



**Directorate for Education
Centre for Educational Research and Innovation (CERI), OECD**

Innovative Learning Environments (ILE)

INVENTORY CASE STUDY

Mordialloc College

Australia (Victoria)

Mordialloc College is a Year 7-12 government secondary school located south of Melbourne near Port Phillip Bay in the city of Kingston. The school's ILE can be best described as personalised learning, team-planning and teaching, and using flexible spaces as a means of maximising learning. Eight existing classrooms were redesigned as an open-learning area, which encompasses the Year 7 Learning Centre and the Year 8 Enquiry Zone. Structures include: family groups and family guides; team teaching and planning; optional and compulsory workshops; student planning and documentation; engagement in learning; and development of self-management and social skills. Other designated learning areas include: the Think Tank; a glasshouse; dedicated outdoor areas; a library; and science and arts areas. Flexible learning is continued in Year 9 within the subjects of the Mordialloc Experience Program. The spaces lend themselves to the sort of pedagogy valued at Mordialloc College—one which engages students in personal and interpersonal learning through an integrated oriented approach to curriculum. Pedagogy and personalisation are at the heart of the innovation; however the flexible spaces offer a tangible expression of the ILE and provide unique environments which have attracted widespread interest and support a renewed pedagogical approach.

This Innovative Learning Environment case study has been prepared specifically for the OECD/ILE project. Research has been undertaken by Professor Jill Blackmore and her team at the Centre for Research in Educational Futures and Innovation, Deakin University in partnership with Dr Elvira Vacirca from the Department of Education and Early Childhood Development of Victoria, Australia, following the research guidelines of the ILE project.

© OECD, 2012.

© Department of Education and Early Childhood Development of Victoria, Australia, 2012.



Department of Education and
Early Childhood Development

OECD/CERI Innovative Learning Environments (ILE) Project

Case Study: Mordialloc College

Aims of the ILE and the nature and history of the innovation

This innovative learning environment is an example of how a program-driven school-based reform can have wider impact on a school and its wider educational community.

Background and context

Mordialloc College is a state co-educational secondary school located on Port Phillip Bay in the City of Kingston. Founded in February 1924, the College currently has an enrolment of approximately 750 students and offers a broad range of academic and creative subjects. Approximately 100 students study for the Victorian Certificate in Applied Learning (VCAL). Students come from varied social and ethnic backgrounds with a small number of students (0.07 percent) having language backgrounds other than English (DEECD, 2009a). There are slightly fewer female (approximately 44 percent) than male students. Mordialloc College has invested substantial resources in staff and student training in Quality Learning Principles and Strategies, e.g. Plan, Do, Study, Act (PDSA) and Improvement Process (e.g. Quality Learning Australia, 2010), as a means of maximising learning in Years 7 to 10 and the Years 11 and 12 Victorian Certificate of Education (VCE). Its programs emphasise students reaching their individual potential and developing personal and leadership skills.

The area has traditionally been socially and ethnically diverse but is fast becoming part of the affluent spread of largely white middle-class families clustered around the coastal Nepean Highway. The school has red brick buildings of the 1920s set in beautiful gardens. The city train runs past the front of the school with the station a five-minute walk from the school gates.

Mordialloc College is situated in an area amply serviced by secondary schools. The City of Kingston includes the multi-campus Mordialloc College, four stand-alone Year 7-12 co-educational schools and one girls' secondary college, all with extensive VCE offerings. Mordialloc College has the smallest enrolment among these schools.

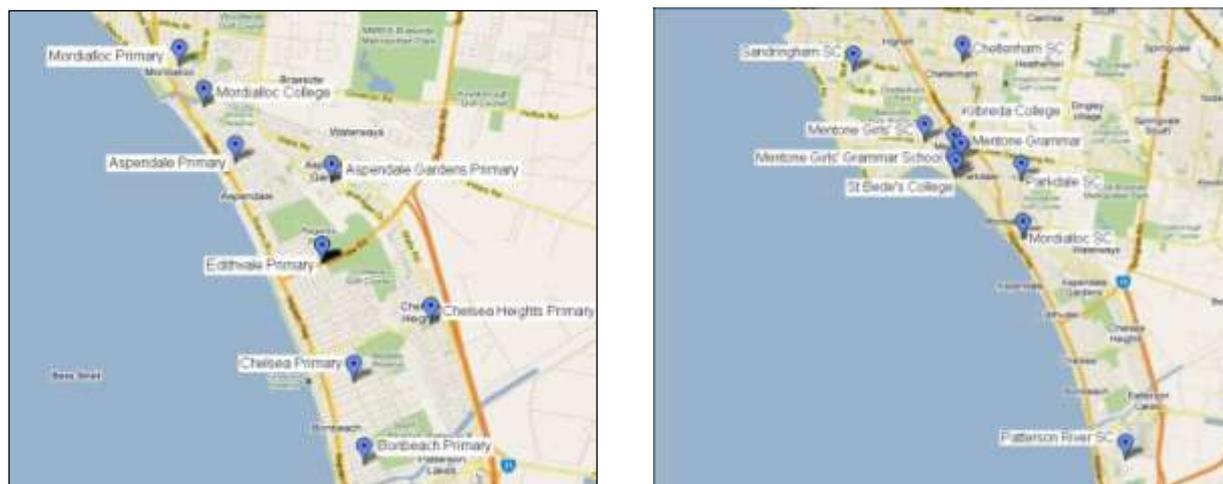


Figure 1. Mordialloc College in relation to Government primary schools and secondary colleges in the City of Kingston

The school has been dealing with an enrolment fluctuation due to the large number of private and Catholic secondary schools in the Bayside corridor. A negative migration pattern from 1996 to 2006, coupled with growth in mid- to higher-level household incomes has seen a changing demographic, which may also account for the drop in enrolments. Mordialloc College increasingly competes for its 'market share' of students as neighbouring private schools offer scholarships to aspirational parents in the region. Some parents seeking government schools also exercise a preference for larger secondary government schools nearby, resulting in a relatively small senior school at Mordialloc College.

Approximately 60 teaching staff support student learning. A Select-Entry Accelerated Learning (SEAL) Program is in place for Years 7-10. The College also offers extracurricular activities including participation in the Rock Eisteddfod¹, musical productions and bands, camps, overseas tours, competitions and Duke of Edinburgh Awards. The College is proud of its profile in the Performing Arts. Students won the 2008 Rock Eisteddfod Challenge and recent musical productions include *Grease* (2007) and *Over the Rainbow* (2009). Visual arts are displayed in the school's Art Show, which also exhibits work from local primary schools.

The College values, which underpin all learning, include the following:

- Respect (fostering an environment which respects ourselves and others);
- Relationships (valuing the contributions of others);
- Quality (enabling students to acquire skills and independence);
- Supportive environment (ensuring that community members are supported and safe);
- Continual improvement (using a systematic approach to support improvement);
- Innovation (fostering the desire, confidence and ability to innovate);
- Leadership (acknowledging the role leadership plays in inspiring pride in the College);
- Diversity (celebrating others in the community); and
- Community (with whom we work to foster the richness of our culture) (Mordialloc College, 2010).

¹ Rock Eisteddfod is a series of drama and dance events put on by pupils as part of the World Rock Challenge.

Origins and development of ILE

The school's ILE is a program offered at Years 7-9 that seeks to develop 21st century learners through a personalised learning approach. The important characteristics of the innovation under review are a movement towards student self-management and negotiation, a shift towards a team approach to planning and teaching, and a shift from pre-developing units of work to co-development of curriculum with the students.

Prior to the innovation described in this case study, teachers were 'teaching to the text' (Assistant Principal) within single, closed-door classrooms. Some teachers might have been integrating two subjects, such as Studies of Society and Environment (SOSE) and English. All were writing units of work that would typically have been studied for approximately eight weeks. The need to attract students to the school and the Victorian State Government's agenda at the time, as encapsulated in the Blueprint for Government Schools Future (DEECD, 2003), were catalysts for the innovation. The past Principal of Mordialloc College had a strong vision of future education and was successful in gaining a grant of \$20,000 from the Department of Education and Early Childhood Development (DEECD) to investigate models for whole-school transformation. Prior to this, the school's participation in the Quality in Schools (QIS) program (2001-2003) had had a significant impact on teaching and learning. Eighteen teachers had been trained in the use of the QIS tools and the principles had been adopted through the school under the guidance of the QIS facilitator.

In 2002, when the current Assistant Principal commenced at the school as a mathematics teacher, she introduced quality processes for learning strategies. She was influenced by her work as a postgraduate student with Professor Ian Mitchell (Monash University) and PEEL (Project for Enhancing Effective Learning) (Mitchell, Loughran & Mitchell, 2001). PEEL was founded by teachers reacting to and developing pedagogies that addressed the lack of independent, student-directed and reflective learning in schools. Through collaborative action-research they worked to design pedagogies to stimulate and engage students and to provide them with a sense of direction. The Assistant Principal remembers:

At that time the Principal ... [was] a very good educator, very good vision of what education might possibly be and she distributed leadership to staff. She knew that things had to change. She didn't want to walk into classrooms and have students say to her 'I don't know what I'm doing' or 'We're doing what the teacher is telling us to do'...She wanted students to articulate they could learn. She had been to Quality in Schools with a group of teachers here and the government was funding that. I think they gave them \$20,000...to look at a model that might suit whole school transformation. (Assistant Principal)

Mordialloc College applied unsuccessfully for the first round of the Leading Schools Fund. Taking advice to 'tear down the walls', the application in 2004 was successful with funding received for 2005-7. As the Assistant Principal reflects:

...when I came here...they had Quality in Schools...and we had an opportunity to train with QIS to start trialling that in our classrooms and a couple of us got pretty excited about it...we were all doing a lot of research at the time, reading up a lot about the starting point being relationships as the basis of good learning, and metacognition with students...When we were trialling QIS I had my students going through these PDSA cycles where the students weren't seeing their learning as a product. So we were really

into this idea of linking learning and chunking learning and having the students use the learning around them as resources for the next part of the process so students [were] seeing learning as a process—which you see sometimes in primary schools but you never see that in secondary schools unless you're in places like the art room where students are doing folios and they have some ownership of that area and they're comfortable in there and their resources are in there. We didn't have that here. For instance, we have a two week cycle here. If I was in that room, I wouldn't visit that room again for two weeks...So whatever they were creating couldn't be a resource for the next part of their learning...We asked to be stationed into rooms a bit more often. We could create these learning stories around the wall that students were interacting with and as soon as they started having a bit of ownership you could see changes in behaviours.
(Assistant Principal)

In applying to become part of the Leading Schools Fund initiative, schools were encouraged to think beyond traditional practices and structures (see Figure 2). In their application they were required to:

- develop and implement teacher and school effectiveness strategies
- demonstrate the capacity to share effective practice and programs to develop community partnerships supporting collaboration between all schools in a geographic area

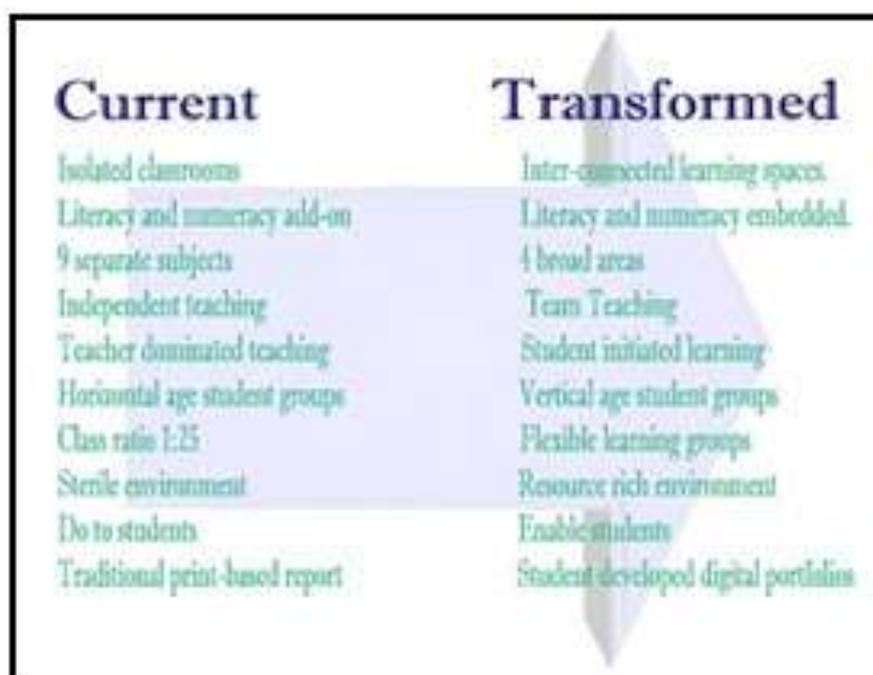


Figure 2. From the *Mordi on the Move Quality E-learning* application 2004

The application sought funding for a flexible space that all classes of Year 7 students would use for most of the day. The varied groupings within this space would include family groupings (home groups) each with a family guide (home group teacher), neighbourhood learning (the whole cohort), and relational circles—usually in family groups—with an emphasis on personalised learning. While the immediate aim was to develop renewed pedagogy and a new learning space

for Year 7 students and teachers, an associated aim was that the pedagogical changes would be influential in transforming learning across the school.

The new Year 7 program came into operation at the beginning of the 2006 school year. As the new building was unfinished, the program began in the school hall. Preparation for the new initiative had begun in 2005 when a number of the curriculum planning team teachers began implementing the modified Quality Learning principles and strategies. Teachers tried new approaches, videotaped themselves teaching and reflected on the footage. Their work had demonstrable results:

The 2006 students' Attitudes to School Survey...revealed that Year 7 students at Mordialloc College were, on average, happier with all areas of schooling compared to Year 7 students across the State. Further to this, independent standardised testing undertaken by the school...at the beginning of 2006 showed all students had made great strides in their learning.

At the end of the year this formal and anecdotal assessment [concluded] that the new program was an outstanding success. [This evidence] was supported by a Quality Award for Innovative Learning from the National Government. This award was presented to the Principal and members of the Quality eLearning Developing team by the Federal Minister for Education in Canberra on 21 March 2007. (Mordialloc College, 2010)

The changes coincided with the introduction of the Victorian Essential Learning Standards (VELS) which presented an opportunity for renewed approaches to curriculum. A team of teachers committed to Quality Learning, including three extra Leading Teachers funded for three years, integrated essential elements from VELS into the Quality Learning matrices.

In 2007, the first Year 7 group to experience the new learning program moved into Year 8, returning to the more usual system of single teachers in single classrooms. However, in 2008 the Year 8 centre—the Enquiry Zone (EZ)—was opened. It was a re-configuration of existing classrooms where corridors, walls and lockers were removed to create workshop spaces and the whole area was repainted and recarpeted.

Since then the school has worked to develop continuity in pedagogy based on Quality Learning. The innovations at Mordialloc College have influenced teaching practices elsewhere through introducing other schools to the philosophy of the program. At the time of writing this case study, the Mordialloc ILE, a renewed approach to pedagogy and learning spaces for Year 7s, could be described as being in the consolidation phase (DEECD, 2011).

Learners within the broader education system

The development of the Year 7 Learning Centre and associated renewal of pedagogy has had somewhat mixed repercussions in terms of Year 7 enrolments. On the one hand it has served to distinguish the school as offering an innovative approach but it has also been seen as a probable cause for a drop in Year 7 enrolments. Even so, the school has a high profile within the local educational community. The Assistant Principal explains:

Students from [learning] centres visit and speak at primary schools...helping primary staff understand...because they are now getting flexible spaces and they're not sure how to deal with them. So for a few years they've been saying 'we don't really want to know what Mordialloc College is doing....' Now [they're saying] 'Hey guys! Any chance of giving us a hand?' And we are happy to do that. (Assistant Principal)

When students begin Year 7 they undertake an introduction to Mordialloc College's learning methodology. This emphasises student decision-making and independence skills underpinned by Quality Learning strategies and principles.

The Year 8 Enquiry Zone, based on the same learning principles as the Year 7 Learning Centre, provides continuity for students in this program. In Year 9, the program extends and develops into the Mordialloc Experience Program, during which students take part in community-based projects whilst developing their own knowledge in Learning Journeys (which replaced former Key Learning Area electives). In Year 10, students learn in a closed classroom design but many of the classes still use a variety of quality learning tools and processes including Learning Matrices.

Structured patterns and characteristics of the learning environment

A strong example of the innovations at Mordialloc College is the Year 7 Learning Centre, where five 'family' groups of approximately 120 Year 7 students and their five 'guides' (teachers) share the specially constructed flexible space (see Figure 4). One of the five family groups is made up of Select-Entry Accelerated Learning Program (SEAL) students. Students spend 75 percent of their school time in the Learning Centre. The timetable for the morning sessions is the same from Monday to Friday. Specialist classes, which are conducted in the afternoons are organised within a fortnightly timetable (see Table 1).

8.55-9.25 am	Silent reading
9.25-10.15 am	Family group time
10.15-10.30 am	Year 7 meeting
10.30 am	Recess
11.00-1.00 pm	Expedition time/Neighbourhood time
1.00 pm	Lunch
2.10-3.05 pm	Specialist classes (French conducted in Learning Centre/ specialist classes conducted in traditional classrooms)

Table 1. Overview of Year 7 timetable

Time in the Learning Centre is structured around 'family time', workshops and 'neighbourhood learning' (the whole group Year 7 cohort). The organisation of learning is highly influenced by the Quality Learning Australia principles and strategies (Quality Learning Australia, 2010, 2011). Teachers work with students to promote inquiry learning, particularly student-driven inquiry learning. Learning is developed using the PDSA cycle (Quality Learning Australia, 2010). To support this, students are trained in the use of the PDSA cycle. Documentation using a series of learning matrices underpins all learning. Individual student use of Learning Matrices is the primary accountability measure for all Year 7 students. A Learning Matrix (designed by a group of teachers in 2005) lists essential learning elements taken from the VELs and students are

required to show evidence of learning which addresses these elements (see sample Learning Matrix in Figure 3).

Students create their own questions and apply their learned skills and knowledge to their own interests. Resource matrices are developed by teachers to provide a range of teacher-sourced resources related to topics under exploration. These include texts, websites and worksheets. Teachers also conduct workshops which students attend voluntarily. Participation in these workshops is negotiated with individual students via the Learning Matrix. This leads to an environment in which students are working on different tasks. As one teacher describes:

You can walk over and find one student who's working on maths problems, another student will be working on the computer and doing something about PowerPoint...that he's linking [to] Humanities...some other students will be building something with clay....They are not all doing the same thing. They'll be sitting at the same table talking to each other about the same thing, doing different tasks. (teacher)

Value is placed on the processes rather than the products of learning. Teachers structure regular formative assessment conversations with students around the tasks they are undertaking. They support student progress through discussions of learning in the planning, doing, studying, and acting stages.

Every day starts at 8.55am with all five family groups in their family areas involved in silent reading. Group sizes vary between 18 and 25. All students and family guides read silently for 30 minutes.

Daily family time (9.30-10.30am) provides opportunities for guides to oversee the completion of Gantt² charts by their home groups. These include a timetable and a Learning Matrix (see Figure 3). The Gantt charts are a focus for personalising learning and for planning and organising time. Students self-select seating within each family area, confer with family guides, read about and sign up for workshops, and complete documentation about their intended learning.

The students have been coached in the documentation processes as part of the program. Becoming accountable for planning, organisation and goal setting is part of the innovation in preparing students for 21st century learning. Students are coached in self-management, independence and accountability through documentation. There is also a focus on relational processes including group formation and collaborative working processes.

To support this self-management, timetables are visible on a whiteboard and copies of student learning matrices are available. A workshop sign-up timetable is displayed on a nearby wall. Individuals and groups of students from the five family groups, peruse the workshop options at the beginning of the day to discuss essential learning options. Examples of Learning Centre planning artefacts are shown in Figure 3.

² A Gantt chart is a type of bar chart that illustrates a project schedule, with start and finish dates and summaries of stages to break down in stages the work to be done.



3a. Group timetable



3b. Planning examples



3c. Student GANTT chart

Essential Learning Elements		checkboxes
U1.E.1	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.2	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.3	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.4	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.5	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.6	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.7	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.8	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.9	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.10	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.11	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.12	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.13	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.14	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.15	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.16	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.17	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.18	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.19	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.20	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.21	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.22	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.23	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.24	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.25	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.26	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.27	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.28	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.29	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.30	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.31	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.32	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.33	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.34	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.35	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.36	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.37	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.38	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.39	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.40	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.41	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.42	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.43	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.44	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.45	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.46	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.47	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.48	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.49	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	
U1.E.50	Understand the importance of the learning process, the role of the teacher, the role of the student, the role of the parent, the role of the community.	

3d. Student Learning Matrix

Figure 3. Examples of Learning Centre planning artefacts

The role of the family guides is both proactive and reactive. Some students approach guides to clarify completion of Gantt charts. Guides may also request that students make appointments with them. During these conferences various issues are raised, including access to resources (including information communications technology) and instructions about appropriate use of resources. Students are encouraged to read, reflect on progress, form groups and choose a ‘big question’ for self study. Personalised planning is evident as is the diversity of student progress towards meeting the essential learnings.

Guides hold individual student conferences to address student progress. The foci of these conferences vary depending on the learning needs of the student, but are generally text-focused. They might include a literacy-related skill such as the use of paragraphs or of referencing. The guide and the student negotiate work outcomes. Student conferences may be one-to-one, or, in the case of group work, may involve a number of students. Conferences are the major means of monitoring accountability for students and teachers.

Daily expedition time (11.00am-1.00pm) provides opportunities for workshops and student conferences related to the substantive curriculum content, as well as embedded aspects of literacy and numeracy. Guides also hold workshops on areas which support the specific needs of students (e.g. substantiating claims made in textual work, skilling in an area of ICT or exploring aspects of a topic such as 'Cells' or 'The Great Wall of China'). Workshops are the key point of direct instruction for students and are generally held for groups of fifteen or more students.

Midway through expedition time all students review their progress according to the Gantt charts. Students are encouraged to be seated and to reflect.

Guides not undertaking workshops continue to participate in student conferences which, on any given day, can vary significantly in their focus and content (e.g. inserting images in a PowerPoint presentation on rainforests, developing a model related to ten ways in which ancient China influenced the world or brainstorming ideas for a website on the uses of drugs). Teachers also conduct roving conferences with various individuals and groups of students.

Nature and quality of the learning

The flexible learning space is a very large area (see labelled images of areas of the Learning Centre in Figure 4). At present it generally accommodates the equivalent of five home groups of students but it has the capacity for eight groups. The central area has a lectern and a big projection area. This area is large enough to have the whole Year 7 cohort sitting together involved in 'neighbourhood learning' (usually seated on the floor). Nests of tables and chairs surround the central area which are organised into five designated family group spaces. Storage tubs are located in each family group's space.

Sound-reduction boards hang from the vaulted ceiling and a 'wagon wheel' motif is repeated in windows at both ends of the central area. Quality learning materials and the Year 7 Code of Conduct are prominently displayed behind the lectern. There is an abundance of glass and consequently an abundance of natural light. Many examples of student work are on display. Flexible tables of various shapes and over 120 polypropylene chairs surround the central area which can be connected in numerous ways.

On the wall facing the central space (partially separated by a glassed partition) workshops are advertised and students sign up as appropriate. Adjacent to the big projection area is the 'Think Tank' which students can use as a mini conference room. It is partially walled but opens onto the centre. On one side of the Learning Centre is the home area for the SEAL group and one other family group. Under the windows along the wall there are science facilities and a wet area, which students use for both art and science. Next to this is a small area with basic kitchen facilities and a library.

Opposite the science and wet area are two further family groups with the 'Glasshouse' at one end. This consists of a glassed-off area (formerly two classrooms) where students can undertake silent independent work if required. The Glasshouse is also used for workshops. This side of the Learning Centre opens onto a deck and an open outdoor space. The Learning Centre, deck and open area are used almost exclusively by Year 7; the aim is to develop a sense of community. (The area is also used for staff workshops, the valedictory dinner and community events. Once a week the Year 11 mentors use the space for an hour.)



The Think Tank for small group and conference area



Workshop central and resource matrix display



The central area for neighbourhood learning



The central area for neighbourhood learning showing hanging sound-reduction boards



The science area and wet area



The library



The Glasshouse for independent work and workshops



The outside deck

Figure 4. Areas of the Year 7 Learning Centre

Planning curriculum and assessing learning using Learning Matrices

Learning at Mordialloc College is organised around Learning Matrices. All essential learning elements in the matrix have been taken from the Victorian Essential Learning Standards (VELS) (VCAA, 2010). The task of constructing the matrix was undertaken by a group of 13 teachers following the successful application to the Leading Schools Fund. The close relationship of the matrix to VELS makes auditing and reporting straightforward. Audits of student progress are collated by the Year 7 teachers and given to the Year 8 teachers so that student progress is monitored during annual transitions. Many essential elements are applied a number of times; that is, they will be present in a number of Learning Matrices. This is particularly evident in the assessment of Personal Learning (VCAA, 2008). It is anticipated that the forthcoming Australian National Curriculum (ACARA, 2008) will require a review of all Learning Matrices.

Students' learning matrices are kept in a learning folder, which provides evidence of the learning process and are used for self-assessment purposes. The matrices record the essential elements of the learning processes undertaken and evidence of the learning outcomes. Evidence includes a teacher signing off on a conversation, a photo, a piece of written work, a workshop exercise and/or a video of work accomplished.

Teachers record student progress and achievement on e-versions of these matrices. For example, under the learning element, 'Demonstrate your knowledge of BOLTSS conventions' the teachers will assign either a 'one' (if the teacher has seen evidence that the student has learned the element and can articulate it and apply it elsewhere) or a 'zero' (if the student has not met these requirements). In the latter case, teachers provide feedback and the student resubmits the work.

In the Learning Centre teachers moderate when making judgements about student work and write their reports collaboratively. Teachers also use 'on-demand' testing to validate their judgements.

Teacher learning and the role of the learning guides

The role of the learning guides is quite different from that of a single-classroom, single-subject secondary teacher. Teachers plan and teach as part of groups of five and require training in Quality Learning principles and strategies. As part of professional development, Mordialloc College has introduced programs including QIS (Quality in Schools), QLA (Quality Learning Australia) and the PDSA (Plan-Do-Study-Act). To foster their practical application, individuals and teams of teachers present new ideas, strategies and methodologies derived from these programs in weekly, two-hour professional learning workshops.

Team teaching is an integral part of the Learning Centre. Teachers work collectively to plan and implement curriculum and assess students. This is a marked change from the one-teacher one-classroom model where a teacher's work for students was planned individually and often conducted behind closed doors. Teachers have had to adapt to a new teaching environment with more students and fewer walls than the conventional classroom. This adjustment has been facilitated by the team of teachers working together consistently to plan, assess and evaluate their own practices.

Teachers have also 'reassessed' assessment. Prior to the introduction of the ILE, students and their parents were focused on the 'grade' which a student received. However, the new learning program required a new, more flexible assessment system. Assessment for learning was introduced with teachers and students co-constructing learning goals and then scheduling teacher-student and parent-teacher-student conferences to discuss and monitor progress towards these goals. The development of linkages between the learning matrices and VELS progression points assisted in determining the depth and quality of student learning.

A strong emphasis is placed on resourcing the learning of the students such as, finding or creating rich resources and/or planning ways in which the students might create resources. This planning is undertaken by the family guides in their regular, shared spare periods, such as the time when students attend afternoon specialist classes. On Monday and Thursday mornings, following the whole-school staff meetings at 8.30am, the five guides meet in the Learning Centre to share information about the program or about significant events such as a presentation by the school nurse.

The College offers practica for visiting teachers. These take the form of a full day of professional learning for which the school is paid. The justification for the professional learning component is to minimise 'educational tourism' by giving visitors a complete and complex understanding of the philosophy and pedagogy of the Learning Centre and Enquiry Zone. The practica occur once a month and schools from around Australia and overseas have taken advantage of this opportunity.

There is a heightened sense of visibility for teachers working in the Learning Centre which can take its toll on the staff involved. There is also a possibility that the practica, along with the Centre's multiple levels of participation in Department-led research or funded development projects (Leading Schools Fund, Building the Education Revolution, Building Futures Program, Web 2.0 technologies, Equity case study, ILE Immersion Pilot, Organisation for Economic Cooperation and Development (OECD) horizon scan) may add to this pressure.

While the school has focused on consolidating teams for at least two years in an effort to enable transference of knowledge into the Year 8 team, graduates and young teachers predominate in the Year 7 Learning Centre. However, it should be noted that all graduate teachers were recruited from pre-service teaching placements and so had previous experience in working in the Centre. Teachers in teams, including graduates, became skilled very quickly because they were 'living' the program. Constantly developing, improving and reflecting on the program and the learning with each other every day. The need for experienced teachers and ongoing professional development is evident. As one teacher explains:

I'm the only one in there who's had more than two years of experience...and it's vitally important that you have at least two people in a learning centre who have a sufficient amount of experience and understanding of the philosophy that underpins the learning that goes on here. Otherwise...you get processes breaking down and teachers feeling stressed.(teacher)

Surrounding schools are moving towards the use of more flexible spaces and Mordialloc College has lost staff to other institutions who want well-skilled teachers who understand, develop, live and evaluate enquiry and personalised learning. Constant staff changes and recent leadership changes pose challenges for the sustainability of the Learning Centres at Mordialloc College. There is a sense among teaching staff that leadership is not widely dispersed and that meeting the mentoring needs of early career teachers is a constant challenge.

Impact and effectiveness of the ILE

In 2010 the renewed approach to pedagogy and learning spaces for Year 7 students at Mordialloc College can be described as having passed through the design and implementation phase of the innovation, and moved into the consolidation phase where practices have become institutionalised (DEECD, 2011). This reflects a major commitment by the larger school community to embed the innovation in the school culture. Moving from consolidation to sustained innovation and evaluation (DEECD, 2011) is the current focus for the drivers at the school. It is within this context that the following observations are made.

The ILE has attracted considerable interest and attention since its implementation, as evidenced by the numerous local, national and international visitors, including fee-paying educators to the school. The ILE is a major distinguishing factor for the school and has raised both its profile and its market share within its regional school cohort. Even so, tensions exist both within the school and between the school and external bodies (Regional Office, local principals) about the value of the innovation.

Numerous criteria have been used to assess the effectiveness of the project, including DEECD Leading Schools Fund reports, the Learning Matrices, On Demand testing, teacher judgement data against VELS standards and progression points, and data provided by Student Attitudes to School and the Staff Opinion surveys.

Teacher judgement data against VELS areas, while showing a downward trend for the school year levels generally over the period 2007-9, are more positive when tracking the Year 7 (2007)

cohort through to Year 9 (2009). Mean scores of Year 7 students in all subjects are consistently higher than the State mean. This is consistent with the previous cohort of Year 7 (2006) to Year 9 (2008), indicating that the Year 7 Learning Centre and Year 8 Enquiry Zone have at the very least shown consistent performance above State means in literacy and numeracy, according to teacher judgements. One teacher comments:

We are successful because we've got a small quota of students so we know our students really well... They are with us from the morning until one o'clock... unlike in a traditional classroom setting where you might see them once in a while... [We] have a huge emphasis [on] individualising the learning program and for them to be self-directed and much of what we do is geared towards teaching students those skills. We report on interpersonal learning, and I think we do that really well here. We just on-demand tested all students in English. A third of our students are operating at Year 9 level. That's not to say we don't have students who are way below that, we've still got... 11 who are below the 3.0 progression point... as challenging as this group is and as tiring as the learning centre is, I think the data shows there is improvement.
(teacher)

The Year 7 Attitudes to School Survey which examines students' attitudes in the areas of wellbeing, teaching and learning and student relationships has shown a substantial improvement during 2010 with high ratings in all three areas. The data trends show the school has overcome dips in student satisfaction. Students in Year 7 are clearly satisfied with most aspects of their education. The predominant criticism from a student focus group and student observation is with the lack of adherence to the Restorative Justice³ approach and subsequent Codes of Cooperation⁴. The students felt that the Codes of Cooperation were covered too often by teachers and thus had lost relevance.

Despite the embracing of the innovation, there remain traces of grieving by students and teachers for traditional school structures and pedagogies, as the following quotations indicate:

I like it 80 percent and then there's actually 20 percent that I want to do classroom work... sometimes you feel like you just want to be in a classroom. (student)

My kind of philosophy of 'education' is going back to the roots of the word... the Latin root of the word is 'I lead', and that's always been the model of my teaching. That you lead a group and it's their journey, but you lead them. These students don't expect to be led. They don't like to be led. I've had to work very hard to show them actually, you know, look stay with me and I can lead you on a journey from start of year to end of year which is going to be rewarding. Whereas in past years I found students more ready to accept being led on an educational journey. (teacher)

The struggle with teacher identity is evident in this latter quote. The innovations and the attitudes of contemporary students are seen as challenging the very notion of what it means to be a teacher.

³ The term 'Restorative Practice' describes any a process whereby all the parties with a stake in a particular issue or conflict come together to resolve collectively how to deal with the issue or aftermath of the conflict and its implications for the future.

⁴ Code of Cooperation is developed collaboratively by students and is used to set expectations and promote positive behaviour and attitudes across the Learning Centre.

According to the Staff Opinion Survey (2010) there are a number of issues challenging staff satisfaction around survey items such as supportive leadership (empathy), role clarity (clarity), participative decision-making (engagement) and classroom misbehaviour (outcomes) and resulting individual distress (motivation). The biggest concern for the current leadership is the empathy rating which is over 10 points below the State mean for secondary schools. The gaps become more substantial when compared with all schools in the State. In terms of a trend, most of the data related to teacher satisfaction has not moved beyond the first quartile in 2008-2010.

Overall data from 2007-9 for the Parent Opinion Survey, Attitudes to School (Student) Survey and Staff Opinion Survey indicate an upward trend. A five-year cycle shows increasing parent, teacher and student satisfaction (achievement and opinion) in the years from 2005-8, followed by a downward trend in 2009-2010 in teacher and parent responses. This pattern may be a kind of 'innovation slump'—a positive response followed by a downward trend—as traditionally embedded models of teaching and learning are slowly phased out. However, it is difficult to know whether the slump is a result of the introduction of the Learning Centres or whether it relates to other aspects of school life.

To reinforce the pedagogical philosophy that underpin the programs in the Middle school (Years 7, 8 & 9) and drive further change through into the Senior school, the College opened the High-Tech science flexible learning centre which is predominately utilised by senior classes and is currently building a state of the Art flexible multimedia resource centre to be completed by the end of 2012. However, there are still some very real difficulties with implementing innovation right across the school. One of the main barriers is the structure of the Victorian Certificate of Education (VCE) which requires organisation of curriculum into disciplinary areas with little or no integration and therefore more traditional teaching approaches.

Concluding comments

The scope of the ILE at Mordialloc College is best described as programmatic as it is restricted to three year levels (Years 7-9) and focuses on developing 21st century learners through a personalised learning approach. A number of key features have contributed to the development and implementation of the ILE, the first being the College's need to attract students in an area of high school density by offering a new and different educational experience to students.

Secondly, a unique combination of enablers of the ILE was at play, including leadership with a specific vision, teacher renewal, exposure to new pedagogical principles and strategies and the possibility of funding. These catalysts and enabling features created an opportunity for innovation. The attracting of funding can be seen as a third feature, an external driver which legitimised the innovation within the broader educational community and drew widespread international and local attention to the school.

Fourthly, student interest, engagement in learning, and the development of self-management and social skills have been a sustaining feature in the continued implementation of the ILE. Feedback from students and from test results continues to be positive despite concerns regarding teacher consistency in implementing aspects of the ILE. For the ILE to be sustained in the future, it will need support from school leaders and staff who are both committed and highly trained.

It is interesting to consider what would have transpired if the school had not gained resources for the building of the Learning Centre; would the ILE have happened? One suspects that the drivers in place, the unique context of the school, the keen leadership, the interest in quality pedagogy and staff renewal would have merged to energise the innovation, regardless of the building. As the Assistant Principal said:

Quality is not just about flexible spaces; quality is about enabling your students...it's about pedagogy to shape our learners... (Assistant Principal)

However, the building of the Learning Centres has certainly offered a tangible expression of the ILE, a unique environment which has attracted widespread interest and supported a renewed pedagogical approach. The spaces lend themselves to the sort of pedagogy valued at Mordialloc College—one which engages students in personal and interpersonal learning through an integrated, oriented approach to curriculum. But it is pedagogy which remains at the heart of the innovation.

It is also interesting to consider whether this ILE is transferable to other contexts. It came into being because leadership recognised that the College was not catering to 21st century learners. It was also nurtured by several key features including leadership, teacher renewal and the adoption of new pedagogical principles and strategies, and acknowledges that the learning must become more personalised, authentic, process- and improvement-driven and evidence based. It was also supported by resourcing and policy initiatives that underpinned the funding. The transferability of ideas, use of resources, use of time, space and documentation have all been innovative and this is attested to by the large number of visitors who come to the school to inquire into the venture. However, replication of the ILE as such, is limited by the unique nature of the problem and the blend of supporting features which came into play in response to specific issues.

Glossary

ACARA: The Australian Curriculum, Assessment and Reporting Authority.

Attitudes to School Survey: The overall objective of the Attitudes to School survey is to collect data about the opinions of Victorian government school students from Year 5 to Year 12 and for individual schools across Victoria to use this information to drive improvement.

Australian National Curriculum: In 2008 the Commonwealth Government announced that a national curriculum would be developed for all Australian school students. The new curriculum will cover all school years from Prep to Year 12.

Blueprint for Victorian Schools: The outcome of the 2003 Victorian government state wide reform agenda. This was in response to the effects of 1990s reforms that had devolved responsibility (and risk) to individual self-managing schools while retaining resources and policy decisions at the centre with strong accountability frameworks. Strategies followed that included: focus on student learning; developing a new Resource Allocation Model; building leadership capacity; creating and supporting a performance and development culture; teacher professional development. Specifically, the Blueprint outlines seven flagship strategies and incorporates a range of initiatives under three important themes of recognising and responding to diverse students needs, building the skills that we need in our education workforce and engendering a culture of continuous improvement in our schools.

BOLTSS: An acronym used in high-school and middle-school education in Australia and Canada which show the standard information to include in a map. BOLTSS stands for Border, Orientation, Legend, Title, Scale, Source.

Building the Education Revolution (BER): The \$16.2 billion BER program aims to modernise schools through the delivery of necessary infrastructure, and by doing so, support local jobs and stimulate investment. The BER program was the single largest element of the Australian Government's Nation Building - Economic Stimulus Plan.

Building Futures: The *Building Futures* program initiated in Victoria in 2004 requiring schools to provide an educational rationale, other than enrolments, for any new buildings. School communities were given significant scope to innovate and design these buildings together with architects.

DE&T: The Department of Education and Training; now the Department of Education and Early Childhood Development, Victoria, Australia.

DEECD: The Department of Education and Early Childhood Development, Victoria, Australia.

ICT: Information Communication Technologies.

ILE Immersion Pilot: The ILE Immersion Pilot (2010), run by DEECD, tested if teachers from one school are immersed in another school with effective practice in a new learning environment, can they develop a sound educational rationale to guide operation and practice in a new learning environment at their own school.

Gantt Chart: A grid or chart that illustrates a project schedule including the start and finish dates.

Key Learning Area: Also referred to as curriculum areas, such as English, Science, Mathematics or Technology.

Leading Schools Fund: The Leading Schools Fund is flagship strategy from the Blueprint for Victorian Schools reform agenda of school transformation and renewal. It is a key driver for DEECD's vision of excellent outcomes for all students in secondary government schools. The initiative is a model for whole school improvement and school system development. The focus of the Leading Schools Fund is on: improved student outcomes; changed teacher practice; connectivity between pedagogy and space; flexibility of teachers' working relationships; and access to resources. Improved educational provision, strengthened by innovative practices, aims to keep students motivated, keen to learn and stay in school. This, in turn, will bring about improved student outcomes, the focus of the Government's goals and targets.

Learning Matrix; A two-dimensional grid made up of a series of intersecting vertical and horizontal axes used to structure content of learning for students.

National Curriculum: A national curriculum for all schools in all states is currently being developed by the newly established Australian Curriculum and Reporting Authority. Phase 1, English, Mathematics, the Sciences and History is to be implemented in 2011.

On Demand: On Demand testing is an online resource for teachers to use with students. Tests are designed to link to curriculum and standards. Both general ability tests and topic-specific assessments are available.

Parent Opinion Survey: The objective of the Parent Opinion Survey is to collect data about parent opinions and for individual schools to then use this information to drive further improvements.

PEEL: Project for Enhancing Effective Learning classroom approaches that stimulate and support student learning that is informed, purposeful, intellectually active, independent and metacognitive.

Quality Learning (Quality Learning Australia): Quality Learning is an approach to improving learning and the quality of school life. Founded in the theories of Dr W Edwards Deming and others, the Quality Learning approach can be summarised as four areas that Deming called Profound Knowledge. To improve any organisation requires focusing on these four areas: Systems, People, Knowledge and Variation.

Resource Matrix; A two-dimensional grid made up of a series of intersecting vertical and horizontal axes used to structure resources for learning for students.

SEAL: The Selected Entry Accelerated Learning Program (SEAL) program aims to address the learning needs of gifted and high potential students who are capable of working at a significantly faster pace and in greater depth than their age peers.

Staff Opinion Survey: undertaken in each DEECD school in Victoria annually and reported in the schools' Annual report.

VCAA: the Victorian Curriculum and Assessment Authority. The Victorian government system has 1555 schools over a geographic region equivalent to the UK. Currently, school curriculum and assessment is undertaken through the State authority, the VCCA. The VCAA offers curriculum for Prep to Year 12 for all schools based on the Victorian Essential Learning Standards (VELS) for P-10 and three certificates for post-compulsory Years 10-12.

VCE: The exit certificate the *Victorian Certificate of Education*, Victoria, Australia.

VCAL: The exit certificate the *Victorian Certificate of Applied Learning* (VCAL) provides a focus on making curriculum highly relevant to students by gaining experiential learning in subjects such as Equine and Hospitality Studies.

VELS: The Victorian Essential Learning Standards outlines what is essential for all Victorian students to learn during their time at school from Prep to Year 10. They provide a set of common state-wide standards which schools use to plan student learning programs, assess student progress and report to parents. VELs is based on best practice in Victorian schools and draws on national and international research about how students learn. The VELs differ from traditional curricula by including knowledge and skills in the areas of physical, social and personal learning, thinking and communication to encourage flexible and creative approaches to learning.

References

Australian Curriculum, Assessment and Reporting Authority (ACARA) 2008, *Measurement framework for national key performance measures*, ACARA, Sydney, NSW.

Department of Education and Early Childhood Development (DEECD) 2008, *Blueprint for early education and childhood development*, DEECD, Melbourne.

Department of Education and Early Childhood Development (DEECD) 2009a, *Mordialloc College: 2009 school level report*, DEECD, Melbourne.

Department of Education and Early Childhood Development (DEECD) 2009b, *Leading schools fund: flagship strategy 7*, DEECD, Melbourne.

Department of Education and Early Childhood Development (DEECD) 2011, *Research into the connection between built learning spaces and student outcomes: literature review*, DEECD, Melbourne,
<http://www.eduweb.vic.gov.au/edulibrary/public/publ/research/publ/blackmore_learning_spaces.pdf>.

Department of Education and Training (DE&T) 2003, *Blueprint for government schools: future directions for education in the Victorian government school system*, DE&T, Melbourne.

Mitchell, J, Loughran, J & Mitchell, I 2001, *Insights into PEEL practice: innovations to action*. PEEL, Monash University, Melbourne.

Mordialloc College 2010, *Welcome to Mordialloc College*, <<http://www.mcsc.vic.edu.au>>.

Quality Learning Australia 2010, *Learning and Improvement Guide: Plan-Do-Study-Act (PDSA) Improvement Cycle*. 2nd Ed. Quality Learning Australia, Belconnen.

Quality Learning Australia 2011, *Learning and Improvement Guide: Capacity Matrices*. 2nd Ed. Quality Learning Australia, Belconnen.

Victorian Curriculum and Assessment Authority (VCAA) 2008, *Physical, personal and social learning strand: personal learning*, VCAA, Melbourne.

Victorian Curriculum and Assessment Authority (VCAA) 2010, *Victoria essential learning standards*, VCAA, Melbourne, <<http://vels.vcaa.vic.edu.au>>.