Appendix 1 – Scanned version of New Zealand Journal (A@t_0)
This is support material for IM3
The Journey  Sunday 24/11/02 - GMT

Sheila took me to the rental place where I swapped & Saland's van and took him to Heathrow dropping me at Terminal 3 at about 10.30 am. We had a New Zealand friend attached to the flight and he showed me the way. We had some tea and coffee and a quick look around Heathrow. The flight was at 3.30 pm. We met the friend from New Zealand and he showed me around the airport. We had to go through customs and had our luggage checked. I had a few minutes to wait for the flight. I had a quick look around the airport and had a coffee. We waited for the flight to arrive and we were off. The flight was on time and we arrived in Los Angeles.

Los Angeles  - My first flight was from Los Angeles to New Zealand. I had to wait for a few hours and then I got on the plane. The flight was very comfortable and I was able to sleep a bit. When we arrived in New Zealand, I saw my friend again and we went to the city. We had a good time and I had a few meals. I spent a few days in Auckland and then I went back to New Zealand. I had a good time and I was able to relax and enjoy the city. I spent a few days in Auckland and then I went back to New Zealand. I had a good time and I was able to relax and enjoy the city.
AUCKLAND - 05:45 26/11/02 - GMT +12

Left Auckland International Airport at 07:00 26/11/02.

On arrival, showing 6.125k - blue Roysa take-overs flying some
boats. A bit disappointing, because wanted to see Pompax out of sight.
Still! Must wait around.

Found my way to State Highway 1, the beautiful clear blue sea, it was
- exhilarating. A lovely coat weather, slightly in need of a shave and a shave
- coming down across deep forest and then a vast swampland punctuated
- by lagoons, rivers and a whole range of flora and fauna. Was surrounded
- by many native flora and fauna.

Hamilton - Found my way round Hamilton having made the shut out to
Cambridge. We expected not having made contact with Cambridge University but
seemed to have been almost certainly unobserved by them. Maybe looking
- place a bit like Auckland.

LICHTENBERG - Stopped at a filling station for my fuel experience of
R12.30. - for new shoes and a bottle of beer for about k.10.50 - amazing.
- Real to walk up a bit higher for a sleep. - Head fishing, by now has a sound of full song - found a few native, but
- small, stuff around the office.

TARPO - Alan Cambridge was not joining! This was the most stunning
- view from State Highway 1 (1993) - 100 km per hour.
- Kaimanawa Range and Taumarunui with a head of wind down. Beautiful. Stopped on
- lawn to eat several drops and watch a flying bird. Still along the road.
- 10 km away, below the road.
- The road was here. Stopped at various scenic spots along the way.
- May have had a stop here. From a bridge through the woods
- and pots to bed in a campervan. Heavy storm.

NATIONAL PARK KENT -
- Desert Road - Nothing on my life had prepared me for this!
- Heavily forested, with mountains, lake, river!
- A few more and more spectacular. The mountains become mountain-
- Scenic, the sky and clouds with snow. Beautiful
- 4,000 feet high. Kaimanawa Range, the sky and clouds with snow.
- Beautiful.
- The roads are so well-travelled, as to form a path, to the river, to the forest.
- The hills are Maggie's End, a winding road in a valley.
- Scenic, the scenery, the sky, the clouds.

Palmerton North - Arrived at 19:10. - Drive to
- Murray University. - Lovely long road.
- Beautiful walks, a few before setting on. - 241/00.
- 19th floor
- Restaurant - Tax and C + miscellaneous. Cropped out at 8:00 after a
- $42. - Street kidney - 6CP for all that!! - Unbelievable.
- Palmerton Street on the TV!
Lunch at The University - Paid for by the Faculty.

Prue Kyle - Professional Development Lead, Manager of Teachers' Professional Learning. Her viewpoint came from her deep knowledge about the collaborative learning approach. She introduced me to the notion of 'elephant' schools and discussed about virtual schooling. She gave me an insight into how people at school are coping with the new school, which has been introduced for many years. It's not about how much school, but how much we are teaching. I found a key strategy.

Marian + Gerald

A fabulous evening! Driving from NZ to England, discussing at Redgrave and listening to various reports about children, spiritually, culturally, and power. We met at a home made at Redgrave. The family was set in 10 acres of hills and gardens was the Anglican house of the South East of England. They keep a garden in which has an old cottage. The garden was a prominent feature, and it has been a symbol of the house which is simply amazing. It contains old country style with modern techniques. Simplicity: My room was amazing.

£52.45 for wine! Style!

Paid a visit to the theatre's research centre. I could see the very clear: Today, a lovely music in the room.
BREAKFAST – 11.30 am. Still suffering from jetlag, I wore only in my
feminine bedroom set aside by Vincent for me in their beautiful house
I had cut out the bedroom from about 7.30 am and watched the pounds
passes and the birds going about their morning business. I found the
10 acres and a completely separate cottage, the part that suited us
building and fabulous plants everywhere. Vincent and Nina Martin
joined me and Vincent made a genuinely hearty breakfast.

Off setting the day after – Mushrooms, pancakes and gypsy fruit – Fresh!

LET'S ASIDE. They love to set!
6:30 a.m. I went to bed early (10:15) just after she called, it must have been about 9:30 at home in the morning. I wrote why she is not at work. I hope everything is OK. Apparently Aman is off school. I hope this is not a bad sign. Something about us is off. One more meeting at Murray today with John O’Neill hopefully we can then off to Wellington. Adversely, I just got through the end of the night already. Must make the most of the drive down today. She was looking for longer but feel well, relaxed and up for it. I got the briefing on the corner changed but I suspect I may need to set a change before I arrive.

Next a good conversation with Hamed. Many about where to go over breakfast. The terrace was very good and fresh air. I hope it is going to lead to more with the agents. In Wellington. Must piece up some Kilmarnocks必须 for tomorrow.

The mayor is idle about electronic education and he told me about his efforts of this course education which we did not need last year. That would be a much bigger task before we get going properly with a more substantial professional development model.

Come to Murray for the last time and discuss a market. Great one from New Zealand. The rest of the staff were present and retired from there.

But a good chat with John O’Neill who was quite hot lately, we talked about leadership and the creation of education. He even suggested a comprehensive research project - working on school leadership in the NZ.

Dinner! I must have a come here!

TOURIST AGAIN - set off from Murray at about 12:15 having booked leftovers for lunch at 12.30. I didn’t order down here. Arose the Taumarunui which looks into 185km to Wellington. Not as high as Tongariro but nothing too impressive. It was quite warm and sunny, so I stopped at Shannon for my picnic. Had a short walk around and great views of some mountains. More the Outdoors.

Three Alan had mentioned. Didn’t really want to stop so I decided to get to Wellington. Stopped at Oheka Forest, but was paid off by the sun-welcoming signs - don’t enter here: Christian Tam: Should have known really. Stopped again at Otaki beach and photographed Kaylee's Island which makes Straight out of the Sun. Amazing! The beach was grey and greasy and quite muddy. The sea was again blue and the Island Stanley and looking. The tide was low and the beach very beautiful I drove on through Conway which increasingly showed signs of more cultivation and culture. Still Katrina was from here. Stopped for a farewell from the supermarket which was necessary in my concentration over evening. Women have used to get out at Rosco to have the early bird. The Sun (Sri) The main town down to the Wellington Peninsula and it is not all this. The road runs along the west of
the mountain and in 'caverns' by the Tamana Sea on the other side! I am not convinced there would have been a cave!

**Wellington**

Neared the South Pole now and it was clear from the information that I was not going to see much. Fog had lost its grip on the airport and the strong wind was coming unaususally strong. Home again and the city of my dreams and filling the hotel, change of plan, changed and changed! And a few minutes of depression. My next visit is in leagues it seems. Wellington is a city but it has 2 redeeming features the hills which I will go to see in the morning and the harbour which has a huge expanse of water frequented by ferries, cyclists, walkers (wireless waves in huge drum mode) and pedestrians. Including an exploration of the shopping centre, the arts centre, most of which was closed except for the Concert Hall where Artie was appearing - and the Franliclins park (named memorial) and a visit to Ronald's place (c 105 - about a2.20 for a super chair!) a car out for about 4 1/2 hours. Sarah phoned - missing her and the others! - and then went back for more Amber depression. I cheered myself by a visit to some postcards which are not so far away from this location. Fell asleep with Matthew and then by train at about 10:10 and surprisingly in one comfort. Sleep until 6:00 AM.

**Sunday 30/11/02**

Woke up at 6:00 to a fine beautiful morning, looking forward to today's adventure. The sky was clear and the trees green! As well they should be! Given the low you are the best value for money you achieve. As soon as I had finished 1 had eaten and left. Pranced to the car at Te Puna and went for a walk. Bought a star of fish, some bread, some really cool sunglasses. To the sea and the sky and the harbour fishing. Watched some people during that stuff in a marinade harbour behind the marina, on the way to the post office.

**Departure**

To ensure a good for the car park, I packed the next time I had had I decided to head first for the natural phenomena section and the Moerewa exhibition. The former was a cross between Madame Tussaud, Disney world and the Natural History museum. It has been incredibly well done and in reality interesting. That night - promenading. It helps to explain why NZ is geographically close to it in the violin. We were truly awe-inspiring and a powerful sleeping giant in the sounds of ocean. I was, however, deeply moved by the Moerewa Exhibition. The scenery at the beach in Starling moon and ice out of MO - Sustainable development and we that. I had a great chat with one of the guides who explained it all to me and showed me how to use salt on the green stone (green moss) to set it to shine (sparkle).
There was a palpable sense of the sacred here. Ancient worship is predicated on the reverence and knowledge of the deity. The Hindu deity, Ganesha, for example, is worshiped as the remover of obstacles, a symbol of wisdom and knowledge. This was deeply spiritual and meaningful. The temple is not just a place of worship but a place of pilgrimage and reflection.

KARECI
Looking around, the normal tourist route and the usual guesthouse, I saw a small temple in the middle of the town. Not a problem because it was surrounded by a small group of people celebrating a festival. I wanted to learn more about the customs and traditions of the local community and to celebrate diversity. I started to ask questions and learn from the people.

UPPER MATT
Sitting on the steps, I observed the daily life of the town. The people were going about their daily routine, engaging in various activities. It was a peaceful scene, with a sense of community and cohesion.

KAITOCH REGIONAL PARK
Stopped for coffee near the river. It was a beautiful valley, lush and green. The mountains in the background were spectacular. The river flowed peacefully, creating a serene atmosphere.

KIMURERA SUMMIT
The view from the summit was breathtaking. The mountains were vast and covered with snow. The experience was exhilarating, and I felt a sense of accomplishment.

RUNNING RANGE
I ran up the mountain. The air was thin, and the landscape was stunning.

OHNEIKA
The valley was surrounded by mountains, and the air was fresh. It was a perfect day for a hike.

HAYAIKAI
The second mountain was even more challenging. The view from the top was breathtaking, and I felt a sense of achievement.

This was a unique experience, and I gained a deeper understanding of the spiritual and cultural aspects of the local community.

Simon Hughes Ph.D. Thesis (October 2012)
Simon Hughes Ph.D. Thesis (October 2012)
To Points - As the road climbed out of Minnewaska, it became apparent that the weather was not going to be kind. It was sunny but the sky was cloudy. In the distance, the mountains were shrouded in mist. The vegetation became more sparse, with fewer trees and shrubs.

Tarahumara Forest - Sadly, the rain, fog, and clouds all conspired to limit visibility. I got the impression that I was missing something spectacular, but as a result of the weather, the views were obscured by miles of grey clouds and mist. It was a somber view of nature.

The Hotele - I arrived at a hotel on the top of another mountain. It was a small, cozy place with a view of the surrounding landscape. It was a perfect place to relax and enjoy the tranquility.

Photo Falls - There were several photo opportunities, but none were as impressive as the one I was about to see.

Taroko - I was not prepared for the grandeur of the Taroko Gorge. It was a breathtaking experience. I realized that I should have brought a tripod for photography.

Aratana Rapids - I sat on the edge of the waterfall, enjoying the view. It was a moment of peace and tranquility.

Waipu - I was in awe of the beauty of the Waipu Valley. It was a stunning sight that I would never forget.

Ferry - I was on a ferry, crossing a river. It was a peaceful and serene experience.

Kakum National Park - I was in the midst of the Kakum National Park, surrounded by lush greenery. It was a unique experience.
Monday 2nd December

Down by the lake, next to the Post Office, you can buy a variety of items including coffee. I spent a few minutes there, enjoying the atmosphere. Afterwards, I walked to the beach, where I saw a man fishing. The sea was calm and the sky was clear. I sat on a bench and read a book, enjoying the peace and quiet of the beach.

After leaving the beach, I decided to visit a local museum. The museum was closed, so I walked around the town, exploring the streets and shops. I found a small cafe and had a cup of coffee. It was a nice way to spend the morning.

In the afternoon, I visited the local spa. The facilities were impressive, with a range of treatments available. I tried out the hot springs, which were very relaxing. The water was warm and the steam filled the air. It was a great way to unwind after a busy day.

Overall, the day was pleasant and relaxing. I enjoyed the peaceful atmosphere and the opportunities to explore the local area.

Simon Hughes Ph.D. Thesis (October 2012)
A sense of smaller parts that were both darker and more pleasant. My eigenen had been quite bad for some reason but... I wonder if this is the power of a mind we want matter. There was some similarity with the bolts in howlons. The mountain backbone. The use of a natural spring, the complete acceptance of each body shape by other, why the simplicity... — Sayuk! I was in the water for about an hour and a half with occasional shouts... down the west side of Lake Atitlan. This was a stormy place yet again.

The temperature was very pleasant. Though a little overcast, I intended against lunch on the footpath cafe and hit the road after seeing myself from the top of the car.

Kaimai Manawa PP... I then began a 3½-hour drive to Auckland airport.

This stormy countryside. I found one for coffee and a sandwich along the way. This was again amazing. A circuit of coffee and a sandwich for K1.50. It was a stormy area. I walked again to photograph the mountain scenery and a drive for some way to find somewhere convenient to stop. I didn't leave it too long and we'd be there again on Friday night. This was a much more tranquil drive; more rain fell.

Dunedin was deeply forested in points and quite open place in Otago. The southern part... and city island and the long drive to Averytown began. I realize then more that I find more beautiful is the countryside. The hills — and that amazing view... near me! The drive through the entire island was rainy and could not afford much time for sightseeing. I tried to photograph... and the city tower.oused in Twyman in the harrow ridge and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.oused in Twyman in the harbor ridge... and the city tower.

Back to work... I was tired but needed to get my head round the conference. The outline appearance was nothing to look for the conference. The outline appearance was nothing to look for the conference. The outline appearance was nothing to look for the conference. The outline appearance was nothing to look for the conference. The outline appearance was nothing to look for the conference. The outline appearance was nothing to look for the conference.
Tuesday 2nd December

I woke up and realised I had fallen asleep watching Good Morning America. I had slept for nearly 7 hours. I left early and found the North Building Student with too much difficulty. It was a very impressive, large and imposing building with a good-looking brass pediment. We were more noticeably early and had a fair amount of sitting around before the first session started off at 9.00 am.

- **SESSION 1**: Tutorial on 'Applied creativity' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.

- **SESSION 2**: Tutorial on 'Creative writing' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.

- **SESSION 3**: Tutorial on 'Creative writing' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.

- **SESSION 4**: Tutorial on 'Creative writing' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.

- **SESSION 5**: Tutorial on 'Creative writing' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.

- **SESSION 6**: Tutorial on 'Creative writing' within a VLE called UCMS. It seems like a great idea but I am not persuaded at this time. My favorite topic was 'The role of humor in design' as presented by Australian Dr. American prefers Bluebird.


WEDNESDAY 6 DECEMBER

Well I made the best of today having got the feeling that the conference was going togamma my & tour plans. I came at 5:30 and stayed until 7:00 and then I declared to the hotel that I would not go further. I got up and did the NZ thing which is to get a shave, wash and get ready for dinner. I found my way to the hotel and went around the edge watching the tourists. It was mild, bright and very pleasant, I then discovered why there are no cats... I was confronted by a large black Labrador. Happily his owner was near by and I had to confess that if I had been a cat I'd have been "outlawed". I followed my map and found my way to Tamagawa Beach which was packed with people and I saw a couple of deer. I walked all the way along the beach and took some pictures. The castle tour got me broke up by about 7:20 giving me enough time for dinner, a drink and washing up. My mind was racing with new ideas and development of the hotel's thinking. Indeed I spend most of the day scaffolding my learning from yesterday by the attendance at one lecture (Alan). It was good to historical technological learning communities and 15 presentation of papers. One was given by a CDB expert from Taiwan and I chatted to him for some time afterwards. I made what time I had to staff which is intellectual challenging of my own knowledge base or attempts to say something new. I got some learning about someone research of their own. Good day... Really light weight and gives me confidence that I could do anything. I must put something into RECAST... or maybeVIKING!

I became interested today by the notion of English as a mother language. You have to hand it to these people. The majority do not have English as their first language but the are presenting the findings of their research in English. It is in interesting that the people in year are actually more accurate than the Europeans. I got really inspired by an Ausca woman, Miss that Professor who was doing a session and really inspired. She should be a key note speaker. She was so passionate and convincing to the presenters. Some of the papers that you have to take more seriously... So led by the woman that you have to take more seriously... I decided I need to write down examples of NZ humour. I really like it.
Auckland

I decided to go into Auckland, and was glad I did. The harbour was full of yachts, carrying round the America’s Cup bowls. The city of sails’ certainly lived up to its reputation. I was also able to see Sky Tower and Sky City and made my way via pontoon boat over the spectacular harbour bridge that links the city to the North Shore, on which are Auckland and Devonport. Someday my way down to the docks and watched progression type sailing Nikolai and the other boats over the heads of those who sponsor Team New Zealand and the other Louis Vuitton competitors. The boats were sitting set against the brilliant whiteness of the yachts and super-yachts. I made my way into the city which is no bigger than Sydney and was caused by the tower, the tallest manmade structure in the world. People are seen on the wires. I was able to climb up the Lanyon bridge. Someone at the top of the bridge. Enjoyed some parapets in the Snug and collected my piece of Seal from the All Blacks shop. I was tempted to buy a pair but settled on a tie. Nice to see that with the shock absorbers about Rugby and Set straight on my mind. The difference between the YHC and the Super 12s. I moved to a point of watching not on Sky for the Auckland Blues when they play the North Harbour Stadium. What an interesting about Auckland is that it is NZ’s oldest city. That makes visiting for a couple into Canterbury or Wearing the C. T. They run boat trips to Cooks Bay. While in New York, Sydney and Auckland on do business and shut. Nice to get on a train from City station. Amazingly had a call from Mary chimney. I’d check in the next week. Getting that was and feel the need for sleep. It’s going to be a long day tomorrow, but glad that I’ve seen a bit of Tauapuna and Auckland. 8. Also an obvious on the absence of cars so the large Seagulls that are everywhere. Saw one chewing on a cat with some food scraps, and I like the Seagull!
Simon Hughes Ph.D. Thesis (October 2012)
I also visited the prayer room today. A hospitality desk in a brightly lit and shaded area with a small group of people sitting and chatting. I was interested to note that there was a display closet full of literature on the wall in order to enable all those who visited to find the literature for their prayers. One of the participants, a renowned translator, shared some insights about the experiences of the participants.

I met a group of people from various cultural backgrounds. They had a good knowledge of local history and were very enthusiastic about sharing their experiences. I was particularly impressed by the group of people who were visiting for the first time.

Characteristics, power, and influence in the 20th century world. Which enterprise to use the net? How to use the enterprise to attract attention from native American people. I described the social service at which the people from New York went out. The social service is participating in an event hosted by a local community. The event does not appear to be an attraction for people. However, it provided an opportunity to meet and interact with people. It was a great opportunity to get to know people from different backgrounds and cultures. I enjoyed the opportunity to continue my exploration of the world.

**Discussion**

**3:30 PM**

I had not traveled more than 100 miles when the traffic started to increase. I arrived Friday night and observed a large crowd at the airport. I stayed overnight and left early the following morning.

I visited a local museum and was impressed with the exhibits. I also visited a local restaurant and had a pleasant meal. I continued the journey and left for the next destination.

The road was smooth and the weather was favorable. However, I encountered some challenges along the way. I decided to stay at a local hotel for the night.

**8:00 PM**

I arrived at the hotel and registered for the conference. The conference was held at a local university and I looked forward to meeting the other participants.

I explored the city and visited some local attractions. I was impressed with the architecture and the history of the city.

**3:30 AM**

I returned to the hotel and continued to work on my research. I was tired but I was determined to finish the project in time.

I continued to work on my research and was pleased with the progress. I was confident that I would complete the project on time.
I set off from the beach path, following it as it descends to the sea. The view is magnificent, with the ocean sparkling in the sunlight. We walked along the shore, enjoying the fresh air and the sound of the waves.

Simon Hughes Ph.D. Thesis (October 2012)
bench vanes-passed and the stuff one hear from the roadside it was absolutely awe-inspiring. I stopped as soon as I could, at the road crossing, and to the east and began to climb. I was distracted our car with the view, and the view from the top in its undervisibility. Comended down set at the head of the Cornovallis Bay which is a natural harbor, and a massive'd star from Vesuvius in the mind on this at low tide. From the mountain above every conceivable part of NE geopgraphy. I was able to discern amused by some cattle hiding in the hills - God knows how they got there. The clouds and mist added to the atmospheric weather for the setting, it was just beautiful.

**COOKMASTER**
The town itself was quaint and very aging with all the necessary facilities! A cheese sandwich, and the view of the waterfront. Then we did our lunch at an old Hellenic cafe. Harry and the rail waymen, it would appear, have a dedication ability to staff and food and they settled on the corner of the car while we ate. The town information place was a fascinating old corner and day with loads of stuff and a display of stuffed NZ animals including a possum. They were on a good map of the area which enabled us to find one of the single track railway lines. They used to be an old mine workings in the Sneemets for coal and the railway was used to carry materials to the open coal quarries half way up the mountain. We now go down between a local cultural home place, very old person's foil and the most excite art gallery imaginable! The main workings are now used by potter - Barry's Glass! Some - who cut the clay from the hillside and work it clean. Here was an old station. Work a nicely old train and an absolutely hilarious driver. I quote who regards the whole town with his outstanding and stereotypically Irish English humor, like at the top was a stunning view out across the freeway golf eating the Aran's Cup challenge, which our man described as the Most traditional cup - "Well reason it should be called that now; 3 times and we got it at!" - I virtually said it almost impossible to lose at the Scenery because I was crying with laughter! When I composied myself I was able to watch his thought in how being Excelled in consideration of growth in the vond坚守 by re-planted lawn and palm trees. There are clay and the deciduous woods, including a famous silver thorn trees. It was just fantastic. Among the trees and back the Potter had installed hundreds of birds of art including what looks of bottle! It was an amazing place. It was hard to come away because every corner was a site more stunning than the last - like on the back from converted into living accommodation. Orchard there were many, and I think to sport a flower which were constantly coming.
Case at the car I was surrounded by Alice London who was so fastidious to lean the current and find out the next thing to do in Leeds! It was really quite amusing. Although I was getting quite late I got the impression they wanted to head for home in order. And I was on terra firma for the remaining afternoon. I agreed to be suggested that we go for a short (ish) quirked until around 6am today before hitting the road back down the other side of the peninsula. The turnarounds out to be a good suggestion because we were from Long Bay, covered very much where the Kelly are preserved. One of them was in the house and ended up in my own fridge! The few roads in Tiurai Bay as a cold complete on the beach - very crowded! It was just remarkable.

Whitangaroa. Suddenly we were closed in and spotted what must have been seen slightly on the road next near the hills. In England the scenery was quite spectacular. See scenery is relatively easier to meet the same way. In a house on the weather was stopped for quirked and spent. In some ways Ireland's tradition of 7:30 for tea at 7:30, it was really good. The day was closing in and the 2:30 hours leave to Tooronga would be remembered for the rain concentrating in showing weather on interesting reports. Been seen in order decent at James's house to bad it was not long before I was ready to go.

SUNDAY DECEMBER

Mr. Manawatu. As the day turned out well by suggestion on nearly morning sorter round the island. I'm glad it turned out 2 reasons: 1) it was not the 3:30 than a place of interest, and 2) I have been sitting in this airport since about 20:00 and I had yet to have dinner. I would be 'too crazy' by now! The course gets right onto the base of the mountain which in a large. Being as a result of the weather, the shorebirds and wildlife everything is in their usual spots. Auckland Airport

By 11:30 I was home now. I dropped by back at the residential home and took her diary's contents. I heard she's come to England to invite from Long Bay to the 6:30 quirked. Impressive person but not lasting. Apart from a heavy moment coming from 6:00 to 6:30, it was a peaceful easy drive with intermittent rain and helped sunshine. Sitting here reflecting in the day and all that has happened since that I am glad to be going home. I have to read now for Sunday and the way back across the Manawatu Plain which lead me into homickness for Daley and many. skilful and others. Meanwhile I am also sorry to be leaving this beautiful county which has made me so...content. These notes are going well. Looking cross to the mountains and as the road to the Motatui it will be a peaceful long morning.
Key Ideas / Findings

1. Net solution: strong connectivity
   - Act inclusive - listen to schools and work with them.
   - Standalone business

2. Problem-based teaching
   - Solve problems as a networked learning group.

3. Learning technologies
   - Not just ICT.

4. Web-based groups (small, changeable, fluid)
   - WebCT allows chat.


6. One day show
   - Hard
   - Sqit
   - Techie
   - T+L

7. Semester for course development time

8. "I'm teaching my distance-based class - Do not disturb"
Appendix 2 - IM1 – 1989 (A@t1)

Context

Unlike the other critical incidents that might be described as significant in my life and spanned periods of several days or even weeks, this first sub-case study can be pinpointed to a specific moment in time – the afternoon of Monday 19th December 1988. It was during the selection process for the role as Head of RE at a Roman Catholic Comprehensive School in Maidstone, Kent – a post to which I was appointed that day and in which I remained for the following nine years. It is significant for several reasons, not least that it meant uprooting my family from our home in Luton, Bedfordshire. Professionally, it was significant and relevant for this thesis because of one of the questions I was asked.

For this particular incident, I seek to make the process and proceedings clear by the use of the questioning words: Who? What? Why? Where? When? and How? where relevant and appropriate. It is evident that such a detailed approach to analysis might interfere with the narrative and, where this might be the case, there may be some amendment to the process.

Who?

Present at the time of this critical incident were only myself and the head teacher of the school, (in whose study this part of the selection process took place). That he became, to a degree, an advocate and supporter of me and thus, by implication this project, is attributable to a single question. He asked, “Can you use a computer?”

I answered emphatically, “Yes.”

What?
Some historical data are important in order to further deepen an understanding of the context in which this simple word was significant. In 1989, the internet had not been invented. MS-Windows, as an operating system was at version 3.0 and was by no means ubiquitous. The Apple Macintosh II, the machine that signalled the personal computing revolution, was only five years into its life cycle and the Berlin Wall had been penetrated only six weeks before.

Phrases like “dot.com”, “blogging”, “downloading”, and “silver-surfing” were ‘of the future’.

When?

The reason why this was chronologically significant was because it was uttered at a moment in time co-terminous with that which Friedman describes as the commencement of ‘globalization’ (2006, pp. 51f). By this he means the explosion of computer hardware that enabled users to undertake tasks that had been confined previously to typewriters, other mechanical devices and administrative staff. This was ‘true’ of the school which I was leaving. One of the factors that impelled me to accept the job that was offered was the abundance of technology that was visible on the ‘tour’ of the school that took place in the morning before the interview. I realized that the school was already on ‘the bandwagon’.

It is also ‘true’ (that is, a statement supported by evidence) that I had used a computer. In fact, I had attended a d-i-y training course run by the Head of Computer Studies in the school in Luton, during which I had learned the rudimentary principles of word-processing and data storage and retrieval. Prior to that, my only experience with computers was playing video games as a student from a tape-driven machine that was owned by a friend. It was certainly not a ‘warranted set of true beliefs’ (see e.g. Moser, 1986 and explored in section 2.1) that I could use a computer. However, what I had witnessed was my head of department’s passion for the new technology and his enthusiastic adoption of the word processor as a way of updating our
‘cyclostyled’ resources. In a sense, I had been to the top of the mountain, looked over and seen the future.

Where?
The school to which I was applying was located, and remains in a town which operates educational apartheid at the age of 11+. As the only Roman Catholic secondary school, it provided (with its feeder primaries) education throughout 4-18 for Roman Catholic families, and was very successful in persuading the parents of children in the upper ability quartile (i.e. the top 25% according to intelligent quotients (i.q.-style testing) to not opt into the grammar school system. One of the ways in which it did this was to keep the curriculum new, fresh and relevant. The head had been convinced of the utility of information technology along with a number of ‘early adopters’76 among the staff. The school possessed what I now know to be a ‘thin wire’ network and had provided all key personnel with PCs. There was a thriving department of Computer Studies.

Why?
The reason why I answered affirmatively is clearly open to interpretation77, but the fact that I did so provoked an immediate chain of events. First, I set about learning how to use a computer properly. In keeping with my own learning preference, I undertook this by asking for a machine from the school, arguing that I needed it to re-write the schemes of work for years one to three (now Years 7 to 9), and then playing with what it did. As a symbol of how far technology has developed, and how fast, it is worth noting that that machine was supplied with no hard disk drive, the programs were installed on one floppy disk drive and the outputs had to be stored on another. The program disk I was given contained five pieces of software including MS-Word (!) in DOS format. In practical terms, I had to learn very quickly how to install, load, uninstall and
escape from software. I had to learn how to set up the PC so that it could be moved to places convenient to where I needed to work, how to connect it to a printer and install printer drivers etc, and above all, how to type!

These were the days before schools had ICT technicians, thus, I also had to learn to solve my own problems – not that there were many, since most of the software was being developed, tried and tested by developers keen to get it right from the beginning and not just rush it to market.

Of particular help was the Head of Computer Studies. Intriguingly, he was the former Head of PE who had decided to step down from that role since his increasing maturity, he felt, would disable him from maintaining that role. The school had given him the new role for which; by his own admission, his only qualification was a home computer, owned for gaming purposes. That we shared some deep learning moments together is undocumented, but there was a dynamic, mutually supportive relationship between us from which I learned much. For example, I learned the basic workings of a computer such as the difference between random access memory (RAM) and read only memory (ROM); the core information functions of computing: input, processing, display and output; the value of a logical and sequential filing system (using eight characters only since this was the standard of the time); the ability to dismantle a PC and install hardware components like disk drives and network cards; and the need to back up mission critical data frequently. Given the epistemological schema that was set out in section 2.1, and which underpins this study, it is reasonable to assert that these bits, bytes, data and information can be regarded now as a part of my ‘foundational knowledge’.

It was at this time I also learned the value of involving pupils in the problem-solving aspects of ICT. Looking back, I recall watching over their shoulders while they performed technological
“miracles” on screen, trying to follow their keystrokes on the keyboard and then going back to
the office to see if I could replicate them on my own computer, with no-one looking! I have
chosen to use the term ‘miracle’ deliberately as a ‘pop-up’ in the text, to signify the profundity
of the influence such events were having on my professional and personal self. It is used, in
common parlance, of circumstances that are regarded as out of the ordinary though it has been adapted from theological discourse where it is used to signify a “Marvellous event due to some supernatural agency; remarkable occurrence; remarkable specimen...” (Concise Oxford Dictionary, date p. ref.) Shaw takes the definition further, providing support for my adoption of the term in relation to this thesis:

“A miracle is an event which creates faith. Frauds deceive. An event which creates faith
does not deceive; therefore it is not a fraud, but a miracle.” (Shaw, GB date St. Joan, cited in Pepper, 1989)

These experiences began to create in me the faith that technology could do more than simply solve mathematical problems for a novice head of department though, at the time, this felt nothing less than revelatory. It is interesting to compare this ‘play’ on ‘miracle’ with that of Naughton (2000) describing his first encounter with the internet.

“The man sits there patiently and waits, and in a few minutes the image flickers briefly and is indeed rebuilt before his eyes. Nothing much has changed, except that the camera has moved slightly. It has begun its slow pan rightwards, towards the Bay Bridge. And as the picture builds the solitary man smiles quietly, for to him this is a kind of miracle.” (Naughton, 2000 p. 5)

Naughton reports this event as taking place in 1997 (p. 1); it was nearly a decade before that I awoke to the realization that technology could be an enabler, an equaliser of opportunities and even a liberator, when judiciously applied in classroom settings.

**Influence on learners**
Earlier, I mentioned the early adoptive (Salmon 2000, p. 70) tendencies of the head. At that time he was also teaching RE within the department, along with the outgoing head of department whose promotion to Deputy Head had caused the vacancy that I was filling. Between them, they had begun the not inconsiderable task of migrating all their existing GCSE notes from cyclostyled masters into text format – the process of digitization identified by Friedman (2006),

“…Windows enabled PCs and Apples made it possible for individuals to author their own content right from their desktop in digital form” (p. 56).

Therefore, I inherited a (what would now be called Key Stage 4) curriculum that was word-processed. This was a model that I was keen to extend to Key Stage 3 and up into the VIth Form where we had burgeoning numbers of A Level candidates.

**Influence on professional context**

It is worth noting that some of the materials that had been created before I arrived at the school are still used extensively by candidates preparing for GCSE examinations in Religious Studies, and not just within that school. As will be seen, some of the learning gains I made during the period 1988–1989, fed forward into the establishment of RE-Net, now one of the TDA’s most successful, supported, subject resource networks. RE-Net still makes available some of that original content, though it has been through two revisions in style and formatting (see e.g. http://www.re-net.ac.uk/ViewArticle2.aspx?ContentId=11117). What this phenomenon points to additionally is one of the perceived benefits of the digitizing revolution wrought by (information) technology, namely the ability to re-purpose and refresh ‘content’.

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My enthusiastic adoption of the technologized working practices of the school, contributed to the enhanced impression of the department and thus of my own professional standing with colleagues and the wider educational community.

**Influence on myself**

The recognition that I could refresh and re-publish content infinitely was a significant influence on myself arising from this critical incident. As a head of department, I was convinced that there would be enormous benefits to be accrued from the digitization of our materials, so with every new release of technology, we were able to make the changes seamlessly whilst colleagues struggled to meet the demands of constant change.

This one event triggered in me an almost childish ‘glee’ and willingness to play and experiment (Winnicott, 1999; West, 2004) with the vast array of tools, set out before me. In the succeeding years, I developed, for example, a database-driven reporting tool (using a database program called **DataEase**) to generate electronic end of year reports, a system for recording the end of module marks for each pupil in the department (using a spreadsheet tool called **Logistics**, before migrating – re-purposing – it into **Lotus 1-2-3** format and subsequently into **MS-Excel** format) and I became very proficient at using **MS Word** as a tool for desktop publishing of booklets, worksheets, prayer sheets for the daily collective act of worship and booklets for use in the many religious activities that were additional responsibilities for someone holding the post of Head of RE in a Catholic school. In effect, I had come to appreciate the value of IT in reducing the volume of routine and repetitive tasks. Kennewell et al. note this phenomenon in relation to pupils:

“The speed and capacity of digital technology have allowed the development of software tools of great utility. Word processors, spreadsheets, databases and graph plotters are examples of generic tools that may be used to good effect in a range of subject areas. The
power of such tools lies in their ability to perform repetitive operations swiftly and accurately.” (2003, p.11)

Salmon notes the same phenomenon within the university sector:

“Academics are conscious of the opportunity costs (such as time taken away from research or working with more familiar teaching systems). Administrators look for gains to the institution.” (Salmon, 2000 pp. 19-20)

One of the repetitive operations I was required to perform *ex officio* was the submission of examination results for the subject in rank order for each year group. As someone with what has been identified as ‘Mathophobia’ (Papert, 1993 p. 38), I can still recollect (Gallwey and Green, 1986; Natanson, 1970) the feeling of ‘dread’ at having to calculate the percentages and then conduct the ordering process. It was the solving of this particular problem *using Logistix*, in collaboration, with the Head of Computer Studies, which was a significant pointer to the “magic” that IT could be for me, and is. This occurred on 20th June 1989 – I ‘know’ this because it was at the very moment that I selected <sort> from the menu on the taskbar at the bottom of the screen that the school’s secretary arrived in my office bearing news that my wife had gone into labour with our second child.
Appendix 3 - IM2 – 1996-1998

In January 1996 I completed my Masters Degree in Religion and Education at St. Mary’s College, Twickenham. My dissertation supervisor, Lynne Scholefield had become a close professional ally and advocate. When the teacher second in charge of the department was appointed to a head of department role at another school, I approached Lynne, asking if she had any appropriately qualified PGCE students looking for a job. Robert Bowie (Bob) joined the department in September 1997.

By this time I had built a network of computers in my own teaching room having assembled the money to do so from various ICT grants that were available at that time, careful management of our existing BSA&E and extensive bid-writing into the school’s senior management team. As a Catholic school, RE was a compulsory subject at GCSE level and over the years we had amassed a sizeable quantity of digital materials which were used to support learning and teaching across years 10 and 11. For the more able, the provision of detailed, well-written and word-processed ink-duplicated ‘sheets’ was undoubtedly a contributory factor to our formidable results. The groan from the less able pupils when the ‘sheets’ appeared, was a constant reminder to me as head of department that the need for a variety of methodologies was imperative and, in a Catholic school, morally essential.

Minor shifts in year 10 male pupils’ attitudes to RE had been achieved by the installation of a confessional piece of software on my nascent network. ‘Conflict in Jerusalem’ (Lion multimedia, 1996) was a program delivered on four floppy disks which applied the principles of levelling from computer-gaming to the last week of Jesus’ life as told by the evangelist Luke. To complete the ‘game’, pupils had to navigate their way around Jerusalem by asking questions of certain key personnel. In order to ask the right questions, they had to learn what the
contribution of each group (e.g. Romans, Scribes, Pharisees, Zealots) was to the ‘zeitgeist’ of first century Palestine. Disaffected and otherwise alienated boys, soon bounced up to RE lessons and, moreover, would come back to the classroom at lunchtime to continue with their gaming. I observed this phenomenon, though regrettably now, not in an organized or structured manner.

It was in a department meeting some time in October 1997, that I posed the question of the team, how could we make better use of the network to deliver all this pre-existing material in a more imaginative way. Bob said, “I think it’s called html.” By this, he meant that there was an emerging technology that would convert plain text into ‘hypertext’ and thus enable us to deliver ‘content’ across the network dynamically. It also meant we could make it colourful and add images to it. Naughton (2000 p.215) records that Tim Berners-Lee was working on the development of html code – the programming language of the internet - between 1989 and 1991. Within six years, therefore, Bob was pointing us to a potential pedagogical agent. He was aware of this through his brother who worked in the media.

I had already seen the power of the internet as a learning tool by gaining access to the already proliferating websites associated with religion(s). There was a joke circulating at the time, that “there are more Bill Gates hate websites, than ones about religion.” This masks an important point. Religion is a powerful force in human affairs. Religions are always proselytizing since they believe they contain the path to truth and salvation. Religions have always, therefore, used any available medium to communicate their message. It is not surprising, therefore, that the internet was quickly adopted as a 20th Century means of spreading the ‘message’. Around that time, from inside my classroom, simple searches using tools like Alta Vista, Web Crawler, Lycos, and Ask Jeeves, produced ‘bucketfuls’ of useful information. I realized very quickly that

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I now had access to the greatest library in the world and I could get to it from my armchair. Books would no longer clutter up my house and I would never have to pay overdue lending fines again.

In one Eureka moment I came across the full text version of John Stuart Mill’s *On Liberty*, a text we struggled to get each year for teaching A Level Philosophy and Ethics but which I retain now in digital form, for whenever I might need it.

“What?” I wondered, “could we do, if we converted our ‘sheets’ into this dynamic html ‘thing’.

I invested £25 of the department’s books allowance in *HTML for Dummies*. It was Bob who began to teach himself hard-coding in html first. My contribution was to gather up all the material from all the different storage media and to prune and edit down all those files so that we ended up with a coherent set of resources and no repetition. In a relatively short space of time we produced a website, which we called RE-Net. This developed a life of its own and soon became the subject of a lot of interest from other Catholic schools wishing to find ways to stimulate the imagination and engagement of the pupils in their care. Expectations among our pupils also started to shift. They wanted more and more material online and in rich media formats.

Retrospectively, and with the benefit of hindsight, the departmentally organized cruise around the Eastern Mediterranean, which occurred in the Winter of 1997, was also contributory to the establishment of RE-Net. One of our colleagues returned with photographs of ancient sites of religious, political or historical significance. Once scanned — another technology it became important to master — these photographs became important decoration for the site, giving our pages authenticity and colour.
Recognising that we had touched on something powerful, it then became apparent that I would need to learn to ‘program’ in hard code as well as Bob, since there was not time to both write course and support materials and convert them for distribution across the network. Using the same book that I’d bought for Bob, developing my own shorthand strategies for avoiding repetitive tasks and continually talking to other emergent developers – e.g. the son of some family friends who was attracting a lot of interest by developing and maintaining a website for enthusiasts of Serie A Italian football – I became quite proficient at writing web pages.

This proved useful when, as inevitably they do, examination specifications change - a concrete example of N1. Controlling the website meant that I could make amendments very quickly and not have to write lots of new content. It proved to be even more useful when, in April 1998, I moved to Canterbury Christ Church College (now Canterbury Christ Church University). It was at that time that significant monies were being poured into ICT strategies in teacher training institutions and schools with the express intention of ‘upskilling’ the workforce. On appointment, the ICT lead in the college, Phil Poole, was keen to know what I could do to add value to the ICT experience of the RE students. At one level, the self-directed experiences I had had were immediately useful; but they also presented an immediate problem. RE-Net was a powerful resource for teachers in Catholic schools but it had no meaningful content for anyone working in a maintained school with a curriculum offer which included non-Christian faiths. Moreover, it did not contain any material for the support of professional development of teachers in training. Therefore I realized very quickly the need for even more professional learning on my part about other religions, other cultural contexts and other modes of developing online content - a concrete example of N1. There was more time for research in the University College sector than there had been in school and although I made use of the library, the advantage of...
having a computer on my desk with a hard-wired connection was a considerable help in this process of professional development. As I searched the websites of faith communities to learn more about them, their beliefs and values, I also became more aware of pedagogic agents, like search engines and asynchronous conferencing tools that would allow me to ‘ask an expert’ or ‘get instant feedback’. These were ideas I tried to incorporate into the development of RE-Net.

I realized that what was happening was a 21st Century version of the hermeneutic circle of liberation theologians about which I had taught students at A Level. In other words I was living the dynamic cycle of experience informed by knowledge and knowledge informed by experience. The more I used the internet the more I could see how it could be used to inform and enrich the learning opportunities of RE teachers and their pupils.

Phil Poole had been developing Christ Church’s web presence with a small team of technical staff. They had procured a number of software tools which were designed to speed the process. Recognising the immediate benefits of so-doing, I set about learning to use these tools and RE-Net version 2.0 was born.
Appendix 4 - IM3 – 2002

In the summer of 2002, I was invited by the then Dean of Education to examine the bid documentation for a project which the Faculty was keen to win. The task was to review the tender, write a summary report, and to make a recommendation to the Faculty’s management team as to whether or not there was any point progressing towards the submission of a bid. The project, which I later referred to as ‘E-China’, was designed to deliver high quality English teacher education to the Chinese context. The successful bidder would need to provide a network architecture and infrastructure capable of sustaining potentially millions of concurrent users of an online service, as well as pedagogic consultancy, English language tuition and British quality assurance and accreditation standards.

I made my recommendation and was then presented with the task of writing the bid, in a week. In that week I had to get my head round the technological challenges of scaling up to a million concurrent users of a VLE, the principles and practices of distance education, the challenges and protocols of working in another culture and in another language and the 21st Century imperative to form ‘partnerships’. That I pulled the bid together with partners from the British Council through to a range of technology companies is a footnote in history; that the bid was lost to Nottingham University is also a fact of history. Why this is relevant to these doctoral studies is for the unintended outcomes of that burst of activity.

Critical to the success of the project was my need to get my head round the principles and practices of International Education, and I was put in touch with some experts in this area at the University of Bristol, School of Education. Through this network, I became aware of the Asia Pacific Society for Computers in Education and its annual conference which, in 2002, was to be held in Auckland, New Zealand. My interest in New Zealand had been wakened in

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when we had been given a New Zealand Education student for what I now realize was teaching practice, some time in the equivalent of year 4.

So, when the chance came to bid for funding to attend the International Conference on Computers in Education (ICCE 2002), I took it enthusiastically. There is a whole book, or at least a chapter, which sets out all the things I learned on that two week trip. Indeed some of the learning was written up in research and professional development reports so it exists in the public domain already. Recognising the good fortune of travelling to the other side of the world, I kept an assiduous journal of the trip - now cited in this thesis as appendix 1 - which comprises travel details, reflections on the things I was experiencing but also entries made where I was attempting to relate such experiences to the professional context out of which I was working at home. The things that are relevant to this thesis are however,

- The profound moment of enlightenment I experienced in front of the Marae, in Te Papa, which is the Maori cultural museum in Wellington
- My meeting with and learning from Pithamber Polsani of the University of Arizona
- My observation of academics from Pacific rim countries creating, transferring and building new knowledge in partnership and consultation
- My discovery of the notion of rhizomic networks

The early part of my tour of the North Island was facilitated by academics from Massey University who I had been fortunate to meet in England. The second couple with whom I stayed urged me to visit Te Papa as, for them, it held special significance. The time available for sightseeing was limited so I decided to confine my visit to the exhibition of Maori culture. The centre piece of this fantastic celebration of the indigenous people is the fabricated Marae made
from Medium Density Fibre Board (MDF). This is significant because, as I learnt there and also in Rotorua at the National Maori Centre later in my tour, strict rules govern the fabrication of traditional or heritage buildings. Maarae should be made from traditional Kauri wood, carved by first generation Maori craftsmen whose ancestral claims to authenticity have to be certificated and verified.

In ancient Maori culture the Maarae was the heart of the village and was the storehouse for food and weapons. Decorations and adornments told the stories of the Maori people in order to preserve their foundational stories, the ‘folklore’ and spirituality. Rendering a Maarae in a modern synthetic material (MDF) had been, at the time of its construction, a controversial start in life for the Maarae at Te Papa. However, the Maori people have a strong sense of morality and also a keen sense of the need to live in harmony with the planet and its ecosystems. For modern Maoris, the use of a sustainable construction material created from properly forested plantations was a moral act of greater rectitude than the absolutist preservation of an ancient culture. I was deeply moved by this as a former teacher of RE with more than a passing interest in ancient cultures and spiritualities but I was also moved for the following reason:

Old knowledge and understanding were being shaped, modernized and made moral through the gift of technology. In Maori culture, wisdom was passed down by word of mouth from the elders sitting in the Maarae and in times of challenge the people would go to the Maarae to work together collaboratively to find solutions to new and emerging problems. It is possible to argue that the Maarae was therefore a knowledge building environment. At the conference there were a number of presentations which centred on computer assisted learning as the Zenith of constructivist learning. Of note was a keynote presentation by Lewis (2002) which compared the knowledge building and transfer culture of the Italian region of Cremona in the 16th and 17th
Centuries with so-called ‘Silicon Valley’ in Palo Alto, California from the 1970s to the present day. Cremona was the home of expert craftsmen such as the Stradivaris, the Amatis and Teccler, known now through their outstanding musical instruments. California remains the home for expert computer manufacturers such as Hewlett, Packard and Bell, Jobs (Apple), and Dell. Lewis’ (2002) thesis was that creativity and craft proliferated in these technological centres through various models of knowledge construction and transmission. Old ideas handed down from generation to generation or from corporation to corporation by modelling, instruction, co-participation or apprenticeship. Just, as I had seen at Te Papa, in ancient and enduring Maori civilization and culture.

At the same conference, Polsani’s paper (2002) introduced me to the new concept of ‘rhizomic networks’. The rhizomes of an Iris, flowers that grew abundantly in the gardens of my parents and grandparents and thus familiar to my early experience and interaction with the world, contain the genetic blueprint that enables the reproduction of new plants even when cut off from the existing parent. Evolutionary theory would show that the new plant is not an exact replica of the first but its structure, colour and fragrance are more than redolent of the original. Even if the parent plant were to die, its existence would be carried forward, albeit changed, in newly developing rhizomes. Computer networks, argue Polsani (2002), replicate this behavior. All over New Zealand, I observed the characteristic infrastructure of 10/100 mbps networks: Cisco switches, Ethernet ports, Cat 5 cabling and increasingly ubiquitous wi-fi access points. Even if the parent network of an organization is shut down, relocated, pruned or rationalized, replicas of the network continue to proliferate, grow and spread. The DNA of a computer network is code. It gets edited, changed, copied, deleted and replaced but it can pop up again in some other place, even in an attenuated form, because its essential building blocks and characteristics endure. Polsani’s thesis (2002) is that it is information flow around the network that causes this dynamic
and iterative effect. The ‘network’ is itself both the subject and object of information ‘flow’. As information ‘flows’, so the network learns.

It was in this instance that it dawned on me that human learning and technology were bound together in an inextricable relationship with knowledge, reflection, action and participation co-equal components of the process. Professionally, I realized that a technologised educational setting developed for one formal learning process, could be replicated seamlessly for myriad others. Polsani’s introduction to the concept of a reusable learning object (RLO) (http://www.ltc.arizona.edu/testimonial_polsani02.cfm), in an informal conversation later in the conference, gave me further pause for thought about the potential of technology to increase access, enablement and the facilitation of learning, whilst at the same time reducing effort, bureaucracy and expense.

It was on this trip also that I observed academics from all round the world ‘teaching’ their students through virtual learning environments. Paper after paper reported on participant observation research or action research type projects where the presenter proudly revealed ‘what they had been doing with their students’ in asynchronous, synchronous, distance-based, virtual or other settings. Even before I arrived at the conference I had been privileged to observe Mary Smith (Massey University) tutoring a group of Fijian education students using WebCT. For Mary, her partner Bill Anderson and others, online learning was just the next generation of distance education. Since New Zealand, Aotearoa, ‘is at the bottom of the world’ (Split Enz, Chrysalis Music Group 1979), thousands of miles from anywhere else, Kiwis have always understood the need to study at a distance. Indeed, as I was to discover later in the trip, for many Kiwi children, schooling is only possible by remote engagement with curricula, tutors and resources. Technology, according to Anderson et. al. (2003), just made it a lot easier and more
cost-effective. The point here very simply is that Situated Learning (Lave and Wenger) is dependent on where the learner is, not where schooling takes place. Thus it is possible for a Fijian student of Education to have ‘legitimate peripheral participation’ even though the technological means by which this occurs is sitting on a server farm in Oslo, Norway.14.
Though we failed to secure the E-China project, the knowledge, skills and experience that was developed at CCEU during that time fed-forward into a range of other projects. An unintended outcome was my promotion into the Faculty’s management team and the acquisition of the role ‘Director of Learning and Teaching with ICT’. It was from this position that I began to participate in nationally important groups and projects, most significant of which was the TDA’s ICT in ITT Steering Committee. In a parallel development, colleagues in the acclaimed Centre for Enabling Learning, were working with a range of partners on the construction, management and roll out of the Initial Teacher Education Professional Resource Network (IPRN) Behaviour4Learning. The TDA, under the direction of Dr. Marilyn Leask, were attempting to build capacity in the ITE network by the development of a series of professional resource networks with a major website as the centre piece. Multiverse and Citizen, were variously responsible for the promulgation of quality assured materials to support development of knowledge, skills and understanding in diversity and citizenship. Leask was uncompromising in her belief that student teachers, especially those on non-traditional routes into teaching, should have easy access to quality assured materials and expertise (see Leask and White, 2004, Leask 2010). She was an advocate of the peer-review approach to the maintenance of academic standards and rigour, something that she unapologetically carried forward from her background in Science education. Her work was self-referred to the benchmark of the National Institute for Clinical Expertise (NICE). Leask had also persuaded the TDA to fund the development of Subject Resource Networks and a range of teaching and learning projects aimed at evincing and promulgating up-to-date theory and practice in each of the curriculum areas. Moreover, she had persuaded the TDA to fund a portal for SEN activities and an E-librarian. The E-librarian project was designed to enable enquirers to get access to reading materials online, but with appropriate professional academic standards applied to their searching and browsing.
Frustrated by the tardiness of the academic community and its teacher education students to pick up and run with this glut of online resources, Leask tendered for the procurement of a meta-site, an online resource capable of aggregating all the Crown materials that had been authored across all the pre-existing projects.

In 2003, CCCU employed the Deputy Director of Behaviour4learning and the intellectual property owners of the underpinning theoretical model, the National Director of Citzed and two of its authors and a leading member of the National Association of Music Educators. Moreover, the Dean of Initial Teacher Education and CPD at the London Institute of Education was a sponsor of Multiverse and former CCCU, Head of Department – Jon Davison. Academics supporting Modern Foreign Languages development through CILT, were part of the CCCU diaspora and so it is justified to claim that the University was well-connected across the sector and was in as good a place as any to bid for the work. Moreover, Behaviour4learning, the E-Librarian service and Multiverse were all supported through web-based technologies constructed by 3T productions, a subsidiary of RM, who were thus professional and commercial partners with staff at CCCU.

In my role as Director of Learning and Teaching with ICT, I was encouraged to represent the University at the potential bidders meeting and was introduced to RM’s Business Development Manager, Paul Charman, with a view to putting together a consortium to bid for the work. It has been documented elsewhere (Blamires & Hughes, 2005) that a partnership was formed, was successful in securing the contract and eventually delivered what is now known as the Teacher Training Resource Bank (www.ttrb.ac.uk).
The narrative above has been recorded to set a context for what follows because its relevance appears tangential at this stage.

Relevant at this stage, however, is the fact that in order to undertake my duties as National Director (Networking), it was essential to understand fully the ‘product’ we were developing. This meant learning very quickly all about and how to construct a ‘Content Management System’ (CMS). This, in turn, required me to learn the principles of knowledge management and the critical importance of information schemas and semantic tools. One of our partners was the Director of the British Education Index, Phil Sheffield, from the University of Leeds whose contribution to the project was formidable in terms of the accuracy of taxonomic effort and descriptions of content. I learnt from him meta-tagging, information structures, and the politics of professional boundary transgression. He was as concerned about the untrammelled expansionist tendencies of learning technologists as I was. “They’ve stolen my clothes,” he said, when reflecting on the learning technologists’ practice of defining how knowledge should be organized and described – a sentiment echoed by lecturers infuriated by the tendency of learning technologists to acclaim their ‘discovery’ of pedagogy.

Our task was to build a website on solid epistemological principles which would reflect the structure of knowledge in the domain of teacher education and would thus provide easy access to quality assured materials that had been peer-reviewed by leading academics across the sector. The site had to be refreshed on a regular basis, be copyright free and accessible from anywhere in the world. Specifically, I was tasked with negotiating with each of the subject resource networks the release to us of their Crown copyright materials, those ‘assets’ that had been paid for by Dr. Leask’s other TDA funded projects. It became necessary to sell to each association
the value of participating in the project, the value of ‘tagging’ material accurately and the advantages of central hosting of web-based materials.

It became necessary to learn how to tag work, to access and use the content management system and how also to extract the data reports that the TDA required, on a very regular basis, to justify their use of taxpayers’ money. It was during this period of my professional development that I learned the most about the utility and functionality of databases, especially where they are hosted online. I had to learn the principles, if not the practice, of coding Structured Query Language databases (SQL). I learnt a huge amount about the handling of video over the web and, indeed, led a series of workshops around the country hosted by the TDA on deconstructing Teachers’ TV programmes and re-editing them with Windows Moviemaker.

It was a privilege to be part of a team of real experts, those at the top of their game whether it was programming, librarianship, business development, academic reviewing or capacity-building. It also gave me an insight into the commercial aspects of contemporary education life. It was necessary, on a strategic level, to develop relationships with colleagues managing other Education-focused portals such as the National Education Evidence Portal (NEEP) and the Centre for the Understanding of Evidence in Education (CUREE). Understanding the functionality and utility of web technologies became an urgent development imperative for my personal skill set.
Appendix 6 - IM5 – 2006
Involvement with the TTRB brought me into contact with many other professionals working at the interface between technology and Education. Preparatory work for the validation of an MA in E-Learning enabled me to research the field with a view to providing an appropriate academic context in which to set this new programme. Development work with Hibernia College in Dublin, Ireland on a completely online initial teacher education programme and my ongoing work as Director of Learning and Teaching with ICT also drove my sustained analysis of the tools available for teacher education. At this time, the TDA were providing extensive grants to Faculties of Education (HEI providers of ITT) as a strategic attempt to ‘raise the bar’ of teacher engagement with technology.

Post-NOF discussions had resulted in the view that one needed to crack the issue of access to technology before moving on to increase levels of participation and engagement. An outcome of this analysis was the rolling out of funding to HEIs to procure new and innovative technologies.

I managed a sequence of such projects which I termed JANUS, on behalf of the Faculty which meant engaging with a range of key stakeholders. A vocal minority of the staff were keen enthusiasts of Apple Macintosh Computers. They argued that Microsoft only environments were creating unhealthy monopolies in schools and that, the tools provided by Apple were more ‘cool’, more ‘innovative’ and potentially more ‘creative’. It was decided, therefore to purchase a number of ‘macs’ and explore their possibilities for learning and teaching.

One of the attractions of the ‘mac’ was its bundling together of software tools into the product suite iLife. The adoption of the prefix ‘i’ to everything that Apple did, may have been a conscious commercial ploy on their part to move away from the ‘e’ of contemporary word-smithing as a signifier of anything driven Electronically. Most famously, and now regarded as iconic of the early years of the 21st Century, was the prefixing of the ‘i’ to Pod in the branding of
the now ubiquitous handheld, mobile entertainment device. Elsewhere in this thesis, I have talked about the impact of this ‘i’ on the development of my thinking, practice and professional identity.

I believe that its significance was ‘teed up’ for my thinking by the work of Fullan (see Fullan, 1999, Fullan et. al. 2010), whose notion of the three Is of educational change, I had had to learn well enough to use as an undergirding theory for some professional development work I had undertaken for the States of Jersey, Education. Innovation, Implementation and Institutionalization (Fullan, 1999) were regarded as three contingent phases of a school change management programme. Fullan’s argument was, that many school development programmes fail because they do not reach the phase where they become institutionalized. My daily, lived experience at that time was that technology implementations remained only at surface level. Colleagues who booked holidays online, bought academic books from Amazon, used e-libraries for their research, sold second hand books on e-bay, used PIN numbers to withdraw cash from computers built into bank walls, told me over and over again, that they could not see a value of using technology in teaching and learning. They “could use a word processor, but not much else.”

Suggesting that we ought to move more and more of our learning activity into e-enabled settings (Universities at this time were experimenting with Virtual Learning Environments - VLEs), was greeted, in the words of Monty Python, with ‘howls of derision’. The arrival of the ‘i’ in computing nomenclature was either a fluke of history, a happy coincidence or a serendipitous act of the Apple Corporation and Education Change Management theory.
Reading around postmodern theory, and encounters with West (see e.g. 2004) had encouraged me to ‘play’ with ideas, theories and tools. So I ‘played’ with the letter ‘i’, wondering what it might stand for in iPod. Various words emerged from this reflective process: interactive, integrated, intelligent, international, internet-based, innovative, inspirational and so on.

Clearly, the ‘i’ in iPod was intended to identify the device with its user. This was, in technology terms, the pinnacle of personalized computing. The user could accumulate, arrange and access their choice of entertainment at the flick of a wheel. Applied, in the context of Education, a user could accumulate, arrange and access – at their own convenience and in their own time – those materials and activities they required to advance their own personalized learning agenda.

Since the constant riposte to my home department’s invitation to teachers to engage in professional learning activities usually included some complaint of a shortage of time, or lack of financial resources to go ahead with the activity, I began to see the potential of truly online, personalized learning. What if CPD could be interactive (technologically), integrated (into a teacher’s professional and personal life), intelligent (in other words based around research-informed practice) and international (drawing on insights from around the world, even if the participant could not travel)? Elsewhere I argued, that these 4 ‘i’s, when taken together and enabled technologically could render a powerful professional learning experience for any teacher – I named the nascent model $i^4$PD (Hughes, 2006), where PD stood for Professional Development. The response to this paper was sufficiently positive to encourage me to play more.

I discussed the value of the model with Glynn Kirkham and he suggested a further iteration. He argued that limiting the number of influences to four might reduce the possibilities of the model.
and that the adoption of the signifier ‘ and that the adoption of the signifier ‘ would be more appropriate in enumerating i initialed adverbs. Accordingly, I adjusted the model to iPD. It was this theoretical model that underpinned all the work that I then undertook in the development of iTeach (www.iteach.ac.uk), in partnership with colleagues at Hibernia College, Dublin, Ireland. Together we designed, developed, validated and delivered a suite of courses that enabled remote and distributed learners to qualify to teach Secondary Maths, Physics and Chemistry using a fully web-based and online learning system. Only the ‘practicum’ modules were conducted in traditional settings i.e. classrooms. Thus we delivered a personalized learning experience for persons otherwise excluded from teacher training who could fit their study around the rest of their life (integrated), using tutors from all over the world (international), with high quality interactive tools and by making the best of using intelligent technologies and pedagogical agents. Whilst it could be argued that this was in fact iITT, it was the case that none of the participants in cohorts one and two were new graduates; rather all had had careers of one sort or another and were thus looking to develop professionally in order to be able to teach – thus iPD.

Confirmation of the possibilities of working in this way came in a further moment of inspiration which was provided by Professor Jim Conroy (Dean of the Faculty of Education, University of Glasgow), a keynote speaker hosted by RE-Net at the AULRE conference in July 2007, who brought his presentation with him on his iPod, using it as a portable hard drive. In other words, a professional educators could carry with them, in their pocket all they need for the facilitation of learning.

“... Because everybody’s changing and I don’t feel the same...”
(Keane, 2004 Universal Island Records)
Appendix 7 - A codification of N-ness

A quick reference guide to the way in which I am used N as a shorthand code for different factors of the emerging framework. The meaning of this is only apparent on reading the main text of the thesis. For a detailed analysis of this section, please see section 2.2x and following.

\( N_1 = \text{Need} - \text{when a self has a need to know, understand or be able to do something} \)

NB - the use of the sub-script numerator is intended to communicate a classification of N not a calculation. This would be, say, \( N^2 \) with the numerator superscript as in traditional mathematical notation.

\( N_2 = \text{kNowledge} - \text{when a self uses its prior knowledge, skills or understanding to access future learning; it may also be kNowledge that derives from the words or works of others, the point being that its existence precedes the new learning constructed} \)

\( N_3 = \text{Network} - \text{human, real or virtual networks which exist for connecting people together and to enable information/knowledge flow} \)

\( N_4 = \text{New} - \text{the application of newly-acquired knowledge, skills or understanding in new contexts so as to test out whether it/they is/are fit for purpose and produce valid and reliable outcomes} \)

\( N^4 = N_1 \times N_2 \times N_3 \times N_4 \) (each aspect of N-ness in combination thereby producing an outcome or output that could be greater than the sum of all the parts together). Further work is required to establish whether all are necessary in equal proportion for learning gains to be made.

\( i^PD = \text{This was the term I used back in 2006 to describe the influence on a self of a } i \text{-factors. This marks the beginning of an attempt to codify self-directed professional learning. I was attempting to show that } i \text{ to the power of } n \text{ was the requirement for professional learning to occur (P stood for Professional and D for Development in this iteration of the hypothesis). At the time the } is \text{ could have been: interactive, integrated, international, internet-based, interrogative, inter-personal and so on. Here the } n \text{ was the numerator not the numerated. The thesis has shifted away from focusing on these } is \text{ and is now clearly about } n \text{-ness and its contribution to what I now call auto/pedagogy.} \)

In auto/pedagogy, as I see it, the formula is as below where \( l \) stands for learning gains:

\[ l = N^4 \]