Learning to be a new school:

Building a curriculum for new times

Rosemary Hipkins



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NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

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Abstract

Literature that discusses transformative change in schools typically draws on experiences of renewal and change in existing schools. This report explores the shaping of a new school with the intent, established at the very outset, of offering a curriculum for the 21st century. The report discusses four key aspects of curriculum innovation at this school, outlining the intent of each and then discussing issues and challenges encountered in bring each aspect to fruition as the school got under way.

In its third year of operation when this report was compiled, this senior high school has dared to be different, in the process riding a rollercoaster of hopes and dreams, expectations met and occasionally dashed, careful planning, ongoing troubleshooting and collaborative professional learning. Through the lens of complexity theory, the report discusses the learning and problem-solving processes the school has set in place, describing how they have acted as a key enabler of the school's success in addressing challenges it has encountered to date.

The perspectives of all members of the school community are included in the report: senior leaders, teachers, students, parents and some members of the school's board of trustees.

Foreword: The purpose of this report

This research explores the challenges of enacting and sustaining changes in schooling that have been envisaged as responses to the demands of "21st century" learning. The establishment of a new school provided the opportunistic context to make a "ground floor" snapshot of school innovation in action and to report on its dynamics as these unfolded.

Change that begins with a "blank canvas" is somewhat differently enabled and constrained than change that starts with existing school structures and practices. Initially, the context is very fluid as a vision is created and ways to enact it are envisaged, first in principle, then in possible practice. When the school opens and the first pupils actually arrive, the space of the possible transforms into a "reality of now". Plans do not necessarily work out exactly as envisaged. Practical and philosophical challenges arise that could act to pull the school back towards more traditional practice. Alternatively, the school could respond and adjust in ways that keep the vision on track.

This report documents the first two years in the life of one such new school (three years from the inception of the vision). These were busy years of rolling complex adjustment and change. The story as told appears linear and logical but change in response to the press of the reality was far from this straightforward. Often, events required multifaceted rapid responses that were later difficult to sequence—or even in some cases clearly recall in all their steps and connections. The leaders and teachers were reacting to change in the moment and the researchers were occasionally there but more often not. Thus this is inevitably a tidied up accounting of change put together in retrospect and with the benefit of hindsight.

At the time of compiling this report the school is into its third year of operation, and its first year with all three years levels for which it will continue to cater. This report mainly describes the first two years. Since change has been ongoing, the details as described are inevitably already somewhat out of date. This would matter if the purpose of the report was to describe the school as it is right now (which might be impossible to pin down given the organic change structure it has evolved). But this is not the purpose of this work. Rather, the report documents the setting up of an innovative school in ways that have allowed it to sustain its vision in the face of some very substantial constraints. There are lessons to be learned about why change is so hard but, ultimately, this report is optimistic about what can be achieved, and points to some clear enablers of sustainable change.

1. Introduction to the study

This report is a case study of the foundation of a new and innovative senior secondary school. It outlines the school's vision and documents the challenges and successes of enacting that vision, with particular attention to the way they have given effect to a "curriculum for the 21st century". The analysis identifies key actions, structures and ways of being that have contributed to the school's successes to date, and draws lessons for school innovation more generally.

The author's roles included being an informal mentor to the foundation team when opportunities arose to visit them as the school was being designed, and then a more formal role as a researcher of the school's progress towards achieving its vision to be a 21st century school. The author and another researcher from The New Zealand Council for Educational Research (NZCER) visited the school half way through 2009, the year it opened in temporary premises and with one intake of Year 11 students. Interviews were conducted with school leaders and the board of trustees (BOT) chair. Focus groups were held for teachers, students and a sample of parents. One of the three deputy principals organised the focus groups, selecting participants she felt would bring a range of perspectives to each conversation. The parents invited to take part were already active in the school in various ways so this focus group was an opportunistic sample. The deputy principal said she was confident they would bring a range of views between them and she chose among the active parents with this in mind.

The researchers returned at the end of that year and observed the induction of the new staff for year two of operation. The school roll doubled in size at that point so the teaching team did so too. The author returned for an informal visit at the end of the second year of operation and held other informal interviews with the deputy principals on several occasions where the opportunity presented (for example, during break times in two different professional conferences).

The case study also draws on comprehensive end-of-year student surveys conducted by the school itself at the end of 2009 and 2010 and completed anonymously by the students. NZCER was given access to the collated data and in return provided more detailed statistical analysis than the school had themselves undertaken at the time. The full report of this analysis is published separately (Hipkins, with Hodgen and Dingle, 2011).

A brief history of the school

Albany Senior High School (ASHS) is a newly established senior high in a prosperous, rapidly expanding area of high-quality suburban housing near the northern fringes of Auckland, New Zealand's largest city. With the housing boom came a rapid increase in adolescents living in the

area. They were initially catered for by building a junior high school for students in Years 7–10. A nearby site was earmarked for a senior high school for the final three years of secondary school, with the intention that it would develop in three stages: Year 11 students only in the first year; Years 11 and 12 in the second year; and Years 11-13 in the third year of operation.

Very early in the planning stages the Ministry of Education appointed key members of a foundation BOT to provide governance for the school. This team developed an initial vision for the school and soon thereafter a principal and three deputy principals were appointed. The process required a great deal of personal time commitment from the foundation board and the first chairperson stepped aside once the principal appointment was made. The BOT chairperson whom we interviewed was thus the second chairperson, but was a member of the team from the start of the process. Initially, the board and senior management team worked from a previously unoccupied new house near the school site, where they were joined by the foundation teaching team one term before the school was due to open.

Hitches with town planning resulted in the erection of temporary premises at the end of the junior high school grounds for the first year of operation. By the start of the second year the new school buildings were ready, a new cohort of staff and students joined the foundation staff and students and the new school was finally able to settle into a more permanent home.

The main permanent building is an attractive multistoried block with two wings. This block is built on the side of a gully clothed in protected native trees. It is flanked on other side by a busy road and an area of open farmland that is part of Massey University's Albany Campus. Car parking for staff and students is provided in the basement level. Learning spaces are open plan, with the more traditional spaces (desks, whiteboards, etc.) separated by pods of computers that students can easily access at any time during lessons. Mixed teams of subject teachers work in each space and they share a large workroom that overlooks the space from one end. The school also has the usual specialist facilities: a large, well-equipped gymnasium; art rooms; technology rooms including a heavy machinery area; a dance studio; an auditorium and drama space; music rooms; and a cafeteria where both staff and students can purchase food and relax.

A school for new times

From the outset, the ASHS foundation team sought to build a school that would operate in ways that take account of key messages about educating students in the 21st century. The Ministry of Education had signalled early that the open-plan structure was envisaged for the school's physical learning spaces. The foundation team treated this as an "enabling constraint" (Davis & Sumara, 2006); this fixed parameter was framed in ways that allowed the team to dream of, and plan for, a different sort of school.

Drawing on the services of experienced school advisers from Cognition Education in Auckland, the Ministry of Education organised a series of learning opportunities for the foundation board. These began before the principal was appointed, and were doubtless intended to help build a picture of the sort of leader the board should select. Among the most influential learning opportunities was a session with Waikato University's Russell Bishop, whom the current BOT chairperson described as a "key influence". Russell is the leader of a high-profile teacher professional learning and research initiative called Te Kotahitanga. This research aims to support teachers to lift Māori student achievement by increasing their engagement and sense of relevance and belonging at school. To this end they have recently published an "effective teaching profile" (Bishop & Berryman, 2009). Working with the foundation board, Russell introduced a model of schooling that contrasted with more familiar models, both past and present. The key messages the board chair took from this session were that such a school would feature: highly engaged students; learning that was accessible and useful for students; and teachers as tutors.

Another session was led by Mary Chamberlain from the national office of the Ministry of Education. At the time, she was the senior manager responsible for the collaborative processes by which *The New Zealand Curriculum* (*NZC*) (Ministry of Education, 2007) was being built. *NZC* is a framework curriculum that gives schools considerable latitude to design a local curriculum specific to the needs of their students. In this session the board members drew on experiences from their own working lives to describe what they would like to see as the school's vision. Their emphasis was on "understanding how the world works now" (i.e., in the 21st century). Ministry of Education leaders then showed them how these ideas linked to the structure of *NZC* which was still in draft form at the time. The BOT members gradually came to see how their own ideas and feelings were expressed in *NZC* and this informed the way they further developed their vision for the school. The BOT chairperson described meeting the concept of lifelong learners as an "epiphany" for the foundation working group because BOT members could see how this related to demands in their own lives. They were persuaded of the key importance of fostering enthusiasm for ongoing learning, even after leaving school.

From these two sessions and others like them came some foundational concepts for the new school. One of these was "no-one falls through the cracks". The BOT identified potential cracks at both the top and bottom ability levels of the student cohort and began to plan how to engage *everyone* at school. They appointed a principal whom they thought could take this vision and turn it into a workable plan for the school, then together the board and the principal appointed three deputy principals. With this foundation team in place, thinking and planning for a school curriculum for new times could begin in earnest. By the time the balance of the foundation teaching staff was appointed one full school term before opening to students, the key features of the curriculum had been designed.

New Zealand's Education Review Office (ERO) team also contributed to the initial planning for the school by conducting two "readiness" reviews: the first took place about six months into the planning process and the second just before the school opened to the foundation cohort of students. The next section outlines the national policy context for curriculum and assessment in the senior secondary years and indicates how the ASHS curriculum responds to these national drivers. The following four sections then each elaborate on one key aspect of the ASHS curriculum, beginning with a discussion of the structure they put in place to ensure no-one would "fall through the cracks". The final section of the report makes some reflections on leadership of innovative curriculum change to better meet the needs of today's adolescents in these vital transition years.

2. A curriculum for new times

New Zealand's national curriculum framework

In common with many other nations, New Zealand is wrestling with questions of what it means to educate students for the rapidly changing economic, environmental and social conditions that characterise life in the 21st century. Influential contributions to this debate have been made by education researchers (for example, Bolstad & Gilbert, 2008; Gilbert, 2005).

NZC is a future-focused *framework* curriculum with the stated aim of providing a sense of national direction for local decision making. Each school has to work out how best to build up a detailed local curriculum based on the national framework, with the identified learning needs of its own student community demonstrably addressed. A vision statement and a set of principles guide the reading and interpretation of the whole. The vision is for students to become "confident, connected, actively involved lifelong learners" (Ministry of Education, 2007, p. 8) and the principles highlight the following as key design considerations: coherence; inclusion; cultural diversity; high expectations; a future focus; learning to learn; and community engagement with local curriculum design and enactment, together with a focus on the Treaty of Waitangi as the foundation for bicultural relationships in New Zealand.

The vision and principles are given life when schools design learning programmes that weave more traditional content with specified values and key competencies. Eight broad sets of values, identified and shaped via a national consultation exercise, are expected to be encouraged, modelled and explored. Five NZC key competencies were adapted from a set of four developed by the Organisation for Economic Cooperation and Development's (OECD's) DeSeCo project. The development of these competencies is intended to maximise students' chances of living meaningfully in, and contributing to, well-functioning societies, both during and well beyond their school years (OECD, 2005). The implication is that these competencies are transferable across contexts and continue to develop across each student's lifespan. Key competencies are demonstrated as complex responses to any challenges learners confront as they adapt what they already know and can do to new contexts, or to more demanding aspects of familiar contexts (Rychen & Salganik, 2003). In this way, a focus on competency development draws attention to dispositional aspects of learning and to ideas such as action competence: knowing how best to respond; having the necessary knowledge and skills to do so; and being disposed to use these. As we will see shortly, these ideas strongly influenced the structure of the local curriculum the foundation team designed for ASHS.

It has long been mandatory for schools to implement the national curriculum up until the end of Year 10. Traditionally, examination prescriptions and other exit qualifications' specifications

became the de facto curriculum from Years 11–13 (Bolstad & Gilbert, 2008). The misapprehension that the national curriculum does not apply to the senior secondary years lingers in some quarters but in fact the *Design and Review* section of *NZC* (Ministry of Education, 2007, pp. 37–42) includes specific advice about the learning programme for students in Years 11–13. This section emphasises that the values and key competencies "gain increasing significance for senior students as they appreciate that these are values and capabilities they will need as adults for successful working and living and for continued learning" (Ministry of Education, 2007, p. 42). Schools are advised to "recognise and provide for the diverse abilities and aspirations of their senior students in ways that enable them to appreciate and keep open a range of options for future study or work" (Ministry of Education, 2007, p. 41). The message that no one should "fall through the cracks" (to borrow words from the BOT chairperson) is clear. This message is also clear in the imperative of the *future focus* principle that students should "look to the future" in their own learning (Ministry of Education, 2007, p. 9).

Recent policy changes to assessment in the senior secondary school have opened up opportunities to reconcile tensions between a focus on gaining exit qualifications and the somewhat different imperatives that drive the national curriculum. The assessment system is briefly outlined next as another essential element of the policy context in which the ASHS school curriculum was designed.

Assessing students for exit qualifications

New Zealand's school exit qualification, awarded at three levels broadly corresponding to the final three years of secondary school, is called the National Certificate of Educational Achievement (NCEA). Congruent with the key messages in *NZC*, NCEA has a flexible, modular structure that continues opportunities for local curriculum design right through to the end of schooling (Bolstad & Gilbert, 2008; Hipkins, Vaughan, with Beals, Ferral, & Gardiner, 2005). Standards-based assessment is underpinned by suites of "achievement standards" that can be mixed and matched, at least in theory. Some standards are internally assessed by each school, and these typically specify types of learning than cannot be assessed in traditional examinations. Externally assessed standards do often entail examinations, but methods such as portfolio assessments have been used in the Arts and Technology learning areas for some time and could potentially be used in other learning areas.

NCEA is part of a National Qualifications Framework (NQF) that extends to post-school learning pathways. Other types of assessment standards (for example, those developed and managed by Industry Training Organisations [ITOs]) can contribute credits towards NCEA. Thus there are additional curriculum design opportunities and challenges for secondary schools as they create coherent pathways through and beyond the senior secondary years.

Key features of the ASHS school curriculum

At ASHS, learning time is organised in ways intended to foster greater student engagement and autonomy, as highlighted by the *NZC* vision, and potentially enacted via the many innovative and permissive features of the curriculum framework itself, and the NCEA qualifications system. Three key timetable structures and their accompanying processes form the framework on which teachers construct a curriculum relevant to their students' needs:

- On one day of the week the more traditional timetable structure is suspended and students conduct "impact studies" of their own choosing and design.
- During the other four days, learning time is organised into extended blocks of 100 minutes duration (60 minutes is more usual in New Zealand high schools) during which students undertake studies in their chosen "specialist subjects". They have two such blocks of time per subject per week.
- Two of these 100-minute blocks are allocated as tutorial time when students can access guidance from their tutor/mentor and practise the skill of working independently.

It is not so much that any one of these features is startlingly new. Precedents for all of them can be found elsewhere. However, as the following sections of the paper will discuss, the manner in which they are put into practice as a coherent whole, and supported via a multilayered structure of professional learning networks, gives them an innovative edge. This complex and integrated *learning* structure (for staff as well as students) is a key enabler of the school's ongoing journey of becoming a school for new times.

Another key enabler is the development of a "pedagogy for young adults" which pervades school life and is again congruent with key *NZC* messages about fostering students' growing autonomy and dispositions to be/become lifelong learners. Section 6 discusses this pedagogy and the challenges the school has faced in enacting it as envisaged. *Being* a different sort of teacher—or indeed learner—is not as easy as it might seem, but does ultimately reward and energise those who are able to persevere and learn together.

3. Tutorial time

At the heart of the ASHS curriculum is the intent to build strong relationships with students, ensuring as part of this process that every individual builds a coherent, personally relevant and engaging learning pathway through their senior secondary school years. Thus the manner in which support for learning is organised energises and informs all the other aspects of curriculum delivery and provides a set of processes for ensuring no student falls through the cracks.

Two of the 100-minute blocks of time each week are devoted to tutorials. At these times, students meet in small groups with the tutor teacher who is their designated mentor. Some of the time is taken up with more formally organised learning-to-learn activities but it mainly provides a space for responding flexibly to different students' learning needs.

The brochure about this curriculum component outlines a wide range of purposes for which the time might variously be used:

- building positive and supportive relationships with the tutor and with other students in the tutorial group who constitute a "pit crew" for mutual support
- reviewing e-portfolios, planning and checking on personal learning progress and adjusting learning goals if necessary
- identifying areas where additional support might be needed (e.g., personal organisation, building resilience, addressing gaps in learning, basic literacy or numeracy) and planning ways to meet these needs
- reviewing progress in building NCEA credits and checking that learning pathways are being kept open—for example, by not falling short of needed credits, or a sufficient quality of pass (passes with merit or excellence) in areas where there are entry-level prerequisites at the next stage
- using the tutorial group as a practice audience for high-stakes assessments that have a performance element
- peer teaching and assessment
- preparing for "learning dialogues" with parents at progress reporting times. These are 20minute sessions, during designated after-school times, when parents meet with the student and tutorial teacher to discuss the students' learning goals and current progress towards these
- accessing information and advice on careers and future pathways.

The overall idea is that one teacher in the school knows each student really well and acts as a point of connection for all their various interactions. The senior management team believes that it is this aspect of the curriculum, in particular, that has allowed them to meet the needs of students with very specific learning challenges (e.g., those on the autism spectrum), keeping them engaged

and safe at school. All the adults in the school have a group to mentor. This allows numbers in tutor groups to be kept as low as possible and also allows students to be matched with an adult who might best support their specific learning needs.

Students are expected to use time not allocated to specific activities on any aspect of their learning that requires additional effort and attention. Since everyone is in tutor groups at the same time, some students might choose to seek out a subject teacher for additional help, and that teacher should be available at some point within the extended period.

Co-ordinating and building strong support practices

All teachers belong to a dynamic, evolving support network for their tutorial role. This network is led by one of the deputy principals. The groups of teachers working within a common teaching space form the first level of clustering. Teachers from two learning spaces form a "learning community". There are eight open-plan spaces and hence four learning communities. The structure of this network in 2009–10 is shown in Figure 1.

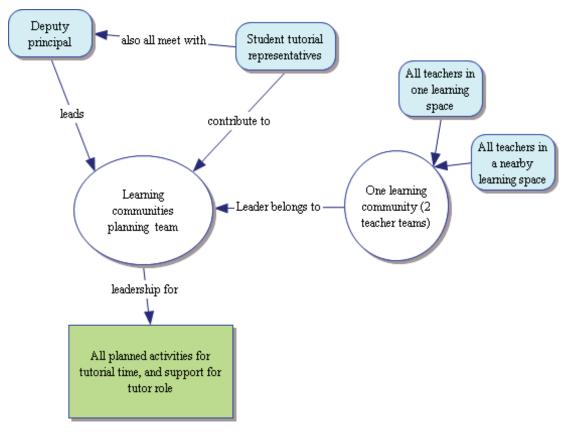


Figure 1 The tutorial support network structure

As Figure 1 shows, each learning community has designated student leaders as well as teacher leaders. The teacher leaders meet regularly with the deputy principal who co-ordinates this

network. They plan some shared activities for tutorial time when specific common needs are identified, provide support for each other, adjust practice as needed and respond to student feedback. Student leaders also meet regularly with the deputy principal for corresponding planning, feedback and co-ordination purposes. On some occasions they meet separately from the teacher leaders and on other weeks the student leader and teacher leader teams join up.

Early in 2011 this network underwent some revision in its allocated roles as it has merged with the impact project network discussed in a later section of this report. The impact project network was seen as having run its course because the structure set up to manage impact projects was now working well. The school now saw that having dual and different roles as tutors and as impact project mentors was seen as creating unnecessary duplication and complexity. Tutor teachers have now become the overall mentors of their allocated students' impact projects, so that watching over progress on these projects sits alongside keeping a check on other aspects of academic progress. Students are still free to check support for their projects from other adults as relevant to the context and focus of each project but the oversight of their learning progress has been streamlined and more tightly co-ordinated. This is an example of the living and evolving nature of the professional networks that operate in this school.

Using tutorial time to build connections

The student surveys in both 2009 and 2010 included a number of items that probed students' perceptions of their experiences in tutorial time. Some of these items specifically addressed the quality of the relationships students had been able to build and others probed the relative success of tutorial time in meeting the various goals outlined above. These items formed a factor. The top-ranking items related to the success of using tutorial time to build a relationship with one adult (the tutor). This is clearly a highly valued and successful role for tutorials in the school. Use of the time to build what might be loosely grouped as *learning-to-learn capabilities* (goal setting and reflection on progress, strategic and proactive assessment planning, active contribution to group learning) was seen as a successful outcome of tutorial time by around two-thirds of the students. Those outcomes related to *making connections* across the various components of an overall curriculum were the lowest ranked, although around half the students agreed that the tutorials did these things (Hipkins, with Hodgen and Dingle, 2011).

Students' views of the support they received in tutorials underwent a positive shift in Year 12, compared to when these students were in Year 11. It is particularly interesting that the views of the male students became less diverse whereas the views of the female students became somewhat more spread in 2010, although, again, there was an overall shift towards the positive end of the continuum of possible responses (Hipkins, with Hodgen & Dingle, 2011). The teachers were especially pleased with this evidence of strengthening of positive relationships because this is something they have worked very hard to achieve.

The focus group conversations with the students in 2009 gave some indications of one possible source of these gender differences. Some students said they didn't feel comfortable about reflecting aloud on their learning in tutorial time. Doing this entailed "opening up in front of the others", especially when there was a need to talk through the issues of working with friends in impact projects because this could jeopardise these friendships. One solution to this dilemma had evidently been to make these reflections more private from other students:

Telling some people your problems—you want to share, but it's personal, so it's hard, so we do evaluation sheets. Some of us don't like talking about it—and I don't trust everyone in our tutorial group. You should be able to trust them, but you don't know them that well.

The focus group students raised the issue of gender differences in these interactions and in how students related to others in their tutorial group. The girls were seen to be more willing to talk about learning issues and also to get more worked up about these, especially the issue of problems in working with friends. They also agreed that "the guys don't talk much—they just get on with the work".

It is important to keep in mind that these comments were made when the students were part way through Year 11. It is possible that greater trust between members of a tutorial group would be built up over the course of the two years¹ and that this is one influence on the positive shift in 2010. We cannot tell from the survey data.

It is also likely that the students' experiences of their tutorial groups differed as the teachers themselves grew into this role. One indication of differences in approach arose when a focus group discussed the vexed issue of working with friends in impact projects. Some students said their tutor teacher came in and "bossed" the prevaricating students to get things back on track. Others said their tutor teacher worked with them on the leadership skills they needed to get things back on track for themselves. The latter response is better aligned with the school's intention to support these young adults to develop the competencies they need to take action for themselves. The "pedagogy for young adults" that has been evolving alongside the curriculum structures is discussed in a later section of the report.

¹ Students stay in the same tutorial group throughout their time at the school.

4. Living a learning-centred pedagogy

Learning to be a school for new times has required the teachers to delve deeply into their views of learning and the pedagogical practices associated with those views. The previous section documented how the desire to build strong relationships with every student is given life in the school. This section looks at how *learning* is supported across the curriculum. Learning in subject classes is used as a context to illustrate the school's philosophy for learning in general, for both students and teachers. The idea that energises this aspect of school life is the intent to foster *agency* and the development of greater *autonomy* in learning. Both students and teachers are supported to be self-directed in pursuing learning questions of relevance and importance to them, and to actively work to build meaningful connections and coherence across the breadth of their work. This challenge also entails a future-focused dimension—it as much about who teachers and students are now and might become in the future as it is about what they know and can do now.

Pedagogy that fosters agency and autonomy

An *Effective Pedagogy* section included in the NZC framework provides advice about:

- creating a supportive learning environment;
- encouraging reflective thought and action;
- enhancing the relevance of new learning;
- facilitating shared learning;
- making connections to prior learning and experience;
- providing students with sufficient opportunities to learn; and
- inquiring into one's own teaching practice to ensure student learning needs are being met (Ministry of Education, 2007, p. 34).

Information on the school's website clearly reflects the pedagogical intent of NZC as signalled by the above list of section headings. The "three Rs" of the school are respect, research and responsiveness. Building respect relations was addressed in the previous section. The subject planning brochure has this to say about the other two Rs:

Research means: knowing students as learners (inside and outside school); helping students to develop their understandings of how well they are doing and being able to explain gaps in their understanding; recognising that students learn at different rates and in different ways; extending our understandings of current thinking in our specialist subjects; and inquiring into the teaching and learning processes, reflecting on the responses, then adjusting the learning experiences to do better.

Responsivity means: focusing planning on addressing students' strengths, interests and learning needs; leaving space for reflection. Encouraging ongoing feedback during lessons; being open and flexible. Responding to feedback from students (assessment is feedback for teachers); encouraging self-reporting by students; being specific about progress and explicit about next steps for learning; encouraging students to participate in planning, developing success criteria and teaching; sharing our specialized knowledge using the split screen to identify the what, why and how of learning in our subjects. (Information sourced from Albany Senior high website)

Guy Claxton's metaphor of split-screen thinking (Claxton, 2008) is invoked as key means of reflection. The brochure defines such thinking as follows:

Split screen (Claxton) allows students to think critically about their thinking and learning. It enables students to stand back from the information or ideas they are engaging with to discuss the what, why and how of learning. Split screen thinking involves explaining/justifying what a learning task has been designed to do, talking the learning out loud, making links with the outside world and real life applications of learning. (p. 6 specialist subjects brochure on Albany Senior High website)

This description provides indications of how the aspiration to foster student agency in learning should be addressed in practice. There are clear indications that teachers are expected to strengthen students' learning dispositions via the manner in which they interact with them, and that they will inquire into and be aware of the impact of their teaching on students' learning.

How the philosophy plays out in specialist subjects

At ASHS, traditional school subjects are offered, much as in any other secondary school. The decision to label them as *specialist* subjects reflected two lines of thought in the overall conceptualisation of the school curriculum. Influenced by Gilbert (2005), the foundation team had in mind the argument that each discipline area has its own specific ways of building knowledge and talking about the world (i.e., discourses or "literacies"). They also wanted to send a signal to students and parents that deep learning is important, requiring both focus and sustained effort. Students are expected to choose areas that will become their specialist subjects. Skating across a wide range of unrelated courses is discouraged.

Specialist subjects are scheduled in extended blocks of time of 100 minutes each, compared to the more typical 60-minute periods in many secondary schools. Most classes are taught in open-plan "learning commons" and access to IT is readily available in the spaces between class groups within each learning common. Staff and students are encouraged to use the IT facilities whenever relevant and students keep e-portfolios of significant work achievements. The 100-minute block structure ensures that lack of time is not a barrier to making full use of these features of the overall curriculum.

Each of the eight open-plan spaces in the school is occupied by a **team of five teachers**. These teachers work in full view of each other, which puts them in a position to offer support and feedback on the pedagogical practices they observe. Thus one of the intended professional learning functions of this arrangement is to deprivatise practice. The teachers in each learning space share a workroom so that they continue to interact informally as they carry out routine planning, preparation and assessment activities. None of them is from the same discipline area because this network is also intended to maximise opportunities to build links across the learning areas in order to enhance the coherence of the curriculum that students experience.²

Learning to teach in ways that can introduce students to the specialist nature of different subjects is challenging. To illustrate: there is large body of literature that discusses the potential for including "nature of science" (NOS) components of science courses but this literature also documents how little traction this type of change has yet gained in science teachers' practice. A similar body of research exists concerning the "nature of history". Taking up this challenge at the tertiary level, Barnett (2009) suggests that the changes needed are essentially *pedagogical*. Teachers foster certain types of *dispositions* via the manner in which they support students in their "coming to know" new knowledge and skills. Thus learning experiences that bring students closer to disciplinary and disciplined knowing need to reflect what teachers hope students will *be* and *become*, not just what they will know or be able to do. These are very challenging matters for teachers to consider and hence they have profound implications for ongoing professional learning and exploration.

The teachers at ASHS have embraced the challenge of exploring how to build a subject curriculum that takes account of these types of "21st century" learning challenges. Indeed, their interest in doing this was one of the criteria that led to them being chosen for employment at the school. However, the senior management team was well aware that good intentions alone would not suffice, especially given the inevitable relatively traditional assessment pressures the teachers would face.³ They carefully planned ways to build a number of key supports and professional learning structures into the overall curriculum.

² The framework for writing course information summaries and associated high-level course planning procedures was shaped to also encourage teachers to build links between the learning they plan and students lives, and to maximise chances that students will use their new learning in meaningful ways.

³ Although NCEA is innovative in its overall modular structure, this flexibility at the level of the overall qualification is not necessarily matched by similar innovative potential within each assessment standard (the modules that build to the qualification). Some subjects (and some standards within subjects) do allow innovation in interpretation of learning scope and assessment tasks. Other standards/subjects are more traditional in structure and scope. Teachers do tend to perceive these as constraining the curriculum they can teach, especially if they see gaining a qualification as the overriding purpose of learning (Hipkins, 2010b).

Inquiring into learning and pedagogy

As with support for building strong relationships and respect, professional inquiry to support the school's learning philosophy is underpinned by a carefully networked set of learning supports. The network summarised in Figure 2 below takes specialist subjects as its organisational frame, but the intent is to support inquiry into any aspect of learning at school. One of the three deputy principals (not the tutorial network leader) has oversight of the whole. Together, the senior management team keeps these subject-related activities purposefully linked and aligned to the tutorial-related activities and learning.

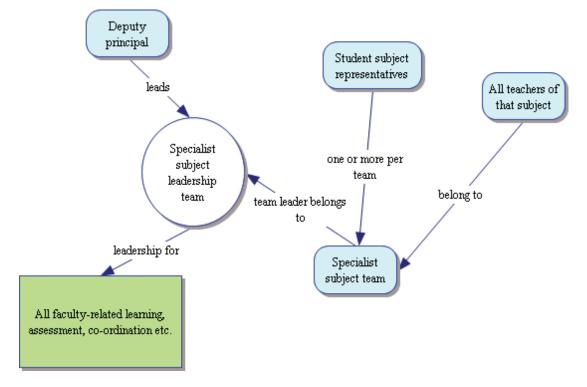


Figure 2 The specialist subject network

The specialist subject teams

- **Specialist subject teams**, each with a teacher **leader**, work together within each learning area. Specialist subject teams meet regularly to undertake the planning, co-ordination, assessment and moderation work carried out by faculty teams in most secondary schools.
- Each team includes at least one specialist subject **student leader** with two or more students involved in bigger subject teams. These student leaders work with the teaching team as a conduit between staff and students. They contribute to key decision making including the employment of new staff members and the planning of in-school promotional activities for the subject area, and in some cases help build curriculum plans.
- The team leaders (both teacher and student leaders) form a **specialist subject leadership group** that meets regularly with the deputy principal with responsibility for this aspect of the school's overall curriculum.

Planning and co-ordinating professional inquiry

All the teachers in the school are expected to undertake professional inquiries related to their practice. Everyone takes part in the shared process of collegial inquiry that begins in scheduled after-school meeting time and then expands out into individual classes. Inquiries into learning are driven via the specialist subject network, and overseen by the deputy principal with responsibility for this network. A team that includes some specialist subject leaders and several other early-career teachers meets regularly with the deputy principal to plan and co-ordinate inquiry activity.

The deputy principal who leads this network said the senior leadership team's initial thinking had been influenced by Best Evidence Syntheses (BES) about effective teaching (in particular, Aitken & Sinnema, 2008; Alton-Lee, 2003). Insights from the BES programme of work were shaped into the curriculum touchstone of the "three Rs"⁴ and these had subsequently informed the various directions the inquiry programme took over time. Early in the life of the school one of the teacher leaders described this as a "living network" in the school and it was clear that the scope of the professional learning activities had evolved in response to the ways in which the overall curriculum was evolving.

One early inquiry focus asked every teacher to profile their class and track the progress of a few students, "red flagging" students in danger of not achieving and taking appropriate support action. One network leader noted that this had to be done "subtly and quietly" at first, especially as this more critical pedagogical inquiry role was more familiar to some of the newly appointed heads of department than to others. It was important that the new heads of department became comfortable with the process because they need to work with their team of teachers as they all enact the classroom-based inquiry process. Over time, teachers have become more comfortable with these deprivatised conversations about students' learning progress.

A more recent focus of shared professional inquiry has been on ways to support and encourage students to strive for "merit" or "excellence" passes in their NCEA assessments. Such passes do not garner any additional credits towards the overall qualification, an initial design feature that was criticised as demotivating because students can do "just enough" to get by (Meyer, McClure, Walkey, McKenzie, & Weir, 2006). Recently the system has been modified so that students' awards can be endorsed to show the quality of their achievement if they gain sufficient credits and merit or excellence levels. This is potentially personally important to students because some universities calculate grade point averages to determine places in limited-entry courses. It is also important to the school because league tables published by local media compare overall school results by numbers of passes at all three levels (achieve, merit, excellence). The school is located in an area where there are a number of other large secondary schools and competition for students puts pressure on all of them to put their best foot forward.

⁴ The Curriculum Implementation Exploratory Studies (CIES) has documented the role that visual metaphors and short pithy sayings and mottos play as important "touchstones" that share and maintain a collegial curriculum culture in a school (Hipkins, Cowie, Boyd, Keown, & McGee, 2011). This is just one example from ASHS, which has a number of these touchstones.

In the first year, a number of teachers also worked on individual or small-group research projects that addressed pedagogical questions relevant to their learning areas. Gradually, teachers have learned to scale back on the scope of these inquiries so that they focus on more immediate practice concerns (the "small things" as one deputy principal put it) than on big questions such as researchers might address. There are interesting resonances in this shift in scope with the argument that sustainable change—and change that does not subvert transformative intentions to fit new ideas into more familiar practice—can only be driven from *within* the school. One team of researchers call the process of achieving such change Indigenous Invention. Such invention takes the sheer "dailiness" of life in school as the starting point for professional dialogue. Taken-for-granted aspects of practice and possibilities for change are explored, preferably with support from an influential third party (Heckman & Montera, 2009). The model at ASHS is clearly moving towards this type of invention.

Teacher and student experiences in the first year

As might be expected, some teachers initially experienced challenges in planning for and teaching in 100-minute blocks of time:

It took about a term to get used to the 100-minute periods. The 45-minute lesson was quite easy—you taught a few points and that was it really, but now you have to be more organised. You have to plan a couple of transitions and activities because you can't 'chalk and talk' for 100 minutes. And you have to be up with your forward planning because you only get to see them twice a week. (ASHS teacher, mid-2009)

Given the challenges of making changes to their pedagogy, the open teaching spaces had a strong impact on the teachers we interviewed. They noted that the open spaces made their pedagogy more visible to their peers, and opened their practice up for both the scrutiny of other teachers and opportunities to access support. Some said that they looked across at colleagues and picked up tips, or they were able to support other colleagues managing students who were being disruptive.

One of the deputy principals noted that there had been initial concerns about how a small number of students on the autism spectrum would cope with the challenges of the open-plan learning spaces. With strong support in their tutor group (see next section) these students had confounded these negative expectations and had settled well in the new school.

The focus group students also liked the open classrooms. They said they felt safe in these spaces and generally behaved better. They observed that teachers could not "lose their cool" without this being seen by others. Similarly, students did not want their favourite teachers to see them misbehaving for other teachers who might be nearby. One student noted that the open-plan spaces could be distracting, with other teachers and students very nearby, but said she was getting used to this. In response to this comment other students pointed out that getting used to working this way will prepare them for open-plan workplaces in their post-school years. Some teachers perceived that independent activities intended to be carried out at the computer pods posed challenges to their authority initially. Some students spent their time playing computer games and needed to be supervised more closely. As with the impact inquiries, staff found they had to provide more structure while students learned the skills and self-discipline of working more independently. In contrast, the students were unreservedly positive about the access to electronic media afforded them during the school day:

We can use technology if it's appropriate here—there has been mutual respect that has made the use of phones etc. very easy. You could negotiate their use and it's no big deal here. Ipods as long as you are not detracting from your learning. The school is adapting and isn't stuck in the old ways. (Student focus group comment)

Last evening we were teaching our parents about the media. We taught them how we use the Internet, downloading music and using social sites. We haven't got anything blocked on the Internet. We don't block U Tube because it is a good learning tool. We watched a procrastination video. Our history teacher showed us a video about how not to write essays that someone else had put together. We showed our parents how we learn using these things. They wanted to learn about what we are doing—because we are like totally hip! (Student focus group comment)

Focus group students talked about how they could "be themselves in their learning" at this school, and they liked being treated as individuals. They also liked being the oldest students and leading the way:

We have a mutual respect and can talk to them [teachers] like friends. Teachers know us well. They cater to people's needs too—they understand that we all learn in different ways. We think the saying, 'It's not that you are all bright but how you are bright', really does matter here. They push you in the subjects you are good at. Teachers here are more intelligent—[than previous school] they know everything you need to ask them. They will put in the time to find out answers.

The survey data reported below show that the positive perceptions of the focus group students are likely to be widely held, although some students do appear to struggle with the level of personal responsibility required of them to regulate their own learning.

The students' views of their learning opportunities

In 2009 and again in 2010 a number of survey items asked students about their learning opportunities. Although such opportunities are available across the whole curriculum we report the results in this section because the majority of students' in-school time is still spent in these classes and, as outlined above, teachers' professional inquiry into their pedagogy is linked to and supported by the specialist subject teams.

We found a *Learning Opportunities* factor made up of 14 items. The 2009 items were repeated in 2010 and students gave very similar patterns of responses in both years. Most students appear to

experience the learning climate of the school as open and accessible—staff aspirations and student experiences are well aligned in this regard (Hipkins, with Hodgen and Dingle, 2011).

Difference in levels of agree/strongly agree responses to the various items suggested that making links to students' prior learning and to their lives outside school, and generally adjusting learning to accommodate individual learning needs, would appear to be somewhat more challenging than maintaining an open, accessible learning environment in general. Although the school documentation exhorts teachers to personalise students' learning, and together they have worked very hard at these aspects of their planning and pedagogy, somewhere between a third and half the students did not appear to recognise these efforts as having been successful. Several types of challenges for changing pedagogy are likely to be at issue here. The most recent round of the NZCER National Survey of Secondary Schools found a "value-practice" gap between what teachers say they would like to do in response to *NZC* and the learning opportunities they say they actually orchestrate for their students (Hipkins, 2010b). It seems that change is easier to say you value than to enact. Some of this "gap" might relate to the pedagogical knowledge needed, and the sheer time it takes, to learn to do things differently.

The recently completed CIES identified that schools at the very forefront of *NZC* implementation are now encountering a "knowing-doing" gap after a time of very rapid and successful higher level curriculum change (Cowie, Hipkins, Keown, & Boyd, 2011). For example, awareness that the *NZC* key competencies should be making a difference to learning within subjects (not just more generically) is not a sufficient basis for determining what those changes could look like in practice and external input is likely to be needed to support schools in making this change. Similarly, public assessment pressures and expectations tend to sustain a "coverage" imperative in the taught curriculum of secondary schools and teachers need support to rethink depth and breadth as two sides of the same coin (both/and) rather than competing dualisms (either one or the other). Comprehensive exemplars that demonstrate what such changes could entail in different subjects are not yet available, notwithstanding some attempts to better align NCEA assessment standards with *NZC* (Hipkins, Cowie et al., 2011).

Finally, there are the *perceptions* of the students themselves. An unpublished study of key competency implementation over several years in another secondary school found a lag between what teachers were attempting to change and students' awareness that anything was different. This could also be the case at ASHS because subjects still take a relatively traditional shape and NCEA is still used for assessment (as it must be). If this lag effect is operating, we might expect to find differences in the responses of Year 11 and Year 12 students concerning the *learning* agenda in their subject classes, and so we turn now to comparisons of year-level responses to the student survey.

Learning "stretch"

The reflective aspects of pedagogy, including leveraging the learning-to-learn potential of assessment, emerged from the analysis as a distinct factor that we called "learning stretch" to reflect the ASHS aim that learning should be personally challenging for every student ("no student falls through the cracks"). Analysis by year level showed that the views of the foundation cohort shifted to become more positive in 2010. In 2010, more students agreed or strongly agreed that their learning challenged them and that they had enough opportunities to practise new things. This positive shift applied to both males and females, although the views of the females became somewhat more spread in 2010 (Hipkins, with Hodgen and Dingle, 2011).

The shift could reflect increasing teacher skill and confidence at implementing the reflective learning-to-learn aspects of pedagogy.⁵ There could also be an element of increasing student maturity, or increasing familiarity and comfort with the metacognitive aspects of their learning, or both. It will be interesting to track these items into these students' third and final year at the school.

Overall, we can say that the majority of students coming in to the school do recognise and seem to value the learning opportunities being offered to them. Given their considerable efforts to work on their pedagogy, this should be encouraging for the school's teachers.

⁵ ASHS has employed a higher than average number of teachers who are at the beginning of their teaching careers. In part, this is simply a result of needing to take on more than the usual number of teachers each year to accommodate the planned roll expansion. In part, it is a deliberate preference so that beginning teachers can be supported into the ASHS ways of working described in this report.

5. Impact studies

On Wednesdays, the timetable is suspended and students undertake impact studies of their own choosing. Working individually or in groups they plan and carry out an extended project that links to some specified aspect of the curriculum but typically extends well beyond what could be offered in any one class. This is seen as an important opportunity to grant greater agency and autonomy to students via the curriculum they experience at school. Each student liaises with a specified adult, chosen for their ability to support the intended learning. For example, an IT project would likely be supported by one of the IT teachers. Parents or mentors from the school's wider community are invited to support impact projects where they are willing and have the relevant expertise.

The nature of inquiry adopted by ASHS

The type of learning activity entailed in impact studies could be broadly described as inquiry learning. This type of pedagogy has a long history in schools in New Zealand and a number of schools that were "early adopters" of *NZC* have incorporated a model of inquiry learning into their curriculum (Cowie et al., 2009). However, the term "inquiry" is used to describe many different types of activity, each with different theoretical underpinnings and intended outcomes. There is not the space in this report to discuss the differences in any detail but we need to be clear about the scope and intent of inquiry at ASHS.

In a forthcoming paper, NZCER researcher Sally Boyd identifies two very broad ways of thinking about the timing of learning benefits from inquiry projects. They can be positioned as preparing students for *future* needs or benefits (e.g., gaining qualifications, knowledge and skills for future use). Alternatively, processes of active inquiry can be seen as conferring more *immediate* benefits for students. Ideally, of course, we would hope they would do both, and this does appear to be the intent of the participatory process developed at ASHS and described in more detail shortly.

Inquiry models that emphasise learning for future benefits tend to focus on the building of skills such as information literacy (or, more recently, learning to learn). The questions that drive the investigation may be provided by the teacher or devised by the student(s) but the focus tends to be on finding and re-presenting information/knowledge relevant to the question at hand. In the senior secondary school the suite of NCEA achievement standards used to assess a subject can include a "research" standard which typically assesses this type of inquiry. However, our research carried out during the early years of NCEA suggested this can be a very unsatisfactory learning experience for students if their teachers do not actively support the development of relevant inquiry

skills (Hipkins, 2006). While many impact studies at ASHS do include a more traditional research component (see below) this is undertaken as a means to an end—part but not the whole of the process.

Inquiry models that focus on current learning benefits are more likely to be energised by a focus on *dispositions*. These subsume, but are not limited to, the gaining of relevant skills and knowledge. They support students to be "ready, willing and able" (Carr, 2006) to extend their capabilities now, not just to store these up in case of some anticipated future need. Such inquiries result in opportunities to take action in the present, not just in a tokenistic way (e.g., writing a protest letter) but real action with the potential to make a difference in the world. One of the five key competencies in *NZC* is called *participating and contributing* and the school has chosen to highlight both dimensions—participation *and* contribution—in the development of the impact project model.

The emphasis given to *participation* is clear in these excerpts from the school's documentation about the impact projects:

There is really only one way to learn how to do something, and that is to do it. (Front cover of Impact Project brochure)

Impact projects nurturing a 'lifelong' delight in learning. (Inside back cover of Impact Project brochure)

The nature of *contribution* has been an area of active debate at ASHS and is being clarified as the projects unfold in action. All of the following broad types of inquiry have been undertaken and hence can be seen as fitting within the intent of the inquiry process:

- Service learning: Students become involved in helping others with a specified need, in the process learning about the issue or challenge encompassed by that type of need but also learning more about themselves and their capabilities.
- **Design and make:** Often associated with technology or arts learning areas, these inquiries address the specific creation of products appropriate to specific needs, accompanied by an evaluation of the success of the product in meeting the design brief.
- **Disciplinary inquiry:** A disciplinary framing is used for gathering and analysing data relevant to the inquiry question (e.g., various statistical, historical, scientific methods of inquiry) and the results are used to take action relevant to the situation that drove the formation of the question. Science-related inquiries might align with the New Zealand Royal Society's Crest programme, where students are assigned a scientist as a mentor for an extended inquiry of their own choosing.
- Action competence: Typically cross-disciplinary, these projects identify an issue, research various courses of action, determine the most appropriate and follow it through. This model of inquiry is specified in the Health and Physical Education learning area of *NZC*, but is also relevant to environmental education, education for sustainability and so on.

Some projects will have the potential to contribute to students' assessments for NCEA and some may be used to enter a competition. The variation in scope of actual projects students have undertaken is illustrated in Figure 3 below. Clearly, there is no one model, and no one "right" way of aligning a project with *NZC*.

Figure 3 Examples of successfully completed impact projects

NB: The following summaries have all been sourced from school newsletters.

In the school's first year, one student with a passion for IT was supported by the deputy principal with responsibility for IT systems to adapt the open source software package Linux to create a digital noticeboard system for the school's use. (As far as they are aware, ASHS is the first New Zealand school to use only open source software for all its computing needs.)

Four female students investigated ways they could provide practical support to the local Ronald McDonald House, where families of very ill children are accommodated to be close to the hospital. One of several initiatives they undertook was to design and prepare "heat and eat" meals to stock the freezer for emergencies.

A group of foundation students designed and produced a teeshirt that represented the various learning communities in the school. These are now sold in the uniform shop and can be worn for events such as sports days, or as part of the PE uniform.

One student was selected as finalist for a regional Young Designer award. She designed, made and presented her garment as part of this competition and also used it for her assessment for the relevant NCEA achievement standard in technology.

One group of students researched the building of low-cost housing for families living in poverty. They worked as volunteers on a project in a low-income area of their own city, putting the building skills and processes they had researched into practice. Meanwhile, they also planned for and began fundraising with the aim of participating in a similar project in Cambodia in the following year.

Two students researched the water cycle, including what younger students might need to know and how they might help them learn these ideas. They then went to a local primary school and taught and evaluated the unit they had planned.

Challenges the teachers and students faced at first

Impact projects are intended to provide students with challenging and personally meaningful opportunities for taking responsibility for their own learning. When we met with staff and students midway through the first year, there was a lot of retrospective reflection on the first projects. It was clear the process had been very challenging for all involved, for several reasons.

With the benefit of hindsight, the teachers realised that they had assumed that all students would be highly motivated and on task, given this opportunity to pursue learning interests that were authentic for them and others. That some students were not so motivated was disappointing and posed specific challenges to the whole programme. Several teachers reflected that the students were so accustomed to teacher-directed learning that they had difficulty even thinking up a topic of interest, let alone being able to carry out a relevant investigation. The following comment made by a focus group student vividly illustrates both the dilemma *and the learning potential* in this particular challenge:

For impact projects you have to set it [learning] up and organise it yourself. The teachers will help you to an extent but won't do it for you. They suggest people to talk to. We like this learning, but it's like being chucked in a pit and you have to find the steps to climb up, which the teachers have helped put there, but you have to choose your own way out. You don't know where the obstacles are and you have to make decisions on your own. We like this learning, but we couldn't have handled this when we were in the third form [Year 9]. It's going to help us when we are working in the rest of our life. (Year 11 focus group student)

Teachers said some students wanted to work on a topic with their friends, but this usually led to problems of role delegation in the group. As a consequence, friends were falling out as deadlines approached. The students also saw this as an issue, but again the learning potential is also apparent:

I was in a project with my friends and I found I had to tell them to do things, and it didn't work, and it was a disaster. I learnt an important lesson from that—it's best not to work with your friends. It makes you learn to get on with working with people who have different skill levels. My friends wouldn't get their work done by the deadlines—they would just play computer games and I was trying to persuade them to do it. I nearly lost my friends from that and then I would be horrible at home—I didn't want to talk to anybody. When mum asked me how it went I would just stomp out. Your friends may not be interested in the same things. We had to go and talk to our tutor teachers about this—it's more of a girl thing—the boys just sit there and get on with it. (Year 11 focus group student)

Congruent with this insightful student comment, a teacher noted that students had come to realise that personal interest or the focus of the chosen topic is the most important basis for choosing a group with whom to work. These same difficulties have been encountered by other schools when introducing more innovative forms of participatory inquiry. For example, we documented student engagement and focus challenges at several schools that took part in the Curriculum Innovation Project (CIP) (Boyd et al., 2005). It seems the benefits that are so apparent for teachers can take longer for students to appreciate, but when they do come to the realisation of what they have gained, the *dispositional* gains are likely to be clear for all to see.

The teachers also talked about *their* different role in the impact projects, and said they, too, had been on a steep learning curve. They have learned how to be more effective in a mentoring role, pointing students in the right direction but not being too directive. Part of this learning was the realisation that it was important to let the students fall over in some instances because their

mistakes were powerful learning opportunities, especially when students themselves had been the instigator of the mistake in question.

The early hitches resulted in some negative perceptions of the initiative out in the school community. "Waggers' Wednesday" or "wasted Wednesdays" were two of the derogatory terms in circulation. The school reacted to these developments by involving the parents in conversations about the intent of the impact days. However, some teachers said it was a challenge to turn around an "assessment-driven mindset" in both students and parents. Again, this challenge was also apparent in at least one of the CIP schools (Boyd et al., 2005).

Yet another challenge was that the school was seen to be a "trailblazer" in this type of initiative. Searching for others' solutions to the types of early problems the school was experiencing was not an option and trial and error learning was needed. The teachers identified the "open management style" in the school as an important support for this steep learning curve. They described events at open meetings where space had been made to spell out the problems and work together on potential solutions. As a consequence of this open process the impact days began to evolve right from the start and by midway through the first year teachers said most students had "stepped up impressively".

How these challenges were addressed

The staff confronted all these challenges openly and learned from them. During the most stressful early stages it helped that the BOT understood the intent of the impact projects and could proactively address changes raised by other members of the wider school community. A "dialogue" evening with parents allowed all the issues to be brought into the open. One output from that meeting was the development of a set of Frequently Asked Questions (FAQs) which are addressed in a document that can be downloaded from the school's website.

Developing a decision-making and support network

A network of teachers who were designated Impact Inquiry Leaders was active at the very heart of the rethinking of processes and planning for parental involvement. Led by one of the three deputy principals, the network was not originally planned into the management structure of the school (in contrast to those discussed in the previous sections) but rather emerged organically in response to the challenges that confronted the teachers in the early part of the first year.

This network initially consisted of the deputy principal in charge of impact projects and four volunteer teachers. These teachers, in turn, each headed a cluster group of four teachers who

worked in pairs to support impact projects with common interests or purposes.⁶ The pairs in any one cluster were strategically matched to create interesting new spaces of possibility at their intersections. For example, a pair of teachers with an interest in impact projects related to the performing arts was clustered with two teachers working with students undertaking business-related projects, with the possibility of leveraging common interests in creative and entrepreneurial dimensions in the students' work.

After the impact inquiry network had been formed, students were invited to apply for leadership roles working with the teachers and deputy principal at the heart of the network. Once selected, these students worked together to explore ways to better represent "student voice" through the impact project process. One result of this was that the student leaders systematically interviewed all the project teams to gain insights into their early experiences of making the projects work, and to identify students' ideas for the next steps needed. They came back to the network group with lots of ideas. A third important perspective was provided by a small number of parents who volunteered at the parent dialogue evening to work with the teacher and students impact inquiry leaders. By the end of the first year of operation, the learning network for impact projects was broadly structured as in Figure 4. As already noted, this network was dissolved early in 2011 once its work had been completed.

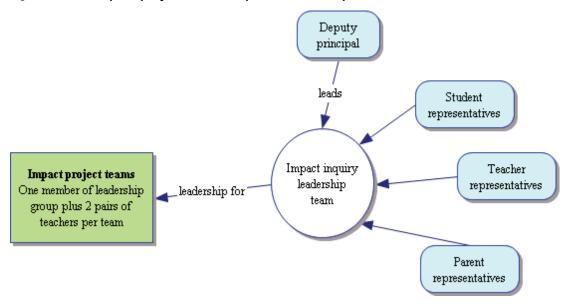


Figure 4 The impact project leadership network set up in mid-2009

Developing clearer specifications for inquiry processes

Together the impact inquiry group developed a more structured process to better support students to succeed with their impact projects. Sequential steps became known as the "5 Ps": preparation; proposal; planning; performing the plan; and presentation of learning.

⁶ The idea of working in pairs was to ensure one teacher was always available to students when needed.

Preparation

The "impact" of the title signals the intent that the project will make a contribution, either within the school community, or to the wider community in which the school is located. Students identify the impact potential at the preparation stage and explain this to an "impact committee", along with a preliminary explanation of what the project might entail. This process allows them to be matched to a suitable adult mentor.

Proposal

A template guides students through the proposal writing stage. As well as justifying their inquiry question and proposed actions to address this, students must identify intended outcomes and describe success criteria. At this stage their work is presented to a panel of teachers and peers, who provide critical feedback with the intention of further strengthening the proposal.

Planning

The refined proposal is converted to a working plan, with timelines, special progress goals and action steps. All decisions and actions are logged in an e-portfolio that documents the overall project learning. In group projects, students are encouraged to develop an action checklist and to allocate a project manager who will use the checklist to keep the project on track.

Performing the plan

The project is carried out over the course of the school term. Regular meetings are held with the supervising adult, who signs off on progress reports.

Presentation of learning

At the conclusion of the project an appropriate way to present the work is devised. This could be a performance, entry of an object into a relevant competition, delivery of a verbal or written report, creation of a website or a portfolio and so on. The format will suit the project. Where students wish to carry out longer projects, the next steps will be planned at this stage so they can begin again with a new inquiry cycle in the following school term.

This careful structure placed considerable demands on the provision of sufficient mentors. Lateral thinking about how to access everyone's potential contribution helped. Support staff became involved and their particular skills and expertise were utilised in ways that complemented the teaching programme. Some of the ways support staff currently contribute include: the school librarian assists students with their information research skills as needed; the finance officer helps students put together proposals and budgets for their impact projects; and the principal's personal assistant edits students' letters to employers and community members when they need to contact them for their impact projects. All support staff also offer workshops in their specialities to students from time to time. By the end of the first year, support staff had noticed that the standard

of the letters, business plans and budgets had improved markedly since the early days of the projects.

The students' views two years on

At the end of 2010 a majority of the students saw their impact projects as providing challenges, believed they had been successful overcoming these and most showed strong appreciation for the roles played by the project mentors. There was a trend for Year 12 males to be the most likely of all the students to be strongly positive about impact projects and for Year 12 students generally to appreciate potential links between impact project experiences and future possible careers (Hipkins, with Hodgen & Dingle, 2011).

Relationships between impact projects and other parts of the school curriculum

Perceiving dynamic and helpful relationships between traditional "academic" learning and the impact projects may still be an issue for students. One 2009 survey item about the impact projects focused on perceptions of this relationship: *Impact projects help my learning in specialist subjects*. A bare majority (56 percent) of students agreed or strongly agreed. The item was reworded somewhat in 2010 but the overall responses remained much the same: *I was supported to identify opportunities in my project to deepen my specialist subject understanding* (59 percent of students agreed or strongly agreed). This was one of the lower ranking items for the *Impact Project* actor.

It would be interesting to know how students *interpreted* this item. Were "help my learning" (2009) and "deepen my understanding" (2010) taken to imply a *direct relationship* between the project and the subject? Illustrating this possibility, the housing project outlined in Figure 3 began with a conversation in a geography class, and the project in which some students planned and taught younger students about the water cycle directly related to learning about the interacting systems of the geosphere, hydrosphere, atmosphere and biosphere, as specified in the science learning area at the appropriate curriculum level (Ministry of Education, 2007). Some design and make projects began in the relevant curriculum area but spilled over into other curriculum areas in the "making" stage, undertaken on impact days, and returned to the originating curriculum area at the evaluation/assessment stage. For example, one group of students made a very large bench seat in the shape of a gecko that is now positioned in one of the school's public spaces. The project began as a design challenge in an arts class but became a technology project as the students worked with the heavy slab of timber and other materials needed to actually make the seat. They completed their evaluations and submitted the project for assessment under the guidance of their arts teacher.

Alternatively, the relationship between impact projects and curriculum subjects could be seen as entailing a *learning-to-learn* perspective, where aspects such as finding out about learning strategies that work best for you could support learning in other parts of the curriculum. Elsewhere, a model of "archeological inquiry" has been developed with exactly this purpose in mind (Deakin Crick & Grushka, 2009). Students literally dig into an issue or topic of strong personal interest, initially gathering and organising material as they see fit. As their personal knowledge and experience of the topic grow they are introduced to disciplinary inquiry tools relevant to their question and quest. At this stage, "ground up" personal exploration and "top down" disciplinary inquiry meet in the middle. Experiencing this process allows students to learn about what it means to *be* an inquirer in this disciplinary tradition (Jaros, 2009) as well as gaining insights into their personal learning strengths and areas in need of further development.

Competency development that includes aspects of learning to learn, including strengthening dispositional dimensions of competency (resilience, persistence, curiosity, etc.) is clearly an intended outcome of impact projects. Some students who responded positively to the item about links to specialist subjects may have understood the connection in this way but this cannot be definitively determined by the student survey data set. It is a question worthy of further investigation in its own right.

6. A pedagogy for young adults

The school has a stated aim of developing a "pedagogy for young adults". This aspect of the school's vision has been a strong guiding influence on acceptable ways of *being* in the school— for everyone present, not just students. These comments from the school's website set the tone and intent:

Research supports our view that students learn best when they feel valued and are actively engaged in their learning. Warm, positive relationships between teachers and students are essential for learners to thrive. (http://ashs.school.nz/learning/)

Young adults learn best when they: know what they are learning and why; connect their learning to real life situations; have multiple opportunities to build on existing knowledge; examine and use new knowledge; have time to reflect on their learning. (School website www.ashs.school.nz reformatted from a bullet point list to a condensed quote)

The preceding sections have discussed the manner in which these ideals are intended to be put into effect in three different components of the school curriculum. Impact studies allow students to follow their passions, direct the tempo and pace of their learning across a whole school day and connect school learning to life outside school. Specialist subjects introduce a more explicit learning-to-learn focus while introducing students to important new knowledge and helping them see how this might be used in the world. Tutorial times set the tone for "warm, positive relationships", and help students keep track of how the various parts of their learning connect to form a coherent whole now, while also pointing the way to future learning and life beyond school.

To these more formal structures and processes this section now adds discussion of a challenging and more informal/tacit layer of expectations about appropriate *ways of being* in the school. These aspects are about attitudes and expectations, and the influence these can have on daily interactions in every aspect of school life:

- There is an expectation that everyone brings strengths (their "treasures") that are resources for learning. Associated with this are high expectations that everyone can learn and contribute, given appropriate support and learning/action goals. These learning values apply to staff and students alike. Quoting from a leading New Zealand researcher, one of the school's touchstone mottos is "the question is not if you are bright but how you are bright" (Gilbert, 2005).
- Relationships are expected to be respectful at all times, with any issues that arise being discussed and resolved in reasonable conversation. Interactions of the sort that disempower one party to the dispute (for example, yelling at misbehaving students) are not seen as acceptable and any such instances are managed proactively.

- Students, like the adults in the school, are expected to be self-managing. Expectations are clear but "rules" in the traditional sense are as minimal as possible. The students wear a uniform only because the parent community strongly desired this. The foundation team would have preferred that the students could choose their own dress.
- The tutorial structure supports the development of self-management of learning and the impact studies provide rich opportunities to practise the associated skills (goal setting, self-review, strategic use of time etc.) on a regular basis.
- Cell phones offer learning and communication options and students are expected to carry them (they are banned in many New Zealand schools). Likewise, access to the Internet is always open but use is expected to be appropriate to learning goals in the moment.
- Spaces that meet basic human needs (food spaces, bathroom spaces, social spaces) are shared wherever practical, with minimal separation of adults and students. For example, the senior management team and the school's leading administration staff all share a large open-plan office where interactions can aid the flow of ideas and keep everyone connected to what is happening in the school. Small meeting rooms are available if privacy is really needed but precedents for deprivatised practice are strongly established and most of the daily work of the school is seen as shared and open.
- As evidenced by their presence in the networks discussed in the preceding sections, students are represented in all decision-making processes unless there is a specific reason to exclude them.

Early experiences of enacting this pedagogy

In some ways this has been the most challenging aspect of innovation for everyone, albeit for different reasons.

Challenges from the students' perspectives

Some students found it more difficult than others to adjust to new ways of "being a school student" compared to their earlier experiences of school. Because they were the foundation cohort, there were no older students to look to for appropriate leads in making this major transition. Some students initially took advantage of what they saw as a lack of boundaries or consequences for misbehaviour. However, the more perceptive students soon came to realise that the different framing of expectations had an important learning purpose and it was now up to them to better govern their own behaviour:

The people who didn't want to learn at [previous school] don't want to learn here. If students are not doing anything the teachers won't try to make them. The teachers make you feel like they are not there to just tell you stuff—you would feel bad about acting up because you might hurt their feelings. So different from the [previous school] teachers—they were always checking on uniforms, hair, etc. (Student focus group comment)

We were spoon fed in [previous school] doing credits—'here they are—eat them up'. But here they say if you want them, you have to do the work. We are comfortable about credits for NCEA. If you don't think you are going to pass the teachers will give you extra workshops. (Student focus group comment)

The students were aware that the greater freedom from traditional disciplinary constraints was initially a worry to their parents, and continued to be a potential source of negative views of the school from others in the local community:

My parents were worried about all the freedom I talked about having when I first started, but they have relaxed now. (Student focus group comment)

For this student and others who have successfully made the initially stressful transition the "pedagogy for young adults" has been a powerful enabler in the ongoing strengthening of selfmanagement competencies. (*Managing self* is one of five key competencies in *NZC*.) The teachers were certainly aware of the powerful engagement gains that could lead to a different way of being a student in this school:

> They come early, they stay late, they don't feel like they learn here only from nine to three and then go home. It's all the same. It's just part of their life. (Teacher focus group comment)

> There are no breaks where they have to stop, start learning. They can stay in the learning space during lunch or morning tea and keep doing things on the computer. It's a seamless environment where the environment is helping support the learning, like they can play music at any time of the day. It was 5.15 last night and I had to kick kids out—say 'go home'. They were playing music. It's part of their normal life. (Teacher focus group comment)

For a small number of students, however, the transition seems to have been less successful and their episodic misbehaviour remains a challenge for the school staff to manage (see below).

Parents' views of the school

The BOT chairperson noted that parental perceptions of a lack of discipline could arise because infringements were handled differently from the processes that were familiar to them from other experiences of school (including their own when they were students). The casual nature of the school uniform might also have contributed to impressions of laxity. These concerns were indeed aired during the parent focus group, but often from the perspective that *other people* in the community might regard the school as having a concerning lack of discipline, not that they necessarily did so themselves. As the following comment made by a parent shows, views and concerns about discipline can also create conflict for parents around where their own responsibilities begin and end in these important years of transition to adulthood:

They are still kids and we don't want them running amok. Some people think it's the school being too lenient. All the parents have to take responsibility for disciplining their kids. The school's job is academic. (Parent focus group comment)

The BOT chair was also aware of concern from some parents that their child would not cope in a climate where they had to take responsibility for their own learning choices and actions. (At this point he said "welcome to the real world".) In their focus group conversations, teachers also commented on parents' expectations and responses to the manner in which the school curriculum was being enacted:

We were on the back foot with our parents when we started—some of them were fierce. When we began ringing them to compliment them on their students' achievements they were wary and said 'What's she done wrong?' They were quite taken aback by our openness. (Focus group teacher comment)

These teachers noted that, after the parents had become used to this newer, more open relationship, they became much more relaxed and positive about what was happening at the school. Comments made in the parent focus group endorsed this view, and also suggested that some parents had chosen the school for the very reasons that were initially of concern to other parents:

My son was in the bottom third and he had no future at [name of nearby secondary school with a policy of ability streaming]. He was so pushed down by bullies there, but he has blossomed here, and loves ASHS—he gets involved in the 100-minute periods whereas at [name of former school] he was easily distracted—there are smaller numbers here so he finishes his work—he does all his work at school. I have rented a house here to get into zone. (Parent focus group comment)

One parent noted that discipline became less of an issue when "the boys are not bored", adding that "it's great coming here to see how the kids work in the open-plan classes". All the parents believed their children enjoyed the open-plan structure, and they liked blending in with the wide mix of students. They recognised the school's efforts to treat the students like adults, and said the students enjoyed the responsibility of the peer teaching that was encouraged. Another aspect of the school's success was the activities that occurred in tutorial groups because teachers knew the students well and this had helped reduce discipline problems. Parents also told stories about the warm emotional culture among the students and the lack of bullying at the school.

Comments parents made about impact projects show a trajectory from initial concern to a dawning realisation of their learning benefits, as illustrated as the parent who made the above comment elaborates on his son's success in the school:

Most of the things my son was involved in I thought at first were ridiculous, but actually what they achieved was mind blowing. It's been hard for me to understand impact projects—I get no communication from my son. Boys don't give you the information. But my son has really grown as a result of impact days. I cannot stress more strenuously the difference this school has made to my son. He is blossoming! You don't know what he was like before. He's loving it. I really like the way they mix with people from the community on impact days. I tell everyone I can about what a great school this is. (Parent focus group comment)

Another father agreed that his daughter, who had been involved in an events management project at the local stadium, loved her experience. He said:

To bring that little bit of adult out in a kid ... they love it. It's real learning and they don't even realise they are learning. (Parent focus group comment)

At the time these comments were made (mid-2009) ASHS did not yet have a "track record" of NCEA assessment results because it was still in its first year of operation. The BOT chair noted initial parental concerns about whether students would succeed academically. At the time of the 2009 interviews, results from early NCEA internal assessments were just beginning to emerge. At that point the school leaders were confident that community concerns about the school's achievement track record would abate because a wide range of students were already demonstrating learning successes, and some who would never have expected to achieve NCEA standards were doing so "with excellence". Nevertheless, in an environment in which schools compete for students and the media publish overly-simplified "league table" comparisons of NCEA results, ASHS staff feel they cannot relax their vigilance in respect of their overall NCEA achievement profile. They need to keep showing prospective parents that their way of enacting a 21st century curriculum will at the very least not harm students' chances of gaining strong NCEA profiles.

NZCER's Competent Learners research does suggest that dispositional outcomes such as perseverance, which ASHS is seeking to foster, are positively associated with NCEA success (Wylie, Hipkins, & Hodgen, 2009). However, in a competitive environment it is not so much the actual gaining of the qualification that is an issue so much as the numbers of merit and excellence passes. Gaining these requires additional effort and self-direction from students, and this does highlight the school's aim of fostering the agency needed to continue learning of one's own volition and towards personally relevant learning goals. To this extent numbers of merit and excellence passes could be seen as an important indicator of the school's success. In a complex change context, however, there are other less obvious factors to take into account.

One such challenge is the extent to which students' valued personal goals align with the available NCEA assessments. While teachers have some freedom to choose the standards (and within these to design assessment tasks) they think best reflect their pedagogical intent, the choice is not unlimited. ASHS is attempting to foster action competencies needed to use new learning in ways that contribute to and enrich personal, school and community life. However, the "something more" these action competencies could confer—now and into the future—is unlikely to be adequately captured by many current NCEA standards, which continue to assess the acquisition of specified bodies of knowledge and sometimes related skills. This comment does not imply a simple either/or dichotomy. Knowledge and skills are important components of competence and to suggest otherwise would be foolish. Rather, the question is one of alignment and adequacy. If what is assessed is not well aligned with, or adequately representative of, the complex demands of taking meaningful action in authentic contexts, students may simply fail to see the relevance or value the learning opportunities on offer.

Aspirations for the young adult learners at ASHS are likely to be misunderstood or simply missed altogether by those who do not recognise or perhaps value what the school is trying to achieve with regard to fostering the desire to keep learning and to use that learning in personally relevant ways and contexts. Furthermore, some of the fruits of such outcomes will, by definition and design, lie well in the future, when NCEA is but a memory of the assessment hoops one must learn to jump through at school.

Teacher troubles

All the factors outlined above have been challenging for the teachers to cope with. On top of all the issues outlined so far they have faced varying degrees of challenge in learning to "be" somewhat different in their classroom interactions with students. Stern in-the-moment reprimands in response to unacceptable behaviour are a staple fare of traditional classroom life but are not seen as acceptable at ASHS. Teacher responses that mete out instant "rough justice" do not afford students the opportunity to learn self-regulation skills and are actively discouraged. Some teachers, faced with the need to cope with episodes when their authority has been challenged without recourse to traditional teacher behaviours, have come to say that students can "get away" with anything. The school's senior leaders have had to proactively manage more than one episode of dissent from a group of teachers when feelings on this issue have run high.

When the going got tough, leading by being a role model was important to the principal. She noted that she had worked in "bully" cultures and seen at first hand how easily overbearing modes of communication can become entrenched through the layers of the school. To her it was particularly important that *everyone* models respectful communication. Even if it takes some difficult students longer than others to apprehend that they are "OK too" the principal believes they will get there if the whole community holds its nerve and everyone persists in being respectful.

"Being" a teacher—or indeed a school student—entails moment-by-moment interactions that are deeply embodied responses built over time by ongoing experiences in the familiar lived contexts of school. This very *everydayness* means these ways of being simply "are" and hence render invisible certain actions in the daily flow of classroom life (Donnelly, 1999). Just as windows function to support seeing yet do so *because* they are transparent (Lave, 1988), the transparency of "normal" interactions keeps classroom life humming yet does so in ways that escape direct attention. This invisibility makes changes in classroom pedagogy particularly challenging to achieve and a necessary first step is to render visible responses that would normally go unnoticed (Donnelly, 1999). This is likely to be one reason that the open-plan spaces have been so influential in supporting teachers and students in making changes to their ways of being in school.

The willingness of the principal and senior leaders to confront issues as they arise has also contributed to the school's ability to embed changes in ways of being in the school. The episodes of teacher unrest mentioned above were brought into the open and debated by the whole staff in specially convened meetings. Trouble is not brushed under the carpet in the hope that it will go away and the difficulty of the changes the school is making is openly acknowledged. Nor does this spirit of courage and frankness only apply to conversations between teachers. Student leaders are instrumental in helping address challenges in daily school life and the school goes to considerable lengths to ensure that parents understand what they are trying to achieve.

Leveraging opportunities for learning together

Learning together is a widely acknowledged component of school reforms that can be sustained over time, especially where the envisioned changes are complex and involve nothing less than a rethinking of the moral purposes of schooling (see, for example, Fullan, 2010). It will be evident from the processes documented in the report so far that the leaders of ASHS have been careful to build respectful, collaborative learning strategies into the everyday ways of being for everyone in this school—teachers, parents where willing and the students. Two particular types of structures have played key roles in enabling learning conversations that have allowed the school to confront issues and move forward.

World café process

Early in the planning stages the senior management team began planning for consultation processes that employ the World Café approach to interactions (Brown & Isaacs, 2005). Briefly, conversations are held in staged rounds of small-group discussions that take place around café-style tables. Questions are designed to invoke a variety of contributions and to lead to shared emergent understanding of challenges, not just to arrive at quick solutions.

This process was developed and refined when the first group of teachers was employed, and thereafter became a standard element of professional learning. Parent cafés have been held to address challenges as these have arisen. As already noted, one was called early in the first year to address the challenges of impact projects and resulted in both the tightening of procedures and a better shared understanding of what the projects were trying to achieve. Student leaders also take part in café-style conversations to build their understanding of the school's aims and to afford rich opportunities for them to contribute ideas for overcoming challenges as the school's pedagogy and curriculum evolve. Thus this process has become integral to the sustainability of the school's vision for quite different ways of "being" a school for the 21st century.

Learning networks

As already outlined, every teacher in the school belongs to several networks for distributed professional learning. Every teacher is a member of at least one specialist subject network and also of one learning communities (tutorial) network. These networks interact with each other via their overlapping memberships, but each has a discrete distributed (nodal) structure and clearly defined

learning purposes. This is a complex, sophisticated structure for distributed learning and leadership. It has evolved somewhat over time in response to issues the school has needed to confront but remains flexible and responsive to ongoing learning needs. It has been central to the school's success in putting into action plans to *be* a different sort of school for new times.

Of course structures alone do not make a school, no matter how carefully planned and well intentioned. At the time of our visit mid-way through the first year of operation, "holding our nerve" was a phrase we heard repeated on a number of occasions. Staying true to the founding vision for the school while acknowledging and addressing issues took considerable courage and tested deeply held convictions about what the school was trying to achieve. The collegial support of the network structures has doubtless contributed to the courage and resilience shown by the school staff as the school has confronted and addressed the issues and challenges outlined in this report. Through all the ups and downs the principal has led the way and the final section of the report discusses the role she has played in orchestrating the whole system to keep the school moving forward with the innovations it has put in place.

7. Leading a learning school

This is the third school the principal has led. She noted that she had previously completed postgraduate study in leadership while still pondering "What does it all mean?" The opportunity to conceptualise a new type of school and then bring those dreams to fruition had afforded her the chance to bring theory, experience and practice together in new ways. Learning from her previous principal roles, she has tried to do some things very differently in setting up the school's systems and ways of being. She said she was glad she didn't have to learn to be a principal at the same time as learning how to establish a school from scratch. Both are huge jobs and in her view there would be too much to learn to tackle both simultaneously and do justice to the challenge.

Differences she described between her leadership style in her previous schools and at ASHS included:

- Being more "hands-off" by making space for her senior leadership team to develop and follow their passions, nurturing and coaching them as they grow and develop in their roles (only one of the three had been a deputy principal before being appointed to this role at ASHS). Making space meant giving away a lot of power, and the principal observed that you can only really do this if you have a lot of power to begin with. She drew a direct parallel between the Te Kotahitanga philosophy, where the teacher "gives away power" to the students, and her philosophy as leader of the school.
- Related to this change, the principal said she aspires to be a leader who leads by encouraging leadership in others wherever those opportunities may be found. She noted that the students have been very surprised at who amongst them had "stepped up" to lead in different ways. Most students came from a school where student leadership opportunities tended to accrue to the "gifted and talented" class and some of the members of this group, in particular, had been challenged by not automatically carrying this "special" status over with them to the new school.
- Another successful aspect of her leadership had been not setting pivotal decisions in place too soon, and making them as collaboratively as possible (as, for example, in the "World Café" approach the school has been using to consult staff, parents and students on important issues). She noted ERO had been asking about the school's intended approach to staff appraisal. Midway through the first year of operation this was one area where the right way to go about this aspect of management had yet to emerge. The principal saw the possibility that appraisals might emerge as a process from the professional inquiry clusters, or from the impact clusters, or from the specialist subject clusters. All were feasible starting points for developing the appraisal process and she just wanted to "slow down and let it come from the collective".

• This observation in turn sparked what the principal saw as the biggest change from her previous leadership roles: "holding her nerve" and trusting the process when the way ahead was not clear or challenges arose. For example, when one mini-rebellion occurred amongst some staff (see previous section) some staff came into the special meeting that was called demanding the implementation of a detention system. As angry feelings were aired, what gradually emerged from within the whole group was the sense that to institute a detention system would be counter to the collectively agreed principles of maintaining discipline through a culture of respect, strong relationships and carefully scaffolded development of student self-management as their learning autonomy grew. The principal observed she could have got "instant kudos" early in this meeting if she had capitulated to the all-too-evident challenges, but the cost would ultimately have been too high.

Planning for sustainability

The principal is very aware the school will face challenges in sustaining its vision as it gets bigger and becomes more settled into its community. Key mechanisms put in place to sustain this school's innovative curriculum include:

A flat management structure and distributed leadership

The different types of learning and management networks described in this report were devised with sustainability in mind. The principal believes that sustaining a vision should not be reliant on any one person or group having to work too hard, nor should it be reliant on strong personalities. There should be a place for all styles of leadership and for everyone to bring their complementary strengths to the team.

A culture of deprivatised practice

The principal has a desk in the open working space shared all three deputy principals and other management staff. Teachers all work in open spaces where they can observe each other at work and they share workrooms attached to these spaces. Issues and challenges are openly shared and addressed. The school is open to parents at all times.

Collective decision making

At ASHS every person is seen as bringing strengths to the whole team ("their treasures"). The leadership team aims to work in ways that build teachers' autonomy and allow them to develop their individual passions within the networked learning culture. All the administration personnel are also empowered to participate in decision making and they "own" the organisational aspects of the school. The principal noted that they have a "respect that doesn't necessarily happen at

other schools". Student leaders are also integral members of all the networks and have real decision-making roles to play.

The school works hard to involve parents and is proactive about educating them so they understand what ASHS is trying to achieve. BOT members are often in the school to share in key events, including professional learning where they have an interest in this. Mid-way through the first year the principal acknowledged that members of the foundation board had personally invested a great deal in the school, because they had needed to be so active in the initial planning. While their formal role is governance rather than management, there was a need to allow the foundation board to "take their hands off slowly" as the new systems bedded in.

The network structure has been carefully used to meet "scaling up" challenges. Starting with just one year level of students, the school was planned to grow by another whole cohort of students and teachers in each of its next two years. The changes that a larger size would bring were not lost on the foundation team and the principal planned very careful induction processes to ensure that a culture of "them and us" did not develop as each next intake of teachers and students arrived. Distributing new arrivals among the various existing networks was one key strategy here.

The network structure supports collective decision making and also acts to ensure that decisions in different parts of the school are not made in isolation from what is happening elsewhere. The whole system thus maintains coherence and integrity while also affording spaces for creativity and innovation in problem solving. This is the very essence of a complex system that learns simply by its daily "being" (see, for example, Capra, 2002) and this ability to adjust and learn in action would seem to sit at the very heart of learning to be a new school for new times.

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