarded as educational research. Teachers, parents and the students were given the choice to partake in the interviews. The researcher was required to ensure understanding that no data collected would identify any participant.

### **3.8.2 Ethical Issues During Data Collection**

Establishing a relationship of trust and consideration of the values of ethical research was required of the researcher during the data collection phase. All students were required to complete consent forms. Information sheets were made available with the consent forms so that the participants were fully informed about the research and any possible ethical issues.

### **3.8.3 Ethical Issues after Data Collection**

All participants were happy with the intended use of the data for this research thesis. Participants were made aware about the storage of data and files on the information sheet provided before the focus group interviews. Recognition of the possible impact of the research on the teacher focus group had to be considered after the research data collection, to ensure their anonymity. An ethical issue when writing the document was to continually reflect on the methodologies, research design and analysis, as the writing of the document occurred two years after the data was

collected. Ethically it was important to ensure an accurate and true account of the work was reflected upon during the writing of the research.

### **3.9 SUMMARY**

This chapter outlines and discusses the methodologies used in this research, research questions, the research title and significance in detail. The research design including a discussion of the benefits of using both qualitative and quantitative methods along with the procedures and administration are also outlined. Table 3.3 summarises the research methods used for each research question with the three groups: students, teachers and parents.

Described in the next chapter are the results from the students, teachers and parents in both the qualitative and quantitative methods to examine the first research question based on the theme of reporting to parents.

Table 3.3 Summary of methodology used for Research Questions

Research Question	Research Methodology		
	Students	Parents	Teachers
1. How effective is using an online 'Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?	Qualitative <i>(Focus group Interviews)</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>
2. How do students best share their reflections about their learning to teachers, parents and peers in an on line environment?	Qualitative <i>(Focus group Interviews)</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>
3. Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?	Qualitative <i>(Focus group Interviews)</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>
4. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the Formative Assessment Process as a method of reporting to parents in an online learning environment?	Qualitative <i>(Focus group Interviews)</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>	Qualitative <i>(Focus group Interviews)</i> And Quantitative <i>Online surveys Questionnaires</i>

## Chapter 4

# REPORTING PROGRESS TO PARENTS

### 4.1 INTRODUCTION

This chapter highlights findings from both qualitative and quantitative results from data collated using both research methodologies to provide answers for the first research question. The qualitative method results provide deeper insights from the key stakeholders as to their perceptions about using the online environment to share the learning process including student reflections as a method of reporting student progress to parents. The results are grouped into the following themes: Effectiveness of Online Reporting, Assessment Capabilities, Ownership and Engagement.

A background to the implementation and school wide trial of learning stories in 2009 is outlined in this chapter. A description of a learning story as a method of reporting student progress and achievement and to showcase the process of learning to parents is also included.

The qualitative results are organised into findings from each focus group, students, teachers and parents. This chapter focuses on the first research question and attempts to gain deeper understanding and possible explanations as to the effectiveness of a change in the process of reporting to parents from paper reporting to reporting using an online environment.

1. How effective is using an 'online Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?

Data presented follows the shift in teacher thinking from 2009, when the Learning Stories were first trialed through to 2011. Quantitative data are shared showing statistics generated from the responses and graphs.

Schools traditionally have reported to parents on paper at the end of the academic year, combined with variations of other reporting methods throughout the year including: parent interviews, student parent teacher conferences or student led conferences as methods of sharing progress and achievement to parents. This research examines the effectiveness of a reporting process that involves the students and parents through sharing the process of learning using online learning stories in an e-Portfolio:

In reporting there is a need to consider how to create 'student voice' because students, as learners, know the most about their learning. Effective reporting systems will be ones where student voice' is an integral part of the reporting process. (Taylor-Patel, 2009)

## **4.2 LEARNING STORIES**

In 2009, St Mary's trialled reporting to parents' school-wide, using an online learning story in writing. The decision was based on the school-wide focus and MoE Achievement Target in writing; the desire to develop assessment practice based on current research and a desire for increased parent understanding and involvement in formative assessment. An online learning story template was developed for school wide use. The template was rolled out to each student's e-Portfolio in KnowledgeNET. This template provided a guide to the formative assessment learning process for parents. Each class adapted the learning template to reflect their current learning context.

Teachers facilitated the following learning processes:

- Identifying the 'purpose' for writing
- Establishing the learning intention(s)
- Co- constructing success criteria
- Developing draft samples of writing
- Scanning and uploading each student's draft sample of writing into their learning story template

- Conducting the 'critical conversation'/reflection between student and teacher using the web 2.0 tool 'Jing'.
- Inviting parents to comment on the learning by making an online written comment in the learning story.

Teachers were encouraged to allow a genuine conversation to develop, however pre-planned questions were made available to prompt the student's reflection on their learning. The learning conversations were characterised by the teacher listening to each student reflecting, and then providing the student with an opportunity to provide feedback to the teacher. The web 2.0 tool 'Jing' was used as a means of supporting students to develop the skill of articulating and making their thinking visible. Teachers were provided with classroom release time to facilitate the critical conversations.

In their 1998 publication *Inside the Black Box: Raising Standards through Classroom Assessment*, Black and William conclude that assessment for learning is one of the most powerful ways of improving student learning (Black and William, 1998). Assessment for learning is a process to develop more effective teaching and learning practice. It actively engages learners through effective feedback, reflection and sharing criteria in a cyclic process. Using the success criteria described in the learning story engages the learner in self-assessment and reflection in the critical conversation. The quality of feedback either from the teacher or from peers depends on the quality and clarity of the learning intention, success criteria and exemplars of work.

Feedback can be oral, written, audio or video recording. Often feedback will be part of a learning conversation, or conference where learning can be discussed together in a one-on-one conversation between teachers and students, and students and students (Absolum, 2006).

The dialogue between pupils and teacher should be thoughtful, reflective, focused to evoke and explore understanding and conducted so that all pupils have an opportunity to think and express their ideas" (Black &William, 1998, p. 12)

A Learning Story example containing questions used by teachers to scaffold student reflection; a Jing audio clip of a critical conversation between teacher and student; the template and diagram illustrating the assessment for learning and e-Portfolio cycle, *Assessment for Learning: What are the Benefits of e-Portfolios?* (Rate, 2008, p. 24) are included in this link:

[http://softwareforlearning.tki.org.nz/Snapshots/Jing/\(language\)/eng-NZ](http://softwareforlearning.tki.org.nz/Snapshots/Jing/(language)/eng-NZ)

Nick Rate describes the process of assessment for learning and the e-Portfolio as a cycle commencing with the teacher sharing exemplars of quality student work, establishing clear learning intentions and co-constructing with the students success criteria.<sup>2</sup> The student is experiencing student agency from the outset of the process. The student has a clear understanding of what they are learning and how they will achieve success. Using the 2009 writing learning story, students created a draft of their writing which was uploaded into the e-Portfolio. This artifact of learning can then be commented upon by the teacher, peers, parents or a wider audience. Students are working towards improving their learning after reflection, self-assessment and feedback or feed forward from the teacher. This cyclic nature of the process of learning is visualised in the diagram below. (Rate, 2008, p. 24)

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<sup>2</sup> An exemplar can be described as an authentic piece of student work which is annotated to show learning, achievement and quality. Te Kete Ipurangi, the New Zealand Ministry of Education's online learning center, provides exemplars across learning areas. Eg. <http://literacyonline.tki.org.nz/Literacy-Online/Student-needs/National-Standards-Reading-and-Writing/National-Standards-illustrations> (retrieved 25<sup>th</sup> June 2013).

## ePortfolio Learning Cycle

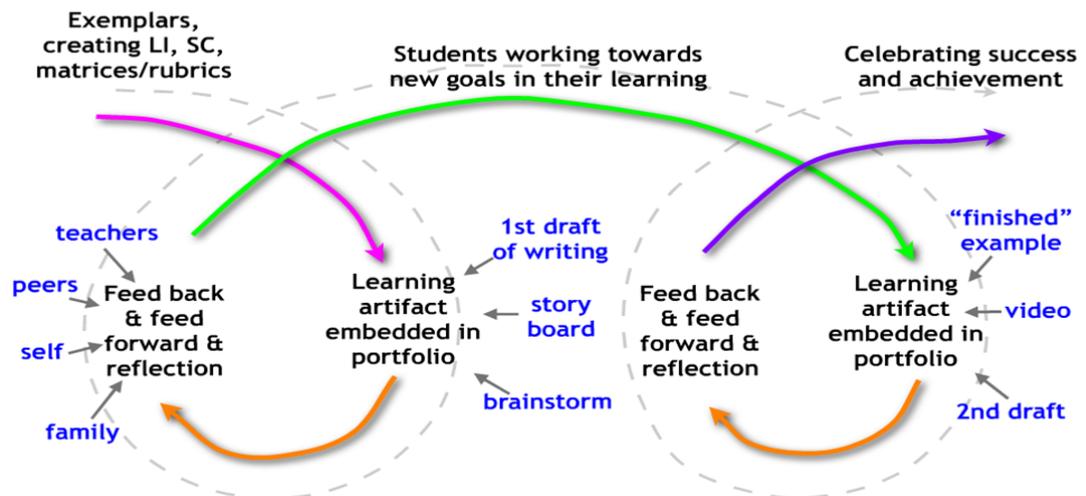


Figure 4.1 Nick Rate's Assessment for Learning and e-Portfolio Cycle.

### 4.2.1 Use of Learning Stories to Share the Process of Learning as a method of reporting student progress to parents

The learning story templates used at St Mary's from the initial 2009 school-wide trial were designed to actively involve and benefit the student while sharing the process of learning with the parents. With the student at the center, the online learning story also allowed the parent to become an active participant in the reporting process through listening to their child articulate their learning progress and being able to provide feedback and feed forward to the learner through making written comments. As each class adapted the learning story template to meet the learning strengths, gaps and where-to-next steps, the learning stories become a personalised curriculum to inform future teaching and learning. The learning stories were norm referenced, providing parents rich information in both St Mary's Assessment mapping and National Standards and Assessment References. From the introduction of using Learning Stories as a method of showcasing the process and reporting progress to parents, St Mary's involved all key stakeholders in this process. When the student is involved in the assessment process, the outcomes are that students learn to use assessment information to manage their own learning. This helps students understand how they learn best, know exactly where they are in relation to the defined learning targets, and plan and take the next steps in their learning. Students engage in the Assessment *for* Learning process when they use

assessment information to set goals, make learning decisions related to their own improvement, develop an understanding of what quality work looks like, self-assess and communicate their learning through reflection, or 'making their thinking visible'.

Jing was used to capture the 'critical conversation' between the teacher and student where effective feedback was shared around the learning artifact, the Learning Intention, the co-constructed success criteria and the local and national assessment references. Results from research question one first explore the students' perceptions around the effectiveness of reporting to parents using an online learning story. Secondly, the results show how students perceive using this method of reporting increased both their own and their parents 'assessment capabilities'. Student perceptions of the concept of 'ownership' in selecting artifacts of learning which best illustrate the child's progress and achievements are also recorded in the results.

### **4.3 STUDENT RESULTS**

Qualitative results from the children's focus groups are the results from the four Interview groups. Quantitative data from surveys are not available, as the students did not participate in any online surveys administered to teachers and parents.

#### **4.3.1 Effectiveness of On Line Reporting**

Perceptions from students were sought on the effectiveness of using a digital learning story to showcase the process of learning and share their progress with parents. The children thought that sharing their learning through an online environment was convenient and more efficient for busy parents. Students noted online learning stories were: easier, faster, more efficient enabled sharing and opportunity for easy comparison, create understanding, offer a wealth of information beyond a paper report, accessibility 24/7 on parents terms, not the school's.

*I thought it was good. It was kind of like an online report. It was easy. You could click on 'maths', 'writing', 'reading' and your results would come up. Your parents would find it easier-* Child from CFG4

*I just think it's a faster, more efficient way of doing it. It's just better than having to write it down and you can share it with everyone. Even with the class so they can see how you've done or how your classmates have done.*  
- Child from CFG4

*I think it's good because you can share our learning at school with your parents, and your parents can interact with what you're doing in class. You can get really involved in a lot of learning with it.* - Child from CFG4

*You could talk to her for two hours and she wouldn't understand. Show her and she'll understand in a few minutes.* - Child from CFG3

*It's good because mum doesn't have to come to school on Parents Day. You can just go on the web and see it. My mum would usually ask me what I did at school and I've got no idea how to answer that. It'd probably take about an hour to list all the things I did at school. But maybe the week after, if I said that I did this and this, she'll be able to look at it and understand.* –  
Child from CFG3

*I think it was easier to share with your family because sometimes when you just have pieces of paper, sometimes you lose them or you only want the good copy and you want to show other family so you can see how you've improved in your learning and it's just easier when it's on the computer because everyone can just go on it.* Child from CFG4

*I think it's pretty important because instead of having to tell them you can show them. Or if you're using Jing you can hear them.* Child from CFG1

*With my mum and dad, I was mowing the lawns and had got onto KnowledgeNET with my mum and dad who were just reading it. I finished the lawns and started reading a book. I finished the book and they were still on the computer looking at all my progress. – Child from CFG1*

#### **4.3.2 Student Assessment Capabilities**

The students perceived that the on line learning stories provided their parents with a greater depth of understanding as to where their achievement levels were at. Students felt it was difficult to give a full and rich picture of their learning through verbal reports and teacher written reports. Students indicated they valued being part of the reporting process to parents, as their own assessment of their progress and achievement was significant in painting a full picture of their progress and achievement and as a method of showcasing their learning as reporting to parents.

*I think it's quite good because I come home and say to my mum, 'Mum, I did my essay writing today.' And she asks me 'How did it go?' and I tell her that it's on the Internet if she wants to read it. She can go onto my learning stories in KnowledgeNET and she can just read it through and listen to my Jing if I've talked about it and what I want to improve on or what I like about my story. So she can tell me what I can improve on or that she enjoyed reading my story. She can look at it and give me feedback. – Child from CFG 1*

*That feedback is important to us, so that we know that next time if we're going to do a Jing as we're going to show our parents, we've got to make them happy. - Child from CFG1*

*On KnowledgeNET you can look at what your goals are to see or hear or read. You know you have to practise them so that next time if you have a test or something you can get that part right. - Child from CFG1*

*In a way it's like a mini end of year report. You can see where you're at in your learning, see where you'd like to improve more so you can just go online instead of asking the teacher. Not an 'end of year', but a 'during the year' report. - Child from CFG1*

*Only because you can ask the teacher questions instead of you getting your letter home of what she thinks of your test. You can actually ask her how you can improve rather than a piece of paper to your parents. - Child from CFG1*

*Yeah because they know then where you're at and what you're doing and how you're doing it. - Child from CFG4*

### **4.3.3 Ownership**

Students raised the concept of ownership in selecting artifacts of learning as examples of their progress and achievement. The students recognise that the Jing audio reflection was more authentic than a teacher's written report comment, and enhanced the focus of 'student voice' in the learning process.

*And you actually hear it from the student and not the teacher. You have the student's point of view. - Child from CFG1*

*I'd rather have a Jing than have the teacher write what she thought. I would rather have a Jing so that I get to share my opinion. - Child from CFG1*

*It's like ... you're recording it and your parents are going to look at it but the teacher usually picked which story they wanted and it wasn't the story that I wanted sometimes. We should be able to choose what we want and what we don't want. - Child from CFG3*

#### 4.3.4 Summary of Student Results

From the focus group interviews with students it is clear that the students liked the efficiency of using on line learning stories as a method of sharing and showcasing their learning processes at school with their parents and peers. Students gave strong indication that this method of sharing the process of their learning as a means of helping parents understand where they were at with their progress and achievement was more effective than either written or verbal reporting to parents. Students indicated that parents could access their progress and achievement information at times that suited their lifestyles and revisit the data on line at their preference. Students clearly indicate they valued being active participants in the reporting process through having the opportunity to ask their teacher questions through the critical conversation, captured and collated within the learning stories for parents to listen to. Students' valued being involved and active in the reporting process but also indicate that they would like to take ownership of selecting artifacts that best represent where they think their learning is situated. Students clearly value their developing skills in articulating the assessment of their own learning. Students have experienced the power to act on their learning through critical conversation, adopting intrinsic ownership and motivation for their learning. Students commented that the Learning Stories increased their parents' assessment knowledge and understanding through being able to know where their learning is at, what they are doing and how they are doing their learning. Comments from students valuing their parents feedback are interesting. The students identify their parents as teachers providing important and valued feedback that will help and inform their future learning. *She can tell me what I can improve on... She can look at it and give me feedback. That feedback is important to us.* Students are recognising the changing role of the teacher, no longer the sole source of all knowledge and in control of their learning, that other significant stakeholders including parents and peers can facilitate learning. The students allude that the online learning environment provides conditions for this to occur. Further evidence of the students thinking in relation to the benefits of the online learning story as a means of facilitating learning is that the information held in the learning story can be accessed and referred to at any time of the academic year and from any place with Internet connection. *You can see where you're at in your learning, see where you'd like to improve more so you can just go on line instead of asking the teacher. Not an 'end of year' but a 'during the year' report.*

## 4.4 TEACHER RESULTS

This section of Chapter Four, presents the findings of both qualitative and quantitative data as perceived by the teachers. Three different teacher surveys were administered during 2009, 2010 and 2011. Some of the questions overlap so that trends and shifts in thinking could be identified. The relevant results to research Question One are presented in this section. The four focus groups for the interviews consisted of three teachers each. These data provide insights into the first research question and are presented under the following headings: Readiness for a Digital Learning Environment; Effectiveness of Online Reporting; Assessment Capabilities; and Engagement.

*Table 4.1 Teacher Surveys and Submission Results from 2009-2011*

<b>Year</b>	<b>Target Group</b>	<b>Survey Name</b>	<b>Responses</b>	<b>Response Rate</b>
2009	Teachers	Teaching Staff Review Online Writing Sample in KnowledgeNET (ID 84871), Appendix H	11	55%
2010	Teachers	Teacher 2010 Learning Stories (ID 33198), Appendix J	11	55%
2011	Teachers	Nick Rate (ID 23778), Appendix L	21	100%

### 4.4.1 Quantitative Results

As a school community that had reported student progress and achievement to parents on paper, from the establishment of the school in 1942 until 2009 with the trial of using Learning Stories in an e-Portfolio, the change from reporting on paper to online was significant. Moving from paper based reports in previous years to reporting in the digital environment involved: change leadership, shifts in pedagogical thinking, support for teachers both in technical skills and pedagogical understandings and an education for parents. The 'Learning Story' in Writing rolled out to every child in 2009, containing a critical conversation between teacher and student, a scanned image of a draft piece of student writing, links to exemplars and standards with the opportunity for parents to make written comments as feedback

and feed forward was the first time in the school's history that both student and parent were actively involved in the reporting process. Given the magnitude of change and demands on teaching staff it is interesting to ask teachers whether they think the Learning Stories were an effective method to showcase Assessment for Learning and to report progress and achievement to parents.

#### 4.4.2 Readiness for a Digital Learning Environment

Teachers were asked for their perceptions on how ready they thought the parents, teachers and school leaders were to move to a digital learning environment including assessment and reporting as an integral part of the process of learning. An issue identified in the case study school from 2009, was the perception of teachers thinking parents were not looking at the e-Portfolios and parents commenting they were not looking at the new learning environment because teachers were not updating the e-Portfolio apart from the learning stories.

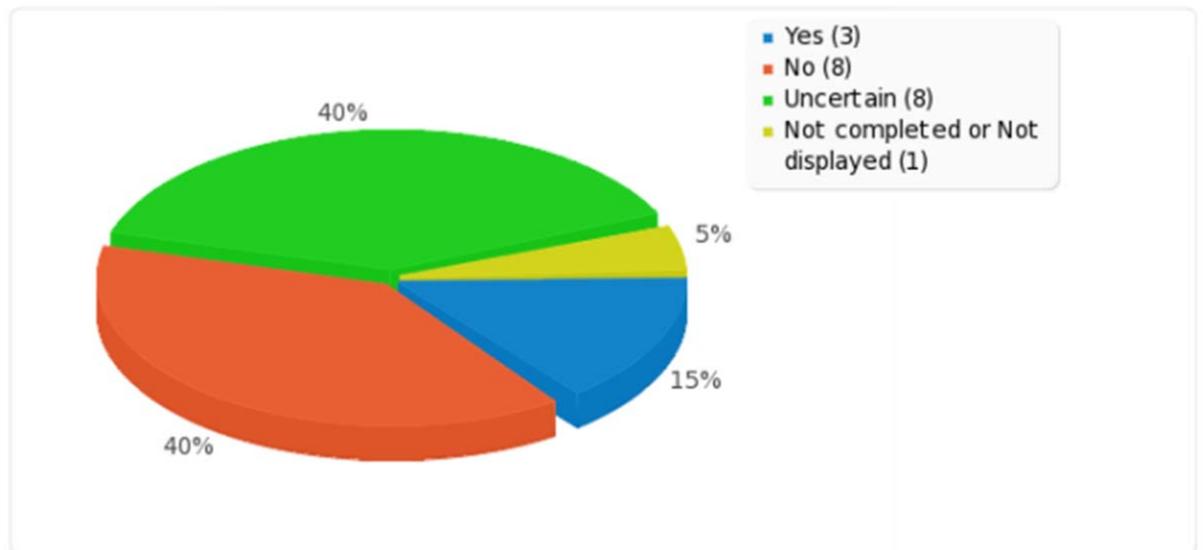


Figure 4.2 Are your Teachers ready? (2011 Survey)

Figure 4.2 shows that 15% of the teachers think they the teachers are ready for the change to a digital learning environment, with 40% showing they are not ready for this change. Figure 4.3 shows that 40% of the teachers think that the school leaders are ready to move to the online environment for learning, while 15% of the teachers think the school leadership is not ready. It is interesting to see that in Figure 4.4, that

25% of the teachers think the parents are ready and that 20% are not ready. These data provide useful information to guide future professional development focus for teachers, school leaders and information evenings for parents.

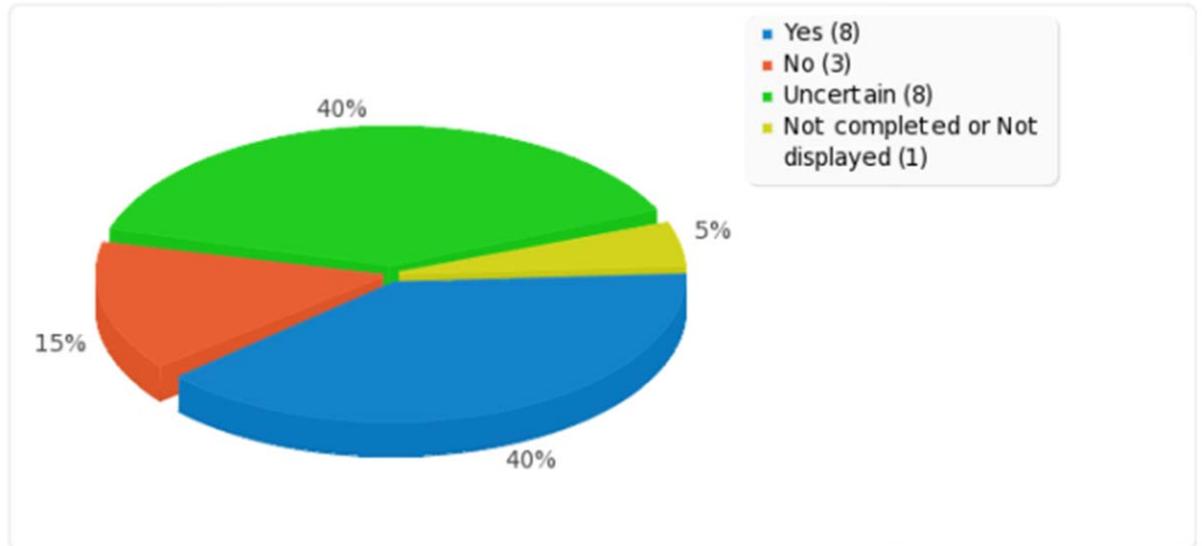


Figure 4.3 Are your School Leaders ready? (2011 Survey)

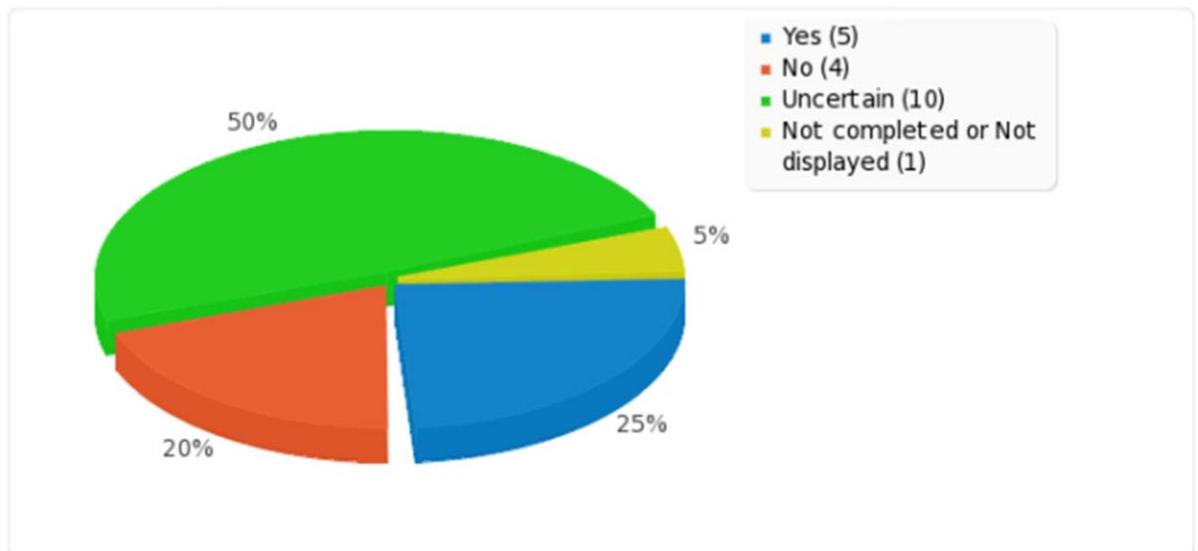
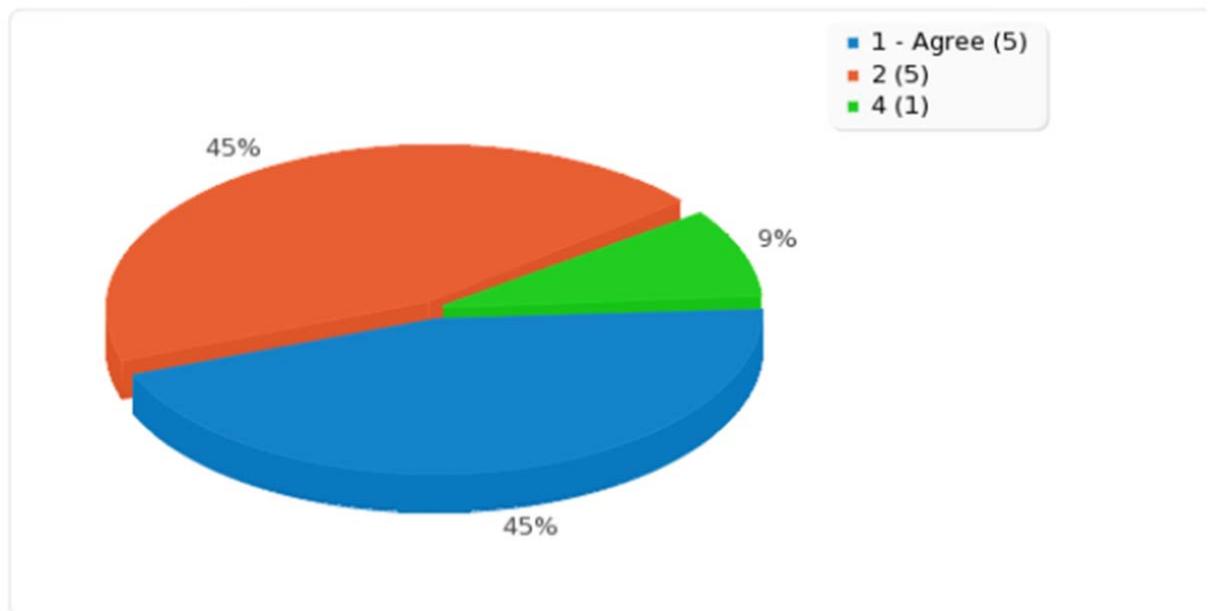


Figure 4.4 Are your parents ready? (2011 Survey)

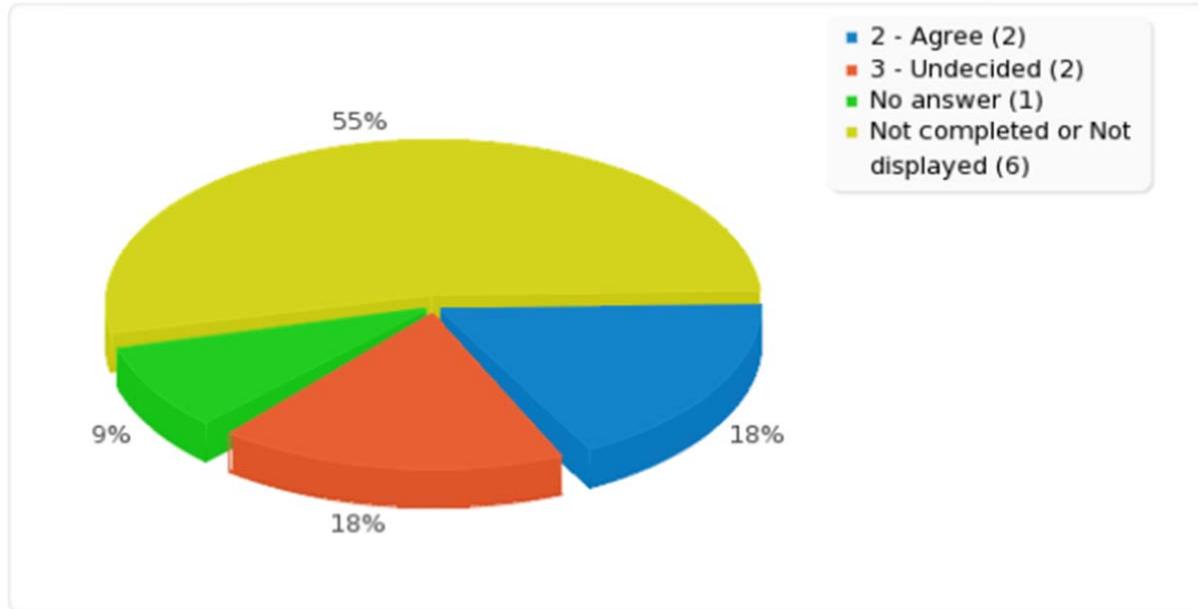
### 4.4.3 Effectiveness of Online Reporting

In 2009, when the school wide trial using an online learning story to report to parents was rolled out to every student, it was aligned to the school's 2009 MoE Achievement Target. Each year schools set an achievement target based on the learning needs of their students. The focus for the 2009 Target was writing. Goal 2 of the Literacy/Writing Target was to develop personalised reporting of progress in writing and reading using the e-Portfolio. The expectation was that every student would have a learning story that included a writing sample and a student reflection.



*Figure 4.5 Writing Sample and the requirements of the MoE Literacy Target 2009 (2009 Survey)*

It is interesting to note that the teachers after completing their first and only learning story in 2009 reported on a positive scale of 1 Agree to a negative scale of 5 Disagree, that 90% of the teachers rated the online writing sample and reflection as successful in meeting the stated goals of the 2009 MoE Achievement Target. Goal 2 of the Literacy Target was: "To develop personalised learning reporting progress of student writing and reading using e-Portfolios – including student reflection."



*Figure 4.6 Process Change in Reporting (2010 Survey)*

In 2010 it is interesting to note this was the year that National Standards were introduced across all New Zealand schools, requiring all schools to report to parents in writing twice yearly in Reading, Writing and Maths. At mid-year, St Mary's reported to parents using the online environment with learning stories in reading, writing and maths. The teachers met the National Standards requirement with a written comment included in each learning story. Above and beyond the National Standards requirements, the learning stories showed parents the process of learning and included a student reflection. It is interesting to note that Figure 4.6 shows that 18% of teachers think that the process of change moving from a paper report to an online report was positive.

Figure 4.7 shows that 55% of the teachers would prefer to send the writing books home rather than an online writing sample as a report in 2009, however in the 2010 survey, Figure 4.8 shows that 18% of teachers would prefer to send home the writing books as a method of reporting writing progress to parents than an online writing sample in a learning story. These results indicate teachers are uncertain about their preferred option of books and a paper report over an online report, however a shift in thinking from the 2009 data can also be assumed, when a significant percentage of teachers indicated they would prefer to send home books as a means of reporting to parents.

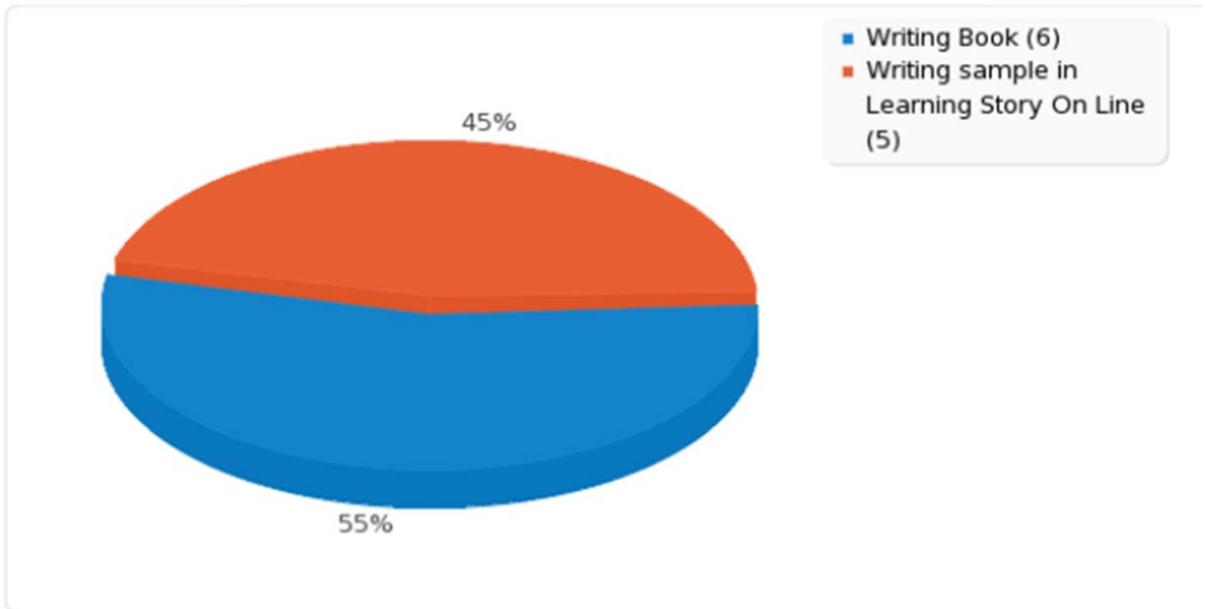


Figure 4.7 2009 Preference to send home child's books and a paper report or complete another online report? (2009 Survey)

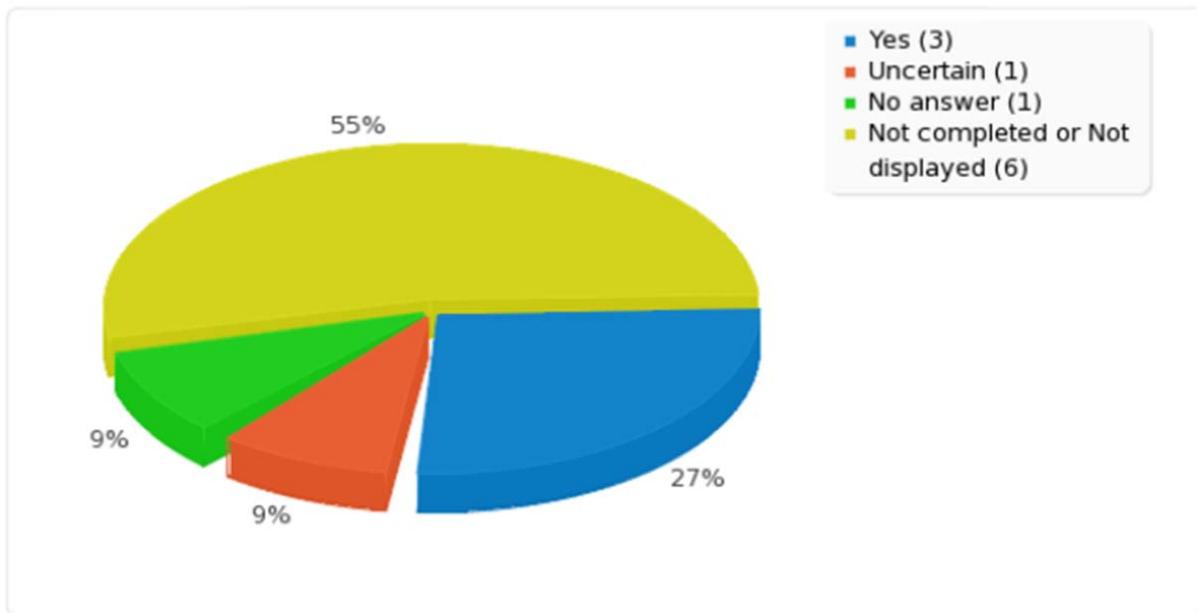


Figure 4.8 2010 Preference to send home child's books and a paper report or complete another online report? (2010 Survey)

#### **4.4.4 Qualitative Results**

Survey comments and focus group interviews provide qualitative findings that give deep insights from the teachers to further support the quantitative data findings. The results are organised into the following themes: change process, shared language, ownership and effectiveness.

#### **4.4.5 Change Process from Paper reporting to Online Reporting**

The change process involved from reporting to parents with sending books home and paper reports to online reporting is a significant paradigm shift. Many teachers felt that sending the writing books home was preferable to using the online environment while some teachers recognised the potential of the web based environment. Teachers indicate that they can see the value in learning stories as a means to share the process of learning if it were not a 'one off' process but rather incorporated into every day classroom practice.

*They could utilise the information in their workbooks as well to do this (access, interpret and use quality info to support their assessment and learning.) - Teacher from 2010 Survey*

*It does not have to be online for the student to be actively involved in his /her learning journey. - Teacher from 2010 survey*

*Made the mistake of too much written reflection, which students did not enjoy. Easier to capture via voice thread or video, but requires release time out of the classroom. - Teacher from 2010 Survey*

*We had evidence, and we went to all the trouble of putting it on KnowledgeNet where it would have been quicker and more effective to have sent it straight home. The way we did it was quite incorrect. It should*

*have been captured on a video or a Jing – the paper thing is what we're trying to move away from. – Teacher from TFG2*

*So what you're alluding to is that we didn't use the web technologies and their potential against paper technology because there's no point in using a web environment to do something paper technology can do. I know what I've done in the past – when I hit the first hitch I say 'right, I'm not doing it anymore.' And then the idea that we had to get them loaded in the week - I realised that we've just got to keep going even though it's not that easy. - Teacher from TFG1*

*And that's the thing that would keep me going; I knew that what they were learning they were going to use again, it wasn't a 'one-off'. And then I realised that that makes it more meaningful for you and the children...especially for the children. - Teacher from TFG1*

*You've got to keep doing it every day. It's not a one off thing. That's how I feel. And it's generally good, but it's time. – Teacher from TFG4*

*As a Lead learner, I can recognise in reflection that further PLD around Learning Stories to show the 'Process' of learning and passing this 'process over to students/teachers to be incorporated as part of everyday classroom practise is very necessary. - Teacher from 2011 Survey*

#### **4.4.6 Shared Language**

With the development of the School Learning Vision in 2010 “To Develop Assessment Capable Students, Teachers, School Leaders and Parents”, based on the DANZ Report as discussed in Chapter Three, teachers reflect on the effectiveness of the learning stories to share the language of learning with parents. It is interesting to note that the teachers felt that the learning stories were effective in exposing the parents to the dialogue and language of learning that occurs in the classroom.

*It allows discussion with parents during home viewing. - Teacher from 2009 Survey*

*I think they did show the parents to the parents though some of what's happening in the classroom. Like the language that we spoke, the dialogue we would have. Or if we were individually conferencing. That side really showed them that process. –*

*It's exposing parents to the language in the classroom and I think it's taking them closer to the learning that's happening in the classroom. – Teacher from TFG4*

*I think we're speaking the childrens' language when we put it onto the web or on the computer. It hooks them in. – Teacher from TFG1*

#### **4.4.7 Student Voice and Agency**

Students offer a unique and valuable perspective on their own learning and the learning experience including the learning environment. Through valuing and honouring student perspectives and opinions a greater depth and richness of where learning is situated is conveyed. Students are empowered to take control of their own learning through articulating their progress and achievement to other stakeholders including teachers, parents and peers. Consequently students are positioned to act on their next learning steps. It is interesting to note that teachers think the opportunity to capture student voice using an audio tool provides this opportunity for students to share their opinions about their learning.

*And it's their own voice too. It's them talking. It's not the teacher saying it. It's actually from the child and if it is from them then they've learnt something. And I think that's quite precious really. Because if they can communicate they obviously understand what's being asked of them. - Teacher from TFG1*

*The writing sample allowed for the student voice to be heard. - Teacher from 2009 Survey*

*Well, it certainly gives the students a voice doesn't it? -Teacher from Teacher Focus Group 1 (TFG1)*

An understanding is shared through these comments about learning, that if the learner can communicate to others what they have learnt, then this is real evidence that the learning has occurred.

#### **4.4.8 Ownership**

When defining the purpose of using a learning story in an e-Portfolio as a method of reporting, St Mary's adopted the constructivist model- the learning or process portfolio to share digital stories of deep learning. This learner-centered portfolio approach brings about self-awareness and metacognition. A principal in Illinois, USA, Elizabeth Herbert, describes in her book *The Power of Portfolios* her school's focus on student ownership of the portfolio over a ten-year development period.

If we can begin to consider that the primary purpose for the portfolio is to provide a vehicle for each child to grow metacognitively and to demonstrate competence in telling the story of learning, the door is open for the child to assume ownership. (Herbert, E., 2001, p.48)

Teachers' perceptions recognise the shift in control of learning from teacher to student through the students being actively engaged in the process of self-reporting. Teachers identify that when student voice is involved, the learning process is more powerful than a teacher dominated learning process.

*It's a tool to put across. Today's a perfect example of great learning even though as a teacher I really felt like I'd failed. But the children probably got*

*a heap out of today by making a mistake and finding the answer. -Teacher from TFG1*

*You've got to put faith in them (the students). It's about letting go and letting the children have more say. – Teacher from TFG4*

*As long as teachers and children alike take ownership of their portfolio it should make a difference and engage both teacher and learner. - Teacher from 2011 Survey*

*Using the e-Portfolio shifts the ownership of learning more towards the student. As research suggests this is where we should be moving in our everyday practice. - Teacher from 2011 Survey*

*I'm growing really positive because the kids are taking more ownership, more responsibility of KnowledgeNet, and becoming more powerful and more sharing. – Teacher from TFG4*

#### **4.4.9 Effectiveness**

Deeply embedded in the pedagogical benefits of the e-Portfolio is the development of student metacognition and support for effective pedagogical practice, such as assessment *for* learning. Teachers' perceptions identify the authentic nature of the assessment *for* learning process as showcased in the learning stories. Teachers identify that this method of reporting adds a clarity and realism to reporting that paper and verbal reports do not achieve. Through self-reporting in the critical conversation, teachers identify that students are developing responsibility for their own learning through increasing student assessment capabilities. . The concept of making student thinking visible was also identified as a benefit of using the learning story to showcase student progress and achievement with stakeholders. Teachers articulated that this process of self-reporting would be more beneficial if it was included in every day classroom practice, not simply for use as a one off report to parents.

*Using the e-Portfolio shifts the ownership of learning more towards the student... This is where we should be moving in our everyday practice.*

*It's very clear I think. Often parents think their children can do things that they can't, and they hear it...*

*And when they see it it's even better. It's very effective for the parent to see that. We did the audio last year hey?*

*I know with the little ones, we said about them counting backwards and forwards. And then you tell parents how they need to learn to count backwards and forwards and they look at you and think that their child can count backwards and forwards. We've recorded the juniors counting backwards and forwards and some of the parents are going to be in for a bit of a shock when they hear that. In that environment they can't automatically do...*

*They assume that they can but they don't always have the concrete evidence that they actually can. That they have actually recorded it. They may be missing an 'eight' every time but the parent is only half-listening to what they're saying if they're counting to ten. And often they think 'Oh no they can do that.'*

*And then they can take responsibility for it so that's that next step of 'Oh, we do need to take work on that.' -TFG 3&4*

*I guess the reflection is the only way to show the process because it's the only way you can really hear their thinking. They can articulate their thinking. Sometimes they can draw that process I guess but there's nothing like the student's voice. When you hear them...it is very powerful.*

*I'm not sure about the process of learning because it tended to be a snapshot so you don't actually see steps so much but you tend to just see that snap. There may be a record of what the next learning step is, which the teacher talks about but to see process you need to perhaps revisit that same student say two weeks later and show the progress that they've made with that particular problem or area of learning.*

*I really value Learning Stories. Especially when I did 'reading' and 'maths' last year, when we did it, I did my feedback and I replayed it and got the kids to listen to their own story. When they listened to their own story and were reading it they realised-What they were doing and not doing .It would be nice to use that as an every-day thing. That's what I was thinking. It felt a little bit artificial but if the kids were doing this, say, once every six weeks or whatever, it would become natural. Not necessarily a video recording, even an audio recording where there would be a sharing of process so that it would be more natural for the kids. I think it would be beneficial for the teacher and for the students.*

#### **4.5 PARENT RESULTS**

As described in the methodology chapter the parent data were gathered through the use of surveys and focus groups similar to that of the teachers. This section of Chapter Four presents qualitative and quantitative data as perceived by the parents. Table 4.2 shows the surveys that had been administered to parents between 2009 and 2011. Each survey has the number of responses and the response rate has been calculated as this may have an impact on the validity of the results that are presented. There were four focus groups consisting of three to five parents each organised for the interviews. The results as presented provide evidence and findings for the first research question. Quantitative results are presented under the heading 'Effectiveness of Online Reporting', as a theme to enable the first research question to be answered.

*Table 4.2 Parent Surveys and Submission Results From 2009-2011*

<b>Year</b>	<b>Target Group</b>	<b>Name of Survey</b>	<b>Responses</b>	<b>Response Rate</b>
2009	Parents	The New Role of ICT in St Mary's School (ID 39974), Appendix G	149	60%
2009	Parents	KnowledgeNet Survey (ID 63787), Appendix I	33	13%
2010	Parents	Learning Stories Parent Survey 2010 (ID 59256), Appendix K	15	6%
2011	Parents	KnowledgeNet Questionnaire May 2011, Appendix M	44	18%

#### **4.5.1 Quantitative Results**

The 2009 Learning Story rollout to parents as an online report was a significant change to previous reporting processes on paper *to* parents. As discussed in Chapter One, the concept of reporting *with* others in this case the students and parents marked the shift in control from teachers reporting *to* parents to a process whereby both parents and students had a voice in this new digital learning environment. Online surveys provide data determining if the parents had taken the opportunity, when advised by letter from the school of their protected password to access their child's homepage, the gateway to the learning stories. Figure 4.9 shows that 67% of parents had taken the opportunity to visit their child's homepage, allowing access to all their child's summative assessment data and the learning story which shares the formative assessment process. The graph shows 24% of the parents surveyed had not visited their child's homepage and assessment data.

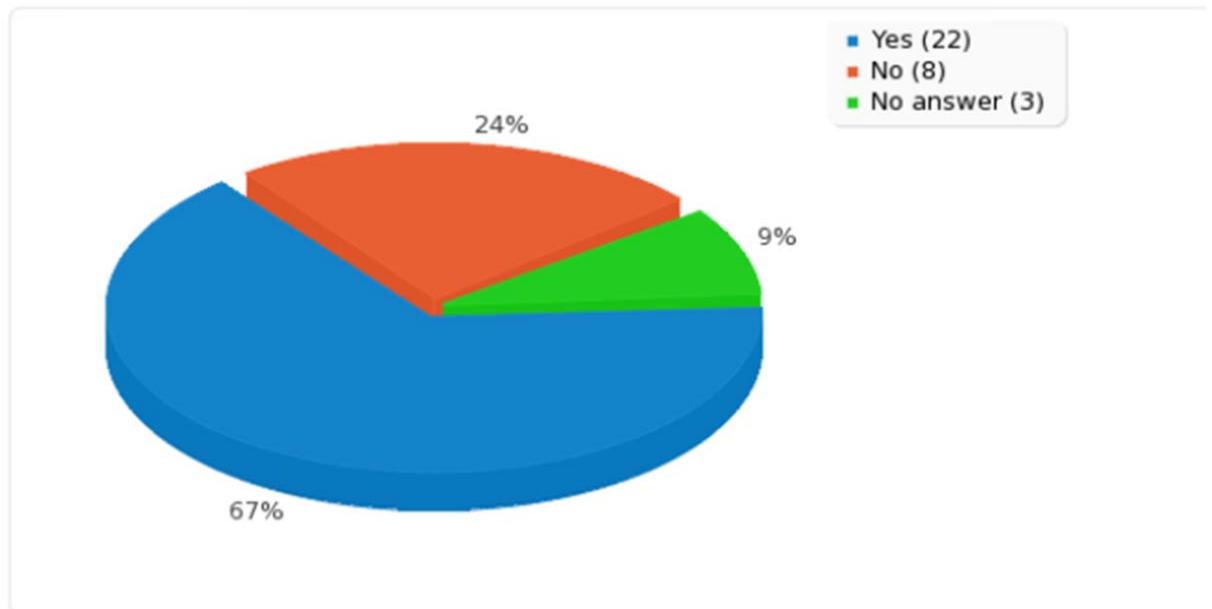


Figure 4.9 Have you taken the opportunity to visit your child's class homepage? (2010 Survey).

#### 4.5.2 Effectiveness of Online Reporting

As part of the school's reporting to parents' schedule, the school had traditionally sent home the student draft writing books, to share student writing progress and achievement with parents. These writing books would provide teacher feedback in the form of written comments, teacher rewards such as stickers and stars and often would include teacher feedback on quantity of writing, presentation and effort in regard to surface features. The Learning Intention and Success criteria were sometimes included with each writing sample. Teacher comments were often summative with little or no feed forward or next learning steps to inform the student of their immediate next learning goal. The writing book, demonstrated to parents the everyday classroom practice in writing and they were able to view multiple writing samples over a period of time. The online writing sample was often referred to as a snapshot in time, being a sample of writing taken on one day. The writing books were viewed by parents, school leaders and teachers as tangible evidence of writing progress. The writing books seldom included the student's self-assessment and self-reporting at the time of the 2009 online writing learning story. At times, opportunity was given for parents to comment on the writing progress, although this practice was not school wide. As assessment *for* learning was increasingly part of everyday teacher beliefs and practice, the opportunities for students to self and peer assess

developed school wide. It is interesting to note that on a scale of 1 to 5, with 1 representing Not Effective to 5 representing Very Effective, 51% of the parents rated the online report as more effective than the writing books going home, using the 3 to 5 ratings. 15% recorded a very effective result, 12% rated this method with a score of 4 and 24% of parents rated the online method of reporting with a scale of 3.

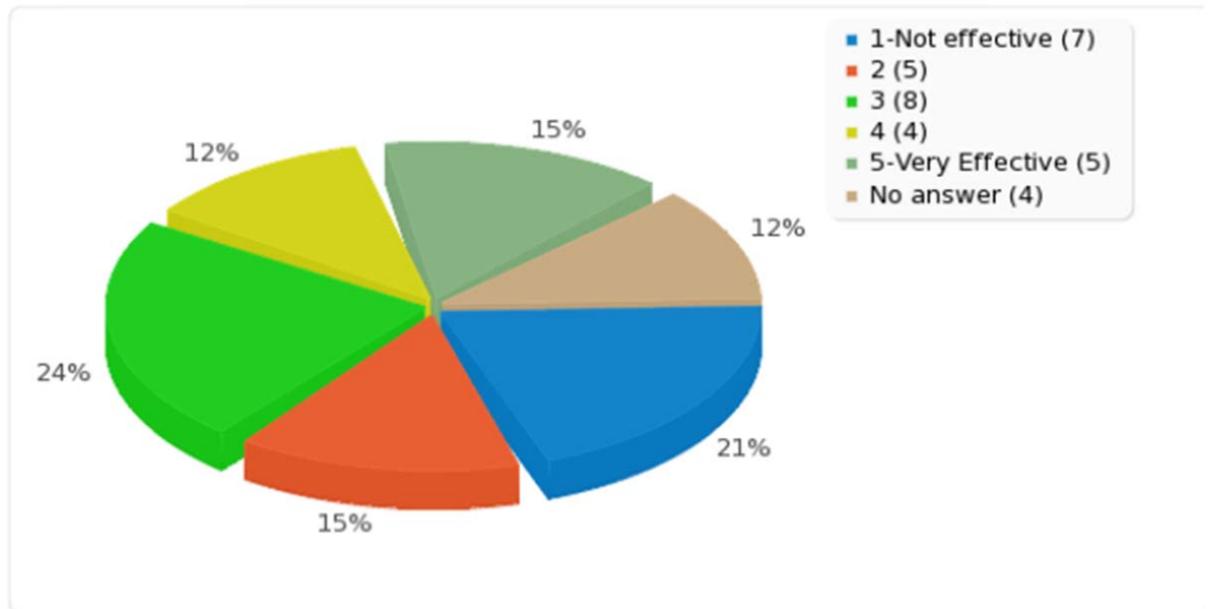
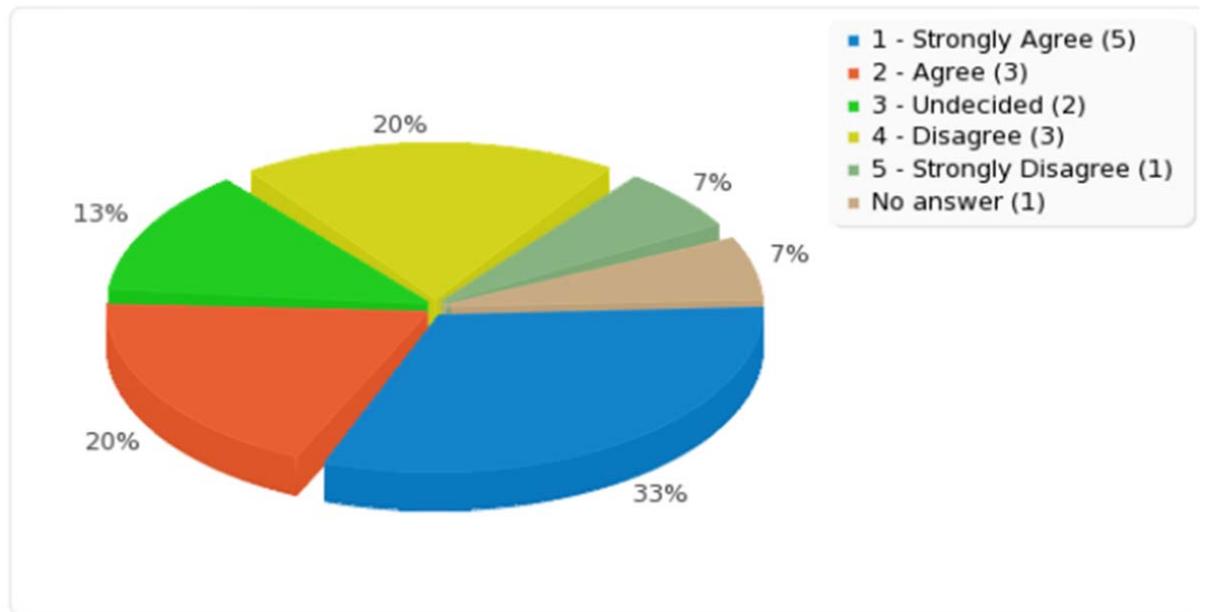
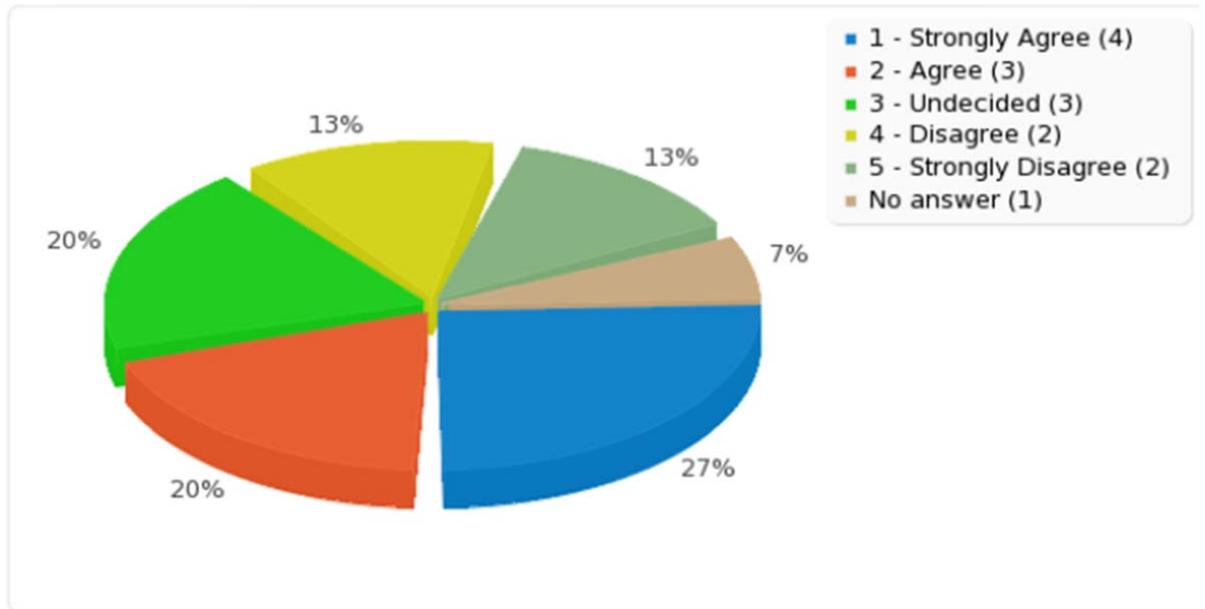


Figure 4.10 How effective is this form of reporting compared with sending home your child's writing books? (2009 Survey)



*Figure 4.11 Assessment Information including the Reading wedge and Maths table enabled parents to understand their child's progress and achievement (2010 Survey)*

The learning stories included an information section for parents with links to exemplars, progressions and National Standards aggregated graphs for reading, writing and maths. These graphs including the reading wedge plot the students' diagnostic results over time, and allow the reader to situate the learner against the expectations or benchmarks for the National Standards. This information had not previously been made available to parents on the updated progress and achievement results of their child. 53% of parents have indicated on the graph that having access to this assessment information through the e-Portfolio enabled deeper understanding of their child's progress and achievement. It is interesting to note that 27% of the parents felt access to this information did not enable them to understand their child's progress and achievement. This wealth of information easily accessed by the parents at anytime and anywhere as it was collated in a secure web based environment is a significant change for parents. Previously the school would select only aspects of this assessment data to share with parents.



*Figure 4.12 The process of Reporting used for teaching and learning has changed positively as a result of implementing KnowledgeNET. (2010 Survey)*

Forty-seven percent of the parents surveyed, indicate that the process of Reporting had changed positively as a result of implementing KnowledgeNET. Whereas 26% of parents disagree that the implementation of KnowledgeNET has had a positive effect on reporting. When seen as part of the reporting processes used by the school in 2010 including: Parent Teacher Interviews, an End of Year Written report, 66% of parents indicate that they are in favour of the online report as a part of the overall reporting processes facilitated during the year.

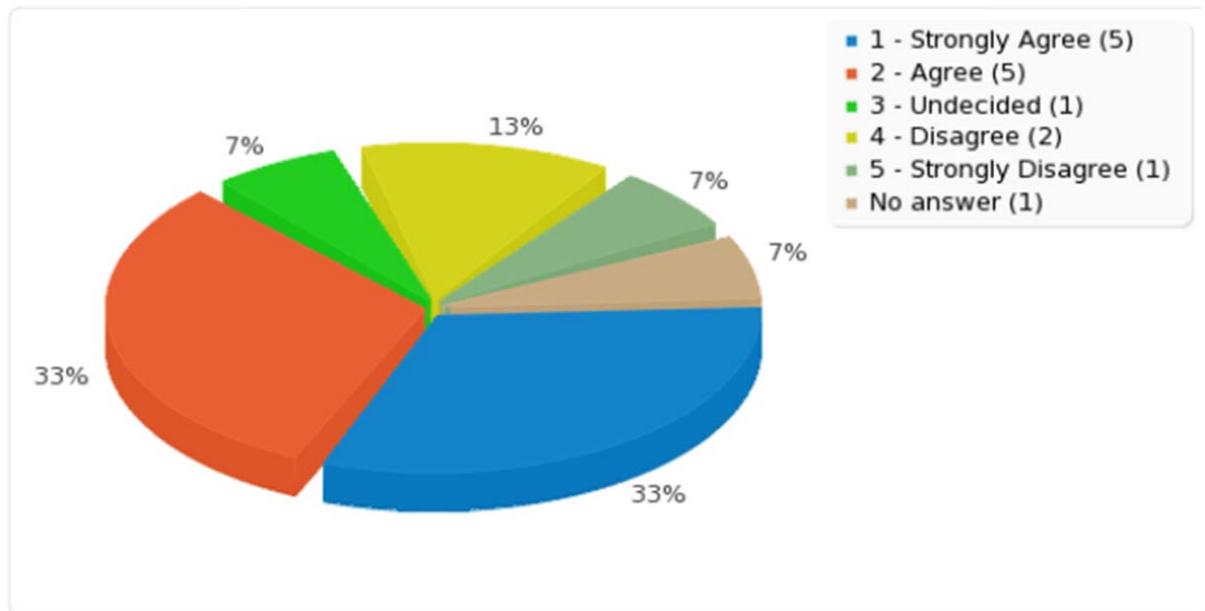


Figure 4.13 I am in favour of the shift towards online reporting (e-Portfolios) as part of the reporting process. (Parent Survey, 2010)

#### 4.5.3 Qualitative Results

Survey comments and focus group interviews provide qualitative findings that give deep insights from the parents to further support the quantitative data findings. The results discuss the effectiveness of online reporting.

#### 4.5.4 Effectiveness of Online Reporting

The perceptions of the parents were mixed regarding the effectiveness of the learning stories to report in the online environment. Parents were skeptical about the shift to online reporting and expressed acceptance of this new mode of reporting if the traditional methods of reporting were continued alongside the new online reporting systems. Parent perceptions of access to the information to develop their own assessment capabilities were also mixed. Lack of technical competency on computers was a barrier identified to accessing some of the links. Parent perceptions of the value of the student reflections were positive. Parents identified the learning stories were a new and worthwhile means for sharing the processes of learning. Having an insight to the learning processes was viewed as an effective and positive element of the online learning stories. The potential of the LMS was

identified by parents however comments were made that its potential had yet to be explored fully.

*I do see a lot of potential and I think that it will be the way that it goes if we make it so that the parents get what they need out of it. – Parent from PFG1*

*But my perceptions are that we haven't used it to its potential or what it has been intended for. Parent from PFG2*

*Possibly I'm a bit old fashioned but I still want to speak to my child's teacher. I think that is the most valuable. But I understand that they're extremely busy and it's a different world of teaching. You have so much paperwork to do that I think this is a really great extra bit so that we can see a diverse side of our children's learning.- Parent from PFG3*

*As a parent I want to know how my child is going and make it personal to her. And I know that you get that through the stories that they've written and things, but I want to know if she's doing ok, or, you know those sorts of things. But I do see a lot of potential and I think that it will be the way that it goes if we make it so that parents get what they need out of it. And I think that's probably the main thing. We tend to take away from meeting the teachers and sitting down and talking to them. I think parents still want to do that. And if its not covered on KnowlegeNET and its going to be the reporting tool used, it just needs to have those things that parents want to know: Is my child socially ok? Are they functioning academically? Instead of getting that report at the end of the year that says they're 'here', but you haven't seen a teacher. Parent from PFG1*

*I also see it as quite a static environment. It's probably really a useable tool in the administration and management of a school. But in terms of a parent using it at home, it's quite static. Parent from PFG1*

*It's nice to know 'this is where my child is at' but then 'this is where they should be heading towards'. Like for example, I like the links where it said about maths where it said 'This is what we expect at Level One and this is what we expect at Level Two. Your child was here. It kind of gives you an idea of where to go. And what to do with your child if you're doing any stuff at home. Parent from PFG1*

*It was quite nice to see that during the interview process the child was thinking about what they'd done and doing that sort of self- assessment and having some insight as to where they were at. I thought it was informative. Parent from PFG1*

*It's nice to hear what they think themselves. The self-reflection I found quite interesting, just to hear how your children are when they're not talking to you. Because probably they talk quite differently to different people. From my perspective I found it really nice to hear how they spoke to their teacher. And it also made them think about what they're doing rather than just getting, say an answer for maths or writing; to actually think that they did to get from A to B and whether they missed some steps out or... like their strategies and processes. To me that was more valuable than to see the snapshot of the piece of writing. To me I found their reflections much more informative. Parent from PFG4*

*I thought the information that was made available was excellent. It was very good. I was just unable to follow those links and I don't know why this was.... I found the information that was there excellent, but the rest of the information I personally was unable to access. Parent from PFG4*

*I think it's a very valuable tool but I think it is quite new and I think it is a mind-set change for parents. So I think it's a slow process... Parent from PFG4*

*It's fantastic for parents to understand the processes of learning... but I guess the point you've just made... What I was saying was that you want to*

*give us something different from what is traditionally given to us, but that understanding is that we're not actually trying to replace the report, but we're trying to... Supplement and slowly grow our understanding towards the processes of learning... - Parent from PFG4*

*What really clicked for me today is the difference between a report and the processes of learning... - Parent from PFG4*

*...you don't really see how effective it is until the next year... It's progress-  
Parent from PFG3*

*Archiving those snapshots and the progress over time is really wonderful-  
Parent from PFG3*

*It's effective later. – Parent from PFG3*

*(Archiving- progress over years) And it's that achievement again. That empowerment that 'next year I can do better than that'. - Parent from PFG3*

*Well the archiving shows us that...that they have come a certain way. If people look at it enough to see...that's the thing. I still have a drawer with every report and first piece of writing and speeches but maybe that's just me. This is another way it's being archived. - Parent from PFG3*

*I think that's probably just understanding. I'm sure you'll find that lots of parents like me, instead of looking at it as just something different, they're looking at it as an 'instead of' and they're saying they don't like it. And it's the change isn't it. Like what are these new reports? I don't like these new reports. - Parent from PFG4*

*I think too from my son's point of view as the audience. I was the audience as well as the teacher. And suddenly he valued what he had done a lot*

*more because of him being able to hear and know that he'd written it or done it for an audience* Parent from PFG4

*Very valuable I think. To articulate how you have put 'this' onto paper and said 'this' to another person in a fairly formal situation is an absolute skill and I think it's a great indication of KnowledgeNET, that it's not just typing and sitting in front of a screen. It's actually using it as a voice, and I think that to me is important... that it is used as a voice and that is a real reflection of classroom productivity and interaction between student groups and the teacher.* Parent from PFG4

*The parents are often the barriers-someone like me is- but I think someone like me, who's got older children and I've moved on, I still haven't made that mind shift as to where they're going and what they're doing there.-* Parent from PFG4

*It's safe for me to get a piece of paper because that's what I know. Whereas I loved this, and I'm not saying that I'm not, but I've just got to learn that this in the future is going to replace what I'm used to and I think that's just a process of time-* Parent from PFG2

#### **4.6 SUMMARY**

This chapter presents the quantitative and qualitative results from the students, teachers and parents. Of the three stakeholder groups, the focus interviews from the students provide a clear indication that the online environment is their preferred environment for effective sharing of their learning progress and achievement with parents. Students indicate that the learning stories provide a rich and in-depth view of where their learning is. Also, students identified the online environment as effective in explaining their learning to parents in a more efficient way than paper or verbal reports. Students value the opportunity for others including parents and peers to provide feedback and feed forward in this environment. Students enjoy the

opportunity to ask the teacher questions about their learning in the critical conversation. Students indicate that student agency is given to them with this opportunity through being an equal and valued partner in the learning process.

A shift in thinking from the teachers perspectives is evidenced from 2009 to 2010 in relation to the effectiveness of the on line reporting as compared to sending home the writing books and a paper report. Teachers perceived that using the online process would be more beneficial if it became part of everyday classroom practice rather than one off reports. A shift in thinking of how to maximise the use of the web technologies over paper technologies emerges from the findings. Teachers reflected using student written comments was not as effective as students recording their reflections using video or audio clips. Teachers recognised this significant shift in the reporting process required support from the school leadership in classroom release, until the process became part of everyday classroom practice. Teachers recognised the value and authenticity of using student voice as real evidence of student learning. It is also significant that using the online learning stories for reporting to parents has been perceived by the teachers as a process that increases student agency and voice.

Over half of the parents surveyed and interviewed perceived that the online writing learning stories were an effective method of reporting as compared to sending writing books home. Parents indicated that the links to information such as exemplars, aggregated graphs and National Standards information were helpful. However, some parents identified that their own lack of computer literacy and technical skill was a barrier, but they also recognised that this should not be a barrier to prevent their children learning in 21<sup>st</sup> century learning environments. Parents recognised that if they kept abreast of technological change and participated in parent education programs that would help them cope with the changes and realise the potential of the online learning environment. Parents recognised that children easily adapt to this new web based learning environment and that it would be a matter of time for parents to adapt to these changes in learning environments. Using the LMS as a portal to collate evidence through archiving the learning stories overtime, was perceived as a very effective method of showing progress and achievement overtime. Parents identified the learning stories

archived overtime were also empowering for student learning and hence improves learning motivation and student agency.

The next chapter, 'Student Reflections', presents the qualitative and quantitative results from students, teachers and parents which attempt to provide insights and answers to the second research question: How do student's best share their reflections about their learning to teachers, parents and peers in an online environment?

## Chapter 5

### ONLINE STUDENT REFLECTIONS

#### 5.1 INTRODUCTION

Students at remarkably younger ages today are already developed experts on reflecting on life through the use of social media. In this context, students eagerly avail themselves of opportunities to reflect on their lives, with a social focus in Facebook, blogs and other social networks. The timing is ideal to capture students' motivation to use social networks and facilitate reflection on learning. Reflection is students telling their own story in their own voice.

Jennifer Moon a researcher on reflective practice cited in Dr. Helen Barrett's *The Reflect Initiative Researching Electronic Portfolios White Paper 2005*, defines the ideal conditions for reflection: time and space, a good facilitator, a supportive curricular or institutional environment, and an emotionally supportive environment. (1999, p. 123)

This chapter examines the conditions where student reflections have been uploaded as an audio file of a critical conversation focusing on powerful feedback from student to teacher and archived in the Learning Story.

The New Zealand Curriculum (2007) describes effective pedagogies that highlight specific teaching strategies to promote student learning. Encouraging reflective thought and action is identified as an effective teaching strategy, supported by extensive research to consistently have a positive impact on student learning. The learning story in the e-Portfolios described in this thesis, captures a story of student learning incorporating a recorded student reflection. The focus of this chapter examines student reflections, where the learners tell their own stories using their opinions to share where they are at and where to next with their learning.

In a learning story, students self-report in a dialogic reflection with their teacher using an audio or video tool, embedded as evidence of learning, to share with parents and peers. In this 'critical conversation' where the student reflects on their learning with the opportunity to think critically, receive feedback and offer their own feedback to the teacher, the learner is well placed to co-construct new learning goals.

Students reflect on selected artifacts of work in the learning story. Together with the teacher, the learner can decide if the artifact meets the learning intention of the lesson and guidelines of the success criteria and accompanying rubric. This active participation in the learning process can show understanding and growth over time through the learners expressing their opinion backed by fact. This connection between the artifact and the student reflection creates deep meaning for the student, which can be shared with an audience in the e-Portfolio

This chapter focuses on the second research question: How do students' best share their reflections about their learning to teachers, parents and peers in an online environment? The strategy of reflection and how best to share student reflections are examined using both qualitative and quantitative data.

As new technologies are increasingly available for schools to utilise, this chapter attempts to give insights into how best to use the available online tools for the purpose of student reflection, with the end goal of improving student learning outcomes for all students. The qualitative results are organised into findings from each focus group: students, teachers and parents. The qualitative method results shed understanding on the process of reflection and how these are most effectively shared with teachers, parents and peers. This chapter also presents the findings of quantitative data as perceived by the teachers and parents providing further evidence into answering the second research question on student reflections. These data are shared showing statistics generated from the responses and graphs.

The student results are organised into the following themes: student voice, authenticity and self-reporting. The results from teachers are focused on student reflection. A background to the rationale for using student reflection to engage

students in active participation in assessing and self-reporting their learning is outlined in this chapter

## **5.2 BACKGROUND**

### **5.2.1 The New Zealand Curriculum**

Students learn most effectively when they develop the ability to stand back from the information or ideas that they have engaged with and think about these objectively. Reflective learners assimilate new learning, relate it to what they already know, adapt it for their own purposes, and translate thought into action. Over time they develop their creativity, their ability to think creatively about information and ideas and their metacognitive ability (that is, the ability to think about their own thinking). Teachers encourage such thinking when they design tasks and opportunities that require students to critically evaluate the material they use and consider the purposes for which it was originally created. The New Zealand Curriculum (2007, p. 36)

## **5.3 ST MARY'S SCHOOL VISION SUPPORTING STUDENT REFLECTION**

Reflection, the ability to stand back from ideas and think critically is at the heart of the critical conversation examined in this chapter. Dr. Helen Barrett an Internationally recognised expert in the field of e-Portfolios speaks of reflection as the “heart and soul” of an e-Portfolio. Barrett (2005) describes reflection as ‘digital storytelling’, a motivating strategy that can make reflection concrete and visible. The strategy of student reflection captured in an e-Portfolio supports deep formative assessment for learning. In Barrett’s *The Reflect Initiative- Researching Electronic Portfolios and Learner Engagement* a reference to Pearl and Leon Paulson’s metaphor of student reflection as storytelling; a strategy for students to construct meaning from their accumulated knowledge and experience of where their learning is at and where they want to go to next.

A portfolio tells a story. It is the story of knowing. Knowing about things.... Knowing oneself... Knowing an audience... Portfolios are students' own stories of what they know, why they believe they know it, and why others should be of the same opinion. A portfolio is opinion backed by fact... Students prove what they know with samples of their work." (Paulson & Paulson, 1991, p. 2)

The implementation of the New Zealand Curriculum 2007, required schools to develop a school vision in collaboration with all key stakeholders: Board of Trustees, teachers, students and parents. St Mary's school followed a process of consultation and engagement with all stakeholder groups to create the school vision. Teaching staff identified desirable 'dispositions' that could possibly identify a St Mary's Graduate. (A disposition was defined as a way of living, knowing, doing and being) The teachers shortlisted the following dispositions: Spirituality, Creativity, Motivated, Reflective, Role Model, Collaborative, Life Long Learner, Communicator, Connected, Empathetic, Confident. Input from students, parents and Governance provided further data to create the final school vision statement. Key dispositions were prioritised including the disposition of 'reflection'. The school vision statement created in 2007 recognised reflection as a key disposition for student learning in a future focused learning environment. Following the collaborative formation of the school vision as the foundation to guide principles and practices at St Mary's school, student reflection was made concrete in the following guiding vision:

At St Mary's we strive to be Christ like. With reflective and creative minds we challenge ourselves to make a difference in our world.

Hattie (2009) *Visible Learning A Synthesis of Over 800 Meta Analyses Relating to Achievement* states that 'feedback is most powerful when it is from the student to the teacher and when this occurs, it helps to make learning visible.' St Mary's school recognised Hattie's refined view of feedback, 'When I discovered that feedback was most powerful when it is from the student to the teacher then I started to understand it better' (p. 173). The school sought to further develop this strategy, trialing and providing optimal conditions for the dialogic reflection to occur between teacher and student.

St Mary's school recognised the need to reflect on the impact of their vision, as a vision must evolve to meet the needs of its community. In 2012 and 2013, in collaboration with parents, students, teachers and governance, the vision was rebranded using visual imagery. All stakeholder groups were invited to make their thinking visible on the key dispositions of: 'Christ Like', 'Reflective', Creative and 'be the difference'. Using a large wall in the school hall painted with blackboard paint, stakeholders regularly shared their understandings of these dispositions. For the students, this opportunity to focus deeply and make their thinking visible on what it meant to be 'reflective', embedded their understandings of how they were using reflection as a key learning strategy. The 2007 school vision was further adapted in 2013 to:

At St Mary's we aim to be Christ Like through prayerful hearts and willing hands. With reflective and creative minds we challenge ourselves to be the difference.

Visual images of the newly evolved school vision using the key dispositions with the action verb 'be': 'be' Christ Like. 'be' Reflective, 'be' Creative, 'be' the Difference, emblazoned the school in classrooms and public areas.



Figure 5.1 Image of School Foyer with newly evolved School Vision and 'be' concept.

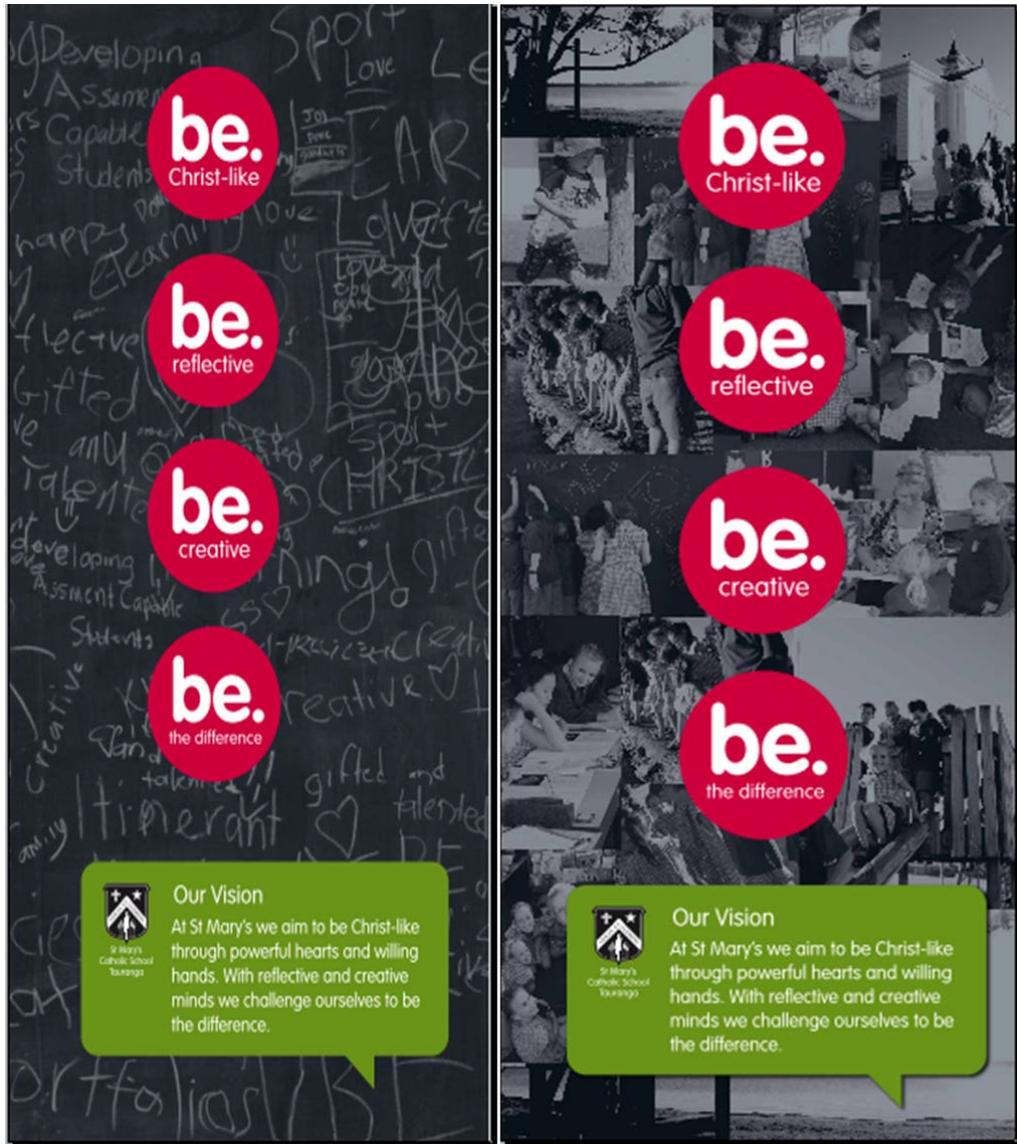


Figure 5.2 St Mary's School Vision branding using 'be' concept for key dispositions

Reflection, an identified key disposition of the school vision, provided the school with the rationale to design and adapt the curriculum through using 'critical conversations' where teachers facilitate reflective dialogue with students in a learning conference.

### **5.3.1 St Mary's Learning Vision "To develop Assessment Capable Students, Teachers, School Leaders and Parents"**

St Mary's created a Learning Vision to provide specificity to enhance the school vision for effective teaching and learning strategies. This learning vision was shaped and influenced by the *Directions for Assessment in New Zealand* (DANZ) report (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009) The recommendation from the DANZ (2009) report 'That all young people be educated in ways that develop their capability to assess their own learning' (p. 23), became the rationale for a student centered curriculum based on developing assessment capabilities.

The DANZ report encouraged students to be included in all aspects of their learning including reflection. 'Students need to be actively involved in helping their teachers ascertain what they have learned, what their strengths are, and where their gaps may be' (p. 6)

In collaboration with the Education Review Office during their 2010 school review, the school leadership team and ERO officers identified the school had adapted its curriculum, with the student at the center of assessment practices in the 2009 Learning Stories. The learning stories incorporated the reflective dialogue between teacher and student where the students' active reflection was captured in the audio clip. ERO encouraged the school to further develop these practices using the learning vision "To develop Assessment Capable Students, teachers, School Leaders and Parents", as a guiding principle for effective teaching and learning.

Principles outlined in the DANZ report (2009) were given further recognition in the *Ministry of Education Position Paper* (2011) which identified that an assessment capable student develops student agency through intrinsic ownership of their own learning. Student reflection is a key strategy in this assessment capability process. Assessment-capable students are more likely to take ownership of their own learning and become independent learners. It is important that all students build their assessment capability and develop into autonomous, self-regulated life-long learners. (p.33)

Research and the New Zealand Curriculum provided the background pedagogy for using student reflection as a valid and vital means of assessing and reporting progress and achievement to parents.

## **5.4 STUDENT RESULTS**

Qualitative results from the children's focus groups are the results from the four Interview groups. Quantitative data from surveys are not available, as the students did not participate in any online surveys administered to teachers and parents.

### **5.4.1 Student Voice**

The dominant voice in classrooms has traditionally been that of the teacher, often with inequitable opportunities provided for all students to talk and think. The 'hands up', and often silent classroom culture does little to support dialogic talk and teaching strategies. All students require planned and scaffolded opportunities to talk about their learning to achieve genuine student voice ownership and student agency. Critical conversations shift the locus of control from teacher to student, affording this opportunity.

Perceptions from students were sought on the effectiveness and value for them as learners in experiencing a learning environment that offered them genuine student voice within the online critical conversation. Students' perceptions were sought on the advantages of using an audio tool to capture their reflections. The critical conversations in the learning stories this thesis examines are learning dialogues between teacher and student. Student perceptions were also sought on recording online reflections between students, with students adopting the role of learning facilitators. Fox (2008) identifies reflection as a critical skill in helping students to take increasing responsibility for their own learning and an essential element in digital Portfolios. In *e-Portfolios- A Personal Space for Learning*, 2008, Fox identifies the e-Portfolios capacity to store sound and thus allow the student's 'voice' to be heard.

The power of 'student voice' should not be underestimated. To hear students' reflect on their own work, in their own voice, with their own intonations and expressions, conveys meaning in a manner that is simply not possible in written form. (Fox, p. 8)

Students from the Focus Group Interviews comment on their experiences in critical learning conversations with their teacher. The students identified the value in having the opportunity to share their perspectives on their learning in these conversations and the benefits of talking to peers about their learning.

*And you actually hear it from the student and not the teacher. You have the student's point of view. - Child from CFG1*

*The teachers, they follow with your learning and give you steps about where you're going next so they can give you good advice. But you might feel more comfortable talking to a student. With your teacher you might feel a bit scared. - Child from CFG1*

*If they had questions that the teacher had prepared for us and they asked them and we answered them, and they put it on our homepage or something, everyone can hear it. Sometimes when the teacher asks questions, you go shy or blank. When you're talking with your friends you just talk. Alice, you know how much of a talker I am, but when I go next to a teacher I just go blank. I just go quiet but when I'm with Alice I'm talking all the time.- Child from CFG1*

*I love it because I reckon it's great how everyone can interact and share their learning. It's just helping people get more into using the Internet in a safe way. - Child from CFG3*

*...it's about how people kind of adapt. Before it was just textbooks and maths books but now we can do learning on KnowledgeNET. I actually love working on computers and I would really like to see more computers in the*

*school. Not more computers but more time on the computers. - Child from CFG2*

*Text isn't quite as valuable as just talking to each other sometimes- Child from CFG2*

*You could see this as a new step. Like cavemen developing into modern humans. - Child from CFG2*

#### **5.4.2 Use of Web 2.0 Tools for Recording Reflections**

St Mary's school trialed numerous web 2.0 audio/video tools to find the tool with best compatibility and ease of use within KnowledgeNET. Jing was the chosen web 2.0 tool used in the learning stories as it was a compatible file format with our LMS (flash/.swf) with a simple upload icon available within the WYSIWIG editor. The uploading process for a flash file was similar to uploading photos or other documents that teachers were familiar with. Jing is screen capture software enabling the user to capture images and videos from your computer screen. Powerful moments of self-recognition of learning, or the 'ah ha' moment can occur when using web 2.0 technologies. Students perceived the tool Jing was an effective tool to capture their reflections as it enabled them to express their own opinions about their learning with ease of use. Students commented on the learning benefits of revisiting their recorded conversations on Jing and recognising their progress over time including incidental self-assessment as they listen to their responses.

*I think Jing's better than your teacher writing it all down because you can say whatever in your own words- Child from CFG1*

*And Jing is also good for some people who might not be as good at reading. They might not be able to read what your teacher is saying- Child from CFG1*

*Yeah, sometimes you only get to Jing if we have a test. But if we do a big term of science we should have a review of what we did and how it helped us.- Child from CFG1*

*I have Jing on my computer and I think it's very good. I use it quite a lot as well. - Child from CFG4*

*I do that on my learning stories. I go back and listen and laugh about my Jing. I laugh about my mistakes. Child from CFG2*

*I was listening to my Jing and I kept saying 'um' all the time. And I thought to myself 'Why do I keep saying "um"?' Child from CFG2*

### **5.4.3 Authenticity**

Students raised the concept of authentic ownership of their learning when their student voice was recorded using online audio tools. The students suggest that parents would have more information about their learning through listening to the online conversations.

*Your parents would actually know that we're actually learning something and it shows on Jing instead of writing it down.*

*Yeah, if you write it down, sometimes your teacher can give you ideas and you say 'yes', like you think it's good but inside you really don't want to have it put in.- Child from CFG3*

*If you write it down on a piece of paper then you'd know it would definitely be you but someone else might actually be able to do that-copy it. Just adding onto Matthew, if you use online tools to speak to your teacher or something, people can't copy what you said, It's on your page and no one else can access that and copy.*

*..and anybody could have written what you said and if it's written on paper its not... they can hear what you've actually said. If your parents ask you what you said, if they wanted more information they could go onto KnowledgeNET and listen to the whole interview.*

#### **5.4.4 Self-Reporting**

The students perceived that recording their reflections about their learning in the online environment using the audio tool provided parents with rich information to further assist their learning at home. Students identified the value for parents to be able to re-visit the online interview between teacher and student. Ease of access for parents was seen as an advantage in using online tools.

*I think it's because you can go back on the whole conversation instead of repeating it. Because if you say. 'Mum we talked about this and this'... you really want to just go back over it and say that this is what I did well, this is what I did not do so well, this is what I want to work on, can you help me with this?*

*Because if you're going to have interviews at school and there's no recorder or anything, your parents won't be able to know what you said. The teacher could put it on KnowledgeNET – Child from CFG3*

*...we had to write a story. It was persuasive writing. On the teacher's computer she brought up Jing and she could interview us one by one and ask us what we thought about writing the story and it was like an online interview. - you could again show your parents what you said and how you answered the questions.- Child from CFG4*

*It's sort of a good way of showing your learning and you can have a little fun too, and it's easy access.- Child from CFG2*

*I think it's good because you can share our learning at school with your parents, and your parents can interact with what you're doing in class- Child from CFG4*

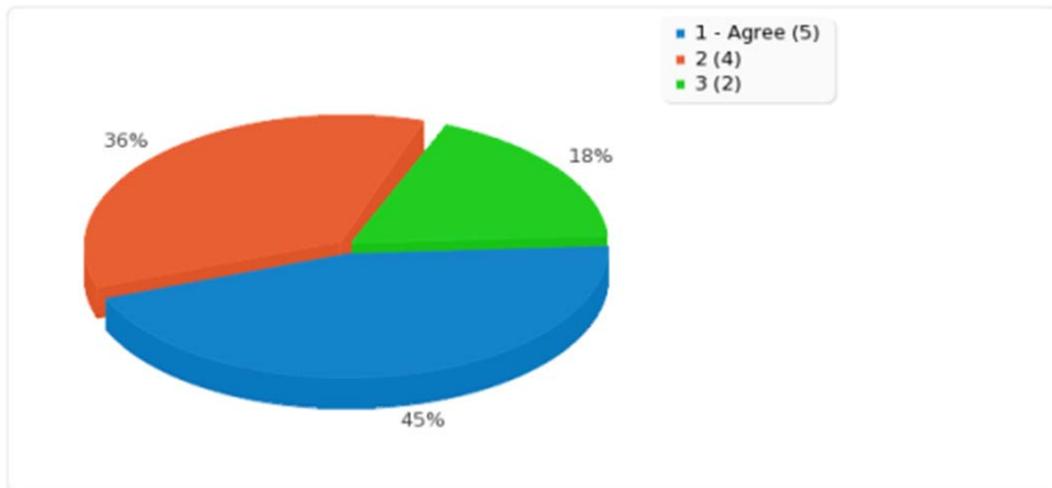
From the focus group interviews it was clear that the students perceived recording their reflections using audio or video web 2.0 tools was preferable to making written reflections in the online environment. Students liked the authenticity that using these tools provide both to themselves and their parents. Students thought their spoken reflections provide a rich picture of their learning with the added advantage of parents being able to revisit the conversations to clarify their understanding of where their child's learning was at. Students talked about adapting to change and how the learning was improved in the online environment using audio tools in preference to textbooks. Some students indicated that learning conversations between teacher and student were not the only reflective strategy to benefit all students. Students recognised the value of peer feedback and feed forward in learning conversations; these were perceived as a desirable reflective strategy. Students recognise the power of their voice to express the position of their learning using web 2.0 tools more than paper technology.

Voice adds depth to the work, allowing the author's personality to come through. It enables the author to communicate more directly with those viewing the work who are then able to listen directly to the author's thoughts and reflections. (Fox, 2008, p. 8)

## **5.5 TEACHER RESULTS**

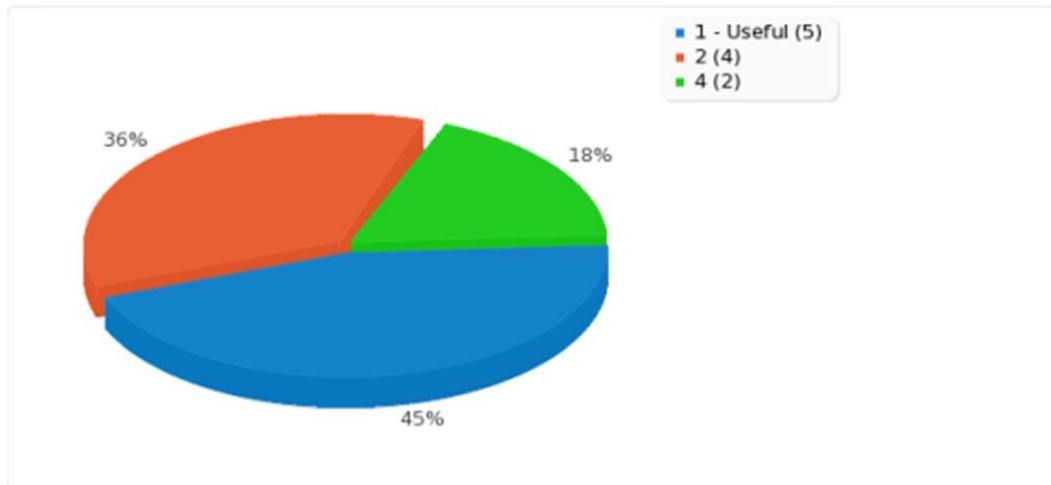
This section of Chapter Five, presents the findings of both qualitative and quantitative data as perceived by the teachers. The relevant results to research Question Two are presented in relation to student reflection and how best these are shared in the online environment.

### 5.5.1 Quantitative Results



*Figure 5.3 Do you think the writing sample met the need for student self-reflection and involvement in their learning? (2009 Survey)*

It is interesting to note that on a scale of 1 to 3, with 1 representing Agree to 3 representing Disagree, that 45% of teachers rated the first online Learning Story in Writing, which included the audio clip of a student teacher critical conversation as meeting the need for student reflection.



*Figure 5.4 How useful was the audio tool 'Jing' in terms of developing the skill of articulating and making 'thinking visible' for the student? (2009 Survey)*

The school through the identification of 'reflection' as a key disposition for learning in its newly formed vision, closely aligned reflection strategies with 'Making Student

Thinking Visible' at this time. Professional development focus and influenced by research from Richart, Turner, Hadar (2008) *Uncovering Students' Thinking about Thinking Using Concept Maps* work in collaboration with Project Zero, Harvard Graduate School of Education alongside exploring the philosophy of the Reggio Emilia schools, the school explored the concept of making thinking visible. This survey question focused on how valuable a web 2.0 tool could be to share and 'make visible' student thinking to a much wider audience. The author of this thesis was fortunate to accompany an EHSAS (Extending High Standards Across Schools) to Melbourne Australia on an MoE Professional Development Initiative (2009) for school leaders to visit Reggio Emilia philosophy schools, including Bialik College Melbourne, where the Cultures of Thinking project was based. It was interesting to note teacher perceptions of using an online tool to capture thinking and make it visible as an alternative to the many other approaches used in a Reggio Emilia philosophy based school, including drawing, writing, clay, all art genres etc. to 'make thinking visible'.

### **5.5.2 Qualitative Results**

Teachers were building a broad pedagogical understanding of the value of student reflections and their link to adding value to student learning outcomes and as a valuable method of self-reporting.

Student reflection is a key learning strategy enabled in an e-Portfolio that allows the student to adopt genuine ownership of their learning. 'Reflective portfolios support a deeper level of engagement and self-awareness, making it easier for a student to understand their own learning and to provide teachers and parents with a richer picture' (Barrett, 2005, p. 1)

*Yeah I like the reflection part because it's more dynamic than the static thing. – Teacher from TFG3*

*In terms of the learning environment, because of the reflection, it's helping with the assessment and it's really pushing that through our school which is good. – Teacher from TFG3*

*I think the level of sincerity is also identified in an oral response rather than a written one where you can often get a copy of the person next door! – Teacher from TFG2*

*I think using the Jing was lovely. You could capture straightaway their honesty, especially with the little ones– Teacher from TFG2*

*I guess the reflection is the only way to show the process because it's the only way you can really hear their thinking. They can articulate their thinking. Sometimes they can draw that process I guess but there's nothing like the student's voice. When you hear them...it is very powerful- Teacher from TFG3*

*The learning was captured and it was so nice to hear that.*

*Using e-Portfolios will give our assessment capable students another means of sharing and reflecting on their learning. - Teacher from 2011 Survey*

*I find that it's more dynamic. Kids like listening to their own voices or seeing themselves. So a movie of themselves talking about what they've learnt is more interesting than just a piece of paper I think.- Teacher from TFG1*

*I think it's very valuable. This is going to sound funny but as long as children are really aware of what they should be reflecting on and commenting on... they have to be really focused and guided.- Teacher from TFG3*

*That's where I believe the paper aspect of them writing their reflections, writing about their learning they've just done and using that to then reflect on through the technology of, say Jing, is useful. – Teacher from TFG3*

*The thing is, the reflection should be like we're having this discussion now. It's supposed to come across like that. It should be like that because then it's a child talking in his natural way. –Teacher from TFG3*

*I should be like that. I mean, last year, I had the questions and the answers that they'd done I chucked them away. Some of them I had the questions on the screen so they could look at them and I took that away. I was learning as it was going on. And then I just spoke to them. And those interviews that I had with them- the spoken ones- were much better than the reading or the question on top. I feel that's more valuable than the... I'm not saying that writing it down is not... they can write down their thoughts but they should not have it in front of them.- Teacher from TFG3 written language too.*

*They tend not to give you much feedback if it's written or much reflection. If it's spoken, they can think about it, they can respond. Some kids are much better than they are with written language too. I found that when I did written reflections with the students they didn't write very much at all. They didn't flesh out what was going on.- Teacher from TFG3*

Qualitative results from the teacher focus groups clearly illustrate a deepening value held by teachers as to the merit of recording student reflections in audio or video clips online as compared to students making written comments on line as a method of capturing student reflections.

Teachers have identified that the process of reflecting taking place during a critical learning conversation, enhances the student's assessment capability. The web 2.0 tools were identified as a valuable method of showing the process of learning to parents and promoting student voice as powerful and valuable evidence of learning. Teacher perceptions indicate that the student's awareness of their own learning is deepened through the online reflection process. Some of the teachers identified the value in the conversation being a more natural process, conversational in style as opposed to a more contrived dialogue, bound by pre-organised questions. Some teachers, however, did see value in students' preparing for these student reflections,

with the students completing some preparatory thinking in writing prior to the conversation. Most teachers felt the dialogic conversation increased the quantity and quality of a student reflection about their learning as compared to students making written comments online.

Authenticity and sincerity were identified by the teachers as a valuable outcome of recording student reflections using the conversations recorded in the online environment.

The quantitative results from the teachers, both identified that the use of the web 2.0 tool Jing met the student's need to self-reflect and be involved in the assessment process and improved the students' ability to articulate and make their thinking visible in the student reflections.

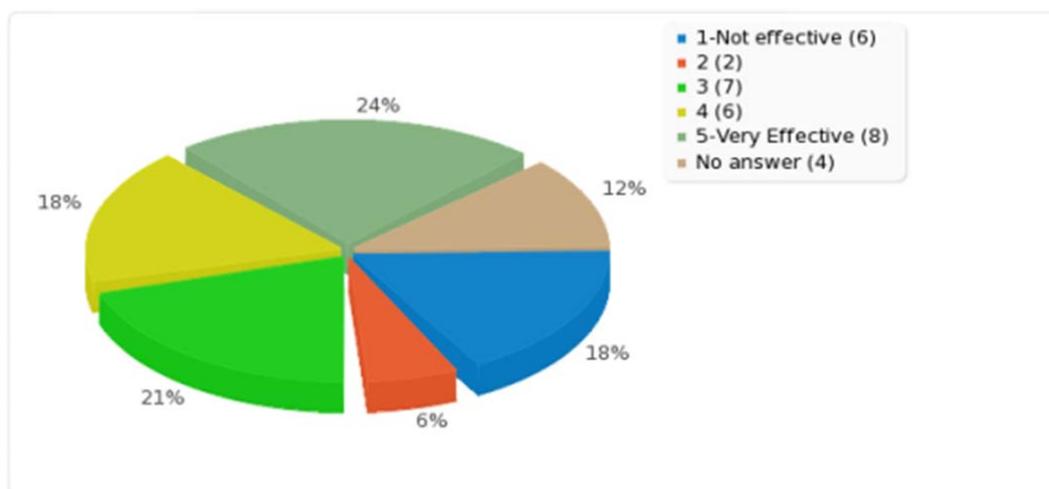
## **5.6 PARENT RESULTS**

### **5.6.1 Quantitative Results**

This section of Chapter Five, presents the findings of both qualitative and quantitative data as perceived by the parents. Four different parent surveys were administered during 2009, 2010 and 2011. The relevant results to research Question Two, 'How do students' best share their reflections about their learning to teachers, parents and peers in an online environment?', are presented in this section.

*Table 5.1 Parent Surveys and Submission Results From 2009-2011*

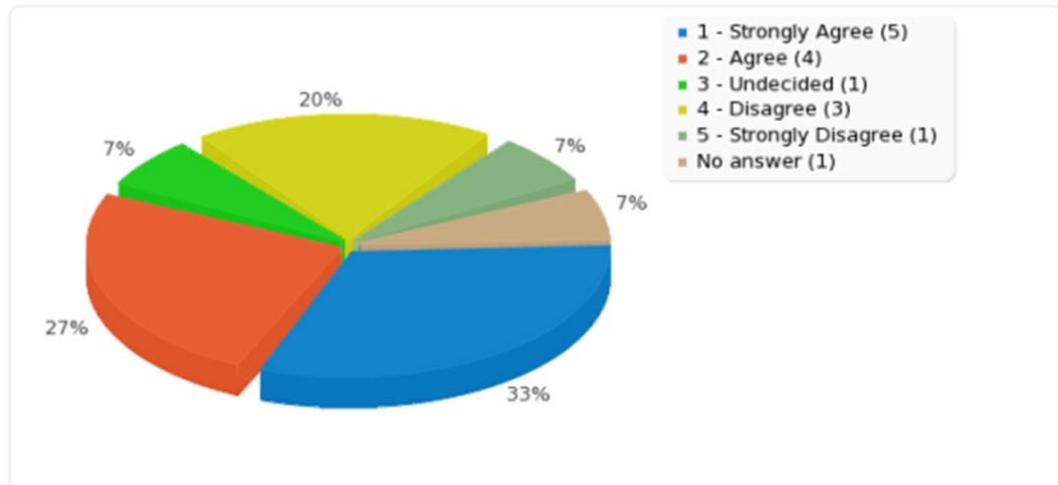
Year	Target Group	Name of Survey	Responses	Response Rate
2009	Parents	The New Role of ICT in St Mary's School (ID 39974), Appendix G	149	60%
2009	Parents	KnowledgeNet Survey (ID 63787), Appendix I	33	13%
2010	Parents	Learning Stories Parent Survey 2010 (ID 59256), Appendix K	15	6%
2011	Parents	KnowledgeNet Questionnaire May 2011, Appendix M	44	18%



*Figure 5.5 How effective is the audio tool (listening to your child speak) as a means of communicating your child's assessment of their writing? (KnowledgeNET Survey 2009)*

It is interesting to note that on a scale of 1 to 5, with 1 representing parents who indicated that the audio tool was not effective as a means of communicating their child's assessment of their writing, that 42% of the parents rated the audio tool as very effective and effective. This survey was conducted immediately following the first school wide trial of using a Learning story, including the student self-reflection

as a means of reporting progress and achievement to parents. As noted in Chapter Four, this change from reporting on paper to online was significant for the parent community.



*Figure 5.6 The KnowledgeNET learning stories provided an opportunity for my children to reflect on and discuss their learning with me. (Learning Stories Parent Survey 2010)*

Figure 5.6 shows that 60% of the parents surveyed in 2010 agreed the learning stories provided their child an opportunity to reflect and discuss their learning in writing at home. Parents' perceptions of 34% of those surveyed indicate they are undecided or disagree that the opportunity afforded for their child to reflect and discuss their learning at home was met through reflections captured in the learning story.

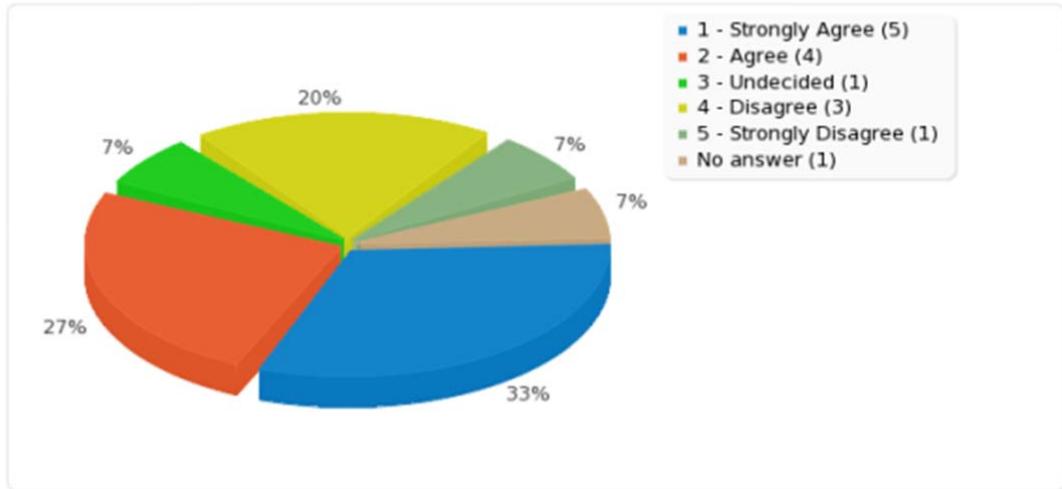


Figure 5.7 The learning stories provided effective teacher feedback. (Learning Stories Parent Survey 2010)

Figure 5.7 shows that 40% of parents surveyed perceived the Learning Story provided effective feedback from the teacher. Feedback from the teacher was contained to the student in the audio clip of the critical conversation and also in a written comment to parents, in the learning story. This graph shows that 27% of the parents surveyed were undecided on the effectiveness of the teacher feedback and 26% of parents disagreeing or strongly disagreeing as to the effectiveness of the teacher feedback.

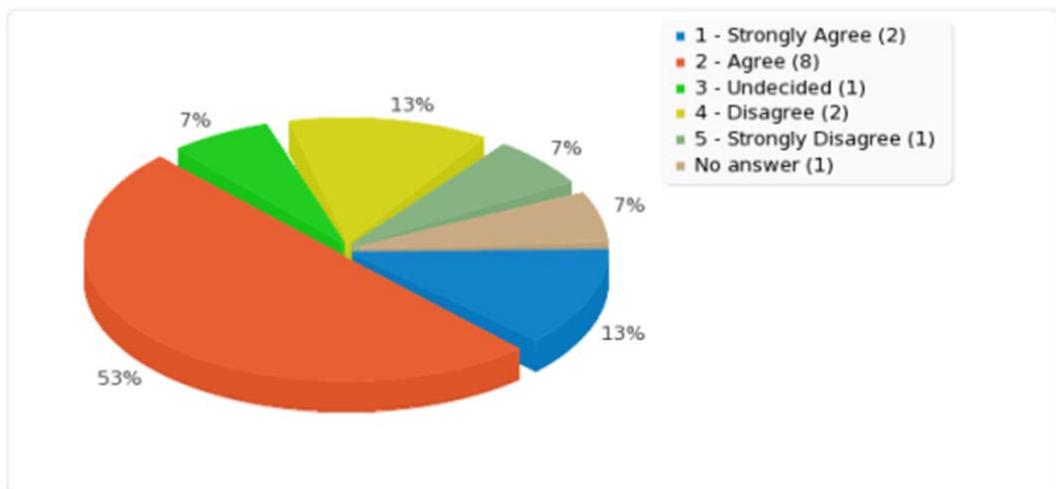


Figure 5.8 The following processes used for teaching and learning have changed positively as a result of implementing KnowledgeNET (our Learning Management System) (student reflection) (Learning Stories Parent Survey 2010)

Figure 5.8 shows that 66% of parents surveyed in 2010 agree that the process of teaching and learning, with the focus on student reflection have improved positively as a result of implementing KnowledgeNET.

### 5.6.2 Qualitative Results

Survey comments and Parent Focus Group Interviews provide qualitative findings that provide deeper insights from the parents on their perceptions of the value of student reflection as a method of self-reporting progress and achievement.

*...once again the information was excellent. In the interview Anna had...once again I didn't find the strengths and weaknesses. I think that voice... that was a real shift for me. When you're online and reading something, that's fine. But when you listen to that little voice- It's very powerful. – Parent from PFG4*

*. It's also that they're honest with their learning. They know themselves by assessing themselves where they're at. – Parent from PFG3*

*To me that was more valuable than to see the snapshot of the piece of writing. To me I found their reflections much more informative. – Parent from PFG1*

*Hearing them say it was definitely more empowering I found. – Parent from PFG1*

*To articulate how you have put 'this' onto paper and said 'this' to another person in a fairly formal situation is an absolute skill and I think it's a great indication of KnowledgeNet; that it's not just typing and sitting in front of a screen. It's actually using it as a voice, and I think that to me is important...that it is used as a voice and that is a real reflection of*

*classroom productivity and interaction between student groups and the teacher. – Parent from PFG3*

*Whereas here it's a real live 'with-the-teacher' experience and you're sort of eavesdropping on that. I guess it was good...it definitely is a good opportunity, but I guess I feel that was just maybe a bit of a novelty – Parent from PFG2*

*So I think from a parent point of view, when kids are bringing home reading every night, you have conjured up a sense of how well they read. But when you actually hear them with the teacher reading something that's unseen, you get a good sense of the fluency and how well teachers are actually doing their running record. I think that's a good clear example for you as a parent of how well your child is actually reading an unseen text within a classroom or within the office or whatever. But at school as opposed to reading something over again and again at home. – Parent from PFG2*

*From a reporting point of view also, by hearing it and seeing it when it's 'where to next?' or 'what to work on', it makes it lot clearer for the parents. – Parent from PFG2*

*I think the audio was easier to listen to and figure out what was going on. But just getting a peep where some of them were just an example of their work, you just thought...– Parent from PFG2*

*Yeah, we don't get that opportunity when we get the reports from the teacher. It's nice to hear what they think themselves. The self-reflection I found quite interesting; just to hear how your children are when they're not talking to you. Because they probably talk quite differently to different people. From my perspective I found it really nice to hear how they spoke to their teacher. And it also made them think about what they're doing rather than just getting, say, an answer for maths or writing; to actually think what they did to get from 'A' to 'B', and whether they missed some steps out or...like their strategies and processes. – Parent from PFG1*

*regarding the audio; the teacher obviously had a specific set of questions and either my child didn't understand the question or wanted to make her own comment regardless of the question. Whatever the case it was not followed up in the audio that was uploaded to the knowledgeNET. My daughters comment (instead of an answer to the question) was not really acknowledged, neither was the actual question followed up by the teacher. This is not really a problem with the tool - it's a great idea - more a problem with this initial attempt at using it! - Parent from 2009a Survey*

*I know that it has been a lot of work to do this on the web. Unfortunately, this is soooo limited, to one subject, not even one topic of the subject, and no clear guideline as to how long did the student had to write this. Some poor feedback as well so unless I talked to my kids I did not have a very clear picture of their learning. Even now I still don't get the full outline... Sorry, good progress with the net but not as good as a report – Parent from 2009a Survey*

*I suppose being positive is critical. If the children see that the teachers are engaged or interested in a particular thing, the positivity will come through. – Parent from PFG1*

*When I looked at the 2009 one, I was looking at Maths and I was trying to find out what had been posted on KnowledgeNET and it was quite nice to see that during the interview process the child was thinking about what they'd done and doing that sort of self- assessment and having some insights as to where they are at. I thought it was informative. – Parent from PFG1*

*I thought it was great. I thought it showed what they were learning and how they were learning. It showed that they were thinking about what they were doing and it wasn't just...you know how with maths especially, you can get an answer right but it doesn't show any thought process? So it actually shows that they understand what they're learning and they can think about*

*where they can improve. I think that's very positive for kids; to be able to set goals for themselves and understand what they're doing.*

*It gives them some responsibility in their learning. And some focus as to, say, a goal to improve themselves. I thought it was really good and also sharing it – you're actually seeing it and you can say to your child 'hey look, this is really good' and they feel positive and want to do better.- Parent from PFG1*

*With the audio for Chantelle – this is the 2009 'writing' example – along with using similes, you could really hear her considered response. Chantelle is a bit like that anyway and considers what she has to say, but she was really evaluating her work in that forum and this was in Year 4 and she'd respond accordingly and I thought that was really amazing. Quite empowering as a parent to hear that, to be a fly on the wall for a moment. – Parent from PFG1*

*Yeah, we don't get that opportunity when we get the reports from the teacher. It's nice to hear what they think themselves. The self-reflection I found quite interesting; just to hear how your children are when they're not talking to you. Because they probably talk quite differently to different people. From my perspective I found it really nice to hear how they spoke to their teacher. And it also made them think about what they're doing rather than just getting, say, an answer for maths or writing; to actually think what they did to get from 'A' to 'B', and whether they missed some steps out or...like their strategies and processes.*

*To me that was more valuable than to see the snapshot of the piece of writing. To me I found their reflections much more informative.*

*I also think it's good because it's starting to make them more critical thinkers. As you get older and study that becomes more important – to be able to analyse what's going on. - Parent from PFG1*

*Hearing them say it was definitely more empowering I found.*

*And as parents we need to move along as well and that we've got to move with the times. Parent from PFG4*

*I certainly didn't access the audio tool last time. I'm stretching my memory but I think the children having the opportunity to reflect was good and the information was certainly valid in that she was identifying her strengths and weaknesses in that process. I know there was some comment that came through the parent community like they felt like the children had been coached and I don't know whether that was just because the child was nervous and had read it through a few times or had practiced or whatever but... Parent from PFG4*

*once again the information was excellent. In the interview Anna had...once again I didn't find the strengths and weaknesses. I think that voice... that was a real shift for me. When you're online and reading something, that's find. But when you listen to that little voice- Parent from PFG4*

*And just reflecting what you're saying, if children are feeding back verbally, it's probably...all children are competent and probably more capable of being verbal rather than writing...Parent from PFG4*

*It was good for us in terms of being an opportunity because normally when you're talking to them it's at home and you're reflecting on things. Whereas here it's a real live 'with-the-teacher' experience and you're sort of eavesdropping on that. I guess it was good...it definitely is a good opportunity, but I guess I feel that was just maybe a bit of a novelty – that it was just something we had to do and we do it once and then... Parent from PFG2*

*I mean, it is good. And it's a great opportunity to be able to see what's going on in the class and get their real voice. Normally you'd be there...even in a parent-teacher meeting and the children are there, you're still having an influence on what they're saying and thinking so you're not...it is good in that point of view. Parent from PFG2*

*It does give you a better reflection because you're not there and it's different when you're at home. Like with you, they act very differently. They will try to achieve a higher level with the teacher than they will with us. With us, they'll even try to dance around, not that I should make my children sound like they play around all the time...but they will; they will try and fool around with you which they wouldn't do with the teacher. So, in that sense, it can be a realistic view for us which we normally wouldn't always get.*  
Parent from PFG3

*I think the only downside of that for me is that a lot of that reflection is done not on a one-on-one basis but by the teacher. I could be wrong so please correct me please! But that reflection, that student voice done one-on-one seems a little contrived. That would be the only downside of it. It's not spontaneous, not what's happening all day - every day.-* Parent from PFG3

*Very valuable I feel. It's also that they're honest with their learning. They know themselves by assessing themselves where they're at. -* Parent from PFG3

Parents perceived the student reflections captured using the web 2.0 tool 'Jing' provided them with an honest assessment of where their child's learning was at. Parents commented on the student reflections as useful in telling, 'where to next' and 'what to work on' as helpful information to report to parents. The student reflections were perceived as an authentic view into the classroom, providing parents with an indication of a possibly higher level of achievement of what their child is capable of, as compared to a written report or a parent, teacher, student conference. Parents noted that in these conferences, the presence of the parents may be a negative influence for the child to best articulate their full learning potential, progress and achievement. Parents noted that the child may be more competent to express their learning verbally to a teacher in the online student reflections and that they are a great insight into how their child thinks and speaks with their teacher. Parents recognised the value of providing a forum for authentic student voice through the student reflections.

Some parents commented on the quality and authenticity of the teacher feedback as disappointing. These parents conveyed that the teacher did not genuinely listen to their child's responses and personalise her questioning for their child. It was apparent to some parents that the teacher had a set of questions and that the teacher was working under time constraints, affecting the quality of the learning conversation. A perception of some parents was that the student reflections were centered on one subject area and therefore were a novelty. Indications were given that parents would like to see these learning conversations occur across the curriculum. Some parents suggested the conversations were contrived and not spontaneous.

Parents perceived the student reflections as providing evidence of their children as critical thinkers, not possible to convey in a written report. Parents commented the student reflections 'made them think' and the learning conversation with the teacher, 'showed that they were thinking about what they were doing'. Parents noted this was empowering for the parents as well as the students. Parents suggested that the student reflections made the students think through their 'considered response'. Parents' perceptions of the student reflections indicated that they demonstrated learning strategies the learner undertook and the learning process. 'It showed what they were learning and how they were learning'. Parents commented on the value of the process of self-assessment as 'the child thinking about what they have done'. Parents valued the opportunity the student reflections afforded in making their child's thinking visible, 'it's nice to hear what they think themselves'.

Parents recognised the student reflections as a valuable strategy in developing a child's assessment capability, authentic student voice and as a means of making student thinking visible.

## **5.7. SUMMARY**

This chapter presents the qualitative and quantitative results from the students, parents and teachers on student reflections and how they are best shared in an online environment. All of the three stakeholder groups indicate that they value the opportunity the student reflections captured using web 2.0 technology provided. It is

recognised by the three groups, that the dialogic reflection is a key strategy in formative assessment, a philosophy in which students are at the center of their own learning. Student reflections captured in 'critical conversations' place the learner in the driving seat enabling ownership, personalisation and genuine student agency in the process.

This research focuses on the use of the web 2.0 tool Jing, which was used from 2009 to 2012 for recording and uploading student audio and video files into the learning stories. This tool was chosen for compatibility with the school's LMS KnowledgeNET at this time. With the increasing use of mobile devices in classrooms, the use of more sophisticated Apps and web 2.0 tools for the purpose of capturing and archiving critical conversations of student reflections will increase and vary as the market creates and adapts to the increased demands of the educational sector. At the time of writing this research, the school was trialling the use of the APP 'EverNote' for capturing student reflections.

When students are offered the opportunities for deliberate planned and scaffolded reflection, they can review their progress over time, receive and give feedback, co-construct their own learning goals and achieve deep recognition of their learning. Students are able to think critically about their work and to speak openly about their progress with their teacher or with their peers in a secure environment. Critical student reflection helps personalise learning, enabling students to take responsibility for their future learning direction.

This critical reflection helps personalise learning, encouraging students to question, to challenge and to celebrate their successes. It encourages students to review their progress over time and to look more critically at their own role in the learning process. It helps them make connections between different elements of their learning. It helps students move from e-Learning to me-learning (Fox, 2008, p. 8))

Jennifer Moon, the e-Portfolio researcher referred to in the Introduction to Chapter Four, indicates the ideal conditions for reflection as: time and space, a good facilitator, a supportive curricular or institutional environment and an emotionally

supportive environment. Comments from students, teachers and parents allude to the necessity of each of these conditions to ensure that the benefits of student reflections are maximised in the online environment. These requisites for ideal reflections will be explored in Chapter Six, *Adding Value to Learning Outcomes* and Chapter Seven *Teacher Support*.

The next chapter, presents the qualitative and quantitative results from students, teachers and parents which attempt to provide insights and answers to the third research question: *Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?*

## Chapter 6

# ADDING VALUE TO LEARNING OUTCOMES

### 6.1 INTRODUCTION

Current educational researchers recognise and agree that the most important school-based influence on adding value to successful student outcomes is quality teaching. Effective assessment practices are a key component of quality teaching when assessment is used as a process to inform next steps in teaching to improve student learning outcomes. The New Zealand Ministry of Education over many years has moved towards a broad focus of assessment beyond a narrow summative focus, sometimes referred to as *assessment for learning*.

When reviewing the National Strategy of Assessment in 2006, the Ministry commissioned a paper to provide advice on future strategy for assessment. The resulting paper, *Directions for Assessment in New Zealand* (DANZ) continued to support the *assessment for learning* focus. As outlined in Chapter Five, the principles identified in this paper were given further recognition in the *Ministry of Education Position Paper* (2010), which identified the power of student agency in the assessment process. Both these papers recognised the importance of building student assessment capability, so that students become autonomous learners and lead their own learning.

Assessment is how we check that learning is taking, or has taken place so that we can decide what needs to happen next. It looks back and it looks forward. It can play a key role in raising achievement and improving student outcomes when undertaken effectively and appropriately and used at all levels of the system. *Ministry of Education Position Paper* (2011, p. 12)

This chapter highlights the findings from both qualitative and quantitative results from data collated using both research methodologies to provide answers for the third research question.

Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?

This chapter provides background into the use of e-Learning in formative assessment processes and its place in a future-focused curriculum.

## **6.2 THE ROLE OF E-LEARNING IN THE FORMATIVE ASSESSMENT PROCESS**

Chapter Four identifies the findings of Black and William's (1998) work from their publication *Inside the Black Box: Raising Standards through Classroom Assessment*, that assessment for learning is one of the most powerful ways of improving student learning. This thesis explores the role of e-Learning in assessment for learning processes that actively engages learners through effective feedback and reflection.

With inevitable development of our understandings, Dylan Williams (2006) argues that there are now five key strategies involved in formative assessment:

- Clarifying and understanding learning intentions and criteria for success;
- Engineering effective classroom discussions, questions and tasks that elicit evidence of learning;
- Providing feedback that moves learners forward;
- Activating students as teaching and learning resources for each other;
- Activating students as owners of their own learning.

(Clarke, 2008, p. 10)

It is internationally recognised that these five key strategies of formative assessment make the greatest difference to learning outcomes. In the case study school examined in this Thesis, these principles are accepted beliefs school wide. The 'engineering of effective classroom discussions', is deliberately planned for,

resourced and conducted by teachers with individual students in 'critical conversations'. It is a growing belief in the case study school that the best feedback comes from the student to the teacher in these conversations. As discussed in Chapter Five, the school sought to further develop the strategy of the student providing the feedback to the teacher as identified by Professor John Hattie (2009) in his *Visible Learning A Synthesis of Over 800 Meta Analyses Relating to Achievement*.

The experience of the case study school and the three focus groups will give insights into the measurable value added to student learning outcomes by using the online environment for e-assessment practices including reflection and feedback. It will be of interest to examine the perceptions of the three stakeholder groups, as to whether the online environment is valued as an environment that adds further value to student outcomes through e-Learning.

### **6.3 THE ROLE OF E-LEARNING IN SUPPORTING FUTURE ORIENTED LEARNING AND TEACHING**

As new understandings evolve in how schools can best meet the learning needs of their students, six emerging principles for a 21<sup>st</sup> century education system are identified in a report to the Ministry of Education, *Supporting Future- Orientated Learning and Teaching- a New Zealand Perspective* (Bolstad, Gilbert, McDowall, Bull, Boyd, & Hipkins, 2012)

The report discusses personalizing learning as the first theme, challenging us to think about the deployment of resources for learning (teachers, time, spaces, technology), more flexibly to meet learners needs. In the case study school, fiscal resources were provided to release teachers from their classrooms for up to a day to achieve the 'critical conversation' with students immediately following a key assessment such as an eAsstle or GloSS test. As the school recognised the learning benefits for the student providing the teacher with feedback against a specific learning outcome and associated rubric, this was a major change in the deployment of funding from the school's Operational Grant.

The second identified theme from the report: 'New Views of Equity, Diversity and Inclusivity, encourages the system to recognise diversity as a major strength for a future orientated learning system. The report calls for greater participation and engagement of learners, their families and the community in co-shaping education to meet the needs, strengths, interests and aspirations of all its learners. The school-wide learning stories from 2009, engaged the learners and their families in participating and co shaping the next steps in the learners journey.

The third theme of the report, 'A curriculum that uses knowledge to develop learning capacity', involves creating and using new knowledge in a 'just in time' basis. The critical conversation between learner and teacher creates new knowledge and understanding about where the learner's knowledge is situated and together the teacher and student create the identified next steps in the learning process, the learning goal. This process clearly develops the students' learning capacity or assessment capability.

'Changing the Script': Rethinking learners and teachers roles is the fourth theme in the future orientated learning report. The report challenges educators to think about how learners and teachers could work together in a 'knowledge-building' learning environment. The dialogic 'critical conversation' provides the environment for teacher and learners roles to be reconceived. Both stakeholders are drawing upon the strengths and knowledge about each other in order to best support next steps in learning.

A culture of continuous learning for teachers and educational leaders is identified as the fifth theme in a future-oriented school. It is vital that all teachers and leaders recognise *the why* in all system changes and how these changes impact learning outcomes for all students. Teachers and school leaders may resist changes to current practices unless they see that new approaches, such as using the online environment for assessment and reporting, lead to better student outcomes.

The final theme of the report, 'New Kinds of Partnerships and Relationships: schools no longer siloed from the community' suggests that students

..must learn to recognise and navigate authentic problems and challenges in ways that they are likely to encounter in future learning situations. However, today many learners encounter learning situations in which the “messiness” of the real world is simplified as contrived learning tasks with answers or outcomes already known to the teacher.” (Bolstad et al, 2012, p. 5)

The dialogic critical conversation in the learning story, could be described as ‘messy learning’ when the teacher’s role is reconceptualised to co-learner and facilitator, providing the climate for the learner to experience authentic problems and challenges about their learning, in ways they are likely to encounter in future learning situations.

The role of e-Learning and its potential to transform teaching and learning is dependent on educators seeing the possibilities of ICT in relation to the six themes of the Future Orientated Learning report.

It is further dependent on schools having the infrastructure, inspiration, capability and opportunities for innovation to achieve these kinds of learning. (Bolstad et al, 2012, p. 10)

Reshaping the delivery of education to a deeply personalised model will require major shifts in the way we distribute resources within schools. Simply continuing with the organizational structures and frameworks we have always used will not meet the needs of all the students in a classroom when schools seek for learners to develop motivation and high aspirations for their own learning. Schools are charged with fostering relationships and interactions that will support learners to become intrinsically motivated to lead their own learning.

Charles Leadbetter argues that children, parents, families and communities are an ‘underutilised resource’ in the current education system

It demands a system capable of offering bespoke support for each individual that recognises and builds upon their diverse strengths, interests, abilities and needs in order to foster engaged and independent learners able to reach their full potential. (Leadbetter, 2004, p. 7. Cited in *Supporting Future Orientated learning & teaching - a New Zealand perspective report to the Ministry of Education*, Bolstad et al, 2012, p.18)

This chapter seeks to identify the measurable value added to student learning outcomes using recorded student reflections in the on-line environment.

## 6.4 STUDENT RESULTS

Qualitative results from the children's focus groups are the results from the four Interview groups. Quantitative data from surveys are not available as the students did not participate in any online surveys administered to teachers and parents.

*... It's kind of helpful sharing your learning online with your parents or with your family or with your friends... just saying 'oh here's my reading and I'm at the moment on level 31. And your parents get to say, 'You need to try harder and get to level 32'... so they can set goals for you.. Child from CFG1*

*And they say how you should achieve your goals because I've written my goals onto my KnowledgeNET page and my mum and dad can say "Oh, I'm going to help you do that. I'm going to help you learn. .. Child from CFG1*

When questioned if the online environment made them more engaged in their learning at home and if more home learning was happening more frequently, due to their access to on line learning, students responded:

*Probably because we just like going on there. Sometimes I forget what my goals are so I go on there and I look at them and then I suddenly just practice what I need to do.*

*And it's good because your teacher will update your homepage so you can see what you need to achieve in your classroom or what you're doing for homework or that basic kind of stuff. And the reading widget shows you if you're above or below where you should be and that helps you. I was talking about my ICAN test to my mum and she said 'What's an ICAN test?' And so last night since I had my ICAN thing on my homepage I showed my mum and she said 'Ah! My daughter's higher than she's supposed to be.' I'm quite good at maths and I've got a 7,8, while the goal is to get a 6 or a 7. Child from CFG1*

*She or he could take us into a room and talk to us about all our different ideas on what we need to work on or improve on. Child from CFG2*

*If you use Jing, they would have to ask questions that are deep into the topic, not ones that are 'yes-no'. They have to be questions that have an open answer. Child from CFG2*

Students were questioned on the value of being able to go back and look at earlier Learning Stories to evaluate their progress and achievement.

*I like the idea that it is online instead of going through folders which state our reading. Instead we can just go online and look back at it and it just says that we are expected to be at a certain level. I just like the idea that we can answer questions while you're here. We can go online without having to have a folder. Child from CFG2*

*Yeah to see if you've improved it and stuff, like your goals... And how much you've grown from Year One. It might take quite a while to look for all the sheets on your reading wedge or your ICAN tests. And how much you've*

*achieved from last year, on the reading wedge, we get the difference.-  
Child from CFG2*

Students were questioned on the advantages of using the on-line learning environment for reflections, instead of paper or books.

*I reckon it is actually pretty cool how the whole school has... every person has KnowledgeNET and we can show people our learning, not just our parents, and how our parents actually have KnowledgeNET things so they can check on what we're doing. - Child from CFG3*

*It's like a way of having your own space on the web without actually putting yourself at risk as with websites. - Child from CFG3*

*It's really cool how you can show mum and dad your work and you don't need to get a piece of paper; you can just view it online. - Child from CFG3*

*It's sort of quite a good way of showing your learning and you can have a little fun too, and it's easy access. - Child from CFG3*

*And it actually helps people be a bit more interactive with ICT learning.-  
Child from CFG3*

*We all need to be able to be good on the computers, not just the people who are already good. - Child from CFG3*

*We weren't good on the computers beforehand. It's just that we're good now because we've searched deeper into what technology can give us. -  
Child from CFG3*

Students were asked to share their thoughts about the new online learning environment since the introduction of KnowledgeNET .

*It's good to get reports and know we're learning and your mum and dad can look at how you're learning and if you're stuck on something you can improve on that. –Child from CFG4*

*Because say you're struggling at something and you're not at the stage you're meant to be at, then you can work heaps at home because you know what you have to work up to. - Child from CFG4*

*The teacher could put on learning links so you could click on the link and go to maths sites, or reading or writing sites. You could see how you have improved over the weeks or the terms or the months and say if you haven't improved, you could keep practicing with the links. You could go onto them and see how you've improved by the next time they put your learning stats on it. And you've got a reading wedge, where you can track how you're going with the results of your PAT tests, eAsTTle and STAR tests. - Child from CFG4*

#### **6.4.1 Summary of Student Results**

Students perceived that using KnowledgeNET for recording reflections and diagnostic assessment data was a safe learning environment, which is of value for extending learning to the home. A number of students from the four focus groups indicated how valuable it is for their parents to access their latest assessment data. Students perceived that with easy access to assessment data, parents were well placed to motivate their children in the exact direction where they required personalised learning help. Students perceived this access to assessment data, would grow their parent's understanding and assessment capability. Having the information accessible in the online environment would help parents understand the diagnostic tests the students were using at school, for example e-AsTTle and GloSS or the Reading Wedge. Students indicated that having access to computers at

school was adding value to their learning through encouraging them to ‘go deeper into what technology can give us.’ Students identified the role of the teacher as locating learning resources and providing links to these resources for the learner to access at home, or when they, the student were ready for the new learning. Students perceived using the online learning environment including student reflections as adding value to their learning which could happen at any time or place, outside school hours facilitated through the password-protected web environment.

## **6.5 TEACHER RESULTS**

This section of Chapter Six, presents the findings of both qualitative and quantitative data as perceived by the teachers. The relevant results to Research Question Three are presented in this section. These data provide insights into the third research question and are presented in relation to using the online learning environment to add value to learning outcomes.

### **6.5.1 Quantitative Results**

With the school-wide introduction to Learning Stories in 2009, capturing student reflections and actively involving the students in the assessment and reporting process, the case study school sought perceptions from teachers whether the learning story allowed for active involvement of the students in the learning process and the development of the student’s assessment capabilities.

Students should be encouraged and supported to be involved in all aspects of their learning including setting goals, developing success criteria and exemplars, self and peer assessment, reflecting on their learning, identifying what they are doing well and why, and considering what they need to do next to further their learning. Self-aware students can provide better information to their teachers. (Ministry of Education Position Paper: Assessment Schooling Sector, 2011, p. 25)

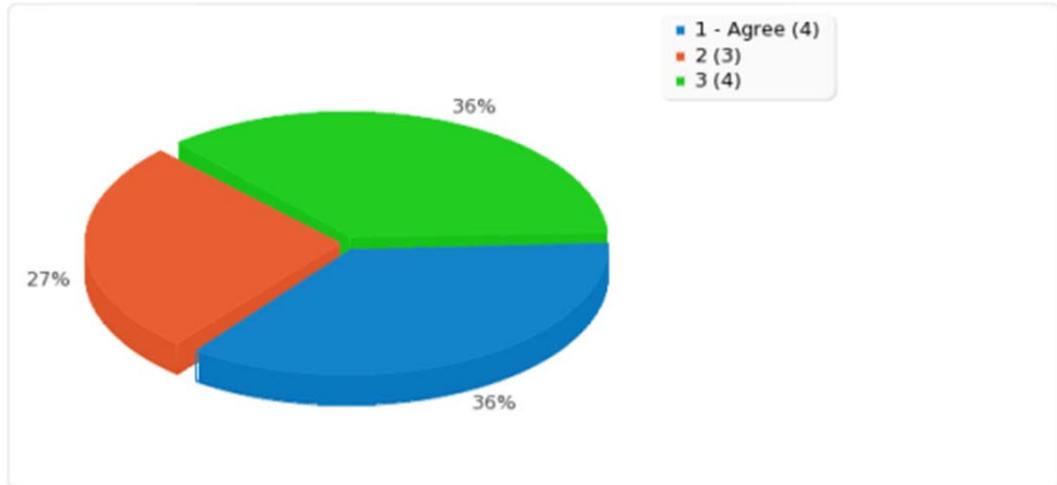


Figure 6.1 Do you think using an online learning story allows for students active involvement in their learning? (2009 Survey)

It is interesting to note that on a scale of 1 to 5, with 1 representing Agree to 5 representing Disagree, that a total of 63% of teachers rated the online learning story as allowing students active involvement in their learning process, and 36% rating at 3, no teachers selected the rating 1 or 2, disagreeing that this process allowed for student involvement. These data provide evidence that teachers at this time recognised that the learning stories allowed for students to be actively involved in their learning.

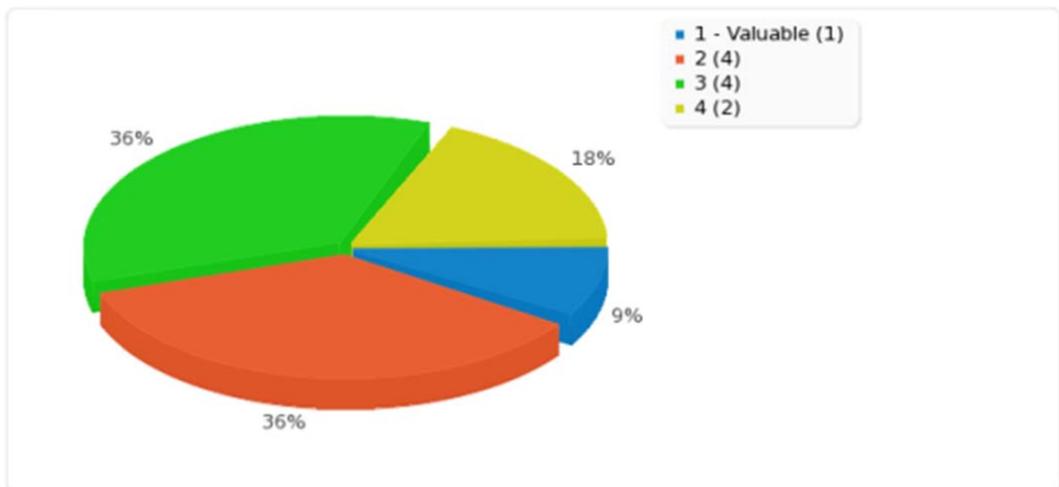
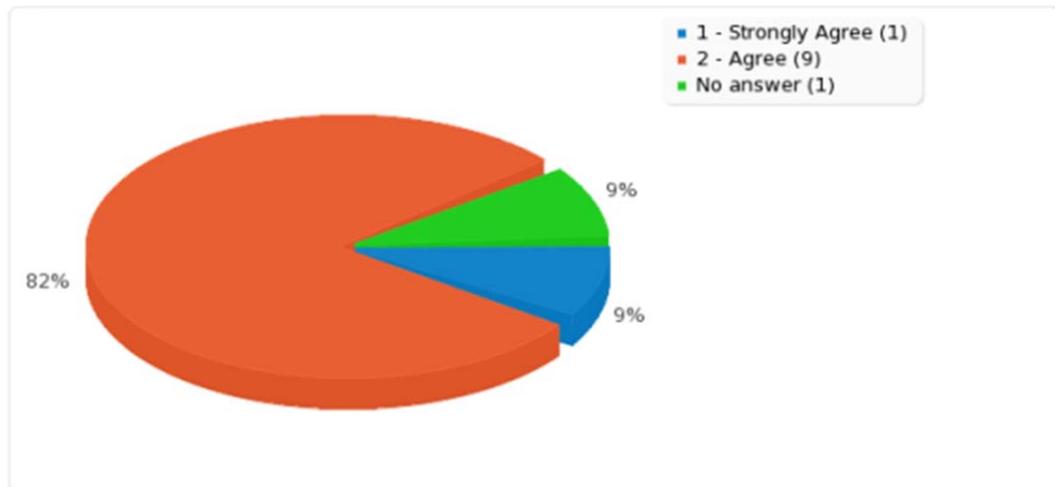


Figure 6.2 How valuable do you see KnowledgeNET in connecting parents with their child's learning journey? (2009 Survey)

Teachers perceptions as to how valuable they see KnowledgeNET in connecting parents to their child's learning journey are that 81% of teachers surveyed selected scales 1 to 3, with the scale 1 representing Agree to the scale of 5 representing Disagree. No teachers selected scales 4 or 5. This evidence indicates that teachers at the time of this survey following the first online reporting to parents, indicated that they saw the online learning environment as valuable in connecting parents with their child's learning journey.



*Figure 6.3 Assessment Capability- Throughout this process my children are aware of where they are at, where they are going, and how to get there? (2010 Survey)*

A strong indication from the teachers is provided in this survey result since 91% of the teachers surveyed indicated that their students knew where they were at with their learning, where they are going, and how to get there. These data from this survey conducted in 2010, indicate clearly that teachers' perceptions valued the assessment capable process happening in the learning story, which was adding value to student learning outcomes.

All students should be educated in ways that develop their assessment capability within and across all learning contexts. Assessment capable students are able to actively participate in assessing their own learning, recognise important moments of personal learning, and make "what next?" decisions. (Ministry of Education Position Paper: Assessment Schooling Sector, 2011, p. 25)

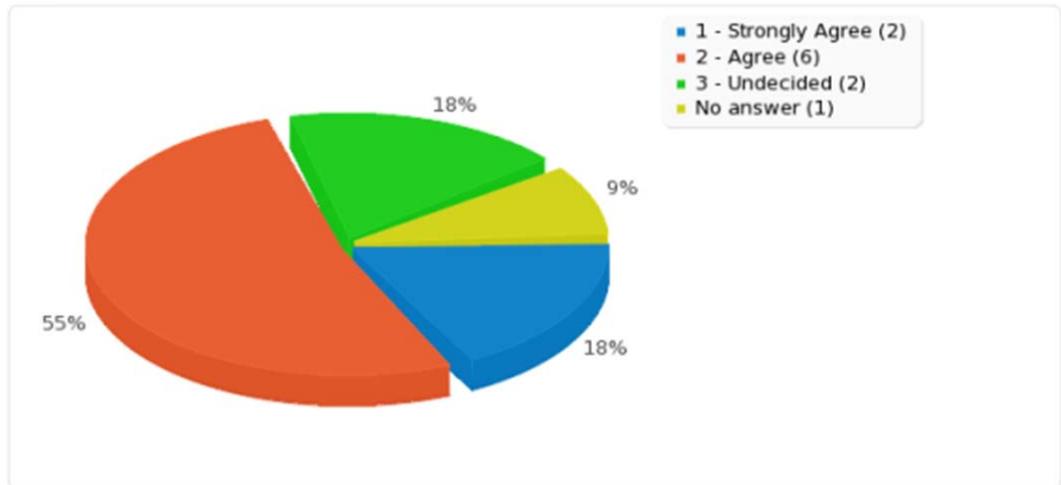


Figure 6.4 An online learning story allows for students active involvement in their learning (2010 Survey)

It is interesting to note that in this survey administered in 2010, 73% of the teachers surveyed, rated using a scale of 1 and 2, Strongly Agreeing and Agreeing that the learning story allowed for students active involvement in their learning. It is also interesting to note that 18% of the teachers surveyed were undecided as to whether the learning story allowed for the students active involvement in their learning.

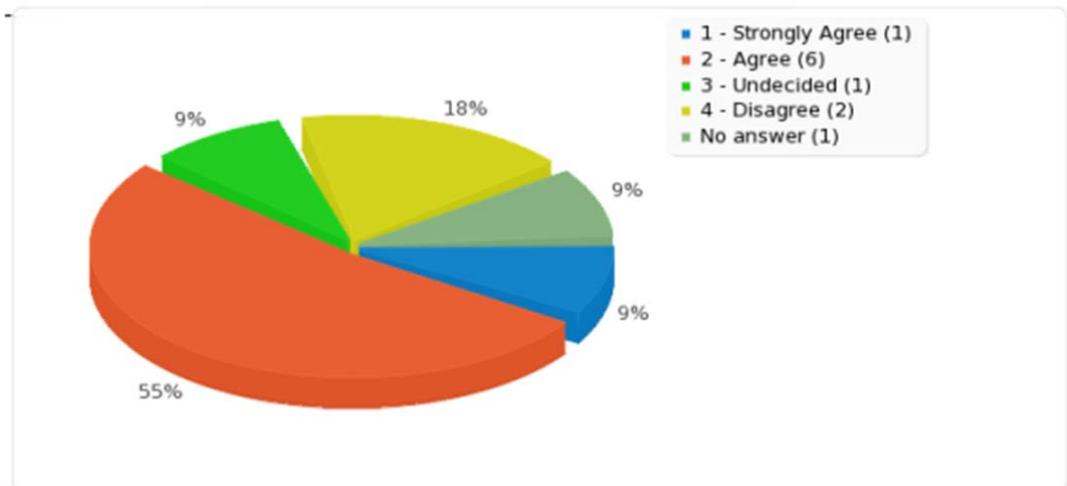
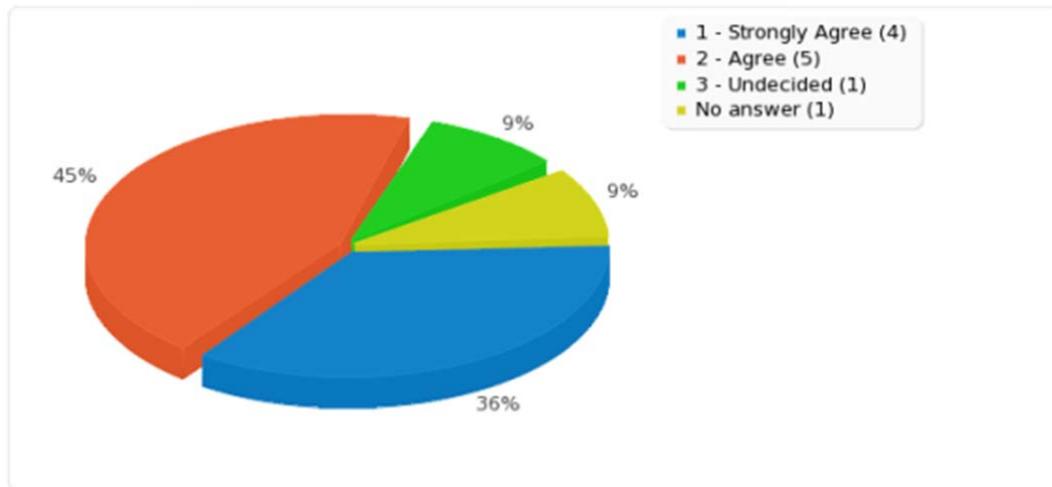


Figure 6.5 'My students were able to participate as fully in assessment as in learning?' (2010 Survey)

It is interesting to note that 64% of the teachers perceived their students were able to participate as fully in the assessment process as in learning, with 9% of teachers

using the rating scale 1, Strongly Agree, and 55% selecting the scale 2, Agree. It is interesting to note also that 9% of the teachers were undecided as to whether their students were able to participate as fully in assessment as in learning at the time of this survey administered in 2010, with 18% of the teachers surveyed at this time, selecting the scale 4, representing Disagree.



*Figure 6.6 A Learning Story/e-Portfolio enables students to access, interpret and use quality information to support their assessment and learning (2010 Survey)*

Figure 6.6 shows that 81% of teachers perceived that the Learning Stories/e-Portfolios enable students to access, interpret and use quality information to support their assessment and learning. 36% of teachers selected the rating scale 1 representing Strongly Agree, with 45% of the teachers selecting the rating scale of 2, which represents Agree. It is interesting to note that 18% of the teachers surveyed, selected the scaling rate of 3 or 4, indicating they were undecided or did not complete the question.

### **6.5.2 Qualitative Results**

Teacher Focus group Interviews and survey comments provide qualitative findings that offer deeper insights from the teachers on their perceptions of whether measurable value is added to student learning outcomes through using the online environment to record student reflections.

Teachers were questioned on their perceptions if there was value added to student learning through using the online environment for reporting, including student reflections. It is interesting to note that in both the quantitative and qualitative data there is an evident shift in teacher thinking, valuing the assessment capable student, being an integral part of the learning and assessment and reporting process.

*I agree that the impact of using an e-Portfolio will change teaching and learning to improve learning outcomes. In that the students will need to clearly know where they are going and what they are learning. They will need to articulate their goals and thinking. - Teacher from 2011 Survey*

*Back to the learning environment with our progressions and our goal setting and I guess because of that now the children can hopefully say 'I've achieved that goal. How about I go and load my story up now?' or 'How can I show that I've achieved this goal?' In the learning environments, if the progressions and all that are working, the children can take responsibility and go on and say 'I need to go and put that on my homepage because that's an achievement for me.' As and when it happens or at the same time because it's more manageable. - Teacher from TFG3*

*As long as teachers and children alike take ownership of their portfolio it should make a difference and engage both teacher and learner. - Teacher from 2011 Survey*

*You've got to put faith in them (the students) – Teacher from TFG4*

*It's about letting go and letting the children have more say. Using the e-Portfolio shifts the ownership of learning more towards the student. As research suggests this is where we should be moving in our everyday practice. - Teacher from 2011 Survey*

*I'm growing really positive because the kids are taking more ownership, more responsibility of KnowledgeNet, and becoming more powerful and more sharing. – Teacher from TFG4*

*Children involved in thinking about their learning. - Teacher from 2009 Survey*

*They can judge for themselves where their next learning step is if they can talk to it. Children enjoyed recording themselves gave opportunity for in depth reflection of writing - Teacher from 2009 Survey*

*I think it was great that the children were given the opportunity to talk about their writing and that we were given the 'time' to listen. - Teacher from 2009 Survey*

*(Learning Stories) 21 century learning ... well-presented opportunities for students to have one to one feedback/forward - Teacher from 2010 Survey*

*I find that it's more dynamic. Kids like listening to their own voices or seeing themselves. So a movie of themselves talking about what they've learnt is more interesting than just a piece of paper I think. – Teacher from TFG3*

*It is 21st century learning so must be actioned – Teacher from 2011 Survey*

*Research tells us that students are engaged by using web 2.0 tools and the on line environment. Ian Fox's research shares that using an e-Portfolio is a very tangible teaching methodology for implementing the NZC Visions, principles and Practices. - Teacher from 2011 Survey*

*This will improve communication with home and give the student a permanent record of their learning which they can refer to at any time. - Teacher from 2011 Survey*

*They could utilise the information in their workbooks as well to do this (access, interpret and use quality info to support their assessment and learning.) - Teacher from 2010 Survey*

*It does not have to be online for the student to be actively involved in his /her learning journey. - Teacher from 2010 survey*

Teachers' perceptions of the learning stories being 'teacher led' rather than 'student led' were evident in the survey comments. Teachers indicated that once teachers had made the adjustment to making student reflections in the online learning environment embedded into regular classroom practice, the result was greater value for student learning outcomes.

*And also, it feels like it's designed just for us. The ideal of course is to have the children doing it which of course requires lots of coaching of the children as to how they implement and put the data in and reflect and do all the bits and pieces on there. With the idea of it being a Learning Journal, we haven't done that as yet. It's been teacher driven. – Teacher from TFG2*

*As this is the beginning of our journey it was very teacher led, but I can see how this can build up to being more driven by the student. . - Teacher from 2010 Survey*

*Eventually, once it is embedded in our everyday practice. - Teacher from 2011 Survey*

*If the children drove it themselves and managed what it looked like it would be more effective learning for the individual. It depends whether the child accesses his e-Portfolio /learning story to actually reflect on his learning. They could utilise the information in their workbooks as well to do this. As long as the reflective assessment is captured soon after the event and posted so that the learning is relevant and valid. It's like being able to look*

*in. It's like a webcam and being able to see what's really going on. –  
Teacher from TFG4*

Teachers' comments suggest that using the online learning environment is one way of reporting to parents where the student is at with their learning and for the student to be actively involved. Teachers recognise the value in capturing and uploading student reflections at the time of the assessment.

*this is one way ..there are other ways. It would be better in their home page driven by them rather than reporting A relevant up to date learning story would matter and should be available to parents immediately when done not a few weeks down the line. It does not have to be online for the student to be actively involved in his /her learning journey. As this is the beginning of our journey it was very teacher led, but I can see how this can build up to being more driven by the student. For the purpose of reporting to parents, they were active in reflecting on their learning.*

*It would be nice to use that as an everyday thing. ...I felt it was a little bit artificial but if the kids were doing this, say once every six weeks or whatever, it would become natural. Not necessarily a video recording, even an audio recording where there would be a sharing of process so that it would be more natural for the kids. I think it would be beneficial for the teacher and for the students.- Teacher from TFG4*

Teachers were questioned on how valuable they perceived capturing student voice and reflection is to adding value to student learning outcomes?

*I think it's very valuable...as long as children are really aware of what they should be reflecting on and commenting on.- Teacher from TFG3*

*I guess in the past also we've had these conversations and you often wish that someone was there to hear those conversations don't you? People say, 'Where's your evidence?' Well, this is your evidence. We have this evidence now so it's fantastic. - Teacher from TFG3*

Teachers in the focus group interviews were questioned on their perceptions of how effective the learning stories were as a means of reporting student progress and achievement.

*Again, I think they're a snapshot. You can measure that learning Intention; whether they've achieved or not, whether they still need to work on it or the next step. But it's a very small snippet of their learning. – Teacher from TFG4*

*I think it did build up eventually for the parents. I think what was done at the time of those National Standards, parents would read what you said, have a listen to the children's reading and then listen to the questioning and hopefully that would give them a fairly good indication. -Teacher from TFG4*

### **6.5.3 Summary of Teachers Results**

The quantitative results indicate clearly that the teachers perceive that the students' involvement in the assessment-capable process as evidenced in the learning stories including the student reflections was valued and recognised as adding value to student learning outcomes. These data convincingly demonstrate the teachers' perceptions that the assessment-capable pedagogy employed in the learning stories, involved the students, made them aware of where they are at with their learning and offered them opportunity to articulate this information, and their next steps in learning, to an on line audience. Teachers indicated that students were able to access, interpret and use quality information in the on-line learning stories which supported learning and added value to learning outcomes. The quantitative results show that teachers believe the on-line learning stories communicated student learning effectively to parents through enabling parents to connect to their child's learning journey. Teachers conveyed the belief through the qualitative data that the student reflections captured in a critical conversation and uploaded to a learning story would have the greatest impact on learning if the practice was a regular learning activity rather than just for the purpose of a one-off report to parents. Teachers conveyed the importance of the timing of the critical conversation; the uploading to the e-Portfolio and access of the learning story to the parents should be

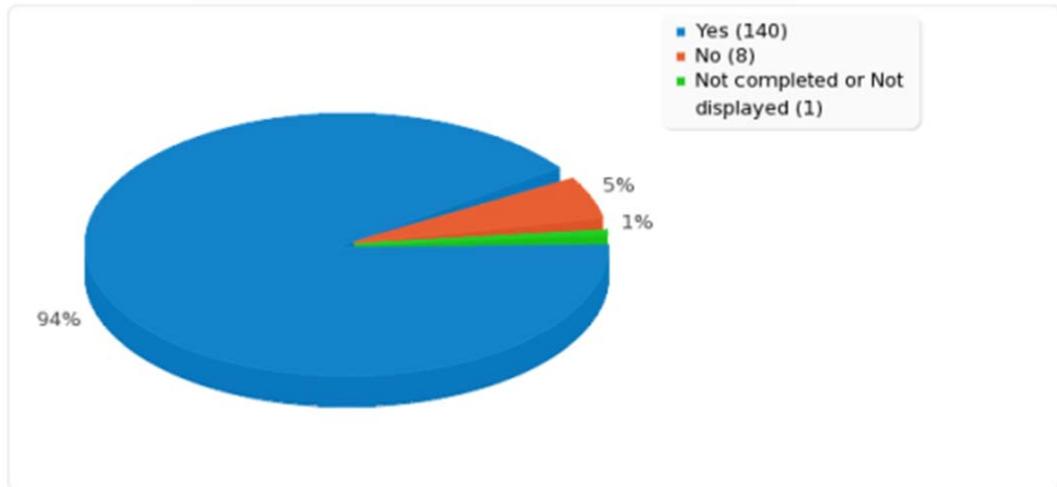
immediately after the critical conversation had taken place. Teachers interviewed recognised that they were at the start of a transformational journey, where these curriculum changes would involve refining, further development and a reconceptualization of their role as a teacher. Teachers voiced the desire to hand the process to the students. Many teachers commented that the process to date had been 'teacher led' or driven and they indicated that the potential value for adding to learning outcomes, when the process was 'student led', would be far greater. Teachers gave a strong indication of support for student assessment capabilities that can be developed through using the on-line learning environment. A very clear indication in both the quantitative and qualitative data presented indicates that teachers see the Learning stories including student reflections as enabling and developing a student's assessment capability, which adds measurable value to student learning outcomes over time.

## **6.6 PARENT RESULTS**

### **6.6.1 Quantitative Results**

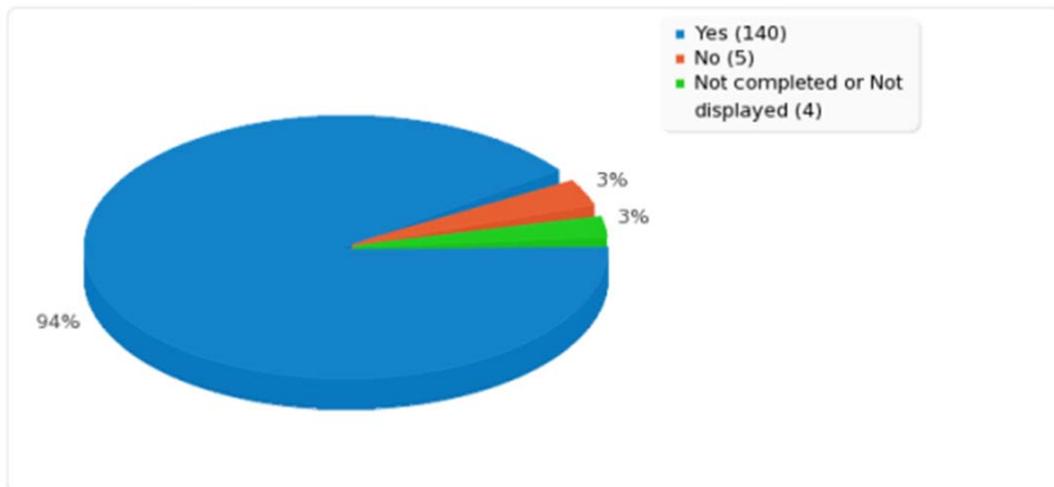
The findings of both qualitative and quantitative data as perceived by the parents are presented in this section. The relevant results to Research Question Three are presented in this section from the four parent surveys administered during 2009, 2010 and 2011.

With the school wide rollout of protected passwords, allowing access for each student and family, to KnowledgeNET, the online learning portal in 2009, it was important for the school to gauge the parents' perceptions as to the value computers may have as a learning environment for their children.



*Figure 6.7 I believe that access to computers at home has a positive effect on learning (2009 Survey)*

This graph indicates an overwhelmingly positive perception from parents, that access to computers at home has a positive effect on learning. This result indicates that parents would see a benefit in a home school learning environment, such as an e-Portfolio, in adding value to their child's learning.



*Figure 6.8 Our child/children believe(s) that computers and the Internet help their learning. (2009 Survey)*

This graph clearly indicates that parents perceived their children believed that computers and Internet access would help their learning. *Figure 6.8 and Figure 6.9,*

demonstrate that both parents and students believed the access to computers and the Internet would add value to learning outcomes.

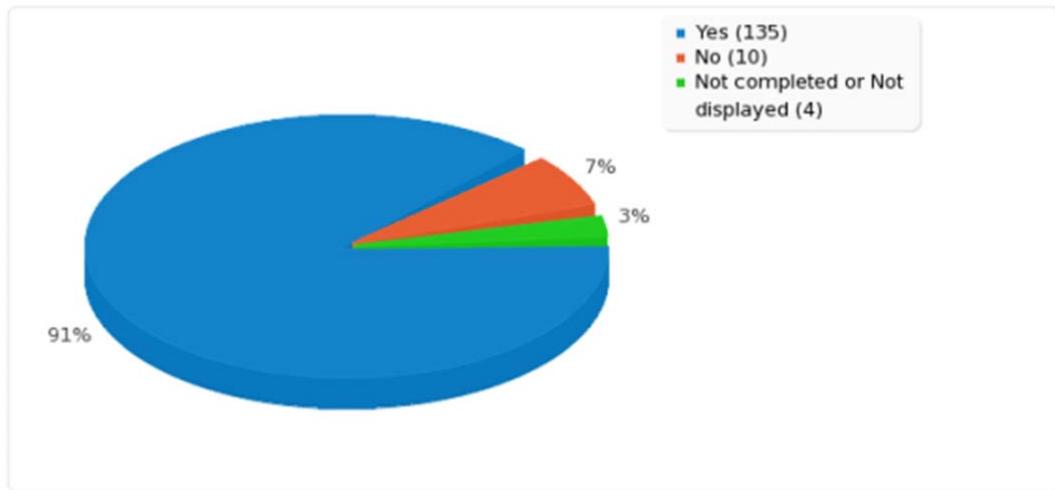


Figure 6.9 Our child/ children believe(s) that computers are important in being a life-long learner. (2009 Survey)

With the introduction of the New Zealand Curriculum (2007), parents have been introduced to the concept of becoming a ‘lifelong learner’ at parent information evenings, through newsletters and parent/teacher communications. It is interesting to note that 91% of the parents surveyed valued access to computers as important in developing their child as a life-long learner.

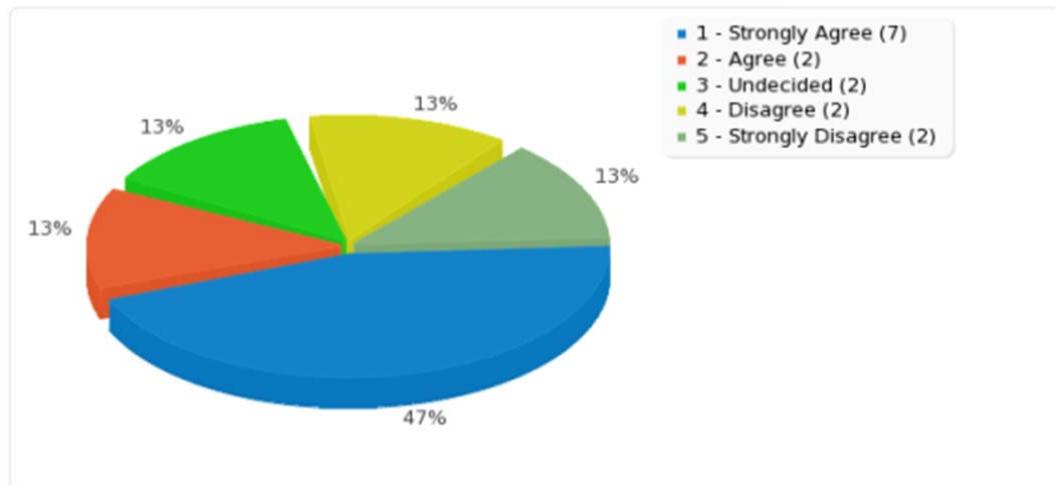
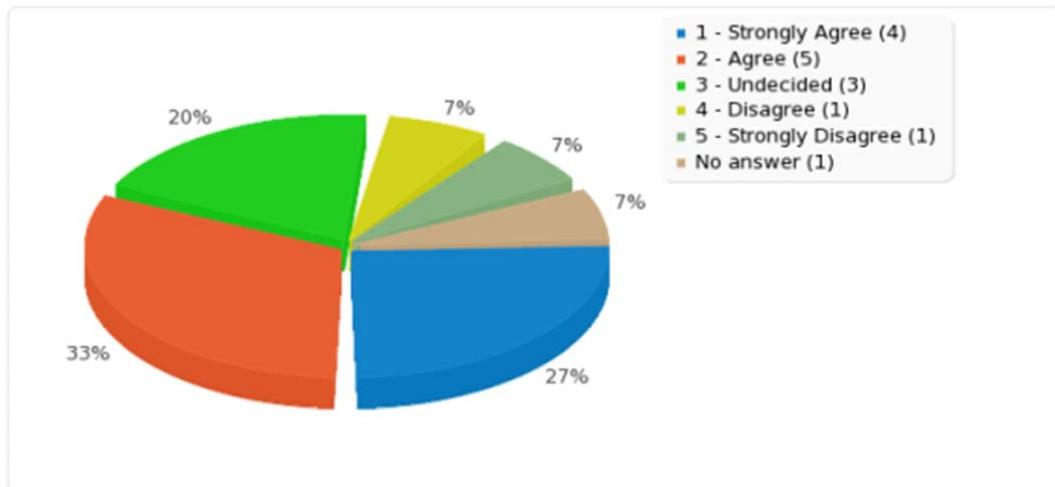


Figure 6.10 The information provided for my children in KnowledgeNET helps him/her see where they are currently at with their learning. (2010 Survey)

It is interesting to note that 60% of the parents perceived that KnowledgeNET would help their child know where they were at with their learning, a key assessment capable strategy for learners. For 26% of the parents surveyed in this graph, their perceptions of KnowledgeNET helping their child know where they were situated with their learning were negative, with these parents not seeing value added to learning through access to KnowledgeNET.



*Figure 6.11 The Learning Stories provided clear learning intentions (We are learning to-WALT) (2010 Survey)*

Dylan Williams identifies 'Clarifying and understanding learning intentions and criteria for success' as a key strategy in formative assessment teaching strategies. Parents of the case study school upon entering classrooms would see evidence of the 'We Are Learning To' (W.A.L.T) acronym whenever specific Learning Intentions were visually displayed to the learner. The Learning Story template for every learner clearly sets out the Learning Intention for the student and audience to connect with the artifact of learning, and reflection. Parents who were able to recognise the Learning Intention of the Learning Story were 60% of those surveyed. It is interesting to note that 34% of parents surveyed were undecided or disagreed that the Learning Story provided clear Learning Intentions.

## 6.6.2 Qualitative Results

Survey comments and Parent Focus Group Interviews provide qualitative findings from the parents on their perceptions as relating to the third Research Question: Is

there measurable value added to learning outcomes by recording student reflections in an on line learning environment?

*As a parent I want to know how my child is going and make it personal to her. And I know you get that through the stories that they've written and things, but I want to know if she's doing okay, or...you know those sorts of things. But I do see a lot of potential and I think that it will be the way that it goes if we make it so that parents get what they need out of it. And I think that's probably the main thing. – Parent from PFG1*

*That's the other thing. When you go to it, and unfortunately my children have a few red areas, just an update would be good because as a parent you want to see 'Have they progressed through those areas? Are they improving now?' Just a bit more of an update as to where they are. – Parent from PFG1*

*When we're talking about red flag areas, it's nice to know 'this is where my child is at', but then 'this is where they should be heading towards'. Like, for example, I like the links where it said about the Maths where it said 'This is what we expect at Level One and this is what we expect at level Two. Your child was here'. It kind of gives you an idea of where to go.- Parent from PFG1*

*I really like the links that come off the reporting pages. As I said, I've spent four hours going through links, reading this and that- Parent from PFG1*

*Obviously something positive is posted; something that is a learning outcome that has moved forward, rather than if a child is struggling with a mathematical equation for instance- Parent from PFG1*

*I suppose even the teacher's reflections if the child struggled with an area... there was often a teacher's reflection or a 'next step' of where the child needs to move to if they struggled with it.- Parent from PFG1*

*It's about the one to one interview and that the child feels special. It's not about the rest of the class; it's about 'you' as a learner and 'my interest in you'. That's a really positive thing because you can get lost in class and feel as a learner that you don't know where you're at. But you do feel special in that one moment when the teacher's spending time with you. – Parent from PFG1*

*As a learning tool it's active. It depends on one, where education is going and where teachers are going with it... and it would be nice to think that ultimately it would be an evolution thing. Like, I'm in year one and I've done...', and a number of pieces. I wouldn't want to see just one piece of writing for that whole year. Obviously when you start something that's all you can possibly achieve but ultimately it would be nice to have selections.- Parent from PFG1*

*It's fantastic for parents to understand the processes of learning.- Parent from PFG2*

*Personally I found it interesting. I didn't have to actually come to school to look at my kid's things. Janine had done a lovely job of doing some videos of the kids in Room 3 last year which was really great to see but they took hours to download. So for me, it was good to see their thinking and that they are thinking about their learning. - Parent from PFG2*

*I think too from my son's point of view as the audience. I was the audience as well as the teacher. And suddenly he valued what he had done a lot more because of him being able to hear and know that he'd written it or done it for an audience. – Parent from PFG3*

*In terms of a 'reading' point of view, from a parent point of view, when kids are bringing home reading every night, you have conjured up a sense of how well they read. But when you actually hear them with the teacher reading something that's unseen, you get a good sense of the fluency. - Parent from PFG3*

*From a reporting point of view also, by hearing it and seeing it, when it's 'where to next?' or 'what to work on', it makes it a lot clearer for the parents. Because sometimes we could think 'gosh that didn't look right', or 'there's no punctuation there'. Well, the follow up is actually, 'it wasn't actually about punctuation' or 'it wasn't about the spelling but it was about "this". So it helps with the 'where to next?' and it sets in your mind something that you're going to work with them for. So there's a lot more direction I think for 'where to next' at home. - Parent from PFG3*

*And they can see that they are making major progress. Because sometimes the progress that you're making is so small that you don't notice it unless you track it over time. What you do from week to week might seem the same, but over a few months it is enough to see that there actually was a change. While as week-to-week you may not feel like you're making progress sometimes. Parent from PFG3*

*Teaching the kids to look at and review their own things and review their own work and teach themselves in a sense. - Parent from PFG4*

*Very valuable I feel. It's also that they're honest with their learning. They know themselves by assessing themselves where they're at.*

*And I think it's probably valid for a child of any academic capability because you can always see something positive in it. You have the tools to interpret it; 'I did this because', 'here I am on here' and 'if I do this, this and this, I'll be here'. It's for all different learning types. - Parent from PFG4*

### **6.6.3 Summary of Parent Results**

Parents identified the potential of an online learning management system to add value to their child's learning outcomes. Parents voiced that this potential would be realised when entries into the e-Portfolio became a regular part of the curriculum and that the artifacts and comments met their needs as parents to monitor their child's progress and achievement. Parents' perceptions of the online learning

environment as having the capacity to personalise learning for the individual child were seen as a positive to adding value to learning. The concept of authenticity was shared by parents, who valued being able to listen to audio clips of their junior children reading unseen texts. This helped the parents gauge with greater accuracy where their child was at with their reading progression. Parents could see the value in tracking progress over time of student learning. The capacity for the e-Portfolio to collate and archive progress and achievement through a child's years spent at a primary school was recognised as adding value to learning outcomes for both the learner and the parent. Parents identified the value for the child when he was aware that his learning had been published to an audience. This parent felt the learning became more valuable for the learner who became aware of this wider audience, and became more motivated because of his awareness of the audience. Parents recognised that recording student reflections increased student, teacher and parent assessment capabilities. Parents also indicated that the feedback from the recorded learning conversation between student and teacher helped clarify the next learning steps that they as parents could assist with at home.

## **6.7 SUMMARY**

Chapter Six presents the qualitative and quantitative results from the students, teachers and parents on Research Question Three: Is there measurable value added to learning outcomes by recording student reflections in an online learning environment?

The Student Focus Group Interviews positively identify the value in recording student reflections, with the students identifying that the quality of questioning and facilitation by the teachers would need to be of a standard that enabled the learner to identify their next learning steps in ideal conditions for adding value to learning. As cited in Chapter Five, Jennifer Moon indicated the ideal conditions for these learning conversations for reflections as: time and space, a good facilitator, a supportive curricular or institutional environment and an emotionally supportive environment. Students identified the value in their teacher taking them aside to a different physical space to discuss their learning, and using open ended questions to

allow them time to think and provide the best reflections on their learning. Students identified that recording their reflections online enabled them to clarify learning goals and further develop their assessment capability.

The recorded reflections were perceived by teachers as providing ideal supportive curricular for developing the assessment capable child. Teachers identified that this pedagogical process was enhanced through the recorded learning conversations and that the school should support these curricular changes with time, professional development and adaptation of current school structures to allow for the use of the e-Portfolio and Learning Stories containing the student reflections to become an embedded classroom practice. Teachers indicated that they were part of a transformation on how learning will become future focused through system changes such as the integral use of the online learning environment and that their roles as teachers would need to be re conceptualised. Teachers used current research they were familiar with to clarify the why in the need for the system changes for education to become future focused.

All three focus groups of students, teachers and parents identified that the recorded reflections further developed the learners' assessment capabilities. The recorded reflections captured in the Learning Stories in the e-Portfolio, was a system-wide change, benefiting all learners in the case study school. The teachers' group identified the learning conversations with their students as reciprocal exchanges where both parties valued the insights uncovered during the dialogue and acted upon this new information to inform future learning.

It is interesting to note that the Parent Focus Group identified that using the online learning environment would benefit all learners irrespective of their academic ability and noting the system's potential for personalizing and maximizing each learner's potential. This system wide improvement was built from the teacher and student conducting a learning conversation enabled by a system level school-wide change to resourcing, structures, curricular, time and space and a supportive environment.

System wide improvement requires a transformative change if all students are to have the best opportunity possible to realise their full potential. This

requires a coherent schooling system in which all participants use assessment effectively and with integrity for the benefit of *each* and *every* student. (*Ministry of Education Position Paper, 2011, p. 17*)

The online learning environment was identified by the three focus groups to increase student achievement outcomes as linked to improved assessment for learning practices. All three focus groups identified the student reflections as adding value and supporting student learning as they provided rich assessment information to affirm learning and provide direction for future learning.

The next chapter, 'Teachers Support', presents the qualitative and quantitative results from the teachers, which attempt to provide insights and answers to the fourth research question:

How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?

## Chapter 7

### TEACHERS SUPPORT

#### 7.1 INTRODUCTION

Schools face significant challenges when introducing new technologies into classrooms, adapting curricular and exploring new assessment and reporting processes in the online learning environment. Professional Learning and Development is identified by educational researchers and teachers involved in the research focus groups of this thesis, as a solution for solving these challenges. Traditional approaches and significant investment into professional development programs in the past have failed to engage teachers and improve student outcomes. Teachers' experience of professional development was one of having been 'done to', where they were passive participants experiencing delivered information in the assumption that this new knowledge would transform their teaching practice. Research today informs us that teachers must be active participants in professional development and are unlikely to make change to teaching practices unless they understand the rationale behind the theory for change and believe that they can improve learning outcomes for their students.

This chapter focuses on the fourth research question: How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?

Professional Learning as the foundation for teacher support in enabling teachers to facilitate student reflection, promote student agency while using formative assessment practices in the on line environment are explored in this chapter. A background to the current shift in professional development to professional learning is outlined in this chapter.

Qualitative results are presented from the four teacher focus groups, which provide insight into the teachers' perceptions of the support they need to best achieve quality student reflections, student agency and use of formative assessment practices in the on line learning environment.

This chapter also presents the findings of quantitative data as perceived by teachers providing further evidence into answering the fourth research question on teacher support. These data are shared showing statistics generated from the responses and graphs.

## **7.2 BACKGROUND**

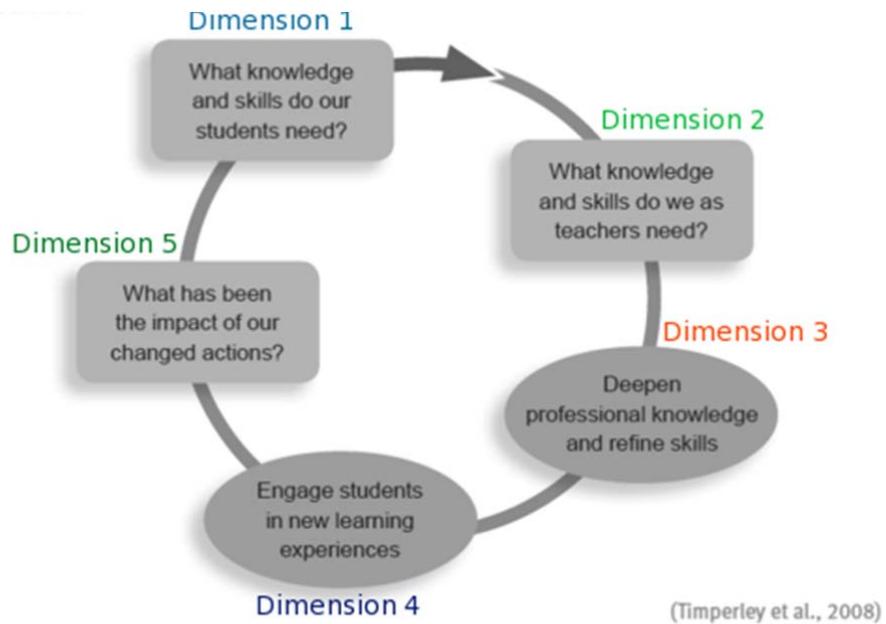
### **7.2.1 The Shift from Professional Development to Professional Learning**

The shift in supporting teachers to make change to improve learning outcomes is one of moving from professional development to that of professional learning. This approach requires a focus on students, engaging in a systematic inquiry on the effectiveness of the teacher's current classroom practice as outlined in the knowledge and inquiry building cycle. Timperley (2008), shaped a framework resource for professional teacher learning described in *Teacher Inquiry and Knowledge –Building Cycle to Promote Valued Student Outcomes*. This resource outlines an evidence-informed inquiry building approach to professional learning. Professional learning requires teachers to be actively engaged in their learning. Challenge and personal meaning making are the key criteria for the shift in teacher practice which result in improved student outcomes. Students are the central reason for teachers to engage in the Teaching as Inquiry model of professional learning. Teachers require knowledge and skills to solve problems they encounter in raising student achievement for all students in their class in the present and future. Timperley's Teacher inquiry and knowledge-building cycle as outlined in Figure 7.1 has parallels to formative assessment processes found to be effective in promoting student learning. Teachers identify learning goals for themselves and their students evidenced by student learning needs. Research on teaching as inquiry indicates that

professional learning must occur at all levels of the schooling sector. Those who support teacher learning, school leaders and facilitators of professional learning must engage in on-going inquiry into the impact of their practices. This model of professional learning frames the kinds of new learning experiences that teachers and leaders can bring to their students. Results from data presented in Chapters Four, Five and Six, indicate the need for teacher support through professional learning if e-Learning is to be an integral aspect to teaching, learning, assessment and reporting practices. School leaders are charged to design systematic, on-going cultures of professional learning in their schools. Each school identified as a professional learning community where teachers come to work, to learn as their students come to school to learn. In a professional learning community, teachers will develop adaptive expertise. Timperley, 2011 describes adaptive expertise and effective teacher professional learning in *Realising the Power of Professional Learning*.

Through engaging in on going cycles of inquiry and building knowledge, teachers develop the adaptive expertise required to retrieve, organise and apply professional knowledge when old problems persist or new problems arise. Adaptive expertise can be best understood by contrasting it with routine expertise... Routine experts learn how to apply a core set of skills with greater fluency and efficiency. Adaptive experts, on the other hand, continually expand the breadth and depth of their expertise and are tuned into situations in which their skills are inadequate. Teachers with adaptive expertise, therefore, have the capability to identify when known routines do not work and to seek new information about different approaches when needed. (Timperley, 2011, p. 11)

Professional learning as outlined in Timperley's 2008 diagram in Figure 7.1 takes place in all the dimensions. The purpose of this inquiry model is to understand what has been effective and what has not. This teacher evaluation will then impact on changed actions on the outcomes for students.



*Figure 7.1 Teacher inquiry and knowledge-building cycle to promote important outcomes for students.*

Adaptive teachers can utilise the full potential of the on-line learning environment to improve student engagement and outcomes. Adaptive teachers are facilitators to allow students' genuine voice in the assessment processes as described in this thesis through the critical conversations captured in the learning stories. Adaptive teachers can develop student agency through recognising and supporting students to select their own artifacts of learning and fully participate in assessment processes illustrated in the Learning Stories.

This chapter seeks to understand how teachers can best support student reflections, develop student choice by allowing students to select artifacts of learning as evidence of their learning and using the formative assessment processes to report on line to parents.

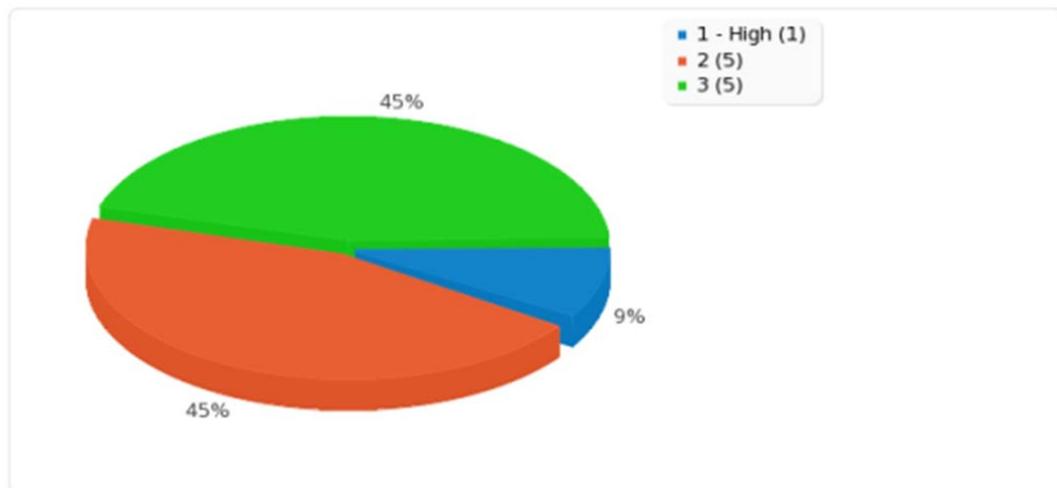
## 7.3 TEACHER RESULTS

This section of Chapter Seven, presents the findings of both qualitative and quantitative data as perceived by the teachers. The relevant results to research Question Four are presented in relation to Professional Learning and Development and how this can best foster teachers' capabilities in supporting student reflection, student agency and the formative assessment processes in the on line environment.

### 7.3.1 Quantitative Results

Following the initial school wide roll out in 2009 of an on line Writing learning Story to every student, teachers were asked for their perceptions about their levels of competency in using the new web based learning environment, KnowledgeNET.

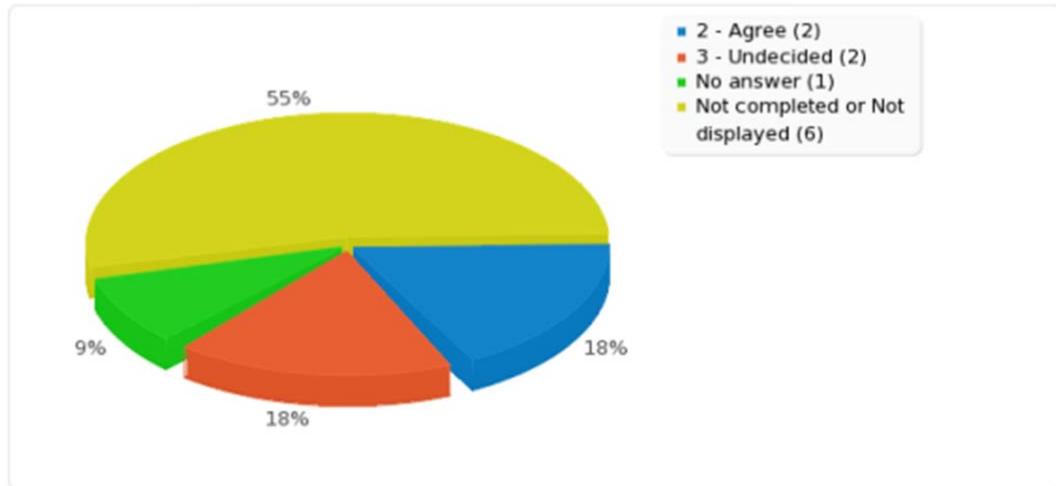
#### 7.3.1.1 Competency



*Figure 7.2 As a whole staff we have navigated new learning territory. Rate your level of competency using KnowledgeNET (2009 Survey)*

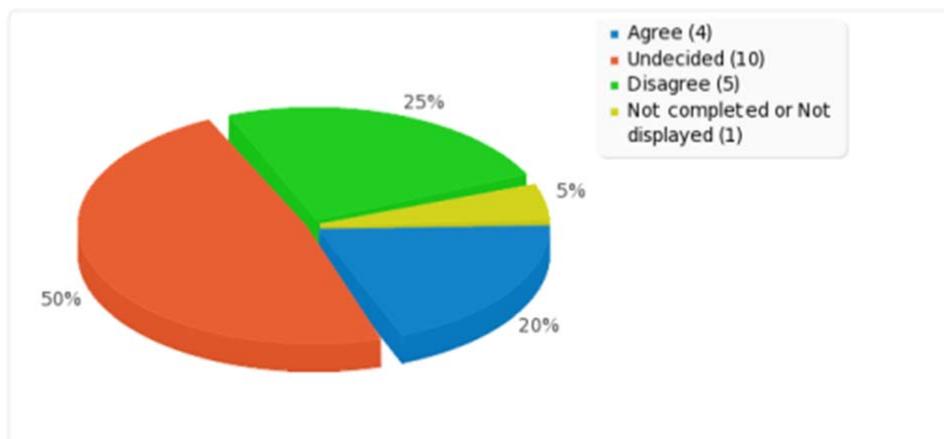
It is interesting to note that 9% of teachers perceived they were highly competent, 45% indicated they felt their competency in using the tool was satisfactory, and 45% had a neutral/undecided response. This result reflects a positive attitude held by the staff when evaluating their technical expertise. It is interesting to compare this 2009

survey with Figure 4.2 (Chapter Four) Are your Teachers Ready, a 2011 survey, which shows that only 15% of the teachers surveyed perceived they were ready for the change to a digital environment.



*Figure 7.3 As a whole staff we have navigated new learning territory. My level of competency using KnowledgeNET is of a high standard. (2010 Survey)*

Figure 7.3 shows that during 2010, 18% of the staff agreed that their competency in using KnowledgeNET is high; however 82% of the staff were either undecided, had no answer to this question or their response was incomplete.



*Figure 7.4 As a whole staff we have navigated new territory. My level of competency using KnowledgeNET is of a high standard. (2011 Survey)*

Figure 7.4 shows that 20% of the staff agreed their level of competency was high, 50% were undecided and 30% of staff disagreed that they had a high competency result indicating that their perceived skill level was lower than average.

Competency levels in using the tool have a significant impact on teachers' uptake of using the tool as an integral part of everyday classroom practice. If the teachers' competency levels increase teachers will feel more capable of playing a supportive role with using the e-Portfolio's learning environment. It is of interest to note the development over the years regarding teachers' perceived competency in using KnowledgeNET.

### 7.3.1.2 Technical support

In 2009, with the first roll out of the learning stories to every student, two teacher aides were employed to assist teachers with the uploading of the learning stories. From 2010 onwards, this support was minimised due to the financial implications and the strategic vision for the teachers to develop their technical competency required to utilise the potential of the e-Portfolio and the uploading of learning stories for their class.

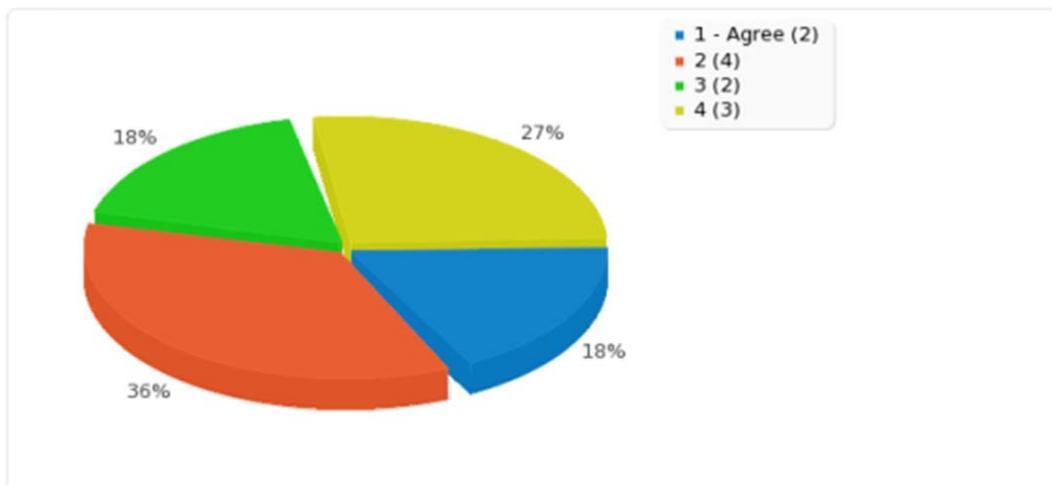
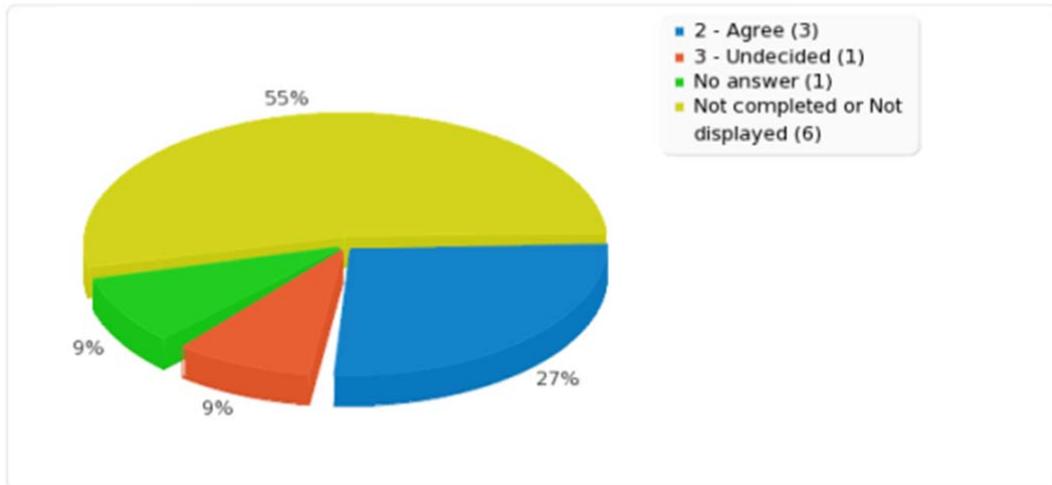


Figure 7.5 Were the technical skills required for this on line writing sample well supported by in house support i.e. ICT Team and outside assistance including ICT facilitator? (2009 Survey)

At the time of the initial 2009 school wide roll out of Learning Stories in the e-Portfolio, 54% of the teachers perceived the required technical support to enable every student in each classroom to receive the on line writing report to parents was provided by the school from both in school expertise and external facilitation. Not all teachers as indicated by the 27% on the graph, as reflected in the scale score of 4 perceived they received either sufficient or tailored support to meet their technical needs and skill development.

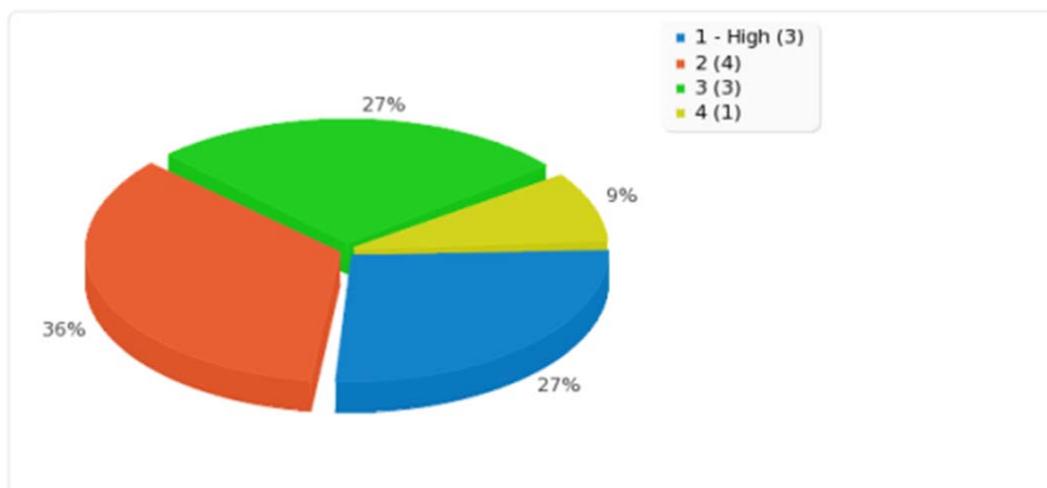


*Figure 7.6 The technical skills required for this on line reporting were well supported by in house support i.e. ICT team, management team and outside assistance. (2010 Survey)*

It is interesting to note that 27% of the teachers in 2010 perceived they were well supported with the technical skills required to roll out the Learning Stories by the school. In the 2009 survey, which surveys the same question, 54% of the teachers' perceived they were well supported to implement the on line reporting to parents with support and assistance provided by the school. In 2009, with the first roll out of the learning stories to every student, two teacher aides were employed to assist teachers with the uploading of the learning stories. In 2010 onwards, this support was minimised due to the financial implications and the strategic vision for the teachers to develop the technical competency required utilising the potential of the e-Portfolio and uploading learning stories for their class. This reduction in support is reflected in the teachers' responses illustrated in this graph.

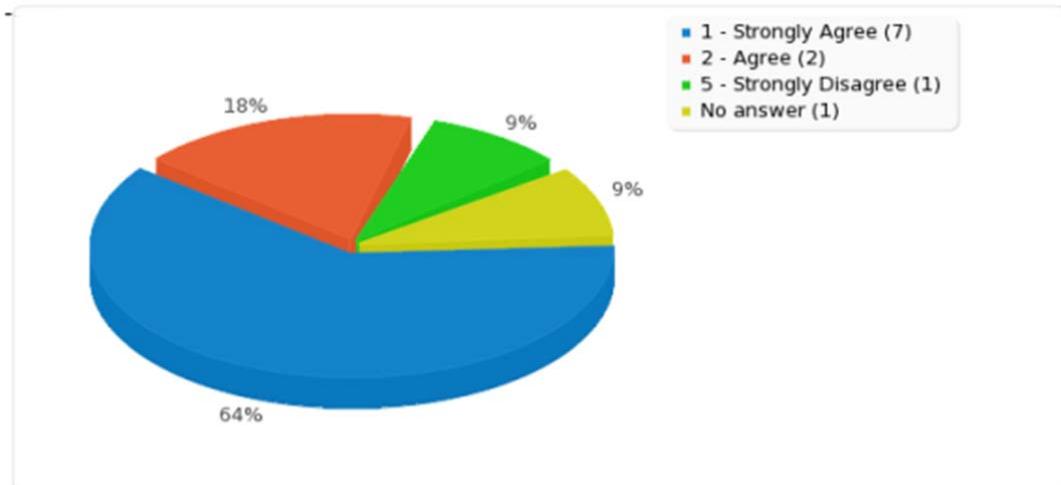
### 7.3.1.3 Professional Development

During 2009, 2010 and 2011 professional development opportunities for staff focussing on learning stories, pedagogy and skill competency were provided for all teaching staff.



*Figure 7.7 How important is further Professional Development necessary to build your understanding of the value of learning narratives/stories as a key element in the teaching/learning/assessment cycle? (2009 Survey)*

The results from Figure 7.7 indicate that a high proportion, 63%, of teachers perceive further Professional Development is necessary to build their understanding or the reasons why we made the change to reporting on line using learning narratives which include student reflections, increase student agency and make the formative assessment processes visible to a wide audience including parents.



*Figure 7.8 Further Professional Learning and Development is necessary to build my understanding of the value of Learning Narratives/Stories as a key element in the Teaching, Learning and Assessment capabilities/cycle? (2010 Survey)*

In 2010, the school had developed a Learning Vision influenced by the *Directions for Assessment in New Zealand (DANZ)* report (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009) that promoted the strengthening of teachers' assessment capabilities alongside those of students, school leaders and parents. It is evident from these data presented in *Figure 7.8*, that teachers at this time saw a very clear need to develop their understandings of the value in the learning stories as a key element in their teaching, learning and assessment cycles. A very high 82% of the teachers surveyed indicated that they perceived the need for further professional learning and development to build their understanding of using Learning Stories in the on-line environment to show the formative assessment process and students at the center of an assessment capable system.

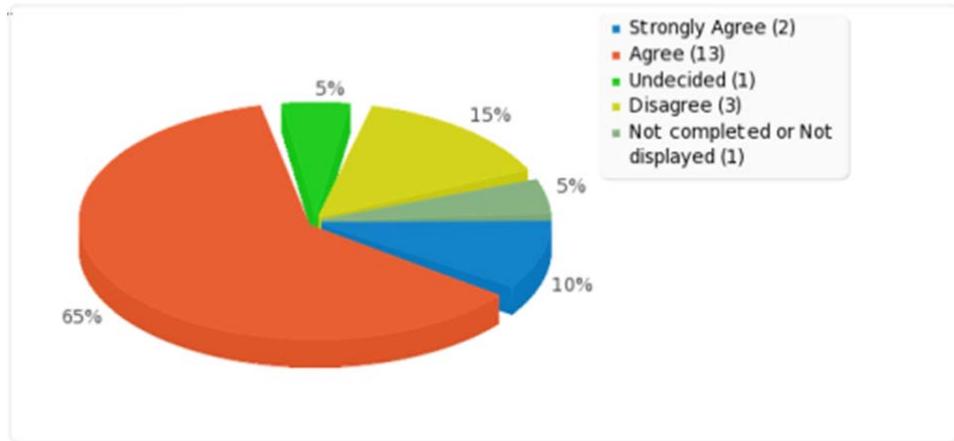


Figure 7.9 Further Professional Learning and Development is necessary to build my understanding of the value of Learning Narratives/Stories as a key element in the Teaching, Learning and Assessment capabilities/cycle? (2011 Survey)

During 2011, 75% of teachers were in favour of further professional development. The majority of staff believes there is a need for on-going further professional development. It could be interpreted from these data that teachers were increasingly aware of what skills they needed to strengthen and an awareness of where their learning needs were at as indicated on the Teacher Knowledge Building and Inquiry cycle.

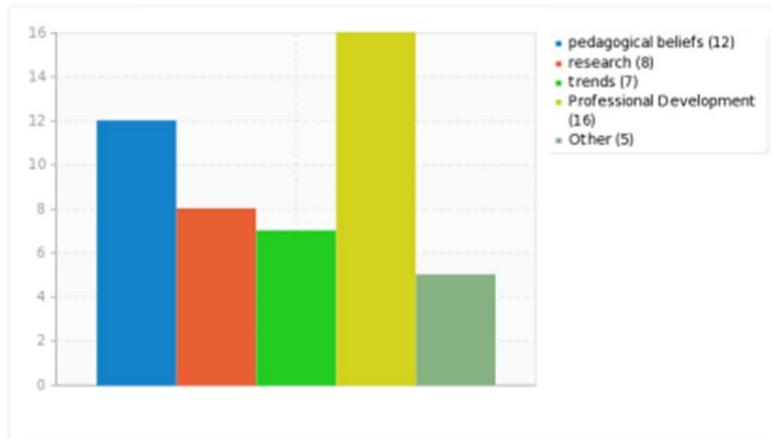


Figure 7.10 What has shaped your e-Portfolio pedagogy? (2011 Survey)

Professional Development was rated by 80% of teachers as the major influence in shaping their e-Portfolio pedagogy. Professional Development during 2009, 2010 and 2011 was facilitated by external experts, in house teaching staff who were early adopters in using the e-Portfolio alongside support from the school's technical

support company and KnowledgeNET staff. Professional development helps to form pedagogical beliefs, which 60% of the teachers surveyed in this graph indicated as shaping their e-Portfolio pedagogy. It is interesting to note that 40% of teachers shaped their beliefs through research and 35% recognised trends in education influenced shaping their beliefs. Twenty five percent of teachers indicated other sources not identified help shape their e-Portfolio pedagogy. These data strongly indicate the importance of professional development in shaping teacher beliefs on the importance and value of using on line learning environments to achieve high quality student outcomes. The development of the pedagogy of every teacher within a school is imperative if the school's strategic vision is leading to the universal adoption of technology as a natural learning environment.

### **7.3.2 Qualitative Results**

Teacher Focus Group interviews and survey comments provide qualitative findings that offer deeper insights from the teachers on their perceptions on the fourth research question: How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?

#### *7.3.2.1 Professional Learning and Development*

Teachers' comments recognise the potential benefits of professional learning in pushing their thinking beyond the known and therefore enabling understanding of the rationale for change. Teacher comments allude to the need for personalization of professional learning, as described in Timperley's 2008 Teacher Inquiry and Knowledge Building Cycle. Teachers' comments describe their needs for development of practical skills in using the LMS, KnowledgeNET.

*Each time we have PD on the learning narrative we improve and strengthen our skills and develop our thinking further. -Teacher from 2011 Survey*

*Professional development needs to be slowly scaffolded for the staff just like the scaffolding we provide for the students rather than fast tracked as it has been in the past with a wide variety of new professional development topics.* - Teacher from 2009 Survey

*Providing for professional development of teachers-visiting other schools using similar LMS* - Teacher from 2009 Survey

*This is a slow process of development. Let people do it at their own pace.* - Teacher from 2010 Survey

*As a Lead Learner, I can recognise in reflection that further PLD around Learning Stories to show the process of learning and passing this process over to students/teachers to be incorporated as part of everyday classroom practice is very necessary.* –Teacher from 2011 Survey

*I think we need further professional development in terms of the practicalities and how we make learning stories part of our everyday practice.* - Teacher from 2011 Survey

*Practical, sitting with laptops, learning as we go and leaving with something achieved.* – Teacher from TFG3

### 7.3.2.2 Support

Teachers comment on how the school's Management Team could best support the teachers to scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process. Teachers perceive provision of time and fiscal resourcing will benefit them to support and scaffold their students.

*Giving more adult support in the classroom to guide the students through the process. and I feel that there's a need for us to still be scaffolded at this early stage, not just to let us go. I don't know if we're at that stage that we can...I think we still need the support. Well, I still require the support. Also, because it is a tool that the parents are seeing and you want the children's voices to be good for it to sound good because it's being published 'out there', you still want that good quality. – Teacher from TFG4*

*Ways to get the students involved in uploading and deciding what pieces of work should go onto knowledge net. - Teacher from 2010 Survey*

*Ensuring the staff know what things look like well in advance. - Teacher from 2010 Survey*

*To give adequate time and resource personnel to assist with the inputting of the data. - Teacher from 2010 Survey*

*Up skill more people who can support others. Maybe one or two people from each syndicate who can be the 'go to' person for rest of the syndicate. - Teacher from 2010 Survey*

*Money for templates/concepts to be designed that the whole school can benefit from – Teacher from 2009 Survey*

*Providing support time for staff. Allocated time for developments and ideas to be achieved.-Teacher from 2009 Survey*

*Just as.... said about PD and 'guide on the side' and actually having some children and adults who can support the staff and the students through this whole process. I think that will improve everything. I mean, everyone has the opportunity to do it and the results should be fantastic too because they've all had that experience. It won't just be the IT experts that'll be*

*doing it. Everyone will be doing it, whether that's a child with extreme special needs or children with a different language or children who have low learning for whatever reason- all of them.-Teacher from TFG3*

*As long as there's a clear structure where we know what the children have to do- where there's a vision. -Teacher from TFG4*

*I would build a little more commitment around KnowledgeNET by, say, a management unit put into it or something like that. Because I think it's a great tool and when we went to..... school we saw it being used really, really well to support the teachers...there were lessons there and resources there and lessons that had been taught by teachers videoed in there. Not just thinking about using it as a publishing tool but as a tool that supports the community of teachers and what they were doing was releasing teachers to go in and work there and they were creating pathways and problem solving and just sending it back to the teachers and it was easy to teach because they were so well supported. If that's the way we're going to go, if we're going to go with KnowledgeNET and run with it, I don't know why we don't have a bigger focus around it. Especially with such passionate people with the skill level. - Teacher from TFG4*

*It doesn't always involve money but money would be good if we prioritized money the following year to get some better technology...iPads for example.*

*I've been using a lot of 'learn shop work shops' where the kids who have done really well, I always get them to reflect on it and share it and the kids listen and say 'I'd really like to do that and that.' I wish I had more time to promote more 'learn shop workshops' where kids can just take ownership and teach other children because it's great. They're motivated and they can share it. I'd still like to have more computers if I could because of the numbers of the students that I have. I've only got four. -Teacher from TFG4*

### 7.3.2.3 Supporting assessment capable students to ensure they are best placed to select reflections and artifacts of learning

Teachers recognise that a student learning in an environment which fosters assessment capabilities is well placed to select artifacts and reflections as evidence of learning for the e-Portfolio, thus increasing their ownership and agency in the formative processes.

*Back to the learning environment with our progressions and our goal setting and I guess because of that now the children can hopefully say 'I've achieved that goal. How about I go and load my story up now?' or 'How can I show that I've achieved this goal?' In the learning environments, if the progressions and all that are working, the children can take responsibility and go on and say 'I need to go and put that on my homepage because that's an achievement for me.' As and when it happens or at the same time because it's more manageable. - Teacher from TFG3*

*They need to be really familiar with their goals. They need to know where they're going in their learning. And they need to be familiar with progressions, because they all lead to stronger conversations. – Teacher from TFG4*

*I think the children need to understand what they're aiming for and what the success criteria are so that the questions mean more to them.- Teacher from TFG4*

*I guess the reflection is the only way to show that process because it's the only way you can really hear their thinking. They can articulate their thinking. Sometimes they can draw that process I guess but there's nothing like the student voice. When you hear them...it is very powerful. - Teacher from TFG3*

Teachers were asked to identify the students' needs when recording on line reflections in the learning stories and how they as the teacher could best support the student. Teachers' perceptions identified the need for the student reflections to become part of the natural everyday learning activities that take place in classrooms across the school at all year levels.

*Probably more regularity I suppose. The more they do it the more comfortable they'll get with it. -Teacher from TFG4*

*Yes, I want it to be open and normal. Keep them feeling safe and just do it every day. Talk about it all the time. -Teacher from TFG4*

*So we're pushing it onto them more and more. And as they keep on going through the school, by the end, it should be pouring out of them.- Teacher from TFG4*

*As a teacher we have to be doing it every day, asking the same questions, talk about it. Lots of reflection, lots of hearing people's opinions. Practice it every day until it becomes natural. - Teacher from TFG4*

*So it's about re designing our classroom program so that we're integrating things a little better. So when you're reading and writing, there are people who can always go on a computer with their buddy and show them something related to their learning.-Teacher from TFG 3*

*You've got to put it into your program so that there's time when they go onto KnowledgeNET and that's part of a tumble over activities and that's part of their natural learning. - Teacher from TFG3*

*It's learning the skills first that causes the problem. Once they've got the skills they've caught onto it. -Teacher from TFG3*

*Making the children themselves aware that some of them are more expert than others and sharing what they know- giving them opportunities in the classroom to actually buddy up and make sure an expert buddies up with someone who's not.- Teacher from TFG3*

The LMS tool itself was perceived to hinder the ease of access for students to select and upload their own artifacts and evidence of learning to the e-Portfolio. Teachers' comments indicate that the student must drive the selection and uploading of the learning artifact rather than the evidence of learning be teacher selected.

*It feels too complicated. Whereas if it's something you can play around with, you kind of understand and be more wanting to do it aren't you? But I think that if it comes through that children know how to upload things; they'll be wanting to upload their own things won't they? And it will be driven more by them that 'I need you to upload this onto KnowledgeNET as a piece of work rather than a reflection they want to put on. - Teacher from TFG1*

Teachers perceived that allowing students to select their own artifacts of learning increases student ownership and agency in the formative learning process. The following teacher comment describes the benefit in a student simply selecting a piece of writing that the student felt proud of, that there is benefit even without feedback and feed forward from the teacher but the possibility for parents to comment on the student's evidence of learning.

*I understand that the Learning Journals were very child orientated. That it's very raw. That it's the kids just saying 'Look at what I wrote! This is fantastic!' Upload it for mum and dad to comment on. That you've got to look over all the rough parts as a teacher. That it's not there to be marked. The models I saw at Christchurch and that's what I liked about it. Selected by the students. That they chose what they wanted to upload and that it's theirs, and if they finish a piece of writing and they think its smashing they put it up and it's done. - Teacher from TFG2*

*Even the recording... them doing the recording and putting it up. –Teacher from TFG3*

#### 7.3.2.4 Strategies for teachers to use to help support and scaffold student reflections

Teachers' perceptions were sought on what strategies could support their students in using web 2.0 technologies to create on line reflections.

*The way you question. The way you set them up. If they're assessment capable they know their goals and they talk to their goals. Which means they're scaffolded a little bit. - Teacher from TFG3*

*The thing is, the reflection should be like we're having this discussion now. It's supposed to come across like that. It should be like that because then it's a child talking in his natural way. - Teacher from TFG3*

*I had two boys that I taught how to do the uploading with the ICAN, that took more time off my hands. The only time I was disturbed was when they had a problem that they couldn't solve; a problem that was happening on the tool.-Teacher from TFG3*

*But that's where the tech savvy kids can assist the teacher. Because if they've forgotten a step or two, the child might remember and say 'Okay, we forgot that step so we have to do that.' So hand in hand would be good because they will pick it up easier than we will basically.- Teacher from TFG3*

*When I took ... in my CRT time separately and I adapted the questions, changed the questions but still had the same meaning and the same process that I wanted, he got it. –Teacher from TFG3*

*Kids like listening to their own voices or seeing themselves. So a movie of themselves talking about what they've learnt is more interesting than just a piece of paper I think- Teacher from TFG3*

*...As long as children are really aware of what they should be reflecting on and commenting on. If they are not scaffolded to a certain degree, you've lost them. They have to be really focused and guided as to what sorts of things are either possible or either sensible for that type of question. – Teacher from TFG4*

*...last year, I had the questions and the answers that they'd done I chucked them away. Some of them I had the questions on the screen so they could look at them and I took that away. I was learning as it was going on. And then I just spoke to them. And those interviews that I had with them- the spoken ones- were so much better than the reading or the question on top. I feel that's more valuable.-Teacher from TFG4*

Teachers commented on the value of conversations that occur in the classroom, but have not previously been captured as evidence of learning. Teachers perceive these dialogic reflections now captured using web 2.0 tools in learning stories, as powerful evidence.

*I guess in the past also we've had these conversations and you often wish that someone was there to hear those conversations don't you? People say 'Where's your evidence?' Well this is your evidence. We have this evidence now so it's fantastic. - Teacher from TFG3*

## 7.4 SUMMARY

This chapter presents the qualitative and quantitative results from the teachers relating to the fourth research question. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an online learning environment?

The results provide a clear indication from the teachers of the value and importance of professional learning to enable them to best support their students using the online environment for reflection, student agency and use of this learning environment for formative processes including student self-reporting to parents.

Over the period from 2009 to 2011 when the quantitative data were collected, there developed a significant awareness by the teaching staff of the need for ongoing professional learning. Teachers provided further insight into how this professional learning might be facilitated by identifying the need for a 'personalised' or needs based learning approach, to provide technical skills to increase competency levels. Teachers identified the need for scaffolded 'hands-on' technical support. Additionally, teachers identified the need for a self-paced professional learning environment, where teachers were scaffolded as they themselves scaffold students, identifying strengths and needs and adapting learning to suit the individual. The staff clearly identified the need for further professional learning to build their understanding of the value of learning stories as an integral element in the teaching/learning/assessment processes in the assessment and reporting cycle.

Survey comments and Teacher Focus Group comments identified an understanding from the teachers that both the curriculum and their daily classroom programs will need to be adapted to embed and naturalise the use of on line student reflections and student agency in selecting their own evidence of learning. The results indicate a strong awareness from the teachers that the learning stories that demonstrate the formative assessment processes need to become part of the everyday classroom learning activities. Teachers recognise the need for students to become fully involved in this process through being able to select artifacts of learning that

demonstrate where the child's learning is at, and for the student to be able to independently upload this evidence on line as the learning and assessment has occurred. Developing student and teacher experts was also significant as perceived by the teachers. Teachers' perceptions are that students must be assessment capable for student agency to be achieved. Teachers indicated that the students must understand and be very familiar with their learning progressions and success criteria, thus enabling the students to identify their next learning goal, facilitating the formative process.

Teachers need access to tools that will allow themselves and the students to make judgments about student learning. Teachers indicated that the LMS tool selected by the school must be easy to negotiate and uncomplicated for both the student and themselves. Uploading files was identified as a complicated element of the tool KnowledgeNET used in this case study school. Teachers perceived this caused a barrier, preventing the students being able to independently upload evidence of their learning. Both students and teachers need simple-to-use tools, to enable the assessment decisions that are generated in the reflective dialogue captured in the on-line learning story. Teachers and students also require scaffolded strategies for self-assessment and reporting. The results from this chapter indicate that assessment capability skills, teacher questioning and regularity in practising strategies for talking about learning are necessary to achieve high standards of student self-reporting in the on-line environment.

These results clearly indicate the teachers' perceptions are very positive as to the value of the dialogic learning conversation captured using a web 2.0 tool. Teachers in these reflective conversations together with their students construct a shared understanding of what they are trying to achieve, the students next learning step. This assessment activity can support or diminish motivation for learning. The teachers identified in these data that support for them to develop their own assessment capability to best scaffold student reflections included questioning, how to question a student to be able to discuss not only what but how they are learning and to cite evidence of achievement on both these dimensions.

Teachers are the orchestrators, encouragers, interpreters, and mediators of learning. They need to understand how students can use and value

assessment as a powerful means of furthering their own learning. As the experts in the learning partnership, teachers need to take the lead in all assessments that students cannot manage without support. But they need to do so in ways that encourage students to feel deeply accountable for their own progress and support them to become motivated, effective, self-regulating learners. To do this, teachers clearly need to be knowledgeable about the curriculum and teaching, but they also require well-developed assessment capabilities and the motivation to use these to forge learning partnerships with their students. (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009 p. 24)

Both students and teachers will develop assessment capability if they are appropriately resourced. Teachers identified that it was not only money that would provide the necessary support, but suggest that investment into mobile devices such as the iPad, would increase student access to the on line learning environment, supporting student reflection and agency. Teachers commented that having a limited number of computers in a classroom was a barrier to uptake of student agency in the on-line environment.

Staff who had visited identified 'best practice' schools supported the concept of commitment by the school to on line learning and the use of e-Portfolios. Teachers commented on the need for a vision for e-Learning, using the e-Portfolio to support the community of teachers as a portal to place resources and videos of exemplary teaching practice. Financial commitment for leadership of this vision and for releasing teachers to create resources and pathways for other teachers to use in the e-Portfolio was identified as desirable support from the school's management team.

Teachers' comments indicated an understanding of the desirability that the students themselves adopt responsibility for being able to discuss their learning, use the success criteria to analyze where their learning is placed and to formulate new learning goals in partnership with the teacher or their peers. Teachers' comments inferred that supporting the ownership of learning by the students through the process of the student being fully involved in reflective conversations, identifying appropriate evidence of their learning achievements and independently uploading this evidence was a desirable learning and assessment activity.

When students are actively involved in assessment they are well placed to recognise moments of important personal learning and, as they develop their assessment capabilities, they find learning to be real and relevant, prove that they can learn and make progress, and discover how to make where-to-next decisions. (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009, p. 20)

The central premise of this chapter on teacher support is that all teachers require ongoing professional personalised learning to ensure that they can educate their students in ways that develop their capacity to assess their own learning in the on line environment. Students, who are able to reflect on their learning in critical learning conversations with their teachers or peers, develop capabilities to analyze their own learning and contribute quality feedback to the teacher enabling their teacher to become better informed and adaptive to meeting the student's next learning steps.

This greater participation in the assessment process supports dispositions of a lifelong learner as identified in the New Zealand Curriculum. The curriculum encourages students to reflect on their own learning processes with the emphasis on learning and how to learn. Using the web based learning environment of the e-Portfolio is identified in these results as having significant potential to promote student ownership of learning and agency. Using web 2.0 tools allows student thinking to be captured and made visible for parents, strengthening the home-school partnership. The learning stories described in this thesis, capture and archive on line, student reflective dialogues with their teacher as a valid and defensible evidence of student achievement. Learning is affirmed in this conversation between student and teacher, where together they recognise and value the evidence of learning and generate feedback from both parties providing clear next learning steps. The student's voice is heard, developed and valued in the formative assessment process. This progress and achievement is documented in the learning story and can be shared and celebrated with parents

School leaders are charged to design and facilitate professional learning that places assessment at the heart of their cycle of inquiry. The results of this chapter focus on teacher support required to facilitate student reflection, student agency and sharing

formative assessment practices with parents in the on line environment. Professional Learning based on the principles of Timperley's 2008 Diagram of Teacher Inquiry and Knowledge Building, (Figure 7.1.), will promote the important outcome of improved feedback from student to teacher.

The next chapter presents the conclusion for the thesis. In an overview of the thesis, its major findings, limitations of the research, highlights, implications, and the significance of the study are detailed.

## Chapter 8

# CONCLUSION

### 8.1 INTRODUCTION

In this concluding chapter, an overview of the study, major findings, implications and limitations are presented. Ideas for extending this study with further research are also discussed.

### 8.2 OVERVIEW OF THESIS

This research study commenced several years ago when St Mary's School implemented an LMS, using learning stories in e-Portfolios, as an integral part of its assessment and reporting practice. The learning stories at St Mary's school share the process of learning in a password protected on-line environment and actively engage students in reflection and self- assessment using an assessment capable learning approach.

At the time of undertaking research for this thesis, considerable shifts were happening in the New Zealand educational sector. A new curriculum became mandatory in 2010 and National Standards were introduced in the same year placing emphasis on teachers' professional judgements and assessment for learning principles. New and emerging technologies were becoming increasingly significant in changing learning environments and schools were given autonomy to design and deliver a curriculum personalised to meet the needs of the community at this time.

Considerable shifts were also occurring at St Mary's school during the time the research data were collected. Key changes at St Mary's included: the implementation of an online learning management system (KN) and an interoperable student management system (e-TAP), the introduction of student e-Portfolios and rich professional development opportunities provoking shifts in

teacher beliefs and assumptions towards an understanding of a future focused model of schooling. Learning stories were trialled school-wide to report to parents, capturing student reflection and self-assessments in reading, writing and mathematics, with the focus on sharing the process of learning with parents and other invited audience.

With major educational change at both national and the localised level, it was of interest to gain the perceptions of the three key stakeholder groups; students, parents and teachers on the student-centered approach to assessment and self-reporting in the e-Portfolio. Surveys and focus group interviews were used throughout this research. Most surveys were administered online using the Lime Survey tool and presented as quantitative data in Chapters 4, 5, 6, and 7. Focus grouped were formed and interviews recorded and transcribed to provide further evidence which was presented as qualitative data in Chapters 4, 5, 6 and 7.

### **8.3 MAJOR FINDINGS**

The major findings in this section are presented under the headings: Reporting Progress to Parents, On-Line Student Reflections, Adding Value to Student Learning Outcomes and Teacher Support. Each section relates to one of the research questions as presented in Chapters 4 to 7 of this study.

#### **8.3.1 Reporting Progress to Parents**

Research question:

1. How effective is using an 'on-line Learning Story' in showcasing the process of learning as a method of reporting student progress to parents?

Perceptions from students on the effectiveness of using a digital learning story to showcase the process of learning indicate a strong preference to use the digital

environment over paper reporting. Students noted that on-line learning stories were convenient, easier, faster and more efficient for parents to form understanding of their progress and achievement and they recognised the benefit for parents of having access to a wealth of information beyond the capacity of a paper report. Students' also identified benefits for their parents of having 24/7 accessibility to the information and links contained in the learning stories. Students felt the learning stories provide a rich and in-depth view of their learning. Students valued being an equal partner in the learning process the on-line learning conversations offered them and recognised the student agency outcome of this process.

Teachers felt the learning stories offered an authentic narrative of the assessment for learning process, as showcased in the learning story. Teachers indicated that there was significant clarity and realism of a learner's progress and achievement achieved in the learning story as compared to a written report. Teachers' perceptions of the critical learning conversation captured in the learning stories is that this practice develops a student's assessment capability and increases their personal responsibility for their learning through self-reporting and providing feedback to the teacher in the learning conversation. Teachers identified that using the e-Portfolio for student self-reporting shifted the ownership of learning towards the students and would be increasingly beneficial if it became everyday practice. Using the online learning stories for reporting to parents has been perceived by the teachers as a process that increases student agency and voice.

Parents' perceptions as to the effectiveness of using an on-line e-Learning story to showcase the process of learning were mixed. Parents recognised that the learning stories were a new and worthwhile method for sharing the process of learning and having an insight into this process was viewed as an effective and positive element. Parents indicated they would be happy to receive on-line reports showcasing the process alongside the traditional paper report. Parents were accepting of the trend towards digitalisation of evidence of learning. Parents felt this was a natural future-focused progression but this change would need time to accept the transition towards keeping a digital archive as opposed to a drawer full of paper reports. Parents recognised this was a 'mind-set' change for parents and would take time. Parents clearly recognised the value in their child self-reporting their learning in the recorded conversations with the teacher and were surprised by their children's

capability to do so. Parents identified the learning stories archived over time as effective in empowering student agency and hence prompting intrinsic motivation for learning.

### **8.3.2 On-Line Student Reflections**

Research question:

2. How do students best share their reflections about their learning to teachers, parents and peers in an on-line environment?

Students from the focus group interviews perceived recording their reflections using audio or video web 2.0 tools was preferable to making written reflections in the on-line environment. Authenticity of assessments was recognised by the students as a positive element in recording the student's opinions in learning conversations with their teacher. Students perceived the captured learning conversations provided a rich and accurate picture of where their learning was situated. Students claimed learning was improved using the on-line environment in preference to books. Students felt the on-line environment offered a very positive means of sharing their learning with others. Students recognise the power of their voice to express the position of their learning using web 2.0 tools as greater than using paper technology.

As the students' articulated their preference for using web 2.0 tools to record their reflections also the teachers' perceptions indicate the merit of capturing and archiving student reflections using audio or video clips on-line. Teachers claimed the web 2.0 tools used in the learning stories were a valuable method to share the assessment for learning process with parents. Teachers identified that the process of reflecting taking place during a critical conversation enhances the students' assessment capability and this was best conveyed by using web 2.0 tools. Teachers felt the dialogic conversation increased the quantity and quality of a student reflection about their learning as compared to students making written comments on-line.

Parents' evaluation of how best students can share their reflections on-line from 2009 to 2010, showed 42% surveyed in 2009 rated the audio tool as an effective means of communicating their child's assessment to 66% surveyed in 2010 rating that teaching and learning had improved positively since the implementation of the LMS with its ability to record student reflection. Parents from the focus interview groups perceived the student reflections captured using a web 2.0 tool provided them with an honest assessment of where their child's learning was at. Parents recognised the value of recorded reflections as a forum for authentic student voice. Parents valued the opportunity that the recorded student reflections afforded in making the children's' thinking visible and developing the child's assessment capability.

All of the three stakeholder groups, students, teachers and parents, indicated that they valued using web 2.0 technology to best share student reflections.

### **8.3.3 Adding Value to Learning Outcomes**

Research question:

3. Is there measurable value added to learning outcomes by recording student reflections in an on-line learning environment?

Students from the four focus groups perceived there was significant value for creating learning partnerships with parents through recording their reflections on-line. Students felt that the learning stories in an e-Portfolio increased their parents' engagement with their learning, through access to authentic assessment information, enabling the parent to help the student with their next learning steps. The changing role of the teacher was identified as a positive outcome by the students through having their learning including their reflections on-line. Students felt their teachers would be able to identify their personalised learning needs and provide links and locate learning resources for the learner to access at home. Students perceived that through having their student reflections on-line, available anytime and anywhere, added value to their learning outcomes.

Teachers indicated strong support for the student reflections in the learning stories as a method for adding measurable value to student learning. Teachers felt the process of capturing student reflections in the on-line environment enables and develops students' assessment capabilities. Teachers identify the capacity of the on-line environment to capture student reflections, enabling the student to provide feedback to the teacher in a critical learning conversation, as authentic assessment. Teachers identified that this process would help to re-conceptualise their roles as teachers, through passing ownership of the learning to the student. The data convincingly demonstrate the teachers' perceptions that the assessment-capable pedagogy employed in the learning stories involved and benefitted the students.

Parents identified measurable value added to students learning outcomes through recording student reflections on-line as the technology has the capacity to personalise learning for the child. Parents valued the on-line student reflections as being useful in helping them gauge with greater accuracy where their child's learning was situated. Having access to the recorded student reflections and self-reporting in the recorded critical conversation, was identified by parents as helpful in further facilitating their child's learning at home. Parents felt the feedback in the recorded conversation between student and teacher helped clarify the next learning steps that they as parents could assist with at home. Parents identified that recording student reflections increased student, teacher and parent's assessment capabilities.

#### **8.3.4 Teachers Support**

Research question:

4. How can teachers best support and scaffold student reflection by developing student choice, when selecting artifacts of learning and using the formative assessment process as a method of reporting to parents in an on-line learning environment?

Quantitative data from 2009 to 2010 showed that the percentage of teachers who felt they had high competency levels in using the LMS ranged from 9% to 18%. However in 2011, only 15% of teachers surveyed indicated that they were ready for the change to a digital environment. These results align with the qualitative data findings, where significant responses from teachers recognise the importance of the need for professional development, as necessary to build understanding of the value of using learning stories in the teaching/learning and assessment cycle. Technical up- skilling of staff was seen to be as important as understanding the pedagogy and rationale for using learning stories as an integral part of assessment and reporting practices. Quantitative data collated in 2011 showed that 75% of the teachers surveyed were in favour of further professional development. Teachers expressed that further professional development around the learning stories to show the process of learning, would result in increasing student ownership of the process. Teachers identified that both time and fiscal resourcing was necessary at the early stages of implementing an e-Portfolio into everyday classroom use for assessment and self-reporting. Teachers identified that by developing experts, both students and teachers to support other learners, would ensure that all students benefitted from the opportunities that the e-Portfolio offered to add value to learning.

Developing student assessment capability was identified by the teachers as necessary for students to select artifacts of learning that could be used as evidence to support student self-reporting. Teachers identified that students who have well developed assessment capabilities were well scaffolded to select these artifacts to use as evidence of progress and achievement and thus increase their student agency.

Teachers perceived that to support their students and scaffold student reflections, regularity of critical learning conversations was a key factor. Teachers felt this should be an everyday classroom learning activity.

Having the students select and upload their own examples of evidence of learning was viewed by the teachers as valuable in growing student agency and ownership in the formative learning process.

Teachers recognised that the learning stories achieve a goal that other assessment strategies cannot. Learning stories change the student role from passive to active participant, as students select and reflect on artifacts of learning which demonstrate where their learning is situated and where to next in a rich narrative. 'Reflective portfolios support a deeper level of engagement and self-awareness, making it easier for students to understand their own learning and to provide teachers and parents with a richer picture' (Barrett, 2005, p.1).

Teachers require on-going personalised professional learning to ensure that they can educate their students in ways that develop their capacity to assess their own learning in the on-line environment. Teachers valued the idea of personalised professional development to meet their learning needs in both technical expertise and pedagogical understandings to enhance the use of the on-line learning environment for assessment and self-reporting. A focus on improving the questions teachers use in the classroom and in critical learning conversations was also identified by the teachers as a strategy for improving and supporting student reflections. E-Learning professional learning must be centered on providing an appropriate blend of curriculum, pedagogy and technological capacity.

The concept promoted in the NZC, that students are actively involved and benefit from assessment and reporting practices was highly valued by the teachers surveyed.

Access to on-line tools that are intuitive and easy to use for students, teachers and parents to use, was identified as essential to the success of sharing student reflections and the formative assessment process.

Assessment capability skills, teacher questioning and regularity in practicing strategies for talking about learning are identified by the teachers as necessary to achieve high standards of student self-reporting in the on-line environment.

## **8.4 IMPLICATIONS OF RESEARCH: SIGNIFICANCE**

### **8.4.1 School**

#### *8.4.1.1 St Mary's School*

The e-Learning Planning Framework developed by Te Toi Tupu (a Leading Learning Network- a consortium of five educational companies), on behalf of the Ministry of Education, provides schools with a roadmap and set of tools to review where they are at with e-Learning, guidance to identify where the school might go next and how to get there. Evidence about practice with particular focus on assessment and self-reporting, from the findings of this research, providing both qualitative and quantitative data can help this e-Learning inquiry, to develop a future-focused e-Learning strategic plan.

The design of professional learning in a school must be based on identified needs in a school. A key component to effective professional learning is to identify students' e-Learning needs. This research can be used as evidence of authentic student voice about e-Learning and to evaluate progress from the time of data collection. Evidence from this research inquiry can also help shape effective pedagogical design and resourcing decisions that support student learning rather than selecting the technology first. Using this research could help teachers identify their student's e-Learning needs and the professional learning they need to support their e-Learning teaching practice. The research provides evidence for school leadership to make judgements as they examine the e-Learning needs of teachers, to build e-Learning capability in assessment practices, pedagogy and teaching as inquiry.

#### *8.4.1.2 Other schools*

Other schools may use this research to examine how the case study school used technology to record and report student progress and achievement to parents using critical conversations with students and their teacher in learning stories. This research may be used by other schools to examine how they can use differentiated

assessment that actively involves the student, to report to parents using an e-Portfolio. Schools can use the findings of the research to allocate suitable resourcing, design of professional e-Learning and pedagogical vision to meet the needs of their students and teachers.

#### **8.4.2 Ministry of Education**

This research will hopefully provide an in depth case study of a school having implemented a vision, 'To develop assessment capable students, teachers, school leaders and parents', using recorded and archived learning conversations in an e-Portfolio, as evidence of progress and achievement to report to parents . This assessment approach is highlighted in *the Ministry of Education position Paper Assessment Schooling Sector (2011)* in strategies to promote achievement. 'Using documented conversations and observations as artifacts to be revisited (learning stories) can be useful, particularly in relation to dimensions of learning that are dispositional and complex...' (MoE, p.27) The Ministry vision promotes innovation in assessment practice and encourages the dissemination to achieve system-wide improvement in learning outcomes.

Being innovative and trying new things. A willingness to be innovative and do things differently can strengthen the evidence base for system-wide improvement. This is especially so if the participants are willing to share their experiences of what works and doesn't work and learn from each other in the context of a shared goal of enabling system wide improvement for the benefit of each and every student. (MoE, 2011, p.23)

The findings of this research will hopefully support the Ministry's vision to see 'the investment in ICT in schools to radically enhance our assessment processes, the information gathered and how it is accessed and used.' (MoE, 2011, p 23). The Ministry recognise 'e-Portfolios including assessment information that travel with a student through their life at school and beyond', as harnessing the potential ICT opportunities for system-wide improvement. This research will provide evidence of how a school has met its National Achievement Guidelines, reporting the National Standards to parents using learning stories in an e-Portfolio to share the process of

learning with parents. The findings of this research demonstrate the increased ability for students to follow self-regulated learning, changing the teacher-student relationship, which is a goal of the Ministry seeking an assessment capable system.

## **8.5 LIMITATIONS OF THE STUDY**

### **8.5 1 Sample**

Data for this research were collated from the three key stakeholder groups, students, teachers and parents. The number of respondents must be considered as a representation of a greater group of people for each stakeholder group.

Each stakeholder group was represented in four focus group interviews. All focus group participants were considered to be a sample of convenience, as interviews were held dependent on the needs of the participants and their schedules.

Two types of surveys were administered, both anonymous and surveys requiring the participant's names/identification. On these latter surveys, full participation from staff and significant participation from the parents was evident. The anonymous surveys and responses did provide the opportunity for respondents to offer authentic and sincere responses, however submission rates were lower for these anonymous surveys.

Close examination of ways to encourage greater responses to e-surveys is warranted. It will be necessary for schools to monitor the frequency of e-surveys to parents and teachers and prioritise their issue, to concepts directly aligned to improving student learning outcomes.

### **8.5.2 The Process**

This study examines the process of using the on-line environment to share formative assessment processes that actively involve and value the voice of the student as authentic assessment evidence to report progress and achievement to parents. This was a significant change initiative from reporting to parents on paper, involving the reconceptualization of the role of the teacher in reporting 'with' the student.

As with any change initiative, resistance from some stakeholders is expected. Teachers require full understandings of the rationale for change and if their beliefs and assumptions align to valuing the change for the betterment of student learning outcomes, acceptance of change processes are improved. In moving from paper to digital reporting, it is identified that on-going professional development in both pedagogy and technical expertise is required to support such significant change processes.

### **8.5.3 Data collection**

Data collection methods were selected and used to best identify reflections and interpretations of those who were using the learning stories as a method of reporting student progress and achievement: students, teachers and parents. Surveys, questionnaire and interviews were used to collate perceptions from the three stakeholder groups. This was a case study in one school, which may be perceived as a narrow and limited focus, however, it offers both a model and starting point for other schools to examine for further research ideas.

## **8.6 SUGGESTIONS FOR FURTHER RESEARCH**

The findings of this study have merit in opening up ideas for further research as future-focused schools reconceptualise their teaching/learning/assessment

processes. Further research that can result from the platform of this research can be classified under the headings of 'Extension and Variation'.

### **8.6.1 Extension**

Using the same methods of data collection, this research could be extended across other schools, selected for a variety of localised contexts including: decile rankings, ethnicity compositions and school roll numbers. The use of the three stakeholder groups, students, teachers and parents is recommended for triangulation of the data. If the research was extended with these considerations and using a greater sample size, the validity and findings would be considerably enhanced and of interest across a wider scope.

### **8.6.2 Variation**

The findings of this study provide a catalyst for further research. This thesis explored the use of critical learning conversations between student and teacher, for the purpose of student reflection and self-reporting in the core curriculum areas of literacy and numeracy. It would be of great interest to investigate the use of student reflection and self-reporting to evaluate learning outcomes, when this concept is applied to creativity, the Arts, dispositional and complex learning in the other curriculum essential learning areas.

Similar case studies could be carried out in differing schools with regard to their decile ranking, location, roll size etc.

Another variable to consider in further research is to investigate and examine a variety of web 2.0 tools and platforms to capture, collate and archive student reflections as portals for life-long digital portfolios.

## 8.7 FINAL COMMENTS

As digital devices flood into schools opening up huge learning opportunities, full emphasis must be placed on how these devices can be used to drive learning. Learning outcomes must drive the use of the technology, not the technology driving the learning. The availability of cost effective digital devices in schools is the catalyst for schools to adapt and reshape how education is constructed with learners, teachers, school leaders and parents. Blended learning, employing effective teaching methods as identified in this thesis using an assessment capable model, with its focus on self-directed learning using technology, lies at the heart of school re-conceptualisation. The time is now to re-evaluate the impact of technology in schools. Students today are part of a demographic for whom technology is as basic as the most rudimentary of activities; eating, drinking, breathing. We cannot conceive the transformations to society that students sitting in schools today will spearhead. Tweaking the status quo of a model where technology is simply added to an industrialised model of schooling is not an option. Informal learning is booming as an outcome of the proliferation of mobile devices in all walks of life and information services. Schools have no option but to design new learning environments. Learning to meet the needs of both today and tomorrow's students must be: adaptive, connected, personalised, social, on-line, mobile, reflective and creative.

This research has examined a personalised, online, formative based self-assessment practice that places the student in a position of ownership of their learning. Student reflections in critical learning conversations are adaptive as they expose an accurate picture of where the students' learning is situated; the strengths and gaps of the learner's needs and form the blueprint of where to next for tailoring future learning design.

*Figure 8.1* illustrates how the student-centered assessment model using 'critical conversations' in Learning Stories, supports and develops; relationships, student agency, intrinsic motivation, ownership, design and transformation of learning, as evidenced in this research in the context of the case study school.

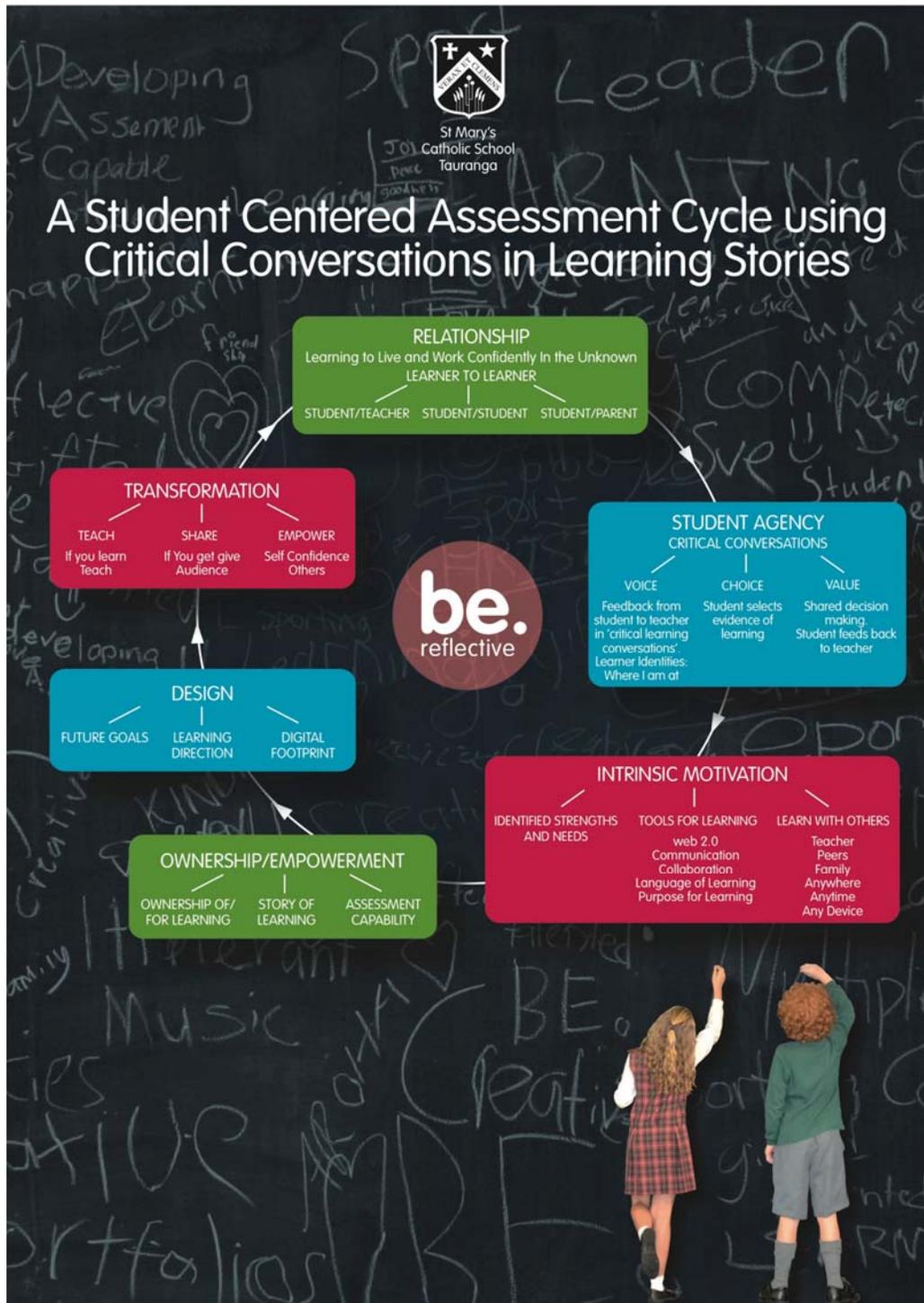


Figure 8.1. A Student-Centered Assessment Cycle using Critical Conversations in Learning Stories

The results of the three stakeholder groups, students, teachers and parents in this research, comprehensively indicate a readiness to re-conceptualise assessment practice. The students interviewed in the focus groups for this research were arguably the most optimistic about how learning could be. Combine their belief in technology and optimism in innovation, leaders, teachers and parents must heed the voice of the digital natives. As leaders at all levels in the education system control resourcing and policy for learning, courageous decision making falls on their shoulders to create climates which are open to innovation, experimentation and re design. Responsibility to meet the needs of today's students falls squarely on the shoulders of leaders who are courageous, creative, experimental and open to new designs for learning. Today's leaders must be beacons of hope for all our children, in the belief that each child can succeed by equipping them with the dispositions, skills, values, tools and self-belief in their own potential to make a difference for themselves and others in society, which ultimately is the gift of an education for life.

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Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

## APPENDICES

### Appendix A: Informed Consent – Children



#### Informed Consent Form – Children

- I know that I don't have to help with the project, but I would like to.
- I know that I will be answering some questions and may be invited to join a group of children my age as part of the project.
- I know I can stop whenever I want to.
- I understand that the researchers have to contact my parent and school principal if I report or my questionnaire responses indicate that I am feeling very sad or have been hurt.
- I know that I need to write my name in the space below, before I can help with the project.

Child's Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix B: Informed Consent – Primary Carers



### Informed Consent Form – Primary Carers

- I understand the purpose, procedures, and risks of this project, as described within it.
- I have discussed this project with my child.
- I am willing for my child to become involved in the project, as described.
- I understand that both my child and I are free to withdraw participation at any time.
- I understand that no personal identifying information, like names or addresses, will be published in the researcher's thesis and journal articles.\
- I understand that if my child or I are required to participate in an interview, questionnaire or survey my and my child's responses and details will be stored separately and securely at the School of Psychology in Curtin University of Technology for a minimum period of 5 years, after which it will be destroyed confidentially.
- I understand that the school principal and I will be contacted if my child questionnaire indicates that he/she is distressed/in danger or my child reports any distress/danger during the group sessions.

Please feel free to approach me or contact me if you need any further information or have any questions.

Parents Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Child's Name: \_\_\_\_\_ My child is a (please circle): Boy / Girl

School: \_\_\_\_\_ Year & Class \_\_\_\_\_

Home Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_

**If you AGREE to participate, please provide the contact detail of two relatives or friends in NZ whom we could contact in case you move.**

CONTACT 1

CONTACT 2

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Home Phone: \_\_\_\_\_

Home Phone: \_\_\_\_\_

## Appendix C: Participation



### **An Investigation into a Student-Centered Approach to Assessment and Self Reporting Using e-Portfolios**

I \_\_\_\_\_ have read the information on the attached letter. Any questions I have asked have been answered to our/my satisfaction. I agree to participate in this research but understand that I can change my mind or stop at any time.

I understand that all information provided is treated as confidential.

I agree for this interview to be taped/ recorded.

I agree that research gathered for this study may be published provided names or any other information that may identify me/us is not used.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Investigator: \_\_\_\_\_ Signature: \_\_\_\_\_

## Appendix D: Participant Information Sheet



### Science and Mathematics Education Center

#### Participant Information Sheet

My name is Janet McCarroll I am currently completing a piece of research for my Masters of Philosophy at Curtin University.

#### **Purpose of Research**

I am interested in finding out about how a school uses a student centered approach to assessment and self-reporting using e- Portfolios. I will ask you some questions relating to ICT and the St Mary's Learning Management System, 'KnowledgeNET' which will give me an insight into your thoughts, views and ideas. The interview process will take approximately 20 minutes.

#### **Consent to Participate**

Your involvement in the research is entirely voluntary. You have the right to withdraw at any stage without it affecting your rights or my responsibilities. When you have signed the consent form I will assume that you have agreed to participate and allow me to use your data in this research.

#### **Confidentiality**

The information you provide will be kept separate from your personal details, and I will only have access to this. The interview transcript will not have your name or any other identifying information on it and in adherence to university policy, the interview

tapes and transcribed information will be kept in a locked cabinet for at least five years, before a decision is made as to whether it should be destroyed.

### **Further Information**

This research has been reviewed and given approval by Curtin University of Technology Human Research Ethics Committee (Approval number xxxxx). If you would like further information about the study, please feel free to contact me on 0212948508 or by email: [jmccarroll@stMary'stga.school.nz](mailto:jmccarroll@stMary'stga.school.nz). Alternatively, you can contact my supervisor Professor Darrell Fisher on 61 8 92663110 or [D.Fisher@curtin.edu.au](mailto:D.Fisher@curtin.edu.au).

**Thank you very much for your involvement in this research, your participation is greatly appreciated.**

*This study has been approved by the Curtin University Human Research Ethics Committee.. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or emailing [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au)*

## Appendix E: Consent Form



- I understand the purpose and procedures of the study.
- I have been provided with the participant information sheet.
- I understand that the procedure itself may not benefit me.
- I understand that my involvement is voluntary and I can withdraw at any time without problem.
- I understand that no personal identifying information like my name and address will be used  
and that all information will be securely stored for 7 years before being destroyed.
- I have been given the opportunity to ask questions.
- I agree to participate in the study outlined to me.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Witness Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix F: St Mary's Catholic School



### **An Investigation into a Student-Centered Approach to Assessment and Self Reporting Using e-Portfolios**

I \_\_\_\_\_ have read the information on the attached letter. Any questions I have asked have been answered to our/my satisfaction. I agree to participate in this research but understand that I can change my mind or stop at any time.

I understand that all information provided is treated as confidential

I agree for this interview to be taped/recorded.

I agree that research gathered for this study may be published provided names or any other Information that may identify me/us is not used.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Investigator: \_\_\_\_\_ Signature: \_\_\_\_\_

## Appendix G: The New Role of ICT in St Mary's Catholic School

In preparation for our community, parents and students to access 'Knowledge Net', the St Mary's Learning Management System, we require an overview of the ICT capacities of each St Mary's household.

KnowledgeNet facilitates 24/7 access at school and home from any Internet enabled computer. This 'safe' learning environment can only be accessed through a personal/family password.

To ensure all students have equitable access to the global, rich learning opportunities KnowledgeNet provides, the school will meet the needs of those students who cannot access the Internet at home.

There are 23 questions in this survey

### Your Details

1 Please enter your Family Name \*

Please write your answer here:

2 Please enter your child/children's name(s) & year(s) \*

Please write your answer here:

eg; John (3), Janet (5)

### Technology At Home

3 Do you have any computers in your household? \*

Please choose only one of the following:

Yes

No

4 How many computers do you have in your household? \*

[Only answer this question if you answered 'Yes' to question '3']

Please choose the appropriate response for each item:

	Desktop	Laptop/Notebook
None	<input type="radio"/>	<input type="radio"/>
1	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>

Desktop Laptop/Notebook

3

4 or more

5 What sort of computers do you use? \*

[Only answer this question if you answered 'Yes' to question '3' ]

Please choose all that apply:

Microsoft Windows

Apple Mac OS

Linux

Other:

6 Are any of your PCs or laptops able to access the Internet? \*

[Only answer this question if you answered 'Yes' to question '3' ]

Please choose only one of the following:

Yes

No

7 Would you or your family make use of school computers to access learning resources & tools, if they were available to you? \*

[Only answer this question if you answered 'No' to question '6' ]

Please choose only one of the following:

Yes

No

8 What sort of Internet connection do you have? \*

[Only answer this question if you answered 'Yes' to question '6' ]

Please choose only one of the following:

Broadband

Dial-up

I'm not sure

Other

9 We regularly use computers at home for: \*

[Only answer this question if you answered 'Yes' to question '3' ]

Please choose all that apply:

- General Internet access
  - Email access
  - Social networking
  - Playing games
  - Online banking
  - Internet shopping
- Other:

10 Which of the following electronic devices do you have in your household? \*

Please choose all that apply:

- Mobile Phone
- Games Console
- DVD Player
- Digital Camera
- Video Camera
- Netbook

11 I believe that access to computers at home has a positive effect on learning. \*

Please choose only one of the following:

- Yes
- No

12 I believe that access to computers at school has a positive effect on learning. \*

Please choose only one of the following:

- Yes
- No

13 I am interested in supporting the school to increase the number of computers available to students, by: \*

Please choose the appropriate response for each item:

- |                       | Yes                   | Uncertain             | No                    |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Donation              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Helping to fundraise  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sponsoring a computer | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

What Do The Children Think?

Please discuss the following questions with your child/children:

14 Our child/children believe(s) that computers and the Internet help their learning: \*

Please choose only one of the following:

Yes

No

15 Our child/children believe(s) that computers are important in being a life-long learner: \*

Please choose only one of the following:

Yes

No

16 Our child/children believe(s) that the number of computers in their classroom(s) is: \*

Please choose only one of the following:

Not enough

Just right

Too many

Safety & Security

17 Is/are your child/children allowed to access the Internet without supervision? \*

Please choose only one of the following:

Yes

No

18 Is/are your child/children able to access the Internet without supervision? \*

Please choose only one of the following:

Yes

No

19 Which of the following technique(s) (if any) do you use to monitor or control Internet access at home? \*

Please choose all that apply:

The location of the computer(s)

Supervision

Internet filtering software

Other:

## School Website & Email Communication

20 I currently use the school website (<http://www.stMary'stga.school.nz>) for the following: \*

Please choose all that apply:

- I didn't know St Mary's had a website
- Checking school event dates and times
- Reading school notices
- Contacting the school (phone and email addresses)
- Accessing past and current newsletters
- Accessing reply slips

Other:

21 Would you prefer to receive all school & PTA notices via email? \*

Please choose only one of the following:

- Yes
- No

22 If we don't have your email address, or you wish to update it, please add it here:

Please write your answer here:

23 Suggestions or comments regarding the use of the school website:

Please write your answer here:

1980-01-01

Please fax your completed survey to: 07 578 8956 Submit your survey.

Thank you for completing this survey.

## Appendix H: Teaching Staff Review of the On Line Writing Sample In KnowledgeNET

### 2009 MoE Target in Literacy

There are 13 questions in this survey

Teaching Staff Review of the On Line Writing Sample

1 2009 MoE Target in Literacy

Goal 2: "To develop Personalised Learning Reporting progress of student writing and reading using e-Portfolios- including student reflection"

Was the on line writing sample and reflection successful in meeting Goal 2 of the MoE 2009 literacy Target? \*

Please choose **only one** of the following:

- 1 - Agree
- 2
- 3
- 4
- 5 - Disagree

Make a comment on your choice here:

2 Learning Stories/Narratives

Do you think using an online learning story allows for students active involvement in their learning? \*

Please choose **only one** of the following:

- 1 - Agree
- 2
- 3
- 4
- 5 - Disagree

Make a comment on your choice here:

3 Metacognition

Do you think that the writing sample met the need for student self-reflection and involvement in their own learning? \*

Please choose **only one** of the following:

- 1 - Agree
- 2
- 3
- 4
- 5 - Disagree

Make a comment on your choice here:

4 How useful was the audio tool 'jing' in terms of developing the skill of articulating and making 'Thinking Visible' for the student? \*

Please choose **only one** of the following:

- 1 - Useful
- 2
- 3
- 4
- 5 - Not Useful

Make a comment on your choice here:

5 Technical

Were the technical skills required for this on line writing sample well supported by In house support i.e. ICT Team, Lead team and Outside Assistance including ICT Facilitator? \*

Please choose **only one** of the following:

- 1 - Agree
- 2
- 3
- 4
- 5 - Disagree

Make a comment on your choice here:

6 As a whole staff we have navigated new learning territory. Rate your level of competency using KnowledgeNET. \*

Please choose **only one** of the following:

- 1 - High
- 2

- 3
- 4
- 5 - Low

Make a comment on your choice here:

#### 7 Professional Development

How important is further Professional Development necessary to build your understanding of the value of Learning Narratives/Stories as a key element in the Teaching/Learning/Assessment cycle? \*

Please choose **only one** of the following:

- 1 - High
- 2
- 3
- 4
- 5 - Low

Make a comment on your choice here:

#### 8 Teaching and Learning

Next time we report writing to parents, would you prefer to send home the writing book or complete another on line sample? \*

Please choose **only one** of the following:

- Writing Book
- Writing sample in Learning Story On Line

Make a comment on your choice here:

#### 9 Writing Book

Writing sample in Learning Story On Line

How valuable do you see KnowledgeNET in connecting parents with their child's learning journey? \*

Please choose **only one** of the following:

- 1 - Valuable
- 2
- 3
- 4
- 5 - Not Valuable

Make a comment on your choice here:

10 How could the B.O.T. support your learning journey in using KnowledgeNET to improve Learning Outcomes for your students?

Please write your answer here:

11 To ensure that next time we use KnowledgeNET for school wide reporting mid-year 2010, we ask for and value your comments to help us refine the process and ensure that both teachers and students are set up for optimum success. Please enter your comments in the PMI comment box.

**PLUS**

-----

Please write your answer here:

**MINUS**

-----

Please write your answer here:

**INTERESTING**

-----

Please write your answer here:

1980-01-01

{FAX\_TO} Submit your survey. Thank you for completing this survey.

## Appendix I: KnowledgeNet Survey

We have recently launched KnowledgeNET and appreciate your ideas and thoughts.

There are 5 questions in this survey

KnowledgeNET launch

1 How effective is the audio tool (listening to your child speak) as a means of communicating your child's self-assessment of their writing? \*

Please choose only one of the following:

- 1-Not effective
- 2
- 3
- 4
- 5-Very Effective

2 How effective is this form of reporting compared with sending home your child's writing book? \*

Please choose only one of the following:

- 1-Not effective
- 2
- 3
- 4
- 5-Very Effective

3 Have you taken the opportunity to visit your child's class homepage? \*

Please choose only one of the following:

- Yes
- No

4 How effective do you see your child's class homepage as a means of being connected with the learning journey of your child?

[Only answer this question if you answered 'Yes' to question '3' ]

Please choose only one of the following:

- 1-Not effective
- 2

3

4

5-Very Effective

5 Is there any desired context/content/ideas that you would like to see added to your child's homepage/class homepage?

Please write your answer here:

2009-06-27

{FAX\_TO} Submit your survey. Thank you for completing this survey.

## Appendix J: Teacher 2010 Learning Stories

The Directions for Assessment in New Zealand (DANZ) paper provides broad advice to the Ministry of Education to guide and inform the design of new and improved strategies, policies, and plans for assessment.

Quotes in this survey are in italics and can be found in the DANZ report using the following link:

<http://assessment.tki.org.nz/Assessment-in-the-classroom/Directions-for-assessment-in-New-Zealand-DANZ-report>

The information obtained through this survey will be used for self-review of our reporting practices at both BoT and Management levels, to help inform and refine our future school reporting processes and for publications regarding educational research.

There are 17 questions in this survey

### Making Thinking Visible

1 [1]

DANZ: “getting it right’ begins with ensuring that students are placed at the heart of the assessment process and educated in ways that develop their capability to assess their own learning’...

Throughout this process my children are aware of where they are at, where they are going and how to get there?

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

2 [2]

DANZ: ‘all young people should be educated in ways that develop their capacity to assess their own learning’

An online learning story allows for students active involvement in their learning. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree

- 3 - Undecided  
 4 - Disagree  
 5 - Strongly Disagree

Make a comment on your choice here:

3 [3]

DANZ: 'At present the most important assessment decisions tend to be made by adults on behalf of students. Students should be involved in assessment as a matter of course because it is a core aspect of their learning, and they should contribute to any assessment decisions that are used to inform their learning goals.'

My students were able to participate as fully in assessment as in learning. \*

Please choose only one of the following:

- 1 - Strongly Agree  
 2 - Agree  
 3 - Undecided  
 4 - Disagree  
 5 - Strongly Disagree

Make a comment on your choice here:

4 [4]

The Learning Stories met the need for student self-reflection in their own learning. \*

Please choose only one of the following:

- 1 - Strongly Agree  
 2 - Agree  
 3 - Undecided  
 4 - Disagree  
 5 - Strongly Disagree

Make a comment on your choice here:

5 [5]

DANZ: 'strengthening the assessment capability of students, by enhancing the assessment capabilities of teachers, school leaders, parents, and those who support them'.

Further Professional Learning and Development is necessary to build my understanding of the value of Learning Narratives/Stories as a key element in the Teaching, Learning and Assessment capabilities/cycle \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

6 [6]

DANZ: 'Students who have developed their assessment capabilities are able and motivated to access, interpret, and use information from quality assessments in ways that affirm or further their learning.'  
A Learning Story /e-Portfolio enables students to access, interpret and use quality info to support their assessment and learning. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

7 [7]

Connecting parents with their child's learning journey through using a Learning Management System (KnowledgeNET) is very important?

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

### Implementation

8 [9]

The technical skills required for this on line reporting were well supported by in house support ie. ICT Team, Management Team and Outside Assistance. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

9 [10]

As a whole staff we have navigated new learning territory. My level of competency using KnowledgeNET is of a high standard.

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

10 [11]

I have coped with the technological changes involved with a Learning Management System.

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

11 [12]

Would you prefer to send home the child's books & a paper report or complete another online sample? \*

Please choose the appropriate response for each item:

- |                                | Yes                   | Uncertain             | No                    |
|--------------------------------|-----------------------|-----------------------|-----------------------|
| Child's books & a paper report | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Another online sample?         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

12 [13]

How could the Management support your learning journey in using KnowledgeNET to improve Learning Outcomes for your students? \*

Please write your answer here:

13 [14]

The following processes used for teaching and learning have changed positively as a result of implementing KnowledgeNET (our Learning Management System)

Please choose the appropriate response for each item:

	Reporting	E-Portfolios	activities	Accessability to resources and	Audience	Engagement	Communication	Feedback opportunities	Student reflection
1 - Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 - Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 - Undecided	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 - Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 - Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14 [15]

How can a school/class environment be adapted and improved in order to achieve both high quality student outcomes required and the equal opportunity for all learners to be involved in a Learning Management System?

Please write your answer here:

15 [16]

To ensure that next time we use KnowledgeNET for school wide reporting we ask for and value your comments to help us refine the process and ensure that both teachers and students are set up for optimum success. Please enter your comments ... PLUS

Please write your answer here:

16 [17]MINUS

Please write your answer here:

17 [18]INTERESTING

Please write your answer here:

01.01.1970 – 12:00

Submit your survey.

Thank you for completing this survey.

## Appendix K: Learning Stories Parent Survey 2010

In 2009 St Mary's school introduced the concept of an e-Portfolio to our community when we used an 'On Line Learning Story' to report in writing mid-year and maths later that year. Every student was issued with a password to access the 'Learning Stories' stored in an electronic portfolio within KnowledgeNET our Learning Management System

"An electronic portfolio uses technologies as the container, allowing students/teachers to collect and organise artifacts in many media types, (audio, video, graphic, text); and using hypertext links to organise the material, connecting evidence to appropriate outcomes, goals or standards." (Barrett, 2005. P.5)

In July 2010, St Mary's School used Learning Stories in KnowledgeNET to report Writing, Reading and Mathematics to parents for our Interim National Standards. The New Zealand Curriculum 2007 states:

"The primary purpose of assessment is to improve students' learning and teachers' teaching as both student and teacher respond to the information that it provides. With this in mind, schools need to consider how they will gather, analyse, and use assessment information so that it is effective in meeting this purpose"

We encourage all parents to complete the survey, which is anonymous. The information obtained through this survey will be used for self-review of our reporting practices at both B.O.T. and Management levels, to help inform and refine our future school reporting processes and for publications regarding educational research. We thank you for your support in completing this survey.

There are 9 questions in this survey

::Secret Word is Balthasar ::

1 [1]The information provided for my child/ren in KnowledgeNET helps him/her see where they are currently at with their learning. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

2 [2]The KnowledgeNET Learning Stories provided an opportunity for my child/ren to reflect on and discuss their learning with me. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

3 [3]The Learning Stories provided clear learning intentions (We are learning to - WALT) \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

4 [4]The Learning Stories provided effective teacher feedback. \*

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Make a comment on your choice here:

5 [5]The Assessment information (such as the Reading Wedge and Maths Table) in the KnowledgeNET e-Portfolio enabled me to understand my child/rens progress and achievement.

Please choose only one of the following:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree

5 - Strongly Disagree

Make a comment on your choice here:

6 [6]

The following processes used for teaching and learning have changed positively as a result of implementing KnowledgeNET (our Learning Management System)

Please choose the appropriate response for each item:

	Reporting	E-Portfolios	Accessibility to resources and activities	Audience, engagement	Communication	Feedback opportunities	Student reflection
1 - Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 - Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 - Undecided	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 - Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 - Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7 [7]

I have coped with the technology changes in relation to St Mary's over the last two years. \*

Please choose only one of the following:

1 - Strongly Agree

2 - Agree

3 - Undecided

4 - Disagree

5 - Strongly Disagree

Make a comment on your choice here:

8 [8] This year our reporting process has included Parent Teacher Interviews, Online Reporting and will include an End of Year Written Report.

Overall, I am in favour of the shift towards on-line student reporting (e-Portfolios) as a part of the reporting process. \*

Please choose only one of the following:

1 - Strongly Agree

2 - Agree

3 - Undecided

4 - Disagree

5 - Strongly Disagree

Make a comment on your choice here:

9 [9]

Overall, I am in favour of the shift towards on-line communication with parents / caregivers. \*

Please choose only one of the following:

1 - Strongly Agree

2 - Agree

3 - Undecided

4 - Disagree

5 - Strongly Disagree

Make a comment on your choice here:

01.01.1970

–

12:00

Submit

your

survey.

Thank you for completing this survey.

## Appendix L: Nick Rate

After our recent Professional Development we are wanting some quantifiable data/ feedback on a few of Nick's questions. It is intended that this survey is short and sharp so please make your responses brief. It is intended that we will also create a forum on Knowledge NET for further discussions and reflections with an opportunity for deeper thinking to be shared.

For this survey we would like you to enter in your name as in previous surveys we haven't had a full staff response. Without a full response it is hard to use the data as 'true' evidence and justification for future decisions. We will then be able to identify those who have completed the survey.

There are 8 questions in this survey

Your details

1 [D1]Name \*

Please write your answer here:

Feedback

2 [1]DANZ : 'strengthening the assessment capability of students, by enhancing the assessment capabilities of teachers, school leaders, parents, and those who support them'.

Further Professional Learning and Development is necessary to build my understanding of the value of Learning Narratives/Stories as a key element in the Teaching, Learning and Assessment capabilities/cycle \* \*

Please choose only one of the following:

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Make a comment on your choice here:

3 [2]In comparison with other Professional Development opportunities we have had as a staff Nick Rate was extremely valuable. \*

Please choose only one of the following:

- Strongly Agree
- Agree
- Undecided

- Disagree
- Strongly Disagree

Make a comment on your choice here:

4 [3]As a whole staff we have navigated new learning territory. My level of competency using KnowledgeNET is of a high standard. \*

Please choose only one of the following:

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Make a comment on your choice here:

5 [4]I agree that the impact of using an e-Portfolio will change teaching and learning to improve learning outcomes. \*

Please choose only one of the following:

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Make a comment on your choice here:

6 [5]What has shaped your e-Portfolio pedagogy? \*

Please choose all that apply:

- pedagogical beliefs
- research
- trends
- Professional Development
- Other:

7 [6]What type of e-Portfolios are yours? \*

Please choose all that apply:

- Process
- Accountability

Showcase

8 [7]Your thoughts? \*

Please choose the appropriate response for each item:

	Yes	Uncertain	No
Are your parents ready?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are your teachers ready?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is the School leadership ready?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is it important for e-Portfolios in your school to have a consistent look and feel?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Should your school expect the teachers to have a reflective e-Portfolio just as the students do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Should students and teachers use the same tool (ie. Knowledge NET) for their e-Portfolios?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

01.01.1970 – 12:00

Submit your survey.

Thank you for completing this survey.

## Appendix M: KnowledgeNET Questionnaire May 2011

### St Mary's Parent Information Sessions

#### Knowledge Net Requirements Questionnaire

St Mary's school is currently reviewing the way Knowledge Net is used, understood, and maintained, and they are interested in hearing the Parent's voice!

Below are a series of questions that we would like you to answer so the school can see how to improve the parents understanding of and use of Knowledge Net as a tool to aid and follow your child's learning over time.

**Please circle or tick the appropriate answer.**

1. a) Do you know about Knowledge Net and how to access it?

**Yes**                      **No**

	Not at all		Mostly		Very Useful/ Accessible	Not applicable
b) If YES, how useful and easily accessible do you find it.						

2. If you would like to know (more) about Knowledge Net, what sort of learning environment would you like to see available to parents? (Tick 1 or more options)

a) "Drop-In" Learning Sessions, at school one day per week from 3pm to 8pm	
b) Scheduled "Drop-In" learning sessions for specific Year groups (as per (a) above)	
c) Social "Book-Club" style evening sessions at someone's home	
d) Evening Parent session in school hall (for up to 20 users) i) Year specific ii) Syndicate specific iii) General	
e) Other: Please specify	

3. What sort of information would you like to have available at these Knowledge Net learning sessions?

a) Basic access and navigation information	
b) How to set up and maintain a home page	
c) How to interpret uploaded information and upload new information/data/photos etc.	
d) Links to other useful sites, freeware, learning tools/game sites etc.	
e) Other (please specify):	

4. If there were more opportunities available for parent information sessions, what topics or speakers would you be interested in hearing about/from?

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5. If you are able to assist the teacher in a technical assistant type role, to maintain and update Knowledge Net regularly, please provide your name and contact detail below.

Name: \_\_\_\_\_

Ph: \_\_\_\_\_

**Thank you very much for taking the time to complete this survey.  
Please return this survey in the PTA Post Box inside the sick bay near the office**

**by 27<sup>th</sup> May 2011.**