

Building for the Future

New and changing secondary schools in NZ

John Locke 2006

	Introduction	Page 1
Chapter 1	21 st century context	Page 3
Chapter 2	The Alfriston curriculum	Page 7
Chapter 3	Meeting the needs of students	Page 19
Chapter 4	Learning and teaching	Page 25
Chapter 5	Learning leaders	Page 39
Chapter 6	The Learning environment-Property	Page 45
Chapter 7	The Learning environment-ICT	Page 57
Chapter 8	Building culture	Page 61
Chapter 9	Establishment process	Page 69
	Appendix	Page 79
	Bibliography	Page 89



Introduction

The purpose of this manual is to share the story of designing and building a new secondary school in New Zealand, to meet the needs of 21st century students.

The design process inevitably required the school community to think about the kinds of learning we wanted our young people to experience, in preparation for taking their places in a society wholly different from the world in which their teachers were young adults. The answers we found to questions about teaching and learning in a new century were supported by research and are now implicit in the buildings and the organizational structures of Alfriston College.

Most chapters are presented in two sections; the first is a summary of research and evidence articulating the current situation in relation to student learning needs. The second describes the ways in which Alfriston College and other new schools have responded to these challenges.

Although this document is focused on the establishment of a new school, I hope that its usefulness extends beyond its relevance to new school establishment. The process of school creation is not unlike that associated with the development of an existing school. In both cases the exercise is one of initiating, leading and managing significant organisational change.

For readers whose challenge is similar to mine, the building of a new school, this handbook should be read in conjunction with the Ministry of Education publication 'Guidelines for the establishment of a new secondary school' developed by the New Secondary Schools Working Party in March 2000.

At the time of writing the Alfriston College roll is 734 and expected to rise to 1100–1200 by 2008.

I would like to thank the Alfriston College Board of Trustees for giving me the time to write and the staff (particularly the Senior Leadership Team) of Alfriston College who have inspired my desire to tell their story.

My wife Caroline has provided patient and expert support and encouragement. Margaret Bendall and Larry Jenkins have also been invaluable critical friends.

Schools are learning institutions; by definition therefore, their purpose is to bring about change. For those responsible for establishing new schools or managing change in existing schools it is important to ask a couple of key questions.

1. What future do the young people of today face?
2. What sort of people would we like to see emerge from compulsory education and in what ways might these people be shaped by what they encounter in their secondary school experience?

From then to now

In 1979 an Air NZ Antarctic flight collided with Mt Erebus, Margaret Thatcher came to power and Pink Floyd released 'the Wall'. At this time no one had the slightest idea that a text-message was not necessarily always going to be a typewritten letter. It was also the year in which MacLeans College was established in the rapidly growing Auckland suburb of Howick. MacLeans was the last state secondary school to be built in NZ until Alfriston College and Botany Downs Secondary College were opened 25 years later in 2004.

During the passage of those 25 years Information Technology became a global mainstream economic driver and we entered the information age– the most recent paradigm shift in a series beginning with the change from hunting and gathering to settled farming.



A second shift occurred when industrial activity began to replace agriculture as the economic driver. Factories replaced farms as the key element and populations urbanised in response to the need for large localised workforces. The skill sets required by factory-workers were significantly different from those essential for farm-workers. Work began to be measured in hours and workers contributed their specific skills to a chain of manufacture. This era also saw the development of state schools established to equip industrial organisations with employees who had the requisite new attitudes and skills. In this world, compliance and individual responsibility were more desirable than creativity, collaboration or problem solving.

'Developed' countries are now in a transition phase from the industrial era to what has been termed the knowledge era. Just as some of the agricultural era skills were replaced by industrial era skills, the new education paradigm requires profound changes to meet the challenges and opportunities of a new era.

The following extract from the Pink Floyd album 'the Wall' and the Powerful Learning list from Julia Atkin (2001) illustrate, perhaps in a stereotypical way, some of the fundamental differences between 20th and 21st century educational attitudes and practice.

The Wall – Pink Floyd 1979	Powerful learning – Julia Atkin 2001
<p>We don't need no education We don't need no thought control No dark sarcasm in the classroom Teachers leave them kids alone Hey! Teachers! Leave them kids alone! All in all it's just another brick in the wall. All in all you're just another brick in the wall. "Wrong, Do it again!" "If you don't eat yer meat, you can't have any pudding. How can you have any pudding if you don't eat yer meat?" "You! Yes, you behind the bike sheds, stand still laddy! "</p>	<ul style="list-style-type: none"> • Learner purpose • Relevance • Challenge • Sharing– having to teach another • Connection to the personal: experience/ emotion • Teacher passion

The next table highlights some of the issues facing secondary schools as they evolve from a 19th/20th century to a 21st century model. The right-hand column contains skills that are far more demanding and complex than those on the left. The role played by teachers is correspondingly significantly more demanding and consequently requires a much closer emotional and intellectual relationship with individual students.

Mid 19th to 20th century

Manufacturing
 The factory
 Content/product
 Individual
 Compliance
 Selection/failure

21st century

Informing and communicating
 The internet
 Process
 Collaboration
 Autonomy/creativity
 Success for all

International research from the Programme for International Student Achievement (PISA) evaluating the performance of 15-year-old students in OECD countries was published in 2003. The results revealed that NZ students were amongst the very best in the OECD. However, the results also confirmed that NZ education faces a particular challenge in relation to the performance of Maori, Pacific Island and male students. All these groups and subgroups have a tendency to underachieve and disengage physically and emotionally from schooling in years 9 and 10 (See appendix 1).

Now– the specific challenges for NZ schools

In 2001, the Auckland office of the Ministry of Education commissioned the firm 'Critical Insight' to carry out two investigations, firstly to research worldwide trends in educational change and school design, and secondly to determine community hopes and dreams for the first new secondary schools to be built in NZ for over 20 years. Their research summarised five major needs to which new schools all over the world were responding:

1. Changes in learning needs and pedagogy.
 - 21st century students are expected to perform at far higher levels of knowledge and skill than those of any previous generation.
 - In 1963 5% of secondary students progressed to tertiary education; the figure for 2006 is 40% and rising. 'Average' students are now expected to be able to do the things that were previously only expected of the elite.
 - Research, problem solving, self evaluation, independent learning and assessment (in ways other than written examination) all require significantly more complex and demanding student skills and associated teacher expertise and interaction.
2. Relationships, both intra-school and between the school and the community.
 - The likelihood of student success is increased if their family has a close and positive relationship with the school and if they themselves feel that they have teachers who care about and understand them.
3. Flexibility in learning spaces.
 - We may think we know what good school buildings look like in 2006. The structures themselves have a life of at least 50 years. The only way we can be sure that the buildings will work in 2056 is if they are future-proofed by internal flexibility of use.

4. The impact of information and communications technology (ICT).
 - ICTs fundamentally change pedagogy, the nature of knowledge and the role of schools.
5. Environmental quality and sustainability.
 - School structures and systems should model environmental responsibility.

A 2000 Ministry of Education working party developed the following guiding principles for the role and purpose of a secondary school. These provide the beginnings of a useful framework for thinking about the purpose and nature of a new or changing school.

- Provide teaching and learning to students in years 7–13 or 9–13.
- Prepare students for lifelong learning in an increasingly knowledge-based, globalised and technological society.
- Prepare students for active participation as New Zealand citizens in a bi-cultural/multicultural, democratic society.
- Prepare students for further higher education and training.
- Prepare some students for direct entry into employment.
- Meet local curriculum goals and community expectations.

The next section of this manual describes the development of a curriculum designed to respond to these global, national and local needs and trends.

We worry about our schools becoming ineffective when we should be afraid they'll become irrelevant.

"Learning with technology" Prakash Nair

In the previous chapter the context for 21st century education was explored; the major issues can be summarised in the following way:

- First world countries are currently experiencing a major paradigm shift, a period of rapid and profound change which is affecting global economic and social structures.
- The skills and knowledge required in the 21st century are significantly different from those necessary in the 20th century. Performance expectations for the average learner are far higher than for previous generations.
- Success for all; schools no longer have a gate-keeping function and are required to focus on the successful development of every student.

Thus, if all students are now expected to possess knowledge and skills that are both different and more challenging than what exactly are these attributes and what does a 21st century curriculum capable of delivering such qualities look like?

Firstly let us examine the likely content of an appropriate 21st century NZ secondary school curriculum; the Alfriston interpretation of this will then be explained.

From a local perspective Manurewa parents had aspirations that their new school would reflect 21st century needs, and would:

- Be well rounded.
- Have a strong academic base specialising in sport, music, technology and art.
- Provide for non-academic students.
- Create a curriculum that fosters excellence and broadens students' horizons.
- Utilise up to date technology.
- Balance social skills with employment needs.
- Ensure that the unique abilities of students are developed.
- Teach and value life skills.
- Respect the culture of students and their families.

- Create an attractive environment through landscaping.
- Be modern, distinctive and include lots of natural light.
- Have an entrance with a 'wow' factor.



In December 2004 the New Zealand 'Growth and Innovation Advisory Board' researched the qualities needed by young people to be successful in business now and in the future. The top six characteristics were:

- Excellent communication and people skills.
- The will to succeed.
- The ability to learn and adapt to change.
- Vision and big picture thinking.
- Well-rounded education and skills.
- Ethical and trustworthy behaviour.

The NZ Ministry of Education Curriculum Stock take report (2003) adds six more:

- Social cohesion (including developing resilience and a sense of social connectedness).
- Citizenship (local, national and global).

- Education for a sustainable future (including sustainable development and environmental sustainability).
- Bicultural and multicultural awareness.
- Enterprise and innovation.
- Critical literacy (including digital literacy).

In June 2003 the Education Review Office published *Students in Years 9 and 10*. This document reported on international research and local practice about Middle Level Education. The National Middle schools Association (NMSA) in the United States of America identified the following 12 characteristics of a developmentally responsive middle school. The characteristics are important for and can be found in other school types with Years 9 and 10 students:

- Educators committed to young adolescents.
- Shared vision.
- High expectations for all.
- An adult advocate for every student.
- Family and community partnerships.
- A positive school climate.
- Curriculum that is challenging, integrative and exploratory.
- Varied teaching and learning techniques.
- Assessment and evaluation that promotes learning.
- Flexible organisational structures.
- Programmes and policies that foster health, wellness, and safety.
- Comprehensive guidance and support services.

The characteristics of developmentally responsive middle level education are similar to characteristics that have been identified as improving the quality of education for students generally. In a summary, Beare (2001) lists ten; five are the same as some of the NMSA list. The remaining five shed a little more light:

- Focus on learning.
- Climate for learning (attractive, orderly, safe, allows risk-taking).
- Professional leadership.
- A learning organisation (all are learners).
- Students' rights and responsibilities.

The NZ Education Act also has something to say about formal curriculum and assessment requirements. Secondary schools are expected to provide compulsory schooling for all students up to the age of 16; a compulsory curriculum for all students up to the end of year 10 and a choice of curriculum from year 11 onwards. This schooling is based on the New Zealand Curriculum Framework and the National Qualifications Framework and leads to the full range of qualifications available within a secondary school.

Qualifications

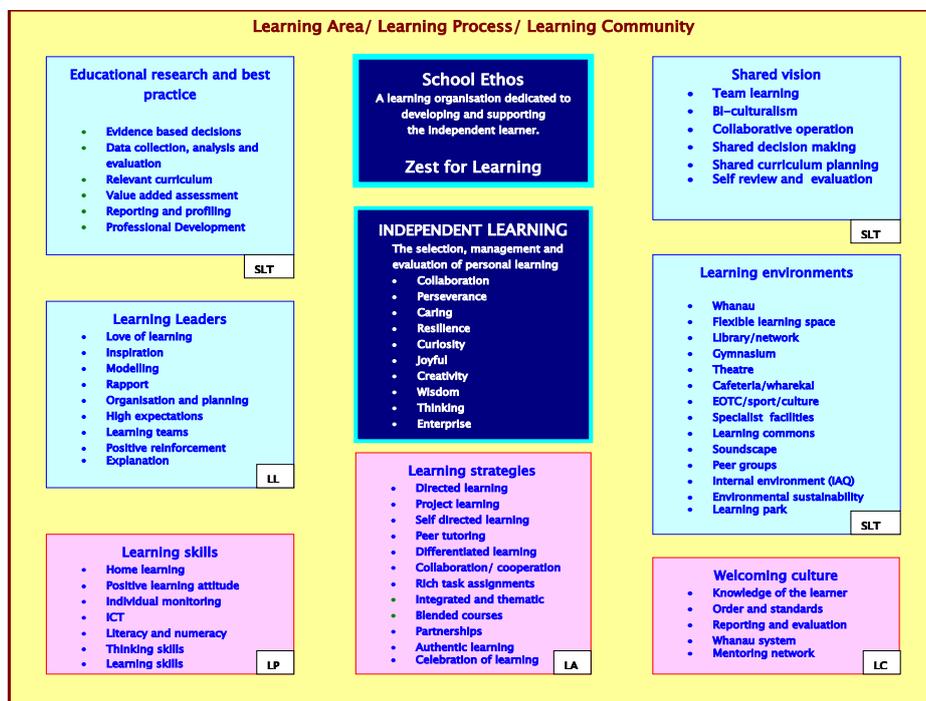
The New Zealand Qualifications Authority (NZQA) approves and monitors all NZ qualifications. The NZQA manages a number of qualifications suitable for secondary students. The most popular of these is the NCEA (National Certificate of Educational Achievement) developed by the Ministry of Education. The NCEA system offers achievable goals, measurement against agreed and realistic standards. It also enables schools to tailor course structures in a very flexible way to suit individual student requirements. NCEA is a qualification designed with the 21st century curriculum in mind.



Two alternative international qualifications are available in NZ; the Cambridge and the International Baccalaureate systems. The Baccalaureate comes from a similar philosophical base to NCEA but is significantly more expensive. Cambridge possesses all the advantages and disadvantages of the NZ national qualification system that preceded NCEA.

During 2003 the establishment board and senior staff of Alfriston College were able to reflect at length about the issues described above and began to shape a curriculum that was designed to meet the needs of future cohorts of Alfriston students. The unifying desire that emerged was to develop *independent learners*, students who had a ‘zest for learning’ and were capable of selecting, managing and evaluating their own learning to become learners who no longer needed the support of a school.

This vision has retained its vigour in subsequent years and has proven to be a powerful and resilient organisational core around which the school operational network has developed. The key to this network is the ‘independent learning model’, which maps the web of policies, programmes, procedures and manuals that breathe life into a learning organisation.



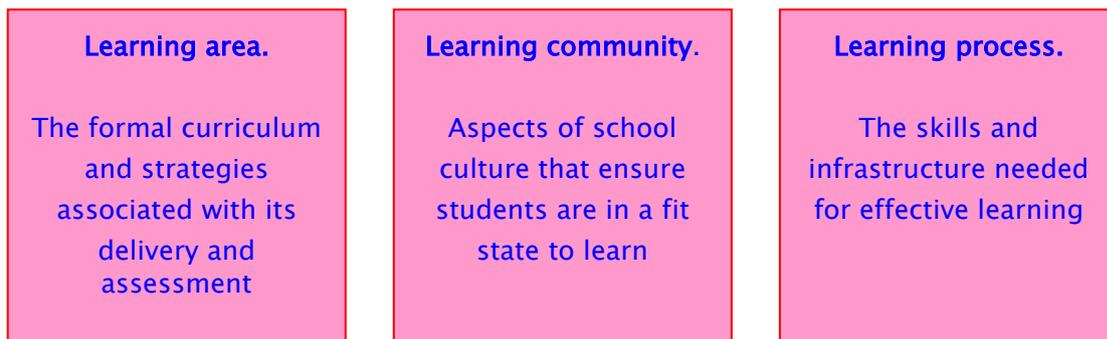
At the core of the model are school ethos and the ten qualities students are encouraged to develop in order to foster independent learning. They also summarise what a knowledge era student needs in order to embark on a lifetime of learning.

Caring	Supports and shows consideration for others
Creative	Makes use of existing knowledge in new ways
Collaborative	Works well with others
Curious	Wants to find out more
Enterprising	Sees and acts on opportunities to develop new ideas
Joyful	A zest for learning
Persevering	Stays focused on learning
Resilient	Strength to learn from mistakes and overcome obstacles
Thinking	Identify, Strategise, Evaluate (ISE) the learning
Wise	Makes good choices and understands the big picture

Surrounding the core are support structures representing values and attitudes shared by all members of the school community.



Three *dimensions of Learning* define the operational responsibility for all school activities. Each is the domain of a member of the senior leadership team.



The following section provides a little more detail on the character of each of these operational categories.

Learning Area

Learning area is delivered through cross-disciplinary, class-based programmes. We know that learners respond well to high expectations. With this in mind the school has developed a number of courses or programmes that challenge learners and are focused on excellence. Student performance in these programmes is monitored by internal assessment and national and international testing. The language used in reporting and assessment is geared to create familiarity with NCEA terminology.

1. Curriculum integration (concept based learning). Real or authentic learning

takes place in context and transcends boundaries. Students must ‘see the point’ of what it is they are expected to learn. They must also be able to comprehend how any new learning fits into the framework of what they already understand. It is a quandary that learning is cross-curricular but Secondary teaching is specialist.



This presents a challenge to create breadth and authenticity in learning yet retain the rigour of specialist study.

The Alfriston solution is to work towards an integrated curriculum through collaborative planning. The broad framework of the curriculum is planned by all Heads of Learning acting in concert in order to deepen student understanding and develop an awareness of the contribution each subject makes to comprehending the 'big picture'.

At year nine the Foundation course is delivered by subject specialists whose lessons compliment each other; this means that what is being learned in Science is supported by what is happening in English or Technology classrooms.

2. At year ten some courses are a 'blended' mix of learning areas. NIB or Nature In Balance includes all the curriculum 'must knows' of the year 10 and 11 Science and Social Studies programmes. Similarly, Stagecraft is a blend of Music, Drama and Dance.
3. Modules or short courses are used at year ten and eleven to provide flexibility and extension to the curriculum.
4. Integrated, authentic, performance assessed learning takes place once a term within project based 'three-day episodes'. Cross-age groups work together to meet a deadline in a realistic learning situation. The timetable is suspended for three days once a term.
5. Independent Learner class (ILC)
Individual students apply for a 'licence to learn' for one term at a time on a negotiated project. Students are released from the timetable and monitored but not supervised.

Learning Community

Learning Community is mainly developed through Whanau-based programmes.

1. Success at secondary school is profoundly affected by the quality of the learning relationship between students and teachers. Smaller, 'human scale' organisational structures create a more fertile environment for the development of a welcoming supportive culture. The school-within-a-school or Whanau structure of Alfriston College is designed to meet these needs.
2. The Tutor programme focuses on developing a sense of belonging to the school community by fostering personal growth and the development of emotional intelligence.

3. The school environment also plays an important role in encouraging passive or informal learning. In particular the built environment is viewed as a Learning Park; a theme park where the theme is learning.
4. Several programmes are designed to deliver learning through a cultural medium. The Te Kahikatoa programme delivers the entire curriculum from a Maori perspective. It is not however a Maori language immersion programme. At year nine the programme is termed 'te Kakano' (the seed). At year 10 and 11 Maori performing arts courses deliver the Arts curriculum through the medium of Maori arts.

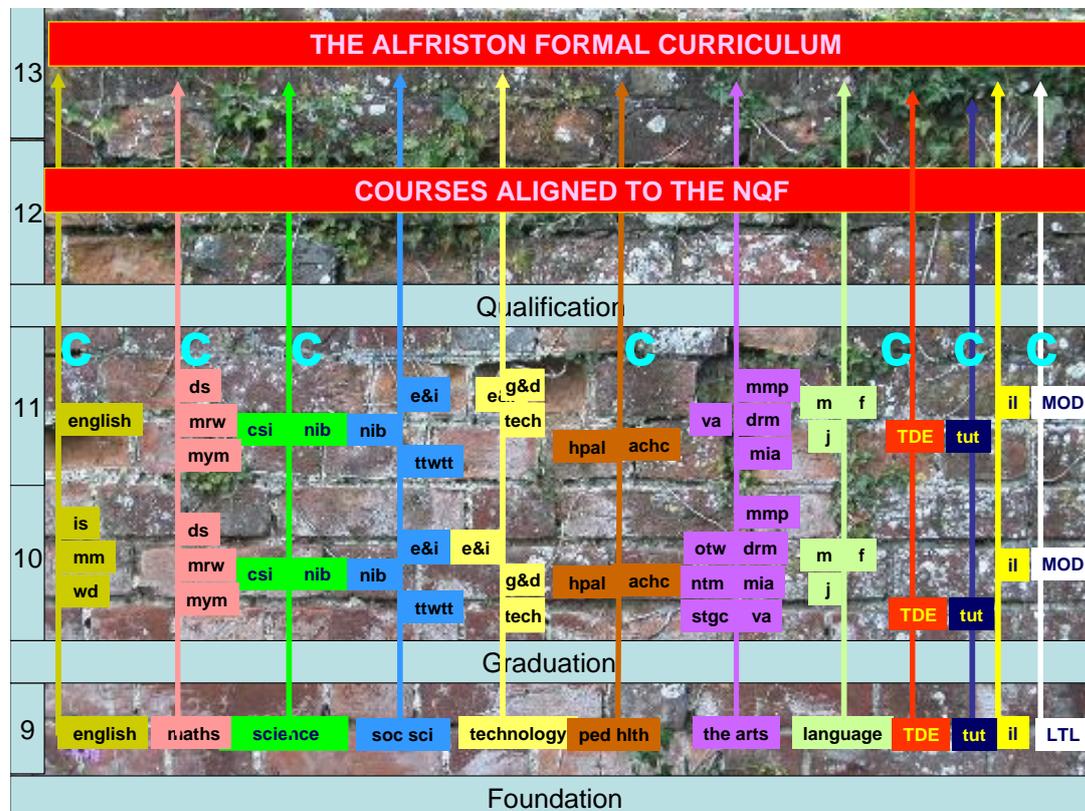
Learning Process

Learning Process is delivered through the explicit teaching of a 'Learning to Learn' programme, modules and 'three day episodes'.

1. A comprehensive infrastructure centred on the school library supports Learning Process. Digital information storage, processing and production facilities are based in this area. ICT is immersed in the classroom and throughout the school environment.
2. All students are expected to be able to make effective use of a range of sophisticated multi-media learning equipment and resources in every lesson in every classroom. A networked school-wide sound system (the soundscape) provides the opportunity for teachers to readily utilise centrally stored sound in their lessons.
3. Our baseline surveys have revealed that Alfriston students are above average in their reading comprehension but this good performance is not matched by their ability to search for meaning, synthesise or infer. This has informed the structure of a 'Learning to Learn' programme that focuses on the development of higher order thinking skills. To support this programme a common *learning vocabulary* is used to enable teachers, students and their families to talk effectively about learning.
4. Integrated, authentic, performance assessed learning takes place once a term within project based 'three day episodes'. Cross-age groups work together to meet a deadline in a realistic learning situation. The timetable is suspended for three days once a term. Students work in vertical groups within Whanau/houses.
5. Intranet Pedagogy is a term coined to describe new learning teaching techniques required to make effective use of school based networks.

Curriculum structure

All Alfriston College courses are set within the Foundation, Graduation and Qualification phases of each student’s journey through the school.



The above diagram sets out the 2006 course structure. Acronyms represent courses such as the Science/Social Science blended NIB (Nature In Balance) programme at years 10 and 11 and the TDE or Three Day Episode programme that engages all students.

The year 9 Foundation phase contains compulsory courses. Students from year 10 onwards select from menu of interconnected and sequential programmes, checked for balance and consistency by Whanau Leaders.

The Foundation programme

Each year students from over 20 contributing schools enrol at Alfriston. They come from large Intermediate schools, small full-primary schools, schools in urban and rural settings, state and private schools and religious schools. The Foundation programme is designed to build on this varied year eight experience and provide students with the skills and knowledge required for successful progress at the secondary level.

- The Learning to Learn programme is a 60-hour, intranet-based course, delivered by selected teachers. It focuses on equipping students with the learning skills required to develop the independent learning qualities (Problem solving, synthesising, researching, reflecting and collaborating).
- The Integrated Programme. Year nine courses are delivered by subject specialists who have collaboratively planned their programme around a unifying concept.

In 2004 all students were involved in an extended process, which developed an understanding of what knowledge they felt they needed and the way in which they preferred to learn. This exercise took the form of a teacher initiated discussion and evaluation over several weeks within the Whanau tutor group environment. Clear directions were given by students about what they considered to be important knowledge and skills. These investigations have informed the 'concepts' that form the basis of the year nine integrated programme.

Heads of Learning have reported that because of the profound nature of these concepts all subject areas are able to make a valuable contribution to the sum of understanding. Some examples are:

- Order and chaos; without order would there be chaos?
- Food; why have I got plenty of food on my plate when others go hungry?
- Learners understand best and remember best when new learning has lots of connections to what they already know. The Alfriston approach maximises these connections and links. At year nine these connections are mapped (see page 31) to show how each learning area or subject contributes to a student's understanding of the world.

This big-picture learning smooths the transition from primary to secondary styles of learning and builds the foundation framework required to appreciate the particular perspective and contribution of specialist discipline based learning in the senior secondary school.

The Graduation programme.

- School attendance is compulsory for all students up to the age of 16. At Alfriston College the year 10 and 11 programme leads to 'graduation'. This qualification indicates what a student and their teachers have achieved during the period of compulsory schooling. The milestone also provides an indication of likely success in the courses designed for year 12 (level 2 NCEA).

- At year 10 students select seven two-year level one NCEA courses leading to a minimum of 105 credits. Some readjustment is possible at year 11. The programme includes a number of 'blended' courses that contain essential 'must knows' for more than one subject.

The Qualification programme

- Year 12 and 13 courses are focused on the acquisition of external qualifications. They include up to 20% of independent study utilising intranet based resources and are based in the Independent Learning Centre; a large ICT rich learning space staffed by trained research assistants.
- Students select a programme from a range of courses designed to fit a pathway leading to one of the following when they leave school:
 1. Employment.
 2. Tertiary based vocational qualifications.
 3. Tertiary based academic qualifications.

Assessment and data gathering

Data about student achievement fuels school responsiveness and subsequent development. In particular the data is needed to:

- Provide information about students entering the school to ensure appropriate placement and to recognise specific needs.
- Provide school wide data to inform 'planning for improved student outcomes'
- Provide information about individual students to enable teachers and support staff to plan programmes, lessons and prepare resources.

The following data is gathered and analysed. It informs the development of the school curriculum:

- AsTTle. Entrance test in Mathematics and Reading comprehension-referenced to New Zealand Curriculum Levels.
- CEM Centre. Curriculum Evaluation and Management research unit within the University of Canterbury:
 - ~ Reasoning Skills entrance test data.
 - ~ MIDYIS (Middle Years information system).
 - ~ SATYIS (Student Attitude information system).
 - ~ YELLIS (Year Eleven information system).
- Paul Nations Vocabulary tests.

- STAR – Reading (non comprehension).
- NCEA.

Early analysis of this data revealed that vocabulary (*“Vocabulary level is one of the most significant factors in determining school achievement” Carroll, 1991, p16*) was a major barrier to the success of many students. This has resulted in the development of both literacy and learning to learn programmes designed to improve every student’s ability to read for meaning and develop research and analytical skills.

In conclusion the Alfriston Curriculum is focused on personalised, authentic, big picture learning utilising sophisticated analytical and collaborative skills.

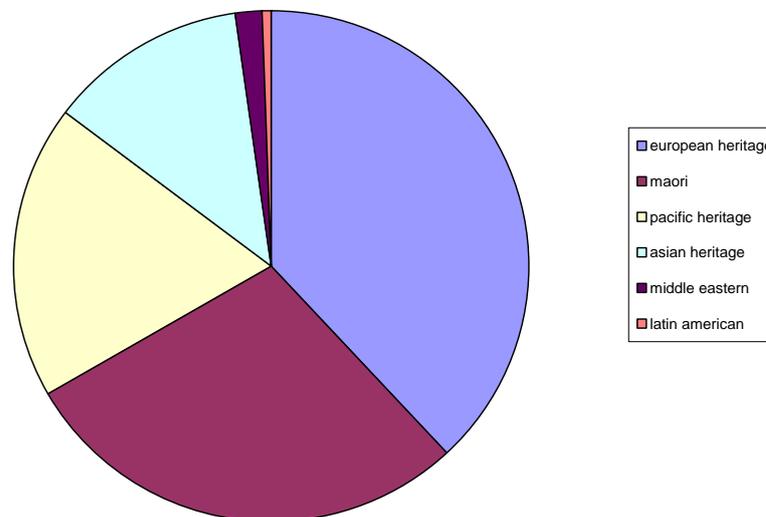
No man's knowledge here can go beyond his experience.

John Locke 1632–1704

A significant amount of education research suggests that students flourish in schools that are student centred and have curricula designed to suit their needs. In a wider sense this also means that the student who is able to develop a sense of belonging and ownership towards a place of learning and its associated culture is more likely to be successful.

Alfriston College students come from 22 different ethnicities including: European– 40%, Maori– 32%, Pacific Island– 14 % (mainly Samoan) and Asian/other– 14% (mainly Indian).

Alfriston College ethnic diversity 2006



The school community has a very wide range of socio-economic groups and contains well-established urban communities, new housing estates and rural properties. Creating a sense of ownership and belonging from such a diverse group is a multifaceted and interconnected exercise.

The learning Environment

The layout of the school was designed to create a sense of intimacy by creating human scale Whanau units arranged around an open space or wide 'street', subdivided into a series of courtyards. Students new to the college in 2006 reported that the school 'felt small'. The roll at that time was 740 and these were students from primary or intermediate schools of less than 500. Further questioning revealed that by 'small' they meant 'not as overwhelming as they had expected' and that this was a function of the openness of the layout enabling all parts of the school to be seen from the central courtyards. This positive feature has some drawbacks. The

high visibility also means that student altercations quickly produce scores of interested onlookers.

Virtual Forest

The student entrance to the school is spectacular and simulates a forest experience. This sends a powerful message about the preferred atmosphere of the school and the importance of students.

Whanau– schools within schools

Size does matter; opinions vary but figures around the 7–800 are frequently quoted as the ideal size for a secondary school. This provides the opportunity to provide a wide selection of senior subjects yet retains a sense of community with everyone able to know everyone else. 1500 is probably too large a unit to maintain the level of social intimacy that most students require in order to feel comfortable.

At Alfriston a structural mechanism, similar to the traditional house system, has been employed to effectively create smaller units or Whanau within the whole. Student allegiance is to their school, however, within the school their loyalty is to their Whanau (family) and various strategies are used to encourage this. Once the allegiance has been forged then the student will be able to satisfy a variety of needs within the unit because familiarity and confidence have been established.

What then is the optimum size for a social unit that provides sufficient variety to be stimulating yet also retains the intimacy and comfort necessary for confidence building? Numbers around 300–400 are popular; some research supports this by suggesting that 400 is the number of acquaintanceships that can be maintained by remembering individual names.

Alfriston College social units are; whole school 1500, Whanau 300, tutor group 25.

Whanau organisation. Raised learning expectations place increased demands on the quality of the relationship between teachers and students and the school and its community.

These relationships are fostered by the Whanau. Each Whanau functions as a community of up to 300 located in a purpose designed two–storey building. The Whanau is an organisational, cultural and spiritual entity. It is also a physical building.

Adolescents are exploring their options as developing adults. To do this they require the security offered by a sense of belonging and a sense of place. The Whanau provides this support.

The Whanau Leader has significant autonomy within the school. The school within a school for which they are responsible is encouraged to develop a distinctive flavour or culture that sits within the ethos of the College.

Values and beliefs that are common to all Whanau include:

- A zest for learning.
- The independent learner qualities.
- Curriculum integration.
- High expectations in relation to goals and behaviour.
- High standard of uniform and attendance.
- Common learning vocabulary.
- Restorative justice.
- A focus on personal excellence.
- Common criteria for praise postcards and commendations.
- Whanau contain a balance of students and teachers in terms of ethnicity, skills, gender and subject specialities.
- Whanau serve as a site for the cross-fertilization of learning areas.
- Students are the focus of Whanau organisation. This means they are involved in operational and strategic matters and can understand and use organisational structures.

Ways in which Whanau develop individual characteristics include the following:

- Colour, flag, motto, symbols etc.
- Furnishings and décor.
- Organisational culture.
- Operational structures.
- Representation.
- Beliefs, attitudes and values.

Whanau physical environment. Classrooms or learning spaces in each Whanau are clustered around a general purpose ‘commons’ area that contains lockers, toilets, kitchen facilities, meeting rooms and furniture designed to encourage a more homely environment.

Learning spaces are made flexible by the use of operable walls.

The internal assembly area of 300m² is large enough to hold whole Whanau meetings.



ICT access is anywhere, anytime. The building also contains resource storage space and workspaces for teachers.

Students and teachers remain in the same Whanau for their entire school career, however not all lessons are delivered within the Whanau building.



The structure is used to select student leaders, deliver emotional intelligence programmes as well as forming the basis of a competition covering four areas (academic, sporting, culture and community).

Competition: The bond between Whanau members is enhanced by the competition with other Whanau. The networks established in this rather artificial way help students develop their identity within a more intimate and supportive environment. Competition between Whanau at Alfriston is vigorous and so successful that it is clearly tapping into a couple of basic needs; a need to belong and a need to be challenged.

A points system fuels the competition and links to a variety of other school goals and programmes. The points structure has been devised to maintain interest and enthusiasm throughout the year. All competitions take place within four roughly equally loaded categories (academic carries the most points). Overall competition leadership is determined by rankings within each category. This process ensures that competition remains tight. The table below demonstrates the way in which points are totalled.

Alfriston College Whanau/house points record sheet

		Auaha	Kaitaataki	Kaitoro	Tirohanga	Whaingā
	ranking points					
ACADEMIC	<i>maximum 8</i>	5	4	6	7	8
SPORT	<i>maximum 5</i>	4	5	3	1	2
CULTURE	<i>maximum 5</i>	2	3	4	5	1
COMMUNITY	<i>maximum 5</i>	1	3	5	4	2
GRAND TOTAL	<i>maximum 23</i>	12	15	18	17	13
		Auaha	Kaitaataki	Kaitoro	Tirohanga	Whaingā
	FINAL POSITION	5	3	1	2	4

Mentoring. Every student needs to relate to a significant adult. Widespread anecdotal comment supports the idea of ‘the influential teacher who supported or

inspired'. School structures cannot enforce such a relationship but they can create a default mechanism to ensure that everyone has their own advocate/sympathetic ear/driver. The tutor group provides that structure. The relationship spans five years and provides the opportunity for tutors to build a relationship with the student and the student's family; it also creates the opportunity for senior students to act as mentors.

The Whanau is at the core of the mentoring network. The Whanau Leader has overall responsibility for the Whanau (approx 300 students). The Whanau group tutor is responsible for a vertical group of approximately 25 students within the Whanau. Restorative justice is a key feature of conflict resolution.

Students

Foundation students. Creating a sense of ownership is particularly vital for the foundation year as their cohort personality heavily influences the tone of the school. Pride in the school and high standards of conduct were reinforced by firm and clear uniform expectations and behavioural boundaries. High expectations of performance were readily met and reinforced the suspicion that junior students are not sufficiently stretched in schools where seniors take most of the leadership roles. Requests for 'senior students' to attend forums or meetings provide an opportunity for year 9 or 10 students to test themselves. The same philosophy was carried to participation in any normally age dependent competition such as cultural festivals, drama competitions, interviews and concert band competitions.

Alfriston has hosted over 2000 visitors since its inception, many are from overseas. Students are routinely used to provide a guided tour of the school. They enjoy the experience, are well prepared and provide visitors with the best possible insight.

Uniform. School uniform is a familiar bone of contention between students and school authorities. As a battleground it is safe territory for students to 'test the water' of dissent and explore rule boundaries.



From an authority perspective uniform infringements provide an early warning system. It is also a useful arena in which to demonstrate vigour with regard to rule enforcement and to model appropriate action, fair play and justice in the way in which rule breaking is dealt with.

However, there is little point in unnecessarily aggravating a situation predisposed towards tension. Thus the goal of the Alfriston uniform was one of presenting students with a range of garments that balanced fashion with longevity and style and provided a variety of outfits that suited all body shapes. The wardrobe of garments includes some unisex items, skirts for girls and shorts, trousers, shirts and blouses cut to suit male and female body shapes. The shirts are designed to be worn 'out'. Waterproof jackets and a polyfleece sleeveless jacket complete the mix.

Even with the benefit of hindsight there is little that would be changed; the uniform presents few difficulties in relation to enforcement. The only area of debate concerns shoes. The school insists on black lace up shoes. Those who choose not to comply exchange their designer trainers for brown plastic sandals provided by senior staff.

In early 2006 senior (year 11) students were charged with the responsibility to survey opinion and recommend any desirable uniform changes that might apply to subsequent year 12 and 13 students. Three garments were selected to be added to the existing mix, a navy blue monogrammed blazer, a white shirt/blouse and a tie. These recommendations were ratified by the board of trustees.

Biculturalism.

Maori and English are the official languages of New Zealand. It is the birthright of every New Zealander to understand both cultures. Maori cultural practices place very high emphasis on the protocol of welcoming visitors and making them feel 'at home'. The Whare Nui plays a key role in performing this function and also in ensuring that all Alfriston students feel confident and comfortable in a Maori environment.

Schools are in the learning business not the teaching business

Our understanding of the significance of quality teaching practice has not changed. We have always recognised the particular magic of the effective practitioner as opposed to those experienced only in the transfer of information from one vessel to another. In the 21st century, however, effective teaching is the only type of teaching and learning that is able to meet the needs of the knowledge age.

The New Zealand situation has been clarified by an analysis of our position in relation to other OECD countries. PISA (2000) data revealed that on average NZ 15 year old students were performing well compared to those in other OECD countries. The information also revealed that despite this good result there were a disproportionate number of NZ students who were performing poorly and that Maori and PI students were over-represented in this group. It is reasonable to conclude that traditional teaching methods are not working well for a significant proportion of the country's potential human resource.

Some basic theory

In 1916 John Dewey described Effective Teaching in the following way:

- Student autonomy & initiative encouraged.
- Open ended questions.
- Higher level thinking students in dialogue with teachers and each other.
- Raw (authentic) data used.

In 1938 Dewey also wrote about the way in which curriculum delivery was arranged 'Almost everyone has had occasion to look back upon his schooldays and wonder what has become of the knowledge he was supposed to have amassed during his years of schooling...but it was so segregated when it was acquired and hence is so disconnected from the rest of experience that it is not available under the actual conditions of life'.

James Beane has developed this theme, he writes:

'When what counts for worthwhile knowledge is confined to that anointed by scholars in academic disciplines and others of the dominant culture, organised in ways that are convenient to them and presented as a kind of 'capital' accumulated for some future time or for cultural ornamentation, two things happen:

1. Young people are led to believe that important knowledge is abstract from their lives.
2. They are deprived of the possibility of learning to organise and use knowledge in relation to issues that concern them.

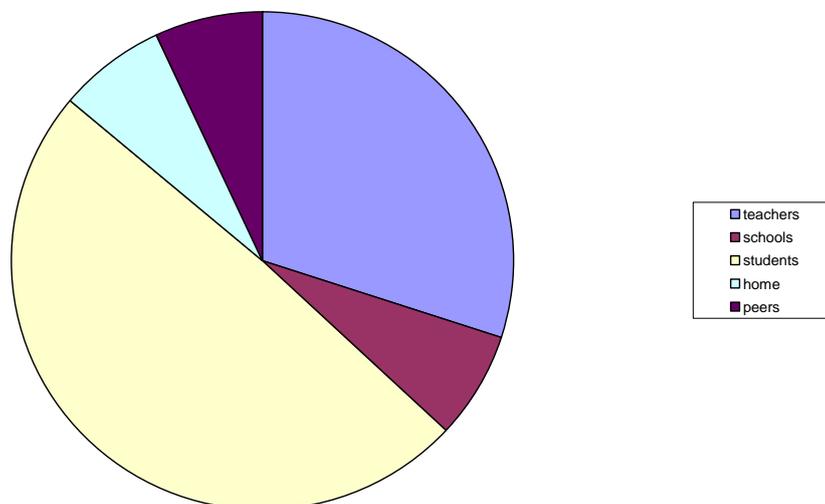
In 2000 the Australian educator 'Julia Atkin' summarised the main characteristics of an emerging learning culture:

- Be lifelong.
- Involve learning to learn.
- Be customised/personalised.
- Be collaborative/ cooperative.
- Be in context.
- Transform an individual's perceptions and competencies through 'knowing directly' rather than 'knowing about'
- Will occur at the point of need; learning will be 'just in time' rather than 'just in case'

Traditional chalk and talk methods no longer present students with the range of experiences in which they are expected to demonstrate competency. Raised learning expectations have lifted the demands on teachers. Quality learning/rich learning/autonomous learning/powerful learning, whatever name is given to the expectation; it always means that the quality of teaching and learning is more challenging.

John Hattie's research (2002) has informed us about the level of impact teachers have on their students.

Influences on student performance



Students 49% (Personal characteristics like intelligence, co-operation, effort)

Home 7% (Expectations for success, physical and emotional care)

Teachers 30% (Types of actions taken, expectations, effort)

Peers 7% (Expectations, support for each others' efforts)

Schools 7% (Organisational structure, quality of resources)

He concludes that teachers make a significant difference to student learning and they do so most in situations where the students are needy.

Hattie has also been able to distinguish the practices that differentiate the experienced teacher (those who can manage classrooms well) from the expert teacher (those who optimise their students' learning).

1. Relationships with students

Effective teachers have high but realistic expectations for all their students and conveyed their expectations to them. These teachers believed that what they did made a difference. Ineffective teachers attributed lack of achievement to students' background or constraints imposed by "the school system."

2. Planning and assessment

Learning that leads to 'big picture' understanding is more effective. Students respond positively to feedback.

3. Problem focus

The teaching cultures of the high performing nations are similar only in the high proportion of class time that its students are engaged in problem solving as opposed to listening to teacher explanations or practicing.

4. Connections

Expert teachers have strong pedagogical-content knowledge (PCK). PCK is a term used by Lee Schulman to describe what a teacher needs to know in order to teach a topic effectively.

5. Instructional responsiveness

Responsiveness implies that teachers are prepared to alter the course of a lesson or sequence of lessons based on the needs of students.

6. Student empowerment

Students' perception of responsibility for their own learning links strongly to high achievement. Students learn best in situations where they either ask questions of others or respond to the questions of others.

7. Equity

Expert teachers ensure that all students have access to the learning resources they need.

Russell Bishop (2003), from Waikato University has investigated ways of improving the achievement of Maori students. A key finding of the project was that students achieved best in classrooms where the teacher was able to build positive personal relationships with students by responding to them as individuals and valuing their cultural identity.

Students who participated in Russell Bishop's study identified the teacher/student relationship as the most important factor in their school success. On the other hand, teachers identified factors such as the student's ability and background as more important, and the teacher/student relationship as less important.

Adrienne Alton-Lee (2003) distinguishes ten characteristics of quality teaching. For students whom she terms 'diverse' (i.e. Maori and Pacific Island), quality teaching is of greater importance than for other students. Variations of up to 60% of student performance in these groups can be attributed to teacher influence.

1. Teaching is focused on raising student achievement (including social outcomes).
2. Pedagogical practices enable classes and other learning groupings to work as caring, inclusive and cohesive learning communities.
3. Effective links are created between school cultural contexts and other cultural contexts in which students are socialised to facilitate learning.
4. Quality teaching is responsive to student learning processes.
5. Opportunity to learn is effective and sufficient.
6. Multiple task contexts support learning cycles.
7. Curriculum goals, resources including ICT usage, task design and teaching are effectively aligned.
8. Pedagogy scaffolds and provides appropriate feedback on students' task engagement.
9. Pedagogy promotes learning orientations, student self-regulation, metacognitive strategies and thoughtful student discourse.
10. Teachers and students engage constructively in goal-orientated assessment.

The ideas articulated by Dewey, Atkin, Beane, Hattie, Alton-Lee and Bishop represent a wide body of opinion and research that serves to illustrate the type of teaching and learning now expected from teachers and their students.

It is not a new concept but one whose time has come.

Maori and Pacific Island students make up 43% of the Alfriston College roll. For this reason our learning and teaching plan has included what we know about positive learning for this group of students; we also know that these pedagogies are successful with all students.

In simple terms the traditional *One teacher, One class, One subject, One hour, One room* approach has been extended to include *Learning teams, Flexible groups in size and age, Cross disciplinary and Integrated courses, Larger blocks of time, 24/7 access, and Flexible learning spaces.*

In chapter two the Alfriston College Three Dimensions of Learning were introduced to describe the structure of the curriculum. The close linkage between pedagogy and curriculum means that it is sensible to use the same format in this section.

Obviously the three areas overlap; nevertheless, each has a responsibility for distinct practices focused on student outcomes.

Learning Area

- Independent learning

The importance of the independent learning concept has been dealt with in the chapter on curriculum. This goal is at the heart of every school action and activity. Students at years nine and ten can choose to pursue a course of study that enables them to negotiate some of their learning and gives them time to work independently. Students on the programme are monitored but not supervised by teachers rostered term by term. Student achievement is assessed by public performance at the end of each term.

It is planned to include up to 20% intranet based interactive independent study programmes in all year 12 and 13 courses. Students will be timetabled to the Independent Study Centre where staff and network access are available.

- Authentic learning

This objective manifests itself in everything from individual lesson plans to school wide suspended timetable programmes. The goal is to recognise what it is that students already know compared with what they need to know. The task is then to devise relevant learning activities that engage and enthuse.

- Time to learn

Discussion about Authentic Learning or Integrated learning or any other 'higher order' learning often involves debate about timetabling. In particular the difficulties associated with the implementation of teaching techniques that do not fit easily into a conventional 50 or 60-minute period. Depth in learning requires longer periods of time to foster deep engagement and sustained concentration. At Alfriston it was decided to make the basic lesson unit a 100-minute period.

The 100-minute period is significantly different from the conventional 60-minute lesson. Students and teachers report that 100 minutes enables total immersion in learning and a more enjoyable learning experience. However a poorly prepared lesson seems endless for both students and teacher. Students who suffer from procrastination find that is far more difficult to evade work in a 100-minute spell.

Best practice in relation to 100-minute periods is a research topic that is currently under investigation by the Alfriston College Research Lead Group. There is a significant amount of literature devoted to making effective use of the greater flexibility offered by larger blocks of time (see bibliography).

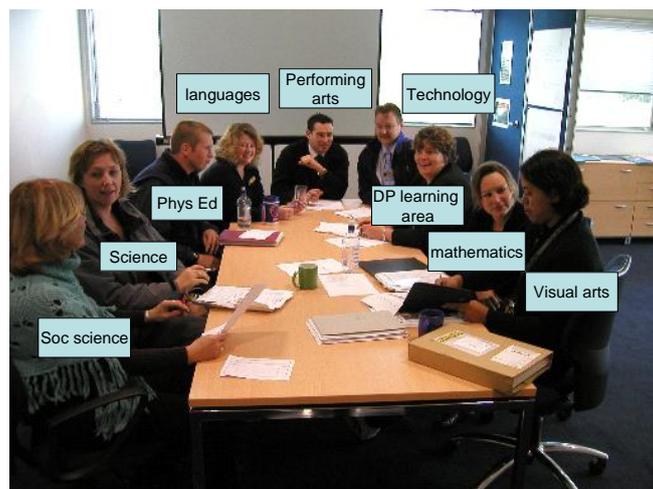
A short piece of music indicates the start of each lesson. There is no signal to denote the end of lessons. Longer and fewer lessons provide the opportunity for students and teachers to engage deeply in learning. The reduction in lesson numbers adds significantly to the amount of engaged learning over the course of a year. (If we assume that it takes seven minutes to disengage learning, pack-up, change rooms and then re-engage in a new lesson; the reduction of daily lessons from five to three generates 270 hours per year, or nine school days, of additional engaged learning).

- Integrated learning

At year nine students are introduced to concept-based cross-curriculum learning. This approach builds on traditional Intermediate and senior Primary practice and at the same time introduces students to subject specialist teaching using links between subjects to enhance overall depth of understanding and create new knowledge. It also serves to clarify the unique contribution of each discipline to the sum of understanding on the chosen topic.

The following is a brief summary of the planning process that underpins this approach:

The process begins with HOLAs (Heads of Learning Areas) meeting to decide on a concept for each term and to identify the opportunities for major curriculum linkages.



Groups of learning leaders add detail to create draft activities and goals.

All staff then plan the cross-curriculum content and activities within a matrix based on Bloom's taxonomy and Gardner's learning styles.



The approach, activities and assessments are mapped and added as a double page spread to student diaries.



The new term's work begins with an 'immersion day', a full day's programme that is designed to capture the attention of students and prepare them for the next ten weeks of concept-based integrated work.

Learning Community

- Whanau are designed to function as ‘schools within a school’. The Whanau or house contains up to 300 students and approximately 20 staff. The Whanau provides students with a supportive and stimulating community based in a dedicated building. The community is small enough to retain sufficient intimacy to build self-confidence in a safe environment.

Pedagogy associated with emotional development is focused on Whanau. Goal setting, collaboration, mentoring, resilience and restorative justice are all taught within the Whanau setting. The Whanau group or tutor group has a vertical structure and is led by a tutor-teacher. This person is the significant adult, the one who knows group members best and always has their interests at heart.

Senior students within the tutor group are able to provide positive a role model and gain practical experience of leadership.

Whanau organisation is smaller scale than whole-school. It presents students with a more easily understood organisational structure and a vital stepping-stone towards a more comprehensive understanding of the wider school and subsequently their lives.

- Student self-management. The student diary is a vehicle for several learning pathways.



1. Diaries are issued at the start of each term. All students are expected to carry their diary with them and display it on their work-desk. When endorsed by a teacher they are a student’s passport around the school

during timetabled lessons. Regular visits by SLT members and the associated award of house points reinforce this practice.



- Commendation cards within the diary are signed by teachers to endorse independent learning qualities. Completed cards (20 entries) earn a letter home from the Principal and Whanau points. The commendations work effectively as a behaviour modification mechanism for year nine and ten students. Year eleven are slightly more circumspect but still enjoy the opportunity to be rewarded.

 INDEPENDENT LEARNING COMMENDATION 	
Name.....group.....	
Curiosity, wisdom, creativity, caring, resilience, perseverance, enterprise, thinking, collaboration, joy.	
1	wisdom acted as a mediator
2	curiosity asked good questions in today's lesson
3	creativity innovative approach to current assignment
4	resilience tries hard despite finding the work difficult
5	caring picked up rubbish without being asked
6	caring really helped another learner in class today
7	
8	
9	
10	

- Learning log. Students are expected to keep a brief daily summary record of their learning in their diary. It is checked by Whanau tutors and parents. This provides students with a reminder that every learning

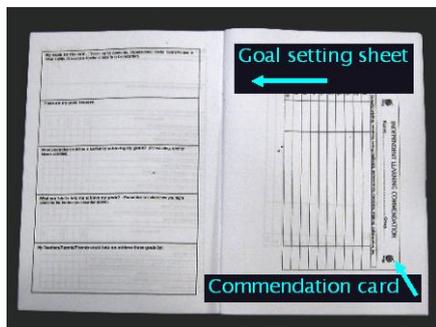
experience has to be revisited five to seven times before it is embedded. It also means that every student has homework every day.

- Learning vocabulary. The diary contains detailed descriptions of each independent learning quality that explain exactly what has to be done to become a better 'thinker' or how to develop 'perseverance'. In this way the diary provides a vocabulary for meaningful conversation about learning between students, teachers and families. Each quality is supported by an easily understood explanatory phrase and a more comprehensive set of descriptors. The descriptions are used by teachers to scaffold students in their development of the qualities. The qualities are included in formal reports and feature in discussions with parents at report evenings.

Alfriston college 

Attributes of an Independent learner at Green /Amber/Red Light Level

Level of Work	Thinking
Green Light	Criteria: The learner - <ul style="list-style-type: none"> Describes in detail the steps of thinking when solving a problem or doing other kinds of tasks. Explains in detail how thinking about thinking helps to improve their work and how it helps to develop a better learner. Describes a plan before starting to solve a problem. Monitors steps in the plan or strategy. Reflects on how well the problem-solving strategy worked.
Amber Light	<ul style="list-style-type: none"> Describes their thinking while solving a problem or doing other kinds of tasks. Explains how thinking helps learning and helps improve their work.
Red Light	<ul style="list-style-type: none"> Describes some of the steps of problem-solving or doing other kinds of tasks. Beginning to see links between thinking and learning.



- Diaries contain self-evaluation checklists and goal setting exercises.

Learning Process

A number of structures provide a range of learning opportunities to provide variety in curriculum delivery:

- Three day episodes, modules, integrated courses, blended courses, 100 minute and 50 minute periods, cross age group programmes, independent learner programme, tutor group programme.
- Differentiated learning. Baseline testing of incoming students revealed a very wide range of student achievement levels. Broad banding in three levels is complemented by differentiated programmes within classes that attempt to cater for individual needs.

3. Special Needs. Learning support for slower learners and the gifted are provided to individuals and classes. The 'connected' classes and the 'independent learner classes' offer programmes suited to both ends of the ability spectrum.
4. Accelerated learning. Trying to develop a pedagogy suited to Alfriston students was a daunting prospect. We were delighted to find a pedagogy guide that provided us with an existing model that matched our vision. *Accelerated Learning: A User's Guide* by Alistair Smith, Mark Lovatt and Derek Wise has become the staff PD pedagogy manual. Accelerated learning refers to the four step learning cycle that underpins learning and lesson planning; connection, activation, demonstration and consolidation.
5. Learning to learn. Year nine students receive a 60-hour intranet based programme delivered by selected teachers. Learning styles, thinking skills, collaborative skills, ICT use, research skills, problem solving study skills and project management are explicitly taught.
6. ICT infused into classrooms and curricula. One of the pedagogical quandaries created by ICTs concerns their relationship to the concept of student centred learning or learning that is responsive to the needs of individuals. Such learning can be fundamentally at odds with an undiluted teacher-directed and centred pedagogy.



The didactic style is very effectively reinforced by the use of data projectors and interactive whiteboards. Yet we know from research that the best learning is achieved when some control of pace and content passes to the learner. This creates the irony of the 'innovative' teacher using sophisticated

and 'modern' equipment to deliver an unchanged curriculum in a traditional manner.

ICT is providing opportunities for both students and teachers to 'think outside the box' and to be creative and collaborative in their approach to learning. This requires a student centred learning environment that looks beyond the traditional classroom.

The intranet holds great promise for the delivery of student centred learning. However, it demands such a profound shift in pedagogical practice that we have coined the term *Intranet pedagogy* to distinguish the attitudes and techniques needed to make effective use of this learning tool and resource.

7. Three-Day Episodes. Each term the timetable is suspended and the entire school embarks on project-based, cross-curricular, performance-assessed, cross-age group learning. Our own research indicates that this is both popular and effective. Student attendance improves at this time and referrals for poor behaviour reduce. Students are signalling by their positive response to this event that they welcome this alternative model.



There is potential to use this style of learning to deliver NCEA units of work suited to this intensive, performance assessed learning environment.



8. Research lead group. Interested members of staff are involved in a low-key email based research group that applies for research funding and fosters discussion and action research.

Projects of current interest include:

- 100-minute periods.
- Three-day episodes.
- Integrated learning.
- Infused ICT and intranet pedagogy.

'Whoever has helped us to a larger understanding is entitled to our gratitude for all time'. Norman Douglas.

Previous chapters have explored the evolution of curriculum and pedagogy in response to 21st century paradigms. The increase in learning expectations associated with these changes has impacted on learning in four main ways:

1. A growth in personalised learning.
2. The desire for authentic learning experiences.
3. The increasing importance of analytical and synthesising skills.
4. The ubiquitous nature of Information and Communication Technology.

This type of 21st century learning experience places new demands on both teaching and non-teaching staff. New and changing qualifications and qualities are emerging. In simple terms the traditional 'chalk and talk' teaching style, although never inspiring, used to be considered adequate. This is no longer the case. The didactic/instructional approach is only one of a range of multi-dimensional styles that are now a pre-requisite for every staff member.

Student-teacher relationships

Russell Bishop's research emphasises the importance of a high quality personal learning relationship between teacher and student. This is vital in two areas, firstly, the attainment of excellence, mutual respect and trust and secondly the motivation of reluctant learners depends on how well the teacher knows the student.

Such personal qualities are also required of support staff who regularly engage in learning relationships with students. Indeed the boundary between the professional and para-professional is increasingly blurred as more students engage in individualised authentic learning. Administration staff also play a key role in creating a learning climate and by modelling effective office behaviour.

Alfriston has responded to the increasing significance of these personal qualities by adding an extra step to the process of selecting new staff. The sequence of CV submission serving as a shortlist filter for a subsequent interview has, where possible, been extended to include observation lessons and consequent student comments.

Professional Development

Applicants for a job in a new school are pre-disposed toward change and usually state that they subscribe towards the school's vision. Nevertheless there is still a great deal to be learned before they can become an effective contributor and developer of the school ethos. A school such as Alfriston has a raft of

'innovative' programmes (see pages 86–87). Only a few are original and most are practised in other NZ schools. However, few schools have as many 'new ideas' operating at the same time in the same place. Established schools engaging in innovation sensibly do so across a single or limited range of activities that continue to be supported by a secure base of familiar practice. New schools have an opportunity and obligation to test and question all established practice at the same time.

The net result is very demanding on staff resilience, expertise and goodwill. The Alfriston Board recognised this issue early and provided for a weekly 90-minute slot of Professional Development using some timetable time. This enables re-focussing and retraining in a wide range of needs. The following list indicates some examples:

- Information and Communication Technology.
- Differentiated Learning.
- Integrated curriculum planning.
- Restorative justice.
- Action Research.
- Learning to learn.
- Collecting and analysing data.
- Generic skills.
- Schools within schools philosophy.
- Literacy and numeracy.
- School vision.
- Information and Communication Technology.

Professional development is also a key factor in maintaining staff who share a common vision and possess the commensurate skills to bring reality to the vision. The rapid growth of a school places this shared belief and consequent staff consistency under pressure.

Alfriston is expected to increase by roughly 250 new students and 20 staff each year. New schools attract talented and ambitious teachers who are more likely to move on. Furthermore, some staff may be unable to make the transition to a school that is different. For these reasons staff turnover is prone to be higher than for established schools and as a result the 'glue' provided by professional development is even more important.

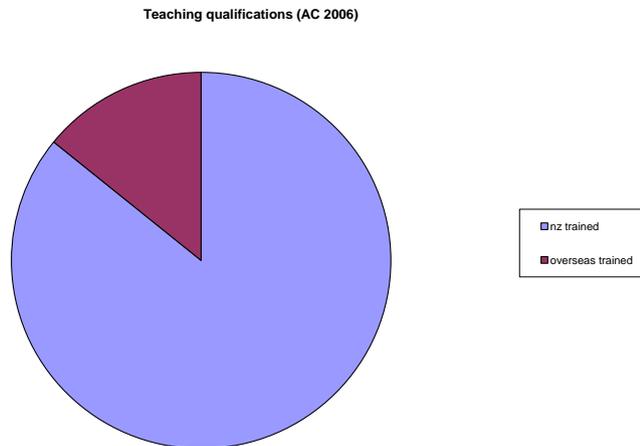
Demographic analysis of staff

The characteristics of new school staff tend to be different from established schools. The following details provide a summary of the 2006 Alfriston composition.

Average age: Teaching staff 35.4.

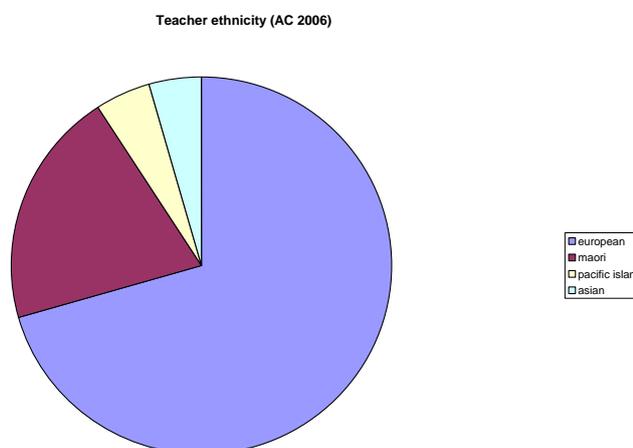
Support staff 38.4

Teaching qualification: Seven out of 49 staff are overseas trained. Despite the attraction of a new school, difficulties are still experienced in recruiting high quality staff in some areas such as Mathematics, Technology and International Languages.

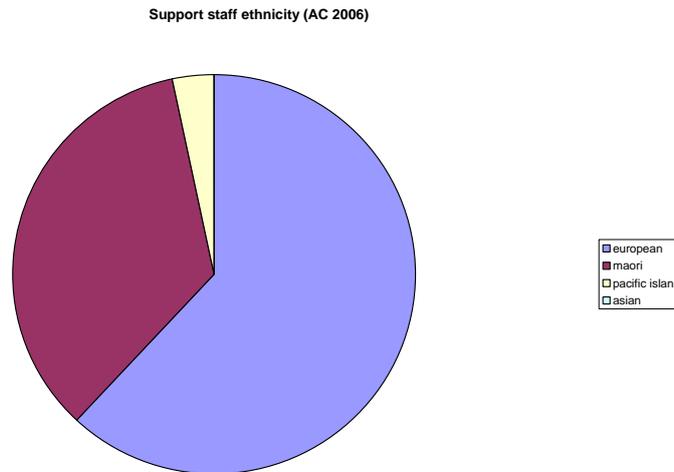


Experience: the average length of service is 9.7 years. In 2006 five staff are beginning teachers and three are in their second year of service. Anecdotal comments elicited during staff interviews suggests that beginning teachers adapt more easily to the culture of a new school than established teachers. Or to put it another way, established teachers have to do some unlearning whereas beginning teachers find a new school environment no more difficult than any other school.

Ethnicity: the establishment of an effective learning relationship between teachers and students is not dependent on ethnic fit but a good fit does remove some obstacles in the initial stages of relationship building. It is also evident that the provision of role models in all representative ethnic groups is an advantage. The ethnic composition of students is illustrated in chapter 4 (page 19).



Some of the imbalances between teacher ethnicity and student ethnicity are ameliorated by the ethnic composition of support staff.



Creating a collaborative and participatory culture

A network of formal and informal staff groupings serve to create a sense of collective contribution to the creation of the school. The following list serves to indicate some of the groups that meet regularly to discuss and plan.

- HOLA (Heads of learning Area) planning group. This is a major group chaired by the DP Learning Area that has as its core the Heads of Essential Learning Areas. Other Heads of Learning join the group when appropriate.
- Whanau Leaders meet with the Guidance Team under the chair of the DP Learning Community.
- Whanau staff (including support staff) meet to discuss pastoral, organisational and curriculum matters. They also serve as one focus for social events.
- The Research lead group functions mainly at email level unless engaged in a particular task.
- Curriculum groups meet in Learning Areas with their head.
- The staff social committee organise a series of regular events including 'happy hour' and competitions with neighbouring schools.
- Close links with 'partner' schools are fostered by exchanges and visits.

It is a pity that there is no measure of how much learning has leaked out of a poorly designed school. Stephen Heppell.

In 21st century schools more interactive models have replaced the traditional teacher-centred model of learning to place students at the centre of the educational process. These increasingly diverse teaching and learning methods present an important challenge for those who design schools.

The following section provides what I hope is a useful summary of design issues and exemplars from influential authors and publications. Collectively they paint a compelling picture of what new school buildings must be able to do.

Creating 21st century learning environments is the report of an OECD International conference held in London in 2004. The purpose of the conference was to investigate how different countries have defined and used innovative design in past and present learning environments. The OECD conference publication described five ‘types of educational space’. These categories provide a helpful framework to combine together the findings of Lackney, Tanner and Nair. In 2000 each of these authors independently published lists about what 21st century school buildings should be like. I have summarised their 77 separate items under the five OECD learning space headings:

1. *Space for group learning*

- Large spaces need to be broken down into smaller units to facilitate group work, project work, cross-curricular learning and different learning styles. (OECD)
- De-emphasis of classroom: redesign classrooms so they function where self-directed learning and collaborative projects will largely replace ‘chalk and talk’. (Nair)
- Team-teaching, non-chronological grouping and inter-disciplinary curricula: this will call for more flexibility in classroom shapes and size including the use of temporary partitions, moveable walls, etc. (Nair)
- Technology-intensive teaching and learning: the advent of more project-based and collaborative learning and less lecture-style teaching. (Nair)

2. *Space for individual learning*

- Areas for personal study. Privacy niches. (Lackney)
- Provide a home base for every learner. (Lackney)
- ICTs for students and teachers– easily available. (Tanner)
- Ubiquitous computing: all children from the 4th grade onward should have access to laptop computers and the internet when they need it where they need it. (Nair)
- Wireless networking and robust internet access. (Nair)

3. *Open, multi-purpose space*

- Outdoor spaces– used as learning environments. (Tanner)
- Pathways and circulation– ease of movement between structures, ample space for circulation between rooms. (Tanner)
- Entrance and public areas– welcoming, comfortable with good lighting. (Tanner)
- Shared common areas: schools partnering with local community institutions to create shared common areas and high quality media centres. (Nair)
- Windows/views– overlooking life, natural light. (Tanner)
- Climate control– comfortable temperature. (Tanner)
- Colour and quality of paint. (Tanner)

4. *Social space*

- Open access learning areas, quiet study areas or central briefing areas. (OECD)
- Emphasis on informal learning: less than 25% of all learning occurs within the classroom, so develop ‘nooks and crannies’ where much of the socialization, interaction and real learning take place. (Nair)
- Consider home as a template for school. (Lackney)
- Safe places– supervised circulation, security systems, safe grounds and toilets. (Tanner)

5. *Specialised spaces*

- Vocational training, sport and performing arts. (OECD)
- Computer labs replaced by distance learning electronic studios. More high-tech production facilities. (Nair)
- Food court vs cafeteria: students should have greater variety in their diet and be able to eat at their schedule and when they are hungry. (Nair)
- Centralised administration– accessible and convenient. (Tanner)
- Plan schools as neighbourhood-scaled community learning centres include learning in the community and job training. (Lackney)
- Students creating products for business: tech-savvy students get involved with real-world projects both on and off-sit. (Nair)
- Emphasis on service learning: community service as part of graduation requirement. (Nair)
- Parent and community education programs in schools. (Nair)
- New learning partnerships with other schools and universities. (Nair)

The OECD report also commented that ‘in some cases school buildings constructed more than 100 years ago can be more easily adapted than other more specialised spaces constructed in the last 30 years’.

The Alfriston response to these design issues focuses on seven areas

1. School layout

A two-story school in a simple stretched oval layout reduces the size of the building footprint and enables all rooms to be accessed and viewed from a central series of courtyards. The school is divided into five schools-within-a-school or Whanau. Public use facilities are located on the fringe of the school. The student entrance is spectacular and leads directly to the Whare Nui at the heart of the campus.



2. Flexibility in learning spaces

The one hour, one lesson, one room, one class, one teacher structure is the basic unit of secondary curriculum delivery for many schools. Although effective, it is not the only way to enhance learning. Alfriston uses 100-minute periods and exploits the flexibility offered by operable walls to respond to the particular needs of a learning activity and





the number of students and teachers involved. Learning spaces can be configured to suit groups from 15 to 120.



Each of the five Whanau blocks at Alfriston has as its focus a two story networked multifunction atrium that can be used for 'breakout' learning.

The Business Academy in Bexley (UK) offers another approach to flexible space by the use of a combination of multi-use space and open-sided classrooms.

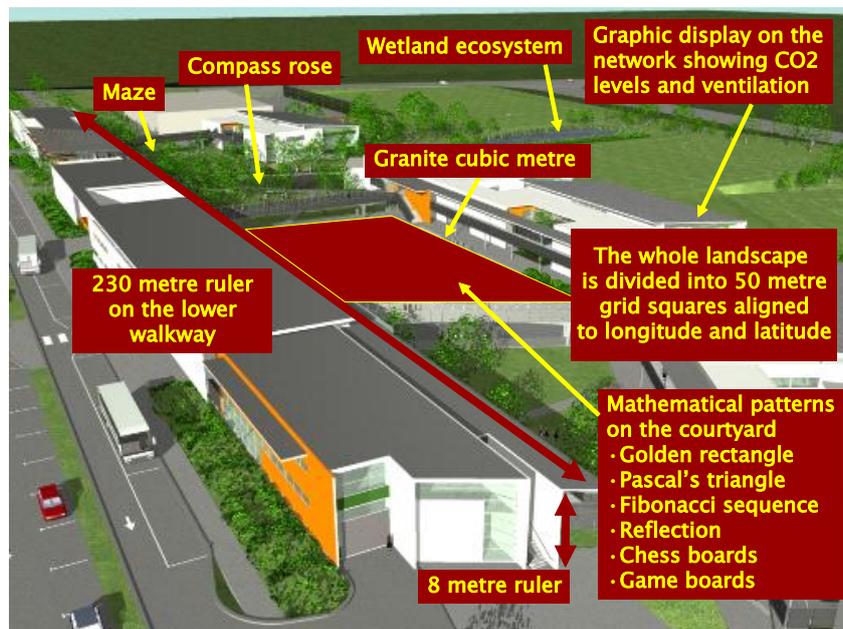


3. Educational facilities as a learning tool: The learning park

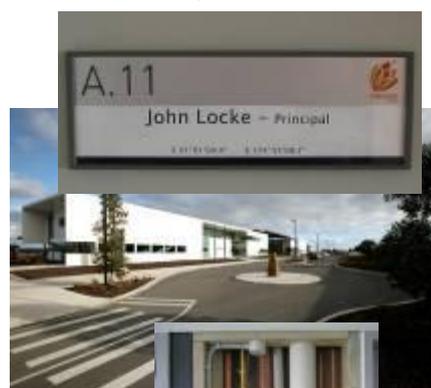
Approximately 25% of learning in a school happens outside the classroom. Students learn about justice and equity from the values demonstrated every day. They also learn important skills about how organisations operate and make decisions. An area that is sometimes neglected is the learning acquired from a familiarity with their built environment. The vision is of *the school as a theme park where the theme is learning*. The following examples illustrate some of the ways in which the Alfriston school buildings and grounds have been used as tools for learning.



- Environment quality and sustainability are explored through such features as a wetland eco-system to collect rainwater and network monitoring of CO2 levels in classrooms.
- Distance, volume and proportion are illustrated on a walkway marked out in ten metre sections, a three tonne cubic metre block of solid granite and lines of bricks illustrate size and mathematical patterns in the main courtyard.



- To denote location and position all paving is orientated along NSEW lines.
- Door signage includes GPS co-ordinates.
- A roundabout at the school entrance is the site of a sundial.
- Lifts are transparent to illustrate how they work and in some rooms glass 'truth windows' reveal ducting and cabling behind the walls and ceilings.



- At the core of the school network are five servers located in a glass room situated in the centre of the library.





- Each year new students create mosaic paving for walkways.
- The student entrance to the school is through a ‘virtual forest’ complemented by recorded music or bird song. In this way students are invited to begin their day in a way, which is designed to lift their spirits.



4. Sustainable design

The environmental impact of a building throughout its life cycle is significant, due to material and energy consumption and the resulting pollution and waste and inefficient or outdated operations and management systems. Increased concern about these issues has led to the incorporation of sustainable design features and the use of recycled or recyclable materials, low impact construction techniques, passive heating and renewable energy technologies. Roof rainwater is collected for flushing toilets and surface water is stored in a small lake, aerated via a stream landscape feature and used for irrigating sports fields.

5. Comfortable learning spaces

Quality indoor environments can result in health and productivity gains for all users of a building (OECD–Creating 21st century learning environments).



IAQ (internal air quality). The brain needs fresh air to function properly, particularly if it is to be engaged in higher order thinking. Should carbon dioxide levels build up to more than 1000ppm then higher order thinking shuts down. Each person requires 0.5 cubic metres of fresh air each minute for their brains to function well. This means that the air in an average classroom needs to be completely changed three times every hour.

At Alfriston the rooms are mechanically ventilated. Machinery in the basements blows fresh air into every learning space. The air is changed six times every hour. Despite this CO2 levels can still build to 900 ppm. This knowledge provides some insight into one of the reasons for the mind numbing stuffy afternoon lessons we all remember.

Natural light has a positive impact on student achievement, however, lots of light also means lots of heat in summer and lots of heat loss in winter. Curtain glazing has been used at Alfriston to allow light to penetrate deep into the building in areas such as the whanau commons.



A similar strategy has been employed at the Business Academy in Bexley (near London). External louvres track the sun's path to minimise overheating and a double façade reduces heat loss.



These measures have not been employed at Alfriston and as a result overheating in some east facing rooms is a problem. Laminated 'thermal' glass has been installed in an attempt to reduce this.

The widespread use of glass creates a sense of space and openness. Students quickly get used to internal glass, although windows to the outside continue to be a distraction. Internal glass also enables teachers to support each other and the visual links provide the opportunity to share pedagogy.

6. Classroom size

21st century students are larger and staying at school longer. Computers integrated into rooms take up space. As a result the new general classroom needs to be larger than the traditional space. Phase one Alfriston general classrooms were between 63 and 65m², phase two and three rooms are over 70m².

Teachers report that more ‘dynamic’ students who have previously experienced little success at school are able to stay on task more readily in larger rooms, which afford them more personal space.

Phase two construction will offer the opportunity to place ‘connected learner’ classes and ‘learning to learn’ classes in larger rooms utilizing the flexibility of operable walls. These programmes will then be able to explore a greater variety of learning styles.

7. Classroom furniture and equipment

Interactivity, access and flexibility are the goals in exploring furniture and equipment possibilities for the 21st century classroom.

Modular furniture provides the opportunity to experiment with a variety of configurations in relation to subject needs, learning style and pedagogy without running the risk of obsolescence.

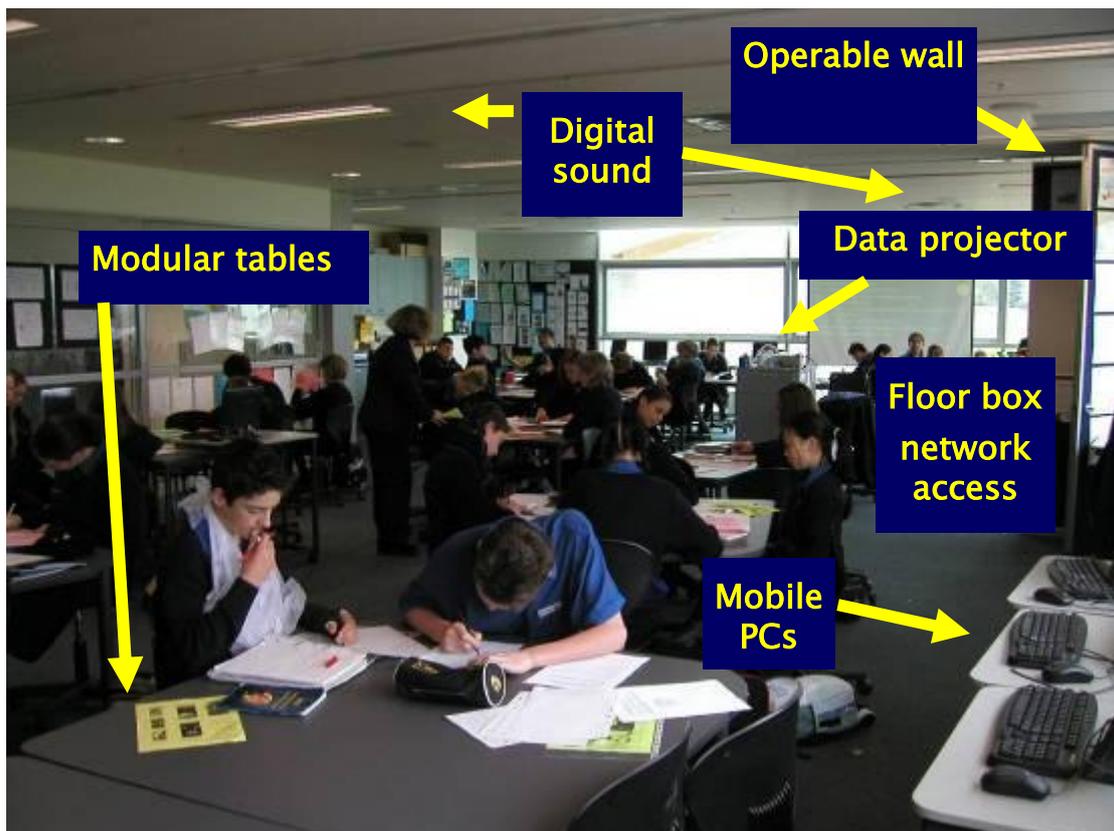
- Four basic table shapes make up the range 600mm x 600mm, 1200mm x 600mm, 900mm x 1200mm and 1200mm x 1200mm. The most popular sizes are 1200 x 1200 and 1200 x 600 although the other two styles have their advocates. Wheels on tables have been trialled over two years. The consensus view is that 1200 x 1200 tables need two wheels only. This enables them to be moved easily like a wheelbarrow and prevents classroom ‘dodgems’. Four wheels on a table coupled with four chairs on wheels create far too much flexibility for younger students to cope with.

- All PCs sit on purpose designed trolleys. These are able to be integrated with worktables to enable collaborative learning sharing a PC.



- Three styles of chair are used. Gas lift with wheels, gas lift with sliders and static (normal). The Furnware Bodyfurn chair is the most popular chair with both students and teachers commenting favourably on its comfort. Gas lift chairs combined with wheels, although undeniably flexible, are too much of a temptation for many younger students and teachers prefer them to be restricted by the slower travel speeds of sliders.

The manufacturers of the Furnware chair have conducted extensive research into classroom furniture. They conclude that the comfort and support of a well-designed chair increases student engagement. This has been borne out by anecdotal comments from Alfriston users.



The range of electronic equipment in each classroom includes, data projector, interactive whiteboard, digital sound supported by the media matrix system and at least five PCs plus a teacher laptop. Sets of wireless laptops are also available.

The modular furniture used in Alfriston was influenced the Australian School of Maths and Science (ASMS), a senior high school located within the campus of Flinders University in Adelaide.

ASMS have designed a number of innovative furniture items. The following illustrations show mobile PC trolleys, individual lockers on



wheels and a range of tables. The furniture is distributed around an open plan learning space with an annex for staff planning (there is no staff room).

ASMS modular furniture



Individualised furniture has also been developed at Reece High school in Tasmania.



Brooke Weston Community School in Corby (UK) utilise only one high quality design of chair throughout the school.

At Cramlington Community High School (Near Newcastle in the UK) every year nine student takes a 60-hour full year programme in 'Learning to Learn'. The school has

developed specialist classroom space and associated furniture to foster a range of learning styles and opportunities explored in the LTL programme.



Cramlington 'Learning to Learn' furniture

Prakash Nair (International educational architectural consultant) has developed an 'Education Facilities Effectiveness instrument' that can be used to assess the quality of school buildings and grounds as a learning environment.

The assessment produces a grade on a scale from 1–100. It tests seven elements of educational facility best practice. The elements include comfort and well-being, 21st century learning, environmental responsibility, meeting community needs, design principles, collaborative design process and the production of meaningful and measurable results. Many schools worldwide have been assessed in this way. Alfriston achieved the second highest secondary school score on this scale.

'ICT should be about making learning more delightful. Similarly design should challenge and channel students' creative efforts in new and interesting ways (Stephen Heppell).

Information and communication technology has and will have such a significant impact on school development that I have chosen to give it its own chapter, although in a logical account coverage of ICT would fall within the sections on property and pedagogy.

ICT is changing the way in which we live, work, teach and learn. It is also challenging traditional pedagogies and even the notion of traditional institution–based learning.

We still do not know whether ICTs will make institution–based learning obsolete or strengthen the role of schools as community based multi–functional learning centres. This is a matter of considerable concern. Community based schools provide a fertile ground for creating a harmonious and tolerant society. ICT presents an opportunity to support learning away from the school site and enable students to isolate themselves from the formative secondary school experience. Thus it may become much easier for those who need to acquire experience in the rigours of daily social life to deny themselves this critical learning.

Research about whether or not ICTs per se enhance student outcomes is inconclusive. What is undeniable, however, is that ICTs are a ubiquitous component of the way in which modern society operates and that in the hands of a skilled teacher they form the cornerstone of good practice.

Further debate and research on school design is needed about the best ways in which ICTs can stimulate and facilitate learning.



What is clear is that the combination of student centred pedagogy and ICTs challenges traditional school design. As well as spaces suited to traditional class sizes and characteristics schools need significantly more spaces of varying size to cater for individuals, small groups and very large groups.

ICT infrastructure

Alfriston students have access to an information and communications technology system than can be used anytime and anywhere in the school. All student computers are based in classrooms (four or five to each) or design spaces or the library. Alfriston does not have any computer laboratories. Most PCs are on purpose designed trolleys; additional sets of wireless laptops are also available.

‘A picture is worth a thousand words’ is both a cliché and a cyber truth; a single picture and a thousand words use roughly the same amount of bytes. Effective learning is inevitably multimedia and a consequently a very heavy load on networks. For the foreseeable future cable is likely to be more cost effective than wireless for the movement of large amounts of data. A two-tier cable and wireless network provides a ‘horses for courses’ option for users. Computers are linked to the network by optic cable to classroom blocks and category six cable within blocks. Several areas in the school are also served by wireless networks. Five servers based in the library sit at the core of the network.

The school has a large number of interactive whiteboards and will soon reach its goal of providing every learning space with a data projector.

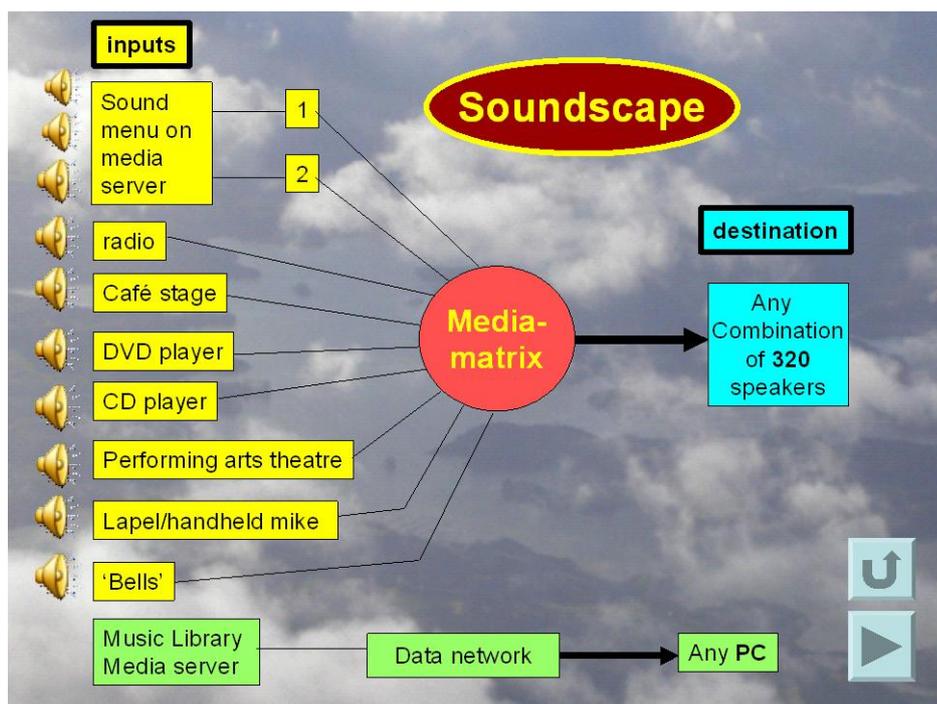
Multi media

The school data network links all learning, administration, social and resource spaces. It is the glue that binds the school. It is important therefore that the network is capable of supporting as many communication and learning modes as possible.

- Visual media are stored centrally and accessed from any data connection outlet. All material is digital.
- Sound media. Music is a powerful influence on mood and memory. Broadcaster Kim Hill comments ‘music is the soundtrack of our lives’ and every supermarket manager is well aware of the power of music to lull shoppers into impulse purchases. The role of sound and music has not been extensively researched in relation to education, however sufficient material existed to convince the Alfriston College Board of Trustees that it would be prudent to equip the school with a comprehensive sound system that used the existing digital network.

The software and hardware package that delivers this resource is called a 'media matrix' and the term 'soundscape' has been coined to describe the resulting environment. Occupants of every learning space can select from up to eight channels, one of which is a server containing a library of sound files. 500 speakers are distributed throughout the campus.

Some music is location specific and controlled centrally. The remainder can be controlled from any data input and sound sent to any location. Wall mounted volume controls operate in every learning space.



At this point the following sound environments are planned, some are already in operation:

- Administration foyer, office areas, staffroom, virtual forest, theatre foyer, cafeteria, library; *Instrumental classical or slow jazz.*
- Virtual forest: *Optional birdsong or foyer music.*
- Plaza and Atea: *World music or popular music.*
- Learning areas: *A choice of mood influencing music– either upbeat or calming plus curriculum based sound files on a dedicated server.*
- DVD soundtracks can be played via ceiling mounted speakers in all learning spaces.

- Lapel microphones enable teachers to enhance the quality of their instruction and explanation for students with listening difficulties.
- Hand held radio microphones improve outside supervision and event management.
- All sound zones have the choice of selecting any of the live inputs from microphones, the cafeteria or the performing arts area.

ICT support structures

These are a significant issue for any secondary school. Once the classroom hardware has been acquired, a robust network built and an effective intranet established, the challenges of maintaining and growing the infrastructure depend on the availability and capability of support staff. Unfortunately the size and complexity of school networks is not matched by operational resourcing. In order to meet the current expectations of teachers and students Alfriston (2006 roll 734 with 200 computers) requires:

- A full time help desk.
- A full time network manager.
- A systems administrator to look after the servers (this could be a contract position).
- At least two front line technicians.
- At least one audio–visual production technician.

This totals more than five full time personnel. The College currently employs a nearly full–time front line technician, a part time network manager and contracts out systems management.

ICTPD

The cost of ICT development in any school is roughly one–third hardware and software, one–third support and one–third professional development. Alfriston and Botany Downs Colleges were fortunate to be selected for the 2004 intake of the on–going three–year MoE Information and Communication Technology Professional Development programme (ICTPD). This has ensured a high level of ICT use and capability amongst staff and students. As part of this programme Alfriston has also focused on the development of Three Day Episodes, PCs infused into classrooms (via Trolleys) and Intranet Pedagogy.

Culture is usually summarised as 'the way we do things around here'

Two ways of looking at school culture will help to set the scene for this section.

Stoll (1999) describes culture as how things are and acts as a screen through which the world is viewed. In essence it defines reality for those within a social organisation and gives them support and identity in school life.

Schein (1992) describes culture as 'a pattern of shared basic assumptions that the group has learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore to be taught to new members as the correct way to perceive, think and feel in relation to those problems'.

Culture is a many layered structure; at the surface is the physical environment of the organisation that joins with its symbols to project an image for newcomers and visitors, at the next layer are the rituals and ceremonies used to reinforce values and at the deepest layer are the common beliefs and resilient norms of the community.

The first cultural layer, the physical environment

- Design

Quality design inspires students to learn and teachers to teach, it also has a positive effect on the visual environment and morale of the local community. Assessing design is more an art than a science and is particularly difficult to quantify in terms of student performance. Existing research sheds little light on the nature or strength of the relationship between the quality of school facilities and educational outcomes.

There is little doubt, however, that good school design creates a sense of pride and well being that nurtures student success. It also sends clear and positive messages to staff about the value placed on their role. Poor design and poor construction also send value-laden messages.

A design quality indicator (DQI) tool has been developed by the Construction Industry Council in the UK. This is a necessary and useful starting point to discuss design quality. Good design should satisfy the following three factors:

- Build quality/firmness– performance of the building fabric.
- Commodity/functionality– use access and space.

- Impact/delight– ability to create a sense of place and to have a positive effect on the local community.

The cultural messages sent by high quality buildings are both subtle and significant. Some Alfriston parents have said they enjoy visiting the school in the evening because it feels like a visit to ‘town’ to see a show.

The school is a theme park where the theme is learning. Considerable thought has been devoted at Alfriston to ensuring that the buildings and grounds provide informal learning opportunities. The Learning Park is described in chapter 6 (p48–50).

- The logo

The logo is both a symbol and an introduction to the school; it tells a story about the school and reveals some of the significant values espoused by the school’s community.



The image means different things to different people. Bonding with and understanding the logo involves seeking symbolic meaning in the opportunities offered by an image that can be interpreted in a number of ways (the observer has to do some work).

The logo has three dimensions:

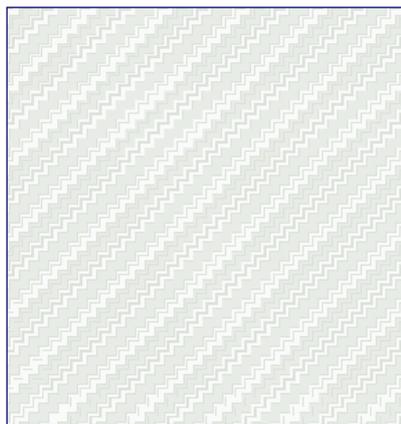
- Font (Alfriston College).
- Mark (the pod).
- Background (the poutama pattern).

The story about the components is as important as the initial impact of the imagery.

- The Koru unfurls from the bottom opening out to support the pod, the koru symbolises a new beginning.
- The pod is a nourishing and nurturing symbol.
- It is a manuka pod, a native of Manukau.
- The seed is independent, complete, dynamic and leaving purposefully.
- The pod is woven; this alludes to kete and tukutuku.

The woven pod can also represent a network – a community network or a digital network or a family network. The woven pod can also be seen to include:

- ~ The letters A and C.
 - ~ A bird's beak (Pukeko).
 - ~ The Pukeko foot.
 - ~ Shapes and symbols used in Maori carving.
 - ~ Lots of other things!
- A connection with the Pukeko is maintained through the uniform colours and the adoption of this bird as the school mascot.
 - The Poutama pattern is a foundation which supports the other elements.
 - The Poutama is a positive, growing symbol, it is a stairway leading onwards and upwards, it follows the same bottom-left-to-top-right trail as the seed leaving the pod.



- The school motto plays a similar role to the logo, whereas the logo tells a visual shorthand story the purpose of the motto is to capture the essential core value of the school. The Alfriston motto, *Zest for learning*, is intended to highlight the thrill, joy, and excitement of the learning experience. ‘Work

hard, have fun' is also used as a mantra to remind students about the purpose of life!

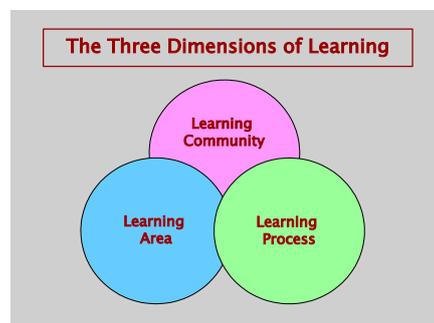
- The school is located on the South Auckland urban fringe. It lies within Tainui territory but most Maori in the area have links to Ngapuhi.

Rituals and ceremonies

The following are some of the characteristics of the school

- Visitors are encouraged. Students and staff appreciate the sense that what they are engaged in is of significant interest to people from NZ and around the world. The constant stream of visitors also maintains dialogue with other innovative schools. Visitors are limited to visitor's day (Thursdays). Well over 2000 people have visited the school by appointment.
- Three-Day Episodes capture the essence of authentic learning.
- The learning culture of the school has three vital elements or learning dimensions linked to curriculum, pedagogy and relationships. Each of these dimensions is the responsibility of a specified member of the Senior Leadership Team.
 1. Learning Area develops knowledge.
 2. Learning Process develops skills.
 3. Learning Community develops emotional intelligence.

These organisational structures are described in some detail in chapters three and five.



- Learning vocabulary. A common learning vocabulary is used to enable teachers, students and their families to talk effectively about learning. This has as its origin the ten independent learning qualities: Collaborative, Persistent, Caring, Resilient, Curious, Joyful, Creative, Wise, Thoughtful, and Enterprising.
- The website showcases student and staff innovation and achievement in order to attract like-minded applicants for vacancies.
- The school has high technology '21st century classrooms' with data projectors, operable walls, floor box data access, PCs infused into classroom practice, access to the soundscape, modular tables, sophisticated furniture and plenty of light and fresh air.

- The school newsletter includes abundant photos of students involved in the everyday business of learning.
- Parents are expected to be involved at an early stage should a student display poor learning behaviour.
- Assemblies are an opportunity for celebration.
- Whanau points system. This has been designed to foster close competition across several cultural dimensions of the school and to send value messages. Academic is emphasised whereas, culture and community are all seen as carrying the same value.
- Discipline is based on a restorative justice process that focuses on understanding and problem solving as the most effective way to develop self-management and conflict resolution skills in students.

The diagram below is used to discuss behavioural issues with students and their families. It is a visual representation of ‘the way we do things around here’. Post stand-down family meetings with the Principal use the diagram to ensure that students and their families have a sense of the scale of the issue under discussion and an understanding of expected future standards of conduct.



- Shared morning teas, bottles of wine for staff who have relieved in their non-contact time, introductory powhiri for new students and staff and visitors and Friday 'happy hour'.
- The wider community is encouraged to use school facilities such as the theatre, Whare Nui (ceremonial meeting house), cafeteria and gymnasium. Most of these are located in the 'spine block' close to road access and parking.
- The Principal regularly visits classrooms to check diaries and to talk with students about their learning.

Common beliefs and resilient norms

What follows is a summary of the responses that staff and students might give if they were to describe the way in which the Alfriston community goes about its business.

- The school is focused on the needs of 21st century learners.
- The goal is to develop independent learners.
- Language is a key cultural feature and influences perception as well as communication. In much the same way as 19th century school buildings and curricula no longer meet 21st century needs, 19th century terminology has begun to exhibit its limitations. Schools are learning institutions and key terminology should reflect their fundamental purpose – Learning and Leadership.

19th century terminology

- *Senior management team*
- *Teacher*
- *Teaching*
- *Classroom*
- *Classroom management*
- *Head of department*
- *Subject*
- *Teacher aide*

21st century terminology

- *Senior leadership team*
- *Learning leader*
- *Learning leadership*
- *Learning space*
- *Organisation of learning*
- *Head of learning*
- *Learning area*
- *Learning assistant*

- Learning theory is behind decision-making.
- Team learning, shared decision-making, shared planning, self-review and evaluation.

- Innovation is encouraged and valued. The school has a high profile at education conferences. Staff are encouraged and expected to give presentations and engage in research.
- The cultural background of each student is an important key to their engagement with their school.

The wider cultural context

Socio-economics

- Six contributing schools lie within the Alfriston zone. The schools range in decile from 10 to 2. The Alfriston College decile is 4. The range of decile creates both challenges and opportunities. The mix of socio-economic backgrounds is beneficial to both ends of the continuum. Wealthier students get a reality check and poorer students realise that they are capable of matching achievements with their more fortunate colleagues.
- The Auckland demographic for 2020 is remarkably similar to the current Alfriston ethnic composition.
- The school is surrounded by new housing, much of it above average. To the west and south of the zone lies older less expensive housing; to the east and north is more expensive urban housing and rural lifestyle blocks.

Biculturalism

- It is the birthright of every New Zealander to understand both official cultures of this bicultural society.
It is of particular importance that Maori and Pacific Island students develop a sense of belonging to the school.
- Maori constitute at least 30% of the school roll and represent the greatest untapped potential. The connection with the Maori community has been fostered by seconded Board members and the decision to include a meetinghouse in the school design. The Whare Nui design was the result of extensive consultation and the Taumata o Takanini has been vigorously supported by local Maori community representatives.
- Both the formal and the wider curriculum have included specific initiatives that respond to knowledge about the importance of culture and relationships in fostering the engagement in learning of Maori and Pacific Island students.
 - A year nine 'Te Kakano' programme delivers the full curriculum from a Maori perspective.

- Maori performing arts and visual arts courses are offered as options in the Graduation programme.
- Whanau structure.
- Kapa haka.
- The conduct of BoT disciplinary meetings focuses on consensus.
- Involvement of Maori BoT members in some stand-down reinstatement meetings.

The driving force of the character of any school is its vision. In Alfriston's case this is the independent learner model. The task of transforming this vision into practical reality is done by seizing every opportunity to embed connections between theory and operational practice. Every operational act or system is linked in as many ways as possible to the vision. It is only in this way that the validity of the vision can be both tested and made real.



'Create then analyse' – Rewi Alley

From a purely pragmatic perspective although the Ministry of Education pay the bills for new schools on behalf of the public, the final shape of a new school is a product of a triangulation exercise between the Ministry of Education, the school community and professional staff. The varying degrees of influence of the individual members of this tripartite arrangement differ worldwide.

Copa (1999) listed lessons learned from the 'New Designs for learning K-12' project that began in 1991.

- Involve a multi-perspective design team from the beginning.
- Look inside and outside the school community for members of the design team.
- Use a clear process for design.
- Leaders act as a role model showing the importance of community involvement and being prepared to both listen and change.
- Keep others informed, especially if you are trying to do anything different.
- Think long-term.
- Look beyond the known; look outside education for ideas, look at maverick schools.

The establishment process for Alfriston College and Botany Downs Secondary College was overseen by the Ministry of Education. The fact that these were the first secondary schools to be built for over 20 years played a major role in the planning process. As a result lead-in time allocations were greater than for subsequent new schools. The main sequence of events at Alfriston was as follows:

1. Determination of need and purchase of land up to 15 years prior to opening.
2. Wide informal community consultation up to three years before opening.
In Manurewa this process involved over 60 individuals and groups, 27 schools and 12 public meetings that gave parents the opportunity to articulate their vision.
3. Formal consultation with affected schools and communities.
4. Appointment of the establishment board two years prior to opening.

5. Selection of the Project Managers (Carson's) and Architects (Warren And Mahoney).
6. Development of the overall building plan. See appendix 2.
7. Appointment of the Principal 18 months prior to opening followed by:
Two Deputy Principals; 12 months prior to opening
Three more senior staff; one 9 months prior and two 6 months
The remaining staff (8) began one term before opening day.
8. A special grant was made available to the Principals and Board of Trustee members of Alfriston and Botany Downs Colleges to enable overseas visits to sites of educational innovation and excellence.
9. The final design determined and construction drawing prepared for tender.
10. The construction firm (Gibson O'Conner) were selected 12 months prior to opening.
11. In phases two and three the Ministry delegated supervision of the project to the Alfriston College board of Trustees. The architectural firm Warren and Mahoney were retained along with some of the consultants. New members of the team included project managers MPM, quantity surveyors Maltbys and construction firm Macrennies.

Resourcing – staffing and grants

New schools that are expected to grow rapidly present special resourcing needs that cannot be met by normal staffing and operational grant formulae.

Firstly, prior to opening the school has no students and therefore no grant entitlement. Secondly even after students arrive the operational grant tends to lag behind the actual needs of the school. The reality is that the school has to develop and sustain systems and support staff 18 months to two years ahead of their capacity use.

Staffing

Senior staff

In addition to the Principal a group of five senior staff including Deputy Principals and an ICT specialist were employed early enough in the establishment process to ensure sufficient planning time. The increased burden on the Principal and senior staff was also recognised by the classification of the school as Principal G7 (750 roll) and additional management units for senior staff.

The full term preparation afforded to all teachers in term 4 2003 was of tremendous significance. It ensured that the establishment board and staff were able to develop a very strong vision for the school built around the concept of developing the ability of students to become independent learners. The resilience and power of this vision was so pronounced that ERO, in their November 2005 visit, recognised that the school was one of 'special character'.

Support staff

High quality, committed support staff are needed at an early stage of new school development in order to ensure that systems and procedures are well planned and capable of expansion.

Operational grants in the early years of a school's operation are insufficient to employ key full-time well-qualified support staff (e.g. ICT technicians, librarian, financial manager and property manager). These people provide vital specialist knowledge that is needed to ensure that robust systems are established and effective medium term planning is carried out. At Alfriston the highlighted needs included the creation of a major computer network, the installation of a 650m² library, the maintenance of 11 hectares of grounds and 12,000m² of buildings plus the management of a construction and establishment budget of over \$45m.

Part-time or consultancy appointments do not provide the developing institutional knowledge that is critical at this stage.

Teaching Staff

The establishment process of a new secondary school continues for five years after opening day. New schools are quite rightly expected to take advantage of their rare opportunity and develop innovative solutions to current and future educational issues.

The establishment experience offers a wonderful opportunity to gather together self-selected, innovative teachers keen to develop programmes and procedures with fewer inertia driven obstacles than might be encountered in established schools. Ministry of Education foresight allowed ten weeks for all staff to prepare for the opening of the school. This was a unique chance to embark on significant 'whole school' professional development. The foundation staff involved in this phase have been critical to the development of the school and although in subsequent years as their numbers have been diluted their influence remains powerful.

The professional development programme devised in 2003 was a comprehensive crash course in the latest educational theory and practice grafted on to the school vision. The durability of this vision is a testament to the quality of foundation staff

whose enthusiasm has enabled subsequent staff to share and become enthused by a common philosophy.

Consultants were used for a significant amount of the 2003 Professional Development programme. A two-day mini-conference was also held at this time to enable all PD providers and staff to engage in a multi-dimensional exchange of ideas. In addition to the Professional Development programme staff were also involved in purchasing resources and developing curricula.

The broad programme included the following elements:

Team Building activities	Senior Leadership Team
Treaty of Waitangi	Bernie Mathews, Board of Trustees
Development of the school vision and values	Senior Leadership Team
Resiliency	Jim Peters, Ministry of Education
Effective Teaching	Graeme Aitken, University of Auckland
Quality Learning Circles (QLC)	David Stewart, Independent Consultant
Assessment and Planning	Kay Hawk, Independent Consultant
Learning to Learn	Robyn Mcleod, Independent Consultant
Appraisal	Eileen Piggott-Irvine, Massey University
Digital Portfolios	David Stewart, Independent Consultant
Te Mana	Steve Saville, Ministry of Education
Curriculum	Julia Atkin, Independent Consultant

Some of these programmes were held in conjunction with the staff of Botany Downs Secondary College. This reduced cost and also provided discussion opportunities.

New schools offer an opportunity to act as a vanguard for development. This also means that new schoolteachers have significantly increased opportunities and responsibilities. The current operational resourcing formula has some provision to realise this goal but it is insufficient for this opportunity to be capitalised upon.

Additional staffing resourcing is required to meet the needs associated with the impact of innovation expectations on teachers in new paradigm schools. In addition to the normal responsibilities of a secondary school teacher, new school teachers also have to contribute to:

- The creation of five years of curriculum resources in as many years.
- The unlearning and relearning of new pedagogy (see appendix 7).
- Substantial increases in personal ICT capability.
- A responsibility to share developments by hosting visitors and presenting at conferences.

- A research responsibility to monitor and evaluate innovation.
- Supporting relatively large numbers of teachers new to the school each year who have significant in-service training needs.

The new school secondary teacher has an experience not unlike that of a beginning teacher. It would be realistic to allocate additional resourcing of 0.1 or 0.2 for each full time staff member. This would enable them to meet their operational, developmental, collegial and research responsibilities.

Establishment grants.

MoE formulas generate the following grants:

Library and Information Centre Grant. This is used to equip and stock the library. As the information centre of the school, the library also houses the network servers and these were paid for from this grant also. Some of the human resource establishment costs in relation to the library were also met by this grant.

Learning and Teaching Grant. This provides funding for the purchase of curriculum materials and whatever else is needed to deliver the curriculum. Some of the establishment human resource costs in relation to the creation and organisation of curriculum materials were met by this grant.

ICT Equipment Grant. This was used to equip classrooms with ICT. Computers, data projectors and switches made up the bulk of this purchase.

Administration Grant: This provided funding for the school prior to the arrival of students and formula Operational Grant. It was insufficient to meet the systems infrastructure development required prior to day 1.

Students

Secondary schools are populated by young people growing from childhood into adulthood, the change that has been termed adolescence. This is a time of tremendous growth and uncertainty. Schools play a key formative role in developing successful, confident young men and women.

The school provides a model of society in microcosm that serves as an opportunity for students to learn about complex organisations. It is imperative therefore that the school organisation is transparent and easily understood. A clear vision that provides a rational framework for all aspects of school organisation enables students to sense the power and certainty that comes from understanding complexity. It will

also provide them with the confidence to navigate their way through other complex aspects of their lives.

The school's character becomes a part of the personality of every student and every student contributes to the overall persona of the school.

The AC student diary serves as an example of a school system that has numerous references and linkages to the Independent Learner model.

The strategic plan is constructed around the Independent Learner model and the three dimensions of learning. It is in this way that the Alfriston Way or the Alfriston school character is evolved and manifested. Such linkages provide students with a sense of what makes them and their school unique, and also reveals something of the complexity and interrelationships that are common to life outside school.

Establishment challenges

The following are both the anticipated and unexpected difficulties of new schools:

Foundation year

- Late delivery of buildings causes significant difficulty and encourages staff turnover.
- For some people excitement and enthusiasm can quickly turn to overload and stress.
- The ability of junior students to 'step-up' underlines the absence of challenge in normal year 9 curricula.
- Foundation students have a very strong sense of pride and ownership.
- The absence of seniors creates a vacuum that is an opportunity for juniors to experience leadership roles.
- The downside of the above point is the absence of the moderating and usually positive example of senior students. There is a tendency for juniors to 'run loose' without seniors, it happens in all schools when seniors are involved in examination leave. Some junior students find the vacuum created unsettling.
- The mentoring opportunities of pairing seniors with juniors for pastoral or curriculum support is absent.
- Many teachers will not apply for jobs in schools without senior classes.

Second year challenges

- The school no longer has quite the excitement of newness and the inconveniences of incompleteness cannot be ignored.
- There are very real difficulties for year 10s who having a deep-seated sense of ownership and without the advantage of age, experience and size try to impose their culture on a new cohort who compose half the school.
- The sheer unrelenting pressure on teachers trying to develop curriculum and pedagogical innovations who also have a full timetable of 'high maintenance' junior classes.
- The difficulties of providing realistic challenges for subsequent year groups in the same way as the foundation cohort. It is absolutely clear that year nines are far more capable than they are given credit for or the opportunity to display.
- These second year challenges described above coupled with the disadvantages resulting from the absence of year 12 and 13 students are also matters of concern for the establishment of junior high schools.

Networks

- The development of a school targeted at the 21st century is a daunting objective given that we know that no suitable models exist. Several new NZ schools meet regularly under the auspices of the 'Secondary Futures' (the organisation charged with leading discussion about the direction of NZ Secondary Education) to share ideas and support each other.

The design and construction process

The following comments stem from my involvement in the design and build process for Alfriston from July 2002 to December 2006.

- The key relationships are with the Project Manager, the Architect and the Quantity Surveyor. These are the only people who need to know what the budget is.
- The Project Manager is there to make sure that everyone does their job and that the buildings come in under-budget and on time. A good project manager will provide regular written reports detailing programme progress, payments, variations, design issues, consents, Occupational Safety & Health (OSH) and construction issues.

- The Architect is there to provide high quality buildings that do the job and also provide an aesthetic or impact factor. Architects solve design problems. People who employ Architects must focus on describing the problem or need rather than articulating an amateur design solution.
- The Quantity Surveyor, it is the quality of their judgement, which will determine what gets built and whether the project remains on budget.
- Consultants are supervised either by the Architect or the Project Manager.
- Be on time for meetings and be concerned if others are not.

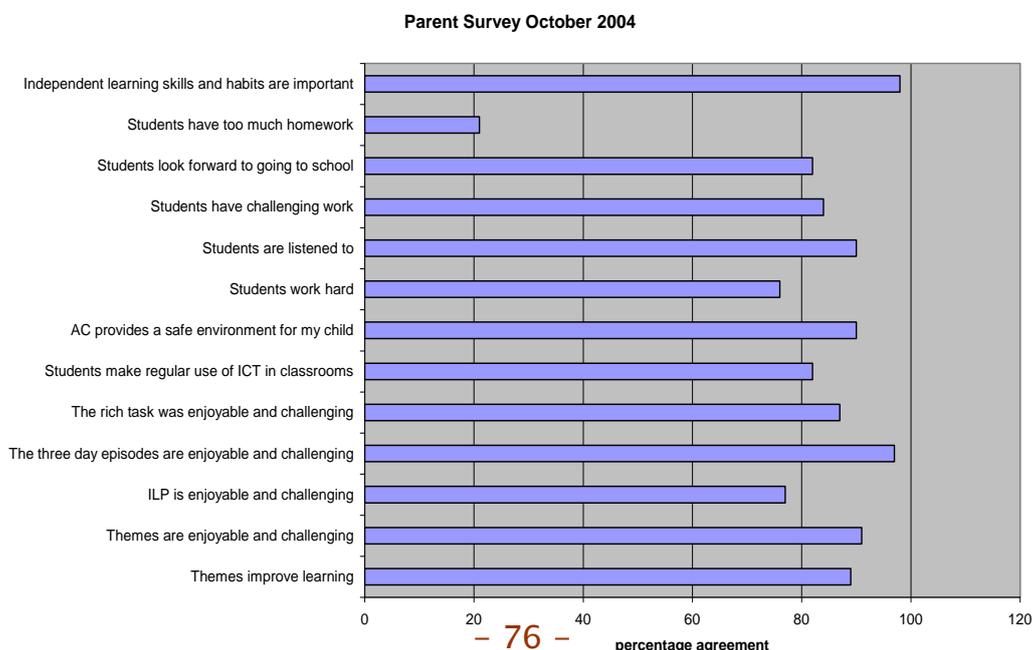
Once construction has commenced the Project Manager organises regular site meetings with the construction company.

Key relationships here are between the school Property Manager and Caretaker and the construction Site Manager. Good relationships can be very beneficial for the school. The presence on site of earth moving machinery, 'spare' materials, cherry pickers and trades people is often a good time to get tricky maintenance jobs and little extra projects done at minimal cost.

The construction or development of a school is a wonderful learning opportunity for students. It has relevance for every learning area.

Community

Parents were surveyed towards the end of the first year of operation. The responses showed a very high level of satisfaction particularly in relation to the vision of the school and some of the more innovative curricula and pedagogies. Parents also disagreed with the statement that students had too much homework.



Alfriston College Establishment Board of trustees, September 2003



Alfriston College Foundation students and staff, February 2004



Appendix

Contents

1. Selected results from PISA
2. Tomorrow's schools today
3. Extract from 'Suburb living real estate'
4. Extract from a speech by the Hon' Steve Maharey 15 06 06.
5. Personalised learning. Extract from a speech by the Right Hon' Steve Maharey, 03/07/06.
6. Education Review Office (ERO) Evaluation, November 2005
7. Alfriston innovation checklist
8. Contracts and partners

1. Selected results from the PISA (Programme for International School Assessment) Research on 3,700 New Zealand 15-year-old students carried out in 2000.

- Strong link between interest in reading and achievement for Pakeha, Maori and Asian students. Not so strong for Pasifika.
- Asian students highest engagement in reading, Maori least engagement.
- Learning strategies:
 - Control* (task completion and self assessment of learning) – students who used these performed better in reading literacy. Maori made less use of control strategies.
 - Memorisation* – improves reading literacy – girls and Asians use memorisation more.
 - Elaboration* – relating to existing knowledge – stronger links with Pakeha and Maori than with Asian and Pasifika.
- Homework – more time on homework the better the outcome but moderate homework just as effective as heavy. Girls, Asian, Pakeha, Pasifika, Maori.
- Co-operative/competitive – both effective. Co-operative – girls, Pasifika, competitive – boys, Asian.
- Self-concept – strong relationship between positive self-concept and achievement.
- Computers – links between positive self-assessment of ability with computers and achievement. Girls less interested than boys. Pakeha and Maori less interested. Asian most interested.

2. Tomorrow's schools today an Education Today article published in February 2004 and written by members of Warren and Mahoney the Alfriston College Architects.

It's almost 25 years since the last brand new state secondary school appeared in New Zealand. The building of two new schools in South Auckland is, therefore, a unique chance to examine the evolution of school design. Here, Warren and Mahoney architects Bren Morrison and Jonathan Hewlett shed light on their work at Alfriston College.

Appendix

Entering the learning park

That Alfriston College isn't your traditional school is obvious the moment you enter the school gate – because there isn't one. Instead, there's a virtual forest beneath a canopy structure – a feature intended to give a feeling of natural learning and underline the school's relationship with the surrounding environment.

Design as a learning resource is at the heart of this new place of learning. Even the stormwater control pond will form a wetland eco-park to enable students to learn about ecology in their own playground.

Another outdoor learning feature is the use of measurement and shapes in courtyard spaces. Students will know exactly how far 50 metres is because it will be marked out on the ground for them with global co-ordinates placing them on the planet. In addition, a cubic metre becomes something they really can relate to – through a sculpture. Geometry also steps out of textbooks and onto the courtyard space through the reproduction of Pascal's triangles, shape sequences and a chess board. And the ability to discover more about the indoor environment is "designed" into the school. Information from CO₂ sensors in learning areas and real-time information about the functioning of the school's ventilation system will be available to students via graphic displays on the intranet.

Together, these outdoor and indoor features support the school's objective of implementing an integrated approach to learning. When, for example, students use information from the CO₂ sensors they will develop skills relating to multiple subjects – from Science to Maths – but with an environmental application. This will allow teachers to develop a curriculum beyond the traditional division of science and maths into separate subject 'parcels'.

Interactive parts within the whole

Integration and interaction are also at the heart of the school's layout and classroom design. The result is, in effect, a 'school within a school'. At the centre of the college is a whare, developed in partnership with local iwi, intended as a central focus for both the school and the local community.

Surrounding this are two whanau clusters, or classroom buildings, with three more anticipated by 2008 in line with projected local population growth. The 'cluster' tag stems from the fact that while each two-storey building caters for between 250 and 300 students, the internal teaching spaces can be reconfigured to cater for anything from five to 100 students depending on the teaching demands and needs. A common area in the centre of each building can also be used as a 'break-out' teaching space or socialising area.

Appendix

The use of whare and whanau design elements reflects more than the community's cultural diversity. Research shows students tend to under-perform in very large schools and may well benefit from a greater degree of familiarity and social interaction. Teaching at Alfriston will, therefore, be on the basis of 'learning teams', with three teachers responsible for up to 80 students. College principal John Locke says it's an approach that wouldn't work in a conventional classroom space and one that also lends itself to the new NCEA framework.

The school has been designed as a vital part of community infrastructure. The school's gym/performance/art space, intended for community use outside school hours, is easily accessible from the main entrance.

Networking and the sound of learning

Designing a building also means allowing for the raft of IT resources and facilities required to prepare students for a 'knowledge economy'.

In-floor networks in many spaces enable connections throughout the school and students will be able to access digital resources, via the school intranet, even when they are off school grounds.

The school's data network will also be used to encourage learning by sound. As John Locke points out, the number of teenagers listening to walkmans suggests that sound has a large role to play as a learning medium. Consequently, speakers will be used to deliver music or spoken files to any part of the school, as well as providing teachers with the option of using lapel microphones.

This means students are less likely to 'switch off' – Locke cites a study where test scores increased by 30% when teachers used a lapel microphone.

Creating a complete school 'soundscape' extends to the use of acoustic operable walls and transparent screens. Acoustic engineering of learning spaces ensures the best possible learning environment and allows numerous class configurations to be formed at any time, without undermining the ability to maintain noise control.

"Greening" learning spaces

Another key aspect of the architecture of Alfriston is the incorporation of environmentally sustainable design (ESD) features. This entails designing buildings with both the well-being of the environment and the building's occupants in mind. Consequently, the school has been designed to maximise northern orientation and daylight exposure, so that students will study in natural light wherever possible. The rationale lies in a host of international studies which link building design and the physical, emotional and intellectual health of occupants. Indeed, a study of 21,000

Appendix

students in the USA, showed students in natural day lighting performed up to 26% better in test scores than students in artificially lit classrooms.

Similarly, Alfriston features an energy efficient heat exchange system to ensure reduced carbon dioxide and toxin levels in all learning spaces by changing the air six times per hour. This is good news for students given growing evidence that poor air quality, classroom temperature and air circulation cause high carbon dioxide levels. This can impede learning by causing drowsiness, inability to concentrate, or lethargy, as well as triggering asthma attacks (one of the significant contributors to student absenteeism in New Zealand schools).

The heat exchange system also uses far less power than conventional systems and discharges fewer pollutants into the air. That's not only good for the environment, it also means the school saves money on regulating classroom temperatures.

Additional 'green' design elements include water conservation features, such as rainwater recovery tanks and a re-use system for toilet flushing and irrigation. Energy and water use efficiencies, together with lower maintenance requirements from the use of robust building materials will save money for the whole life of the building. This is particularly beneficial in school buildings designed for long tenure, and outweighs any initial up-front investment in ESD design and construction.

The evolution of learning parks

Things have clearly changed a lot since the last state secondary school, Macleans College, was opened in Pakuranga in 1980. Back then, Macleans College was the first school in New Zealand to adopt a whanau house design and, therefore, marked a departure from the baby-boom era when schools were largely built to a standard design by the Ministry of Works.

Today the Ministry of Education's design brief for developing schools recognises the principles of multi-function teaching spaces, the fostering of independent learning, environmental sustainability and community engagement. Alfriston College, therefore, represents the next stage in the evolution of school design.

The result is that architecture is set to play a greater role than ever before, in shaping education in New Zealand.

Alfriston College opened in January. Final construction work is due to be completed for the official opening at the start of Term 2.

3. Extract from 'Suburb living real estate', a feature article in NZ Herald, 03.09.05. Manurewa

Including Weymouth, Clendon Park, Homai, Hill Park, Manurewa East, Randwick Park, Wattle Downs and Conifer Grove

Appendix

Amenities:

The high number of schools reflects the high proportion of families here. The new Alfriston College, which some parts of this area are zoned for, is the most highly regarded.

Trends:

Anything near the new Alfriston College is considered a desirable locale, because of the school's good reputation.

4. Extract from a speech by the Hon' Steve Maharey, Minister of Education, to Wellington Principals, 15/06/06.

I believe secondary schools can make a real difference in New Zealand. Across the country new secondary schools are showing us the way. In Auckland new learning structures are being created in a recently opened secondary school.

Alfriston College in Auckland

In the last few years a number of new state secondary schools have been established in Auckland.

The physical design of these schools has focused on improving learning outcomes with:

- accessible and up-to-date learning technologies.
- networked passageways – for easy and safe movement.
- user friendly student and teaching learning environments, and
- outdoor spaces, in harmony with the school.

These physical aspects help to create positive learning environments, but what's been more important is how the curriculum is influencing teaching and learning and what we can learn from this.

In Alfriston College an innovative programme of curriculum integration operates at Year 9 to ensure all students begin their secondary schooling with strong foundations. NCEA level one courses begin at Year 10. Years 10 and 11 are the 'graduation' years with Years 12 and 13 focused on getting specialist qualifications. The graduation curriculum is designed to offer realistic and interesting courses of study, equip students with the must-knows for entry into Year 12 and lead to a minimum of 105 standards at NCEA level 1.

Alfriston College holds that students learn best if they are challenged from an early stage and can see the point of what they are learning. Their curriculum is designed

Appendix

to give every student a clear learning pathway from their first days at secondary school.

We can all learn from these principles of clarity and challenge.

5. Personalised learning. An Extract from a speech by the Right Hon' Steve Maharey, Minister of Education, 03/07/06.

That's why today I want to focus my speech on personalised learning. It's an idea that I believe captures everything we're trying to do in education at the present time. In the interest of modelling good teaching practice. Let me start by telling you a story, which illustrates personalised learning.

CSI

Some of you may have seen the TV crime show CSI – Crime Scene Investigation. CSI has inspired a fascination for forensic science. More and more people, particularly school students, are eager to know how scientists really work out whodunit – and how.

Why is forensics so popular? Basically, people like to solve problems and puzzles. This is something that Alfriston College in South Auckland understands. In fact it is the inspiration for their novel approach to teaching science and maths. The school has developed a course, which starts in Year 10 and runs through Year 11. It sets the students up as detectives investigating crime 'scenes' and uses a combination of science, maths and social studies achievement standards to assess their learning.

As a result more students are excited about learning, different paces of learning can be accommodated and students are able to be reflective about their learning.

This is just one example of personalised learning.

6. The Education Review Office (ERO) Evaluation, November 2005

Alfriston College is a new secondary school in Manurewa, Auckland. The school has been open for instruction for two years and currently caters for students in Years 9 and 10. Staff are continuing to develop appropriate programmes for teaching and learning as the initial student intake progresses through to Year 13. The second phase of building is due to begin and will provide students with a gymnasium and additional whanau classrooms to accommodate the school roll, which is expected to grow over the next three years.

Appendix

The school's distinctive culture, developed from a carefully considered and well-researched base, underpins programmes and operations for foundation staff and students. Regular self-review provides opportunities for senior leaders to refine current practices. An emphasis on developing independent learners, together with a carefully planned integrated curriculum delivery, provides students with purposeful learning experiences.

Senior leaders use a range of assessment tools to gather school-wide achievement data, predominantly in literacy and numeracy. Comprehensive testing at Year 9 provides baseline data that will allow students' progress to be measured over time. These data can be used to inform strategic planning. Achievement information indicates that there is some significant under-achievement in literacy and numeracy at Years 9 and 10. Further analysis of achievement data is required to identify the specific learning needs of the students and to develop strategies to raise student achievement school-wide.

The school vision is well understood and embraced by students. Students are generally courteous and interact positively with each other and with adults. The vertically grouped whanau system encourages healthy competition and provides students with opportunities to develop leadership and peer support skills. The whanau areas and marae make positive connections for Māori and Pacific students.

Recent research on good teaching practice informs curriculum planning and delivery. Staff demonstrate high expectations for student success, behaviour and interactions. Classroom management is firmly focused on learning. A high level of purposeful interchange between students and teachers and among students in classrooms is evident. Collaborative teacher planning, both within and across departments, provides teachers and students with coordinated learning opportunities. This process provides students with sound role models and reinforces the concepts of effective learning and whanau support.

The senior leadership team, carefully selected for their strengths and expertise, has worked tirelessly to develop, model and implement the school vision. Effective planning and reporting processes enable the board and staff to be well informed of school development.

The establishment board has provided the college with a sound foundation for governance. Extensive consultation has contributed to effective curriculum and property development. A successful transition to an elected board has been made. The board of trustees, with both Māori and Pacific members, is representative of the school community. The board has co-opted trustees for their specialist knowledge in property development. Board procedures are effective and strategic planning is in place to guide future development. Building the capacity of the board to govern the school through ongoing training is an important next step to meet the demands of a growing school.

The focus area of this review is the progress made in creating a culture that develops independent learners in a new school. The report examines how well the college is meeting student-learning needs and explores the provision of education for Māori

Appendix

and Pacific students. The report also comments on the provision of career education and guidance. The review finds that the board has made good progress in creating a culture of independent learning, but has yet to satisfactorily address the needs of the large number of Māori and Pacific students who are at risk of not achieving. The report recommends that the senior management team further develop assessment practices and use achievement data to inform decisions about resourcing, planning and the strategic direction of the school.

7. The following list provides a quick reference about innovations developed at Alfriston or adapted from other schools

Accelerated learning	p 35
Action Research	p 40
Authentic learning	p 29
Blended courses	pp 12, 14
Biculturalism	pp 24, 67
Classroom size	p 52
Commendation card	p 34
Concept based integrated learning	pp 15, 30
Crime Scene Investigation (CSI)	p 14
Cross curriculum planning	pp 30, 31
Curriculum structure	p 14
Differentiated learning	pp 34, 40
Dimensions of learning	pp 11–13, 29–36, 64
Foundation programme	pp 12–15
Flexible space	pp 28, 47
Graduation programme	pp 13, 15
ICT infused learning	pp 35, 37
ICTPD	pp 40, 60
Independent learning	pp 10, 29, 68, 74
Independent Learning Centre	p 29
Independent Learning Class	p 12
Internal air quality (IAQ)	pp 50, 51
Intranet pedagogy	pp 13, 36, 60
Integrated learning	pp 14, 28, 30, 31, 37, 40
Learning and behaviour strategies	p 65
Learning area	pp 11, 12, 29
Learning community	pp 12, 13, 32
Learning log	pp 34, 35
Learning Park	pp 12, 48–50
Learning process	pp 11, 34, 35
Learning terminology	p 66
Learning to Learn	pp 14, 35
Learning vocabulary	pp 13, 34, 64
Mentoring	pp 22, 23

Appendix

Module based learning	p 12
Modularised furniture	pp 52–54
Nature in Balance (NIB)	p 14
One hundred minute periods	pp 29, 30, 37, 47
Operable walls	pp 20, 43,
PC trolleys	pp 28, 47, 48
Personalised learning	p 75
Professional development	pp 39, 40, 60
Qualification programme	pp 13, 16
Research lead group	p 37, 42
Restorative justice	pp 21, 40, 65
Schools within a school	pp 12,20,32,40, 47
Soundscape	pp 58, 59, 64
Stagecraft	p 12
Student guides	p 23
Student diaries	pp 32–34, 65,74
Student mosaic	p 50
Sustainable design	p 50
Te kahikatoa	p 13
Te kakano	pp 12, 58
Three-day episodes	pp 13, 14, 34, 37, 60, 64
Truth windows	p 49
Tutor programme	pp 12, 23
Virtual forest	pp 20, 36, 50
Whanau organisation	pp 20, 21, 42, 47
Whanau environment	p 21
Whanau competition	p 22, 64

8. Contracts and partners

Contracts

- MoE: Information and Communications Technologies Professional Development (ICTPD) 2004–2006
- Manurewa Enhancement Initiative (MEI) 2004–
 - Literacy strand
 - Numeracy strand
 - Attendance initiative
 - Restorative justice
- MoE: Te Kotahitanga. 2007–
- MoE: Teaching and learning Research Initiative (TLRI) 2007–
- MoE: Gateway 2007–

Partners

Appendix

Warren and Mahoney
Manukau Institute of Technology

Bibliography

Alton-Lee, A (2003) *Quality Teaching of Diverse Students in Schooling: Best Evidence Synthesis*. New Zealand Ministry of Education website. www.minedu.govt.nz

Atkin, J (2000) *Styles of Learning; priorities and challenges for the new millennium*. Unicorn, Journal of the Australian College of Education 26:3,2000,p.50

Beare, H. (2001) *Creating the Future School*. London, New York: Routledge Falmer p164, 165.

Bishop, R., Berryman, M., Richardson, C., & Tiakiwai, S. (2003). *Kotahitanga: The experiences of year 9 and 10 Maori students in mainstream classes*. Wellington: Ministry of Education.

Copa, G (1999) *New designs for learning K-12*. Centre Point Series No6. National Centre for research in vocational Education.

Education Review Office (2003) *Students in Years 9 and 10*. ERO, Wellington.

Hattie, J (2002). *What are the attributes of excellent teachers?* In: New Zealand Council for Educational Research Annual Conference. NZCER: Wellington

Hewitt, D, (2002) *Green Features encourage schools to lighten up*, Seattle Daily Journal of Commerce, online edition, August 20.

Impey, S (2004). *Learning Leaders Manual*. Unpublished Alfriston College practice and procedures guide.

Kane, P.J., Pilcher, M., Legg .S.J. (2006) *Development of a furniture system to match student needs in New Zealand schools*. Presentation to the 16th Triennial World Congress on Ergonomics. Maastricht.

Lackney, J (2000) *Thirty three educational design principles for schools and community learning centres*: Educational Design Institute Mississippi State University

Locke, J (2004) OECD Programme on Educational Building. *Creating 21st Century Learning Environments*. Section 2, 55 p (Alfriston College).

Nair, P (2000) *Learning with technology; new schools for the new millennium* Designshare .com

New Secondary Schools Working Party (2000). *Guidelines For the Establishment of a New Secondary School*. NZ Ministry of Education.

Bibliography

- NMSA (1995) *This we believe: Developmentally responsive middle schools*. Columbus, OH:NMSA.p.10–11.
- Marshak, D (2001) *Improving Teaching in the high School Block Period*. Scarcrow Press.
- Robbins, P., Gregory, G., Herndon, L., (2000) *Thinking Inside the Block Schedule*. Corwin Press.
- Schein, E. (1992) *Organisational culture and leadership*. Jossey–Bass, San Francisco.
- Shanks, L. (2005). *Evaluation of Educational organisations*. Unpublished essay.
- Smith, A., Lovatt,M,. Wise, D., (2003). *Accelerated Learning; A User's Guide*. Network Educational Press.
- Stoll, L. (1999) *School culture or fertile garden for school improvement*. In Prosser, J. (ed) *School culture*. London: Chapman Publishing.
- Sutton, S., Wait, A., Benseman, J., (2001). *New Secondary Schools Consultation Project*. New Zealand Ministry of Education website. www.minedu.govt.nz.
- Tapu, A. (2004), *Whanau support and guidance Manual*. Unpublished Alfriston College practice and procedures guide.
- Tanner, C.K. (2000) *The influence of school architecture on academic achievement* *Journal of Education Administration*, 38 (No4), 309–330
- Tetley, S. (2005). *Alfriston College Curriculum Integration Development*. Unpublished.
- Vander Ark, T (2001) *Building Better Outcomes: The Impact of School Infrastructure on Student Outcomes and Behaviour*. Australian Government, Department of Education, Training and Youth Affairs: 200.
- Vander Ark, T (2002) *"The Case for Small High Schools"* *Educational Leadership*, 59, 5: 55–59).