4.   Findings

The aim of the research project was to identify the shifts that occurred after a period of curriculum and pedagogical innovation during 2004 in two schools. The findings, structured by using the research questions, provide a picture of what was going on in each school.

School One

This section reports findings from document analysis and interviews, autophotography, and photo elicitation from eight teachers and eight students from one school in relation to each research question.[1]

1.   What was the extent and nature of any changes with respect to individual teacher practice and the practice of professional learning communities within and between the schools?

Teacher responses

The core teaching belief espoused by the school in its charter (2004–2006) documentation identified "earning power" as a key outcome for students. Learning power included the foundation skills of literacy and numeracy and the skills and attitudes to become lifelong learners. The charter described a focus on the "best of traditional and innovative approaches to learning". The excerpt from the charter reproduced below lists the ways in which teachers were expected to achieve the desired outcomes for students.

> All staff will base their teaching on:
>
> o   The belief that all students can learn;
>
> o   The need to instil in students the need to think of the rights of others and develop a sense of self responsibility;
>
> o   The desire to help all students develop a positive self-image and identity;
>
> o   Ensuring that all students need to be competent in acquiring basic skills as well as learning 'how to learn';
>
> o   The traditional values of applying effort and perseverance; and
>
> o   Encouraging students to take a growing responsibility for their own quality learning.

Action goals identified as key mechanisms for achieving the vision included: establishing curriculum integration; reviewing curriculum delivery and implementation statements; encouraging staff and pupils to be reflective practitioners; and encouraging staff to refine and improve practice through professional development. Further, the charter identified the Board of Trustees, teachers, parents, caregivers, and students as having collective responsibility for achieving the vision.

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[1] *Unless indicated otherwise, comments in quotation marks or in block quotes indicate excerpts taken directly from interview responses. These may not be grammatically correct. Other comments treated as quotations describe categories of responses from the interviews. Bracketed numbers record the number of individuals asking similar responses. Reported findings also include selected responses from autophotography and photo elicitation interviews. These responses, shown in text boxes, may also include incomplete or ungrammatical statements, as they record the actual language forms used by participants.*

The charter indicated a central intention to develop and refine the implementation of curriculum integration and alternative pedagogical approaches (for example, thinking skills). Responsibility for outcomes lay with the wider community of the school, and espoused beliefs focused on a wide interpretation of what constituted valued learning outcomes, including (but not limited to) academic outcomes.

During 2004 all teachers in the school engaged in professional development for implementing integrative curriculum designs and different pedagogical approaches, in line with the intended actions expressed in the charter documentation. They continued with this work during 2005. All teaching staff engaged in professional development that focused on action learning.

Responses from individual interviews with teachers provided information about what they conceived integrative curriculum designs to be. Their responses ($n = 8$) reported that curriculum integration meant deciding on a focus and linking all curriculum areas. Three responses further indicated that this should include all curriculum areas to a greater or lesser extent. Three responses focused on working from the needs or interests of students in authentic contexts, three responses identified pedagogies, one teacher talked about the need for community involvement in learning, and two teachers also mentioned teachers working together.

The implementation of integrative curriculum designs, as described by Beane (1997), required teachers to change their professional practice, both individually and collectively. When asked to describe the changes they had made, teachers reported change in a number of areas, and sometimes added evaluative comments about the nature of those changes.

Seven reported the introduction of school-wide changes to planning and reporting. Five explained that student interest now formed the basis for planning, but that teachers continued to decide on and plan the actual units of work:

> Children are more involved in making choices about learning.

One teacher commented that they now made "taking action"—meaning that students used their new knowledge and skills to find solutions for identified problems or concerns—an integral part of the unit. While developing a whole-school approach to unit planning, teachers also reported that they focused more on the individual needs and interests of students ($n = 5$). Within the general unit frameworks, teachers allowed students to engage in learning activities in different ways and to "express their thinking in different ways".

Teachers discussed a number of ideas that indicated shifts in their actual teaching practice. They also reported an increase in the direct teaching of learning skills and strategies. Comments included:

> Teaching about learning and thinking is more important than information about things. ($n = 2$)

> We are using more co-operative activities. ($n = 3$)

> Teachers teach children to plan their own work at their own pace. ($n = 2$)

Teacher response

Co-operative learning actively supports the diverse learning needs of children. Children are grouped according to the nature of the task and the level of support that individuals require. Co-operative grouping enables children to participate in ways that all can achieve the goals of the task. By working together, they can share ideas and expertise and teach other.

Four responses noted that changes which included a more direct focus on direct skill teaching required "very structured teaching". Teachers recognised the need for explicit teaching for students to be able to learn about and practise the skills during learning activities.

All participating teachers ($n = 8$) reported that how they worked together as a staff had changed as they implemented integrative curriculum designs. They reported more joint planning and constructive talk about teaching ($n = 4$), and providing feedback to each other about their teaching ($n = 3$). Teachers reported that working together provided opportunities for personal and professional support, focused on improving learning for their students.

Teacher Response

Teachers are the most important enablers of learning. They guide, support, praise encourage and provide feedback to challenge children as far as they can go. The teachers are committed to supporting each other and the children. They strive to keep professionally informed because they are passionate about improving learning for kids.

Teacher Response

Celebrations are in balance at our school. Teachers push themselves but not too far or too fast. Collegial support at both personal and professional levels is strong.

Five responses also indicated concerns about the increased amount of collaborative work. One teacher of this group did not support the increase in joint planning: "I can't do what I want to do". Another thought that joint planning of units was not very successful: "Our units seem to go belly-up half way through". Another teacher commented that it was "a challenge to get enough opportunities for in-depth learning" included in the unit planning.

Involvement in whole-school professional development initiatives also increased the joint work resulting from planning term-long, whole-school units. All of the participant teachers undertook professional development related to action learning during 2005. Participation in shared and "much more focused" professional development provided opportunities for teachers, both individually and

Teacher Response

Professional development improves my knowledge of pedagogy to meet diverse needs. I actively seek knowledge, to increase my understanding and then seek to apply the ideas in a practical way. I have moved from trying to shift children to shifting myself. I ask questions of my practice- "What do I need to do?" How can I change what I am doing to help children learn?" What other approaches can I use?"

collectively, to inquire into their practice and to share their strengths. One teacher remarked, "Combining ideas and getting different perspectives has been awesome". Another noted that involvement in professional development caused individual teachers to focus on their own practice as a way of improving outcomes for students.

The changes reported by teachers went beyond the organisation, management and content of learning and teaching in the school. As teachers developed ways to teach thinking and learning skills explicitly within their units of work, three teachers reported shifts in their beliefs about what students could do and achieve:

> Teachers believe that students can do more now.
>
> Teachers are allowing students to be more creative.
>
> Our expectations are probably too high now—we expect students to be able to do things without teaching them like research skills.

Another teacher said that expectations "probably haven't changed".

To some degree teachers supported changes they had made as a school to curriculum design and teaching focuses; five reported that everyone was committed to the vision of the school, with one teacher commenting, "We are all at different stages but all facing the same way".

Five teachers said that change would continue only if there were not too many changes in staff. Teachers also identified a second difficulty in relation to the changes they were implementing: documentation required by the school, described as "paper work", had not yet developed in line with the practices teachers used. Five teachers noted that assessment, in particular, required further work. While teachers reported a shift in their assessment practices to focus more on the assessment of learning skills and strategies, school documentation continued to concentrate on recording the progress of student learning in terms of the achievement levels described in individual curriculum statements.

Teacher Response
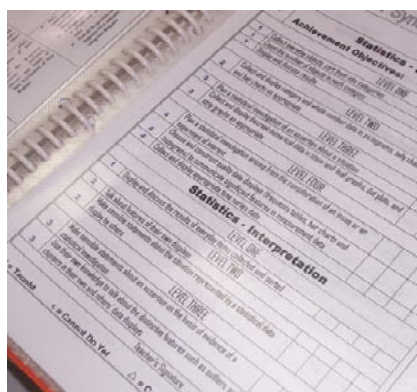
The paper work gets in the way. Some of what we do hasn't kept up with the changes we have made to our curriculum delivery. This is being addressed but some of the traditional things (i.e. the checklists) don't match with our new approaches such as formative approaches to assessment.

Student responses

Student responses in the group interviews indicated that they had not noticed a great deal of change in what teachers were doing. One group of students identified changes to timetabling in classroom programmes. Other group responses discussed new buildings and that things at school were "OK".

2. *What key factors influenced student engagement in learning?*

Teachers' responses

Teachers wanted to know whether the changes made in curriculum design and teaching methods had improved the engagement of students in learning.

Teachers believed that integrative curriculum designs had potential to influence student engagement in learning positively. Beane (1997) describes curriculum as integrative when the approaches used seek to organise learning around personal and social issues, problems, and concerns identified in or developed from the lives of learners in the world in which they live. Teachers reported that they planned units based on students' interests, issues, or concerns ($n = 4$), involved students in planning for learning ($n = 1$), and ensured that learning was relevant to their lives ($n = 1$). Two teachers commented that, while they wanted to work in these ways, they were "not quite at that stage yet". Teachers wanted students to learn in an environment that created links between school and the other aspects of their lives.

Teacher Response

Integrated curriculum is based on teachers' knowledge of their children's interests. Working as a team on activities builds an environment of interest, focus, captivation and perseverance. Ownership and choice are key components but it's hard to incorporate this into the class learning programme.

Teachers identified what they thought they had achieved. They reported an emphasis on building supportive classroom environments (n = 7), building peer support through co-operative learning ($n = 4$), and increasing student ownership of learning by creating clear learning outcomes with students ($n = 3$).

Teacher Response

Cooperative learning engages those children who don't normally get involved. It's fun. Children are focused, they know what the learning outcomes should be, they plan to achieve these while learning and supporting each other. Children are more likely to be on task longer, more likely to problem solve, more likely to be creative as they listen, share and work in groups or pairs.

However, when asked to evaluate the effectiveness of links made with the cultural contexts of student lives, teachers reported mixed views and mixed understandings. Three responses reported that the content of units made such links. The following comment exemplifies this view:

> They are doing recreation, I've got lots of Māori students in my class, we are going to be looking at Kapa haka …

Two teachers assumed that students would recognise inherent cultural links in unit work without needing them to be made explicit:

> … looked at the cultural perspective—cultural identify—who am I? I tried bringing in New Zealand history but that didn't work—I thought that's what they need …s o that was learning for me …

> I thought they'd make the connection, but they didn't.

Other teachers (*n* = 3) thought that creating links with the cultural contexts of the students was important, but were unsure how to proceed. They commented that parents/whānau needed to be involved more, without saying how this might be achieved:

> It would have been nice to have some of the other families in. (

> Not a lot of iwi support for the school.

Six teachers talked about changes they had noticed with student engagement in learning. Three responses noted positive changes in relation to motivation—"Children are excited about learning"— and the social norms prevalent in the school:

> Seniors work well with junior children.

> Children are learning more from each other like ways of presenting information.

Three teacher responses noted ongoing behavioural challenges that influenced student engagement in learning:

Student Response

I like doing art work. You can take it home and show your parents. (year 4)

I like art work. Art is easier although what our teachers expect is higher now. (year 6)

I like doing art a lot. It's fun. When I was little I wanted to be an artist. I'm good at art - it's easy. (year 6)

I like drawing. It gets me thinking about stuff and it's easier to draw what we know. It gives your brain a rest. (year 8)

During group interviews students discussed things they liked or disliked during "topic time", the time allocated in classroom programmes for integrative units of work. Students could name the topics completed and identified some they enjoyed (for example, the themes about "Friends" and "My place"—mentioned in relation to the amount of art completed).

Students also reported that they liked "thinking", "trying to achieve their goals", "teachers letting us do our own thing", " working more in groups", and "working more with younger children and being role models". These ideas were reflected by teachers when they described what they thought they had achieved in terms of improving student engagement in learning.

Students did not focus on the same aspects when they participated in autophotography and photo elicitation interviews. Here, when students were asked to think about what they liked or disliked about school, their responses focused on friends, doing physical education, and receiving awards.

Student Response

I like working on the computer. It does not take as long, it's not so much hassle and you can do things more easily. (year 4)

We enjoy using the computer- it's faster and it's fun. You can change words, look things up and play games. (year 6)

Student Response

I like the playground. My group plays here and we don't get bored. (year 6)

I like playing on the playground. It's fun to jump all over the place. I usually play there with my friends. Friends are important. They are cool and funny. (year 8)

All three groups of students in their interview responses identified the behaviour of other students as getting in the way of doing well at school.

3. What was the extent and nature of community involvement and participation in student learning?

The school wanted to identify the extent and nature of the involvement and participation of parents/whānau, because research has shown that strong and sustained gains in student achievement are possible when schools and families develop learning partnerships to support students' achievement at school (Alton-Lee, 2003). Teachers anticipated that the development of integrative approaches would provide a vehicle for strengthening existing participation, because they organised more opportunities for parents/whānau involvement as part of their unit planning. An example was "Pure Day"—the name given to a day organised as part of a unit when community members and parents contributed their knowledge and expertise to support students to try a range of leisure and sporting activities.

Teachers' responses

Teachers identified the kinds of involvement parents were having in the school. Five responses identified the three dominant forms of involvement: parenting (helping families establish home environments to support children as students); communicating (designing effective forms of school-to-home and home-to-school communications about school programmes); and volunteering (recruiting and organising parent help and support) (Alton-Lee, 2003).

> There's a lot more in-your-face focus with the newsletters.

Teachers were aware of the need to involve parents/whānau more closely in the learning of their children. They saw the "open door" policy of the school ($n = 5$) and planned sporting events ($n = 1$) as possible ways to encourage parents to come into the school:

> [Parents] will meet us out on the touch field and they will play a game with us. From there you have kind of got them …

Teacher Response

Parental involvement and participation with their children enhances community participation in learning activities at school. Sport provides a known territory for parents unlike the unknown territory of teacher talk. Childrens' eyes light up when parents unexpectantly turn up. Participation in other ways then builds- one parent is now coaching the school's sevens team. Relationship building is the key. Parents need to feel appreciated.

Another teacher indicated the need for students to be part of this process. This teacher and the students in the teacher's class invited parents/whānau to view and discuss their children's work at

the conclusion of a unit about whakapapa/family histories. The teacher and principal both commented that parents came along whom they had never seen before. The teacher discussed the potential quality learning experiences at school could have:

> It needs kids to be really excited about sharing. You have to get the kids saying 'Mum, Dad, you have to come'.

While the school attempted to increase parent/whānau participation in the learning of students at school, this had not yet happened to any great degree. Two teachers identified that parents/whānau probably did not know what was going on at school, and commented: "We just assume the kids go home and tell them, but maybe they don't".

Teachers also identified a number of factors beyond the school's control as reasons why they had not been more successful at involving parents/whānau in the learning of their children at school. These views closely aligned with barriers to learning identified in seven out of the 15 teacher autophotography and photo elicitation responses. Teachers perceived that it was primarily family factors, not school factors, that prevented the greater involvement of parents/whānau and improvement in learning for students. The teacher autophotography and photo elicitation response below provides an example of this kind of response, along with an explanation of what the school was trying to do to address these issues.

Teacher Response

Sleepy tired and hungry children are not able to connect with learning. We have two breaks at school to encourage healthy eating. The teachers sit with the children for 10 minutes to ensure that the children eat their food. This results in better playground behaviour too.

Student responses

Students mentioned a different form of parent/whānau involvement from the three identified by the teachers. One student group response reported that parents helped with homework. The autophotography and photo elicitation responses echoed this, as three student responses identified homework as a key conduit between home and school.

They also identified different reasons for their parents/whānau not being involved with school. Their interview responses indicated that work commitments prevented parents/whānau from coming to school for planned events, or becoming involved in school activities.

Student Response

My family helps me with my homework, especially spelling. (year 4)

My family helps me if I have trouble with homework. Dad likes helping me- it helps him learn too. (year 8)

Mum and Dad always help me with my homework, even when I don't ask. They try to help me read properly and do more of it. Sometimes they read to me and I read to them when they ask. They are quite interested because they want to help me learn. (year 8)

3. What relationship, if any, was there between the changes made by teachers with the development and use of integrative designs and alternative pedagogical approaches, and learning outcomes for students?

The aims of the professional development undertaken in 2004 were to change teacher practice, improve student engagement in learning, and increase parent/whānau participation in ways that would improve outcomes for students. The research project was intended to enable the school to explore the possible linkages between the changes and student outcomes.

Teachers' responses

At the beginning of the project, the majority of teachers ($n = 6$) believed that positive learning outcomes were possible through their efforts to develop integrative curriculum designs, combined with the use of different pedagogical approaches. Three responses in the initial interviews qualified this view, and indicated indecision, or the possibility of variable outcomes:

> Some kids possibly, if they come from a home and everything is being done for them, they may not want to take that step and become self-motivated learners.

> I think there are occasions where basic skills, basic things they are going to need really do need to be taught and if you can do that through integration, thank goodness. If you can't, you need to follow other structures.

> There is room for traditional approaches … I think there has to be a balance.

Teachers ($n = 7$) perceived that the changes they had made to their learning and teaching (for example, units based on the interests of students, and explicit teaching of learning skills and strategies) positively influenced the learning behaviours of students. They described a range of indicators to support their views:

> More precise talk about learning.

> [I'm not sure] whether they have a deep understanding—at least the fact they are verbalising, we can start to build their understanding.

Learning to be more independent/take more responsibility. (*n* = 3)

Becoming more active learners.

More interested in the others in the class.

More risk taking.

Awareness of co-operation.

Two teachers reported improved behaviour a result of the school's focus on behaviour management.

Teachers' perceptions (*n* = 7) about the benefits of the implemented changes for students were at best guarded, with two teachers reporting that the changes were not positive for all children, and one was not willing to judge:

Not positive for all children. (*n* = 2)

Positive, but attributes of children affect outcomes. (*n* = 2)

Positive, but not consolidated outside of school gates. (*n* = 2)

CI shows potential to engage children but still a lot of work to go. (*n* = 2)

Don't know about impacts.

Autophotography and photo elicitation responses revealed what teachers perceived as barriers to improving learning outcomes for students. Of the 15 follow-up interviews, six responses focused on children's disengaged attitudes, or their lack of ability to form productive working relationships.

Teacher Response

Disengaged attitudes and withdrawal from social situations interrupt learning. Some children find it hard. Teachers need to spend more time to engage these children.

The student posed for this photo.

28

Teacher Response

Relationship skills or the lack of them can be barriers for some children. Angry children sometimes do not have the skills to get over issues, so cooperative learning skills are a teaching focus.

Students' responses

The students' view of what teachers were doing to help them learn demonstrated a beginning ability to "talk about learning". Three responses in the photos and follow-up interviews identified the support teachers provided. These are shown below.

Student Response
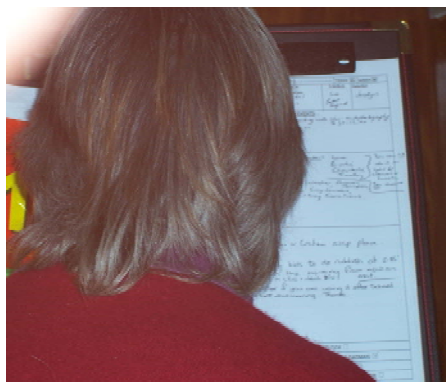
Teachers tell you what to do and give clear instructions- that makes learning easy. She does not growl- only if it is really noisy. (year 4)

My teacher explains things well and helps me to work it out. Sometimes she lets me work with others- they help me a lot too. (year 6)

Teachers help us to do the work. They talk to us. Sometimes when I don't know what to do, she helps me by helping me to work it out. (year 6)

While students generally identified positive things, one child remarked:

> Teachers encourage us, but they don't really believe you can do things.

Data from STAR assessment

Teachers recorded results from the Supplementary Test of Achievement in Reading (STAR), administered as part of the school's regular assessment programme for the participating students. The STAR results in Table 5 show variable shifts in stanine scores over the year, and in one case a regression.

Table 1 **Results of STAR testing—School One**

Students (*n* = 8)	RAW SCORE		STANINE SCORE	
	February	December	February	December
Year 4	10	19	2	3
Year 4	15	21	3	3
Year 4	16	25	3	4
Year 6	25	32	3	4
Year 6	22	29	3	3
Year 6	26	38	3	5
Year 8	36	57	3	5
Year 8	25	28	2	1

Of the eight students, one scored well below average, three scored below average, and four were within average scores for their age (although two of these are at the lower end of the range). A judgement of significant improvement occurs only when there is a gain of two or more stanines. Two students made gains of two stanines, three made gains of one stanine, two students maintained their stanine level, and one student went back a stanine.

As previously discussed, these results provide information about only some aspects of reading. The teachers acknowledged the inadequacy of using STAR test results as an achievement measure, because it did not provide evidence of the broad range of learning outcomes they were seeking to achieve. The school identified the need to review and refine its assessment systems and processes to be able to track student achievement in areas related to social and personal development and academic learning in integrative contexts.

Summary

The aim of the research project was to learn about and describe changes after a period of curriculum innovation in 2004 with respect to the practice of individual teachers, the development of professional learning communities, student engagement in learning, community involvement and participation in children's learning, and learning outcomes for students. Involvement in the research project gave teachers a means of checking progress, and also provided forums to identify problems and find ways to solve them—all central activities of the implementation of change (Hopkins et al., 1994).

The qualitative evidence suggests strong connections between the formal intentions of the school to implement integrative designs and alternative pedagogies, and the espoused views of the teachers. Clear links were evident between the charter documents, the philosophical beliefs held by teachers, and the changes the teachers were trying to implement.

However, the evidence also suggests that the initial changes the school had made to teaching and learning programmes were largely organisational and managerial. Teachers planned longer units and themes as a team, and in doing so developed further their culture of collegial work. Teachers explored a range of pedagogical approaches (including explicit goal setting, co-operative learning, and explicit teaching of research skills using an action learning framework) and developed some confidence in using them. Early indications of enhanced student learning (for example, improved general behaviour, greater engagement of students, glimpses of abilities not previously noticed) rewarded teachers' efforts, and to some extent mitigated the negative feeling about inappropriate "paper systems" in the school. Teachers increased their sense of agency in relation to outcomes for students. Perceived barriers were increasingly seen as problems to address, rather than reasons for taking only limited action.

No links were evident between the school's expressions of collective responsibility for learning, as expressed in the charter, and the practice of teachers. Teachers had not yet identified how to connect strongly with the cultural backgrounds of their students. Students viewed cultural connection as occurring in activities outside classroom programmes. Some teachers also believed that their ability to influence outcomes for students was limited because of familial or societal factors beyond their control. There was a sense that whānau did not want to be participants in their children's learning. The analysis of interview and photo interview responses about barriers to learning and whānau participation proved uncomfortable for teachers when they confronted the data, and this activity highlighted the need for them to talk openly about such issues. To their credit, the teachers did just that, without any outside prompting.

Teachers' recommendations

The teachers developed their own set of recommendations as outcomes of the research activities. These are listed below. The school intends to incorporate these recommendations in their planning for 2006.

1. Develop ways of planning more with students, to include their interests and concerns. Planning in this way has potential to increase student ownership and engagement with learning.

2. Engage in professional learning that directly improves practice by focusing on making changes in relation to student learning needs, rather than just implementing new activities.

3. Develop a stronger culture of "no excuses". Hold high expectations and then work to achieve them with students.

4. Continue to scaffold student learning by providing explicit teaching and learning of new skills and processes, and giving students feedback on these.

    Students identified clear instructions and clear learning goals as important. Teachers acknowledged that, while students were not yet able to articulate clearly factors that helped them to learn, their ability to identify learning activities they liked improved during the year (for example, co-operative groupings).

5. Continue to build the focus on the total wellbeing of students by promoting healthy lifestyles and teaching social skills.

6. Plan opportunities with whānau to move from partnerships based almost exclusively on parenting, communicating, and volunteering to learning, decision making, and collaborating (Epstein, 2001, in Alton-Lee, 2003).

    Teachers acknowledged that they needed to be more proactive in ensuring that parents/whānau were able to participate. Suggestions included varying the time of invitations to school, to enable working parents to attend.

7. Review and develop assessment systems and processes to enable teachers, students, and whānau to identify and celebrate progress across a range of desired outcomes (academic, social, and personal).

8. Move collegial working relationships to more collaborative, reflective practice grounded in evidence-based decision making.

   Teachers acknowledged that the research activities had provided information they had not previously considered.

Students' recommendations

Teachers also took on board the feedback from students. Students' recommendations included:

1. More explicit teaching of learning strategies.

   Students identified some aspects that supported their learning (for example, clear instructions) and they wanted teachers to do more to support these aspects.

2. The importance of continuing with homework, to provide opportunities for parents to be involved with their learning.

   The teachers discussed this at length and agreed to continue with homework, while also seeking to shift the dominant perception of students that their parents were too busy to support learning in other ways and at other times.

3. More use of ICT, art, and out-of-class experiences.

   The students identified these areas as things they liked about school, as they were "fun". Teachers agreed to incorporate these elements more in learning experiences as ways for students to develop and explain their thinking.

This report has 4 documents:

1. http://www.tlri.org.nz/pdfs/9227_finalreport_1.pdf
2. http://www.tlri.org.nz/pdfs/9227_finalreport_2.pdf
3. http://www.tlri.org.nz/pdfs/9227_finalreport_3.pdf
4. http://www.tlri.org.nz/pdfs/9227_finalreport_4.pdf