
# 30 years
## of distance learning and teaching at the University of Otago

*Edited by:* Kwok-Wing Lai, Sarah Stein, Penny Field, and Keryn Pratt


# Our World in Your Place

***30 years of distance learning and teaching at the University of Otago***

**Edited by:**

*Kwok-Wing Lai, Sarah Stein, Penny Field, and Keryn Pratt*

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## Commemorating 30 Years of Distance Learning and Teaching

In 2015 the Senate Distance Learning Advisory Board of the University of Otago set up a working party to plan and organise academic events for celebrating 30 years of distance learning and teaching to be held in 2016.

In early November of 2016 (Nov 3-11), a symposium with the theme *Pedagogy, Technology, and Student Support* was held the Dunedin, Christchurch, and Wellington campuses, and also at the Auckland Centre. An Otago Distance Learning History Exhibition was also held concurrently with each symposium.

A symposium dinner was hosted on November 3 in Dunedin. The guests of honour included Dr Rosemary Beresford, Professor Gareth Jones, Dr Claire Matthewson, and Professor Paul Trebilco.

This commemorative book titled *Our World in Your Place* was also published in November 2016 to mark this important milestone.

## Members of the Working Party

Professor Kwok-Wing Lai (Chair, College of Education), Amanda Clifford (Christchurch Campus), Dr Penny Field (Human Nutrition), Judy Fisher (Library), Dr Rob Griffiths (Wellington Campus), Dr Keryn Pratt (College of Education), Dr Sarah Stein (Distance Learning Office), Fiona Stuart (Distance Learning Office)


Celebrating 30 Years
of **distance learning**
at the University of Otago

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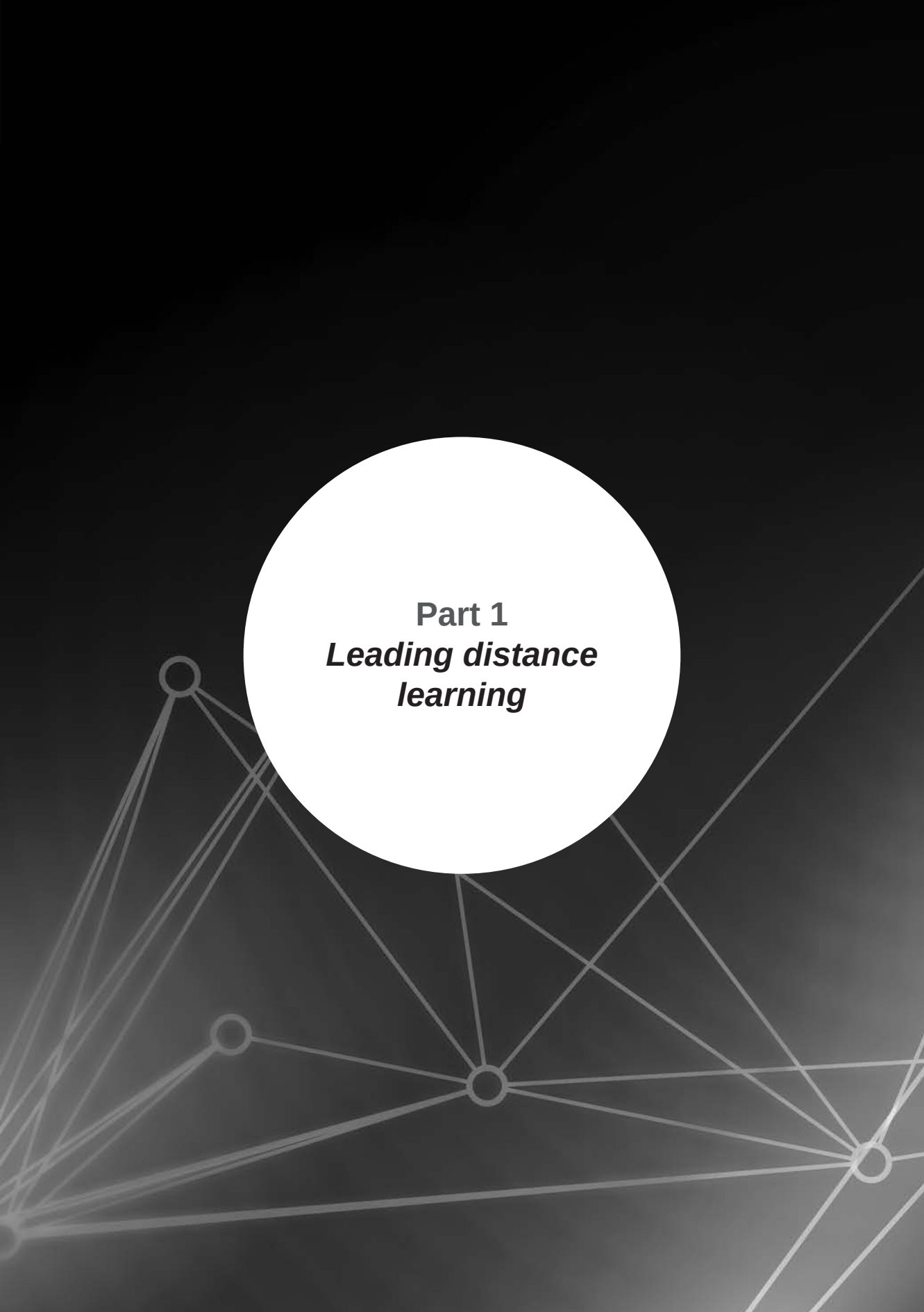
# Preface

This commemorative book serves as a record of the history of distance learning and teaching at the University of Otago over the last 30 years. In Part I of the book, we have included five chapters to provide an overview of how distance teaching began in Otago, and how it has evolved and developed over the last 30 years. The first two chapters, authored by Elizabeth Purdie and Sarah Stein, document Otago's distance teaching history from its beginning to the present; Elaine Webster's chapter details the connection between distance learning and the Summer School; Judy Fisher and Gala Hesson, who curated the Distance Learning History Exhibition, have created an abridged version of the exhibition in their chapter. We had the privilege of interviewing 10 key distance staff and their reflections on the highlights and challenges of distance teaching are collated in a chapter by Fiona Stuart. In Part 2, we have three examples of how distance learning programmes have been designed and implemented by individual departments - Penny Field in Human Nutrition; Rob Griffiths and Kelli Fleming in Occupational and Aviation Medicine (in two chapters); and Keryn Pratt in the College of Education. In Part 3, three research papers presented at the Dunedin symposium are published. Som Naidu, the keynote speaker, has written up his address titled *Mainstreaming open, flexible, and distance learning.* Alison Fields, an Otago distance doctoral student, has developed a model for library support in eLearning and this model is explained in her chapter. In the final chapter of the book, Kwok-Wing Lai reports findings of an evaluation study on the pedagogical design of a blended Doctor of Education programme offered by the College of Education.

***Kwok-Wing Lai, Sarah Stein, Penny Field, and Keryn Pratt***



# Part 1
## *Leading distance learning*

# Chapter 1

## Distance Learning at Otago: A History from 1984 to 2000[1]

***Elizabeth Purdie***

The Distance Learning Programme of the University of Otago was established in the mid-1980's, and was administered by a central body, the Distance Teaching Unit, based in Scott and Shand Houses at the north end of the Quadrangle. Mr Peter McMechan, Director of University Extension, oversaw the beginnings of the Distance Learning Programme, with Dr Claire Matthewson as the first Head of the Unit.

In 1985, the first courses to run were what might be termed bridging courses, intended for older students who had missed an earlier opportunity to take up University study or who in retirement wished to advance earlier interests. The Diploma and Certificate courses in Humanities drew on the knowledge and teaching experience of academic staff in Languages, Classics, History, Geography, Literature, Art History, Music and other disciplines. Many Humanities students enjoyed these early courses so much that they then came to the University as full-time mature students to complete degrees.

Other early courses such as the Diploma and Certificate in Theological Studies also aimed at the mature student returning to study, and these evolved into today's Bachelor of Theology programme, still the only qualification available "at a distance" that leads to an undergraduate degree.

The Certificate in Social Work was the third main subject area for Distance students in the early days of the Distance Learning Programme, also an undergraduate qualification but one with a vocational direction.

A smaller programme offered postgraduate papers in Clinical Dentistry, a forerunner of the several postgraduate Health Sciences programmes that were to be developed over the next few years by the specialist Schools of the University, in particular, Medicine and Pharmacy. Medical Laboratory Science also used the audio-conference network to teach their fourth-year students based in Community Laboratories around the country.

The teaching was by "mixed media" - principally by audio-conference (at that time known as "teleconferencing"), utilising a custom-built regional network ("Unitel South") linking a number of venues in Otago and Southland. The technology was custom-designed and built by Jack Salmon and remains the basic hardware of the

1. This chapter is a reprint of an article originally written for the University of Otago's Distance Teaching Unit.

system. The teleconference sessions were based on and supported by high quality and comprehensive course workbooks written by the teaching staff, incorporating essential Course Readings or Case Studies, and edited by specialist print editors within the Unit in a distinctive house style. The same emphasis on quality was notable in all the course materials produced - sets of replica teeth for the postgraduate Dental programme, kits of sample rocks and fossils for the Geology papers, audio-tapes of music for the Music papers. The quality assurance was possible because, unlike Massey's Centre for University Extramural Studies (CUES), the DTU held central oversight of materials production.

The University of Otago's Distance Learning Programme was differentiated from the extensive Massey University courses, first by the "live" teaching component made possible by the audio-conference network on which courses were based, and second by the emphasis on the high quality both of the courses offered and the support provided to students – a level of support only possible because of the lower number of enrolments in contrast to Massey's high numbers. Students attended residential courses in addition to their regular teleconference classes, which provided a "face to face" component to complement the audio-conference teaching.

The regional audio-conference network was also used for University Extension (non-credit) courses which tapped into community interests in a wide range of subjects, and provided a medium for the University to promote the concept of lifelong learning and professional development. Hitherto these community courses had relied on willing academics travelling to regional centres to teach a series of sessions in their areas of expertise. The audio-conference network enabled this community-based programme to expand and develop in the late 1980's and 1990's. The network was also widely used by non-University providers and agencies on an hourly rental basis for meetings and other networking functions.

With the success of the "mixed media" format, the Distance Learning Programme grew and the target of 1,000 credit enrolments within the 1985-1989 quinquennium was achieved.

The national audio-conference network ("Unitel New Zealand") was developed in 1987, enabling students in over 30 centres to link in for their teaching sessions. Main sites comprised other tertiary institutions, hospitals nation-wide, and the University's Clinical Schools.

Further undergraduate programmes were developed to meet the needs of professional groups in the community. A good example is the Diploma and Certificate in Sports Studies programme, still one of the largest programmes today. Others continued to meet the community demand for interest-courses, as well as attracting teachers in the relevant subject area. Examples were the Geology courses which have today metamorphosed into "Earth and Ocean Science" and "Dynamic Earth", and the Biotechnology

courses likewise aimed at Science teachers.

But increasingly the Distance Learning Programme was developing into a new area – postgraduate health sciences courses which allowed practitioners to update their knowledge and skills, or to add a specialised area of knowledge to their portfolio without leaving their home-base. These included Aviation Medicine, Musculoskeletal Medicine, Obstetrics and Gynaecology, Pharmacy, and Child Health, and these have gone from strength to strength (with the sole exception of the postgraduate dental courses now discontinued), with many now teaching students overseas. Similarly in another health-related field, the Postgraduate Diploma in Dietetics enables selected Science or Consumer and Applied Science graduates in five New Zealand centres to train as dieticians.

The early '90's saw changes in personnel as well as growth in student numbers and development of new courses. In late 1989 Peter McMechan joined the Commonwealth of Learning based in Vancouver, Canada, and Don McKenzie succeeded him as Head of University Extension. Claire Matthewson left in early 1990 to become Director of University Extension at The University of the South Pacific in Suva, Fiji, and Penny Love became Head of the Distance Teaching Unit.

Following Lorraine Isaacs' period of tenure as Director, University Extension's activities moved to be based in other University areas, foreshadowing later events. Following first the untimely death of Don McKenzie and then Penny Love's appointment as the University's Training and Development Adviser, Terry Hearn became Head of the Distance Teaching Unit. And in 1995 the Distance Teaching Unit itself was disestablished with course administration for the Distance Learning Programme devolving to the teaching Departments.

On 25 October 1995 Senate agreed that a Distance Learning Committee be established to report directly to the Senate. Its Terms of Reference were as follows:

1. the promotion of the University of Otago as a centre for excellence in distance learning;
2. the recommendation of policies to coordinate and integrate distance learning initiatives throughout the University;
3. the oversight of the quality assurance of distance learning programmes provided by the University;
4. the facilitation of research into distance learning, both in general and specific to the University;
5. liaising with other centres / organisations responsible for the provision of distance learning;
6. consideration of any other matters relating to distance learning and teaching which might be referred to it by the Vice-Chancellor, the Senate or any Division.

It comprised a Convenor appointed by the Vice-Chancellor (Dr Rosemary Beresford, School of Pharmacy, fulfilled this role for the lifetime of the Committee), the Deputy Vice-Chancellor (Academic), Deputy Vice-Chancellor (Research and International), Assistant Vice-Chancellors of the teaching Divisions (or their nominees), the Director, Information Services (or his nominee), the University Librarian (or his nominee), the Director, Higher Education Development Centre (or his nominee) and a student member. In fact, representatives of the four teaching Divisions attended on behalf of the Assistant Vice-Chancellors.

The Committee had the power to co-opt and generally met twice each semester, or as required, to consider policy and management issues. It also formulated the University's Strategic Plan for Distance Learning (1998).

The Distance Learning Committee's first meeting was held on 20 February 1996. It was disestablished in 1999 and its last meeting was held on 24 February 1999. In March 1999, this Committee and the Committee on Teaching and Assessment were replaced by the Committee for the Advancement of Learning and Teaching (CALT) on which Dr Rosemary Beresford was appointed as the distance learning representative.

In late 2000, the Distance Learning Reference Group was set up as a sub-committee of the Senate Committee for the Advancement of Learning and Teaching, reporting to CALT. The Distance Learning Reference Group held its first meeting on 21 November 2000. Its members are a Convenor (who is a member of CALT), the Deputy Vice-Chancellor (Academic) or his nominee, the Deputy Vice-Chancellor (Research, Enterprise and International) or his nominee, the Director of Academic Services, the Director of HEDC or his nominee, and a representative of each of the teaching Divisions, nominated by each Assistant Vice-Chancellor. These Divisional representatives are people with an understanding of and experience in the delivery of Distance Learning.

Its Terms of Reference are as follows:

- to promote the University of Otago as a centre for excellence in distance learning;
- to recommend policies to coordinate and integrate distance learning initiatives throughout the University;
- to promote distance learning in Divisions and Departments;
- to promote distance learning as a means to further the University's commitment to internationalisation;
- to liaise with other centres and organisations responsible for the provision of distance learning;
- to recommend guidelines and provide advice to those responsible for the administration and technological support of distance learning on the academic

dimensions of these facets of distance teaching;
- to assist Course Convenors with quality assurance issues, including managing feedback from students;
- to consider any other matters relating to distance learning and teaching which might be referred to it by CALT.

The Distance Learning Reference Group continues to carry out a central role incorporating discussion of policy, oversight and promotion of the University's Distance Learning Programme, and makes recommendations to CALT as appropriate.

Recent years have seen further new development within the Distance Learning Programme as the range and number of courses have continued to grow steadily if not spectacularly. Online teaching has replaced audio-conference teaching in papers offered by the Departments of Tourism, and Information Science (INFX411) in the Division of Commerce, and in the Chemical Hazard paper (HAZX401) offered by the Department of Chemistry in the Division of Sciences. But audio-conference teaching continues to underpin most programmes, with students in all but New Zealand's four main cities now linking in from their own telephone, rather than from designated centres. This technology was also substantially pioneered by the DTU's Jack Salmon in the 1980s to "patch in" small interest groups to the network. This development has provided greater flexibility and taken the University of Otago's Distance Learning Programme into more corners of New Zealand and the world.

# Chapter 2

## Distance learning at the University of Otago from 2000 to the present: The story continues

***Sarah Stein***

After the disestablishment of University Extension in the mid-1990s (refer Elizabeth Purdie's chapter in this book for information about the early history of distance learning at the University of Otago), individual departments and teachers continued to run their distance programmes, however, there was a gradual feeling of being isolated and that the University was not providing the guidance as well as the direction that departments wanted. In 2000, a Distance Learning Reference Group (DLRG) was formed, a body that was made up of participants involved in distance learning from across the University. The Group was convened by Professor Paul Trebilco (Theology and Religion) who was, and continues to be, an ardent supporter of distance learning. The DLRG attempted to provide support and direction for distance learning through organising workshops for staff and a discussion forum. The Group was a formal body that could raise issues at the University level and consequently, provided an opportunity to reduce the feeling of isolation and lack of support that individuals and departments were experiencing in regard to distance learning.

The DLRG, however, did not hold the position of a formal University committee. It did not employ any staff and had no budget to carry out its ideas or to act on the issues that it identified. There was no natural formal communication link between it and the departments, and its members were not seen as representatives, as such. DLRG recognised that the University was missing out on making more of the opportunities that distance learning could present, such as increasing access to education for students, saving money due to the reduced need for use of physical spaces that on-campus courses require, and presenting opportunities to attract enrolments from alumni. Having said that, during the time of DLRG's operation, Dr Clare Matthewson, who was the Director of Summer School and Continuing Education, was appointed as Distance Learning Advisor at 0.2 EFT (equivalent full time) role. While this was recognised as a positive step, there was little impact that this part-time fractional role could have across the institution.

In June 2006, a formal University Review into Distance Learning was conducted. The outcomes of that review resulted in some major changes to the way Distance Learning operates in the University today, especially at the strategic level. The Review outcomes included:

- The establishment of a Director of Distance Learning to provide "central leadership, coordination, facilitation and dissemination of good practice";
- The establishment of an advisory board – the Distance Learning Reference Group became the Distance Learning Advisory Board (DLAB) – that reported to Senate through the Standing Committee of Senate. A recommendation about the membership of DLAB was also made.

Issues that were raised at the Review also resulted in the Panel making recommendations concerning staff workload recognition, resourcing, marketing, enrolments, use of educational technologies and the need for explicit contribution and support for distance learning from the Higher Education Development Centre (HEDC) and Information Technology Service (ITS).

Most of the recommendations were accepted by the University and in 2008, the first Director, Distance Learning was appointed - Dr Bill Anderson - along with a half-time Administration Assistant, Karen Hogg. Although small, Distance Learning became a department in its own right and this arrangement continues today. In early 2013, Karen Hogg resigned and Fiona Stuart took up the Administrative Assistant position. In August of the same year, Dr Bill Anderson retired, and from the start of 2014, Dr Sarah Stein, who had been a member of DLRG and then the HEDC representative on DLAB, stepped into the position of Director, Distance Learning.

The DLAB continues to the present day. It is convened by the Deputy Vice-Chancellor (Academic) and members include representatives of all four academic Divisions, International, Academic Services, Library, HEDC, and Otago University Students' Association (OUSA). From its inception until the present day, there are also two co-opted members, Professor Paul Trebilco (Theology and Religion) and Professor Kwok-Wing Lai (University of Otago College of Education), both of whom have been, and continue to be, strong advocates of distance learning, while continuing their engagement in teaching their own distance programmes. The DLAB Terms of Reference are:

- To advise the Senate on policy and procedures relating to Distance Learning,
- To assist the Director, Distance Learning to ensure that Distance Learning operates in accordance with policy and to provide guidance for the ongoing development of Distance Learning,
- To promote the University of Otago as a centre for excellence in Distance Learning,
- To promote Distance Learning in Divisions and Departments, in accordance with the Strategic Direction for the University approved by Council,
- To promote Distance Learning as a means to further the University's commitment to internationalisation,

- To recommend guidelines and provide advice to those responsible for the administration and technological support of Distance Learning, particularly on the academic dimensions of these facets of Distance Teaching,

- To consider any other matters relating to Distance Learning and Teaching referred to it.

During his time as Director, Dr Bill Anderson contributed much to making distance learning more visible in the institution and to laying down many of the foundations that underpin distance learning at the University of Otago today. One of those foundations is the *Distance Education Strategy to 2020* (http://www.otago.ac.nz/courses/distance_study/otago084451.pdf) that outlines the vision for Otago's distance learning programmes and demonstrates how distance learning contributes to the achievement of the overall University strategic imperatives. Reflecting the same need identified since the days of DLRG to have informed staff working in the distance learning area, staff professional development is seen as being of high importance. Dr Bill Anderson recognised this and he and Dr Sarah Stein developed a series of workshops, which also continue today. The Distance Learning Forum for administrative staff and one for academic/teaching staff were also established, and once again, these fora continue today. Both are avenues through which staff performing the many roles necessary to enable high quality distance learning to occur, can share perspectives, information, and raise and discuss issues.

Investigation and exploration of the use of digital technologies to support and enhance distance education continues, and is ever-changing. Audio-conferencing was still used by many departments until approximately 2009, when the introduction of 'user-friendly' web conferencing technologies became more readily accessible. The University purchased a licence for Adobe Connect and this was grasped by many distance teachers as a way of better engaging with their students, synchronously. In 2014, another application called Zoom became available. The usability and cost of Zoom led to the decision to make Zoom the institutional-supported web conferencing system. The use of Zoom has spread quickly with staff and students making use of it for administrative, research and teaching purposes. ITS provides staff with access to many technologies of which distance teachers make regularly use. Audio-conferencing is still in use in a small number of papers.

Since 2007 in particular, distance learning has not only gained a stronger presence in the University, but staff involved are also being recognised for the particular expertise and teaching skills. Being faced with the opportunity to teach at a distance prompts much creative thinking, clever and innovative use of teaching strategy, planning and incorporation of educational information and communication technologies. Teachers who have been recognised in the formal sense include Associate Professor Gordon Sanderson (Department of Medicine, Postgraduate Diploma in Ophthalmic Basic Sciences) who won a University of Otago Teaching Excellence Award in 2013, and Associate Professor Tim Cooper (Department of Theology and Religion, Theology

Programme) who won the same award in 2014. After winning his award in 2013, Associate Professor Sanderson went on to win the Prime Minister's Award for Tertiary Teaching Excellence at the national level, on the basis of the work he had done over many years at Otago in his distance learning Ophthalmology programme.

The hard work and passion of those involved in distance learning across the last 30 years at the University of Otago means that today's distance students, and the staff who teach and support them, have an impressive academic context in which to work and study. In comparison with other tertiary institutions, the University of Otago is unique in the way it operates its distance programmes and the vision it has for distance learning. As expressed through the *Distance Education Strategy to 2020,* Otago has a clear vision for its distance programmes to be predominantly postgraduate, focusing in areas of particular expertise, and to be devolved and managed at the departmental level. The explicit importance placed on the quality of Central Library, IT and Student Learning Development provision, means that the primary focus for distance learning at Otago truly is to provide the best possible learning environment for its students, not simply just to "go online".

# Chapter 3

## Distance papers in the University of Otago's Summer School

*Elaine Webster*

**Introduction**

Distance papers or courses have been part of Summer School at the University of Otago, since it started in summer 2001, providing both a valuable alternative for students and an opportunity for departments to innovate and connect. To explore distance offerings in Summer School I began with the Summer School archive, and then seeking the stories that facts do not tell, I turned to the people involved in some aspect of development or delivery of distance Summer School courses. A small group of staff generously shared their recollections with me, and their stories should be read as such. Otago history and fortuitous blogging by Ali Clarke filled in a few blanks[1]. The resulting story is mainly from the perspective of programme and department: what distance learning looked like in the beginning and over time, which departments took part, and why.

**The Summer School Context**

Otago Summer School started in 2001 as an initiative of then Vice Chancellor, Dr Graeme Fogelberg to give students more flexibility in planning and developing their degree programmes. Departments were given clear motivation to take part via an innovative and transparent funding model, and the school got off to a good start with over 1000 enrolments.[2] In that first year a total of twenty-three papers were offered, and two of these were two distance papers. During the following fifteen years the Summer School programme developed to provide mainly for undergraduate students needing one or two more papers to complete their degrees, offering a record high of eighty papers in 2010. Usually the programme offers about sixty undergraduate papers from across all four academic divisions, and every year a small number are taught by distance.

**Summer School Students**

Approximately 1700-2000 students take advantage of Summer School each year[3]. These students study in Summer School because they want to complete or fast track

1. Ali regularly shares snippets from her University of Otago 150 anniversary history project. Her work provides useful details on the development of the Social Work programme which was invaluable since key people in that department had either left Otago or were away on research and study leave.
2. Summer School begins in early January and runs for six weeks of intense learning. Most students take one 18 point paper which counts as full time study in Summer School, although a maximum of two papers is permitted. Many students say they like Summer School because they can focus on just one subject.
3. Approximately 10% of undergraduate students at Otago take part in Summer School each year.

their degrees, prepare for the coming year, manage workload, or repeat a failed paper, and they choose to accomplish this in the most interesting and convenient way possible. Summer School students are mainly Otago undergraduates in their second, third or fourth year of study and about a third of them have studied in Summer School previously. Proportionally higher numbers of Māori and Pasifika students take part in Summer School than in semester time, and while proportionally fewer International students enrol. Many Summer School students are local to Otago, Canterbury or Southland, and nearly 30% are from Dunedin itself[4].

**Summer School Distance Students**

Every year a subset of students study a Summer School course from elsewhere, and the composition and size of this cohort varies each year. By 2007, this group had grown from very small beginnings to comprise between 7- 12% of the SS student body. Most distance students enrol in just one paper, and most enrol in undergraduate study. Consistent with on-campus patterns, 100 level distance papers are popular, although papers at higher levels also attract students.

**Participating departments**

Tourism has offered distance papers alongside on-campus papers since the start of Summer School in 2001, and for several years was the only department offering distance options. Tourism was followed by Social Work (from 2006 until 2013) and Information Science (from 2008 to 2013). Religious Studies began offering distance papers in Summer School in 2010 and Chemistry began in 2015, and both continue to participate alongside Tourism.

***Tourism***

Tourism was the flagship for Summer School distance papers for the first five years. The department started with postgraduate papers intended for people working in the industry, although enrolments remained low. In 2004 the department experimented with an undergraduate paper instead, which resulted in immediate doubling of enrolments. Building on this result, the department offered both 300 and 100 level distance papers in 2006 and student numbers grew exponentially. A second 100 level distance paper was offered in 2011, and since then this winning combination has been offered with consistently strong enrolments.

From the start, Tourism recognised the opportunity offered by Summer School and distance teaching. Their involvement in Summer School was a strategic success, increasing the profile of the department and its academics, while meeting important student needs. Distance papers were considered a great way to recruit into degree

4. This percentage is approximately double that of semester students, suggesting that proportionally more students return to homes outside Dunedin for the summer. In 2014, 46% of all domestic first year students came from the North Island, with only 14% from Dunedin itself. (University of Otago Cycle 5 Academic Audit Report 2015, p. 5). The home locations of the Summer School distance cohort were not identified, but were unlikely to reflect the wider picture.

programmes, and many students beginning as part-time distance students later enrolled in full-time study. This innovation started under Prof Geoff Kearsley in 1997[5]. Grounded in the historic University Extension approach, Prof Kearsley built on new teaching opportunities opened up by the Internet. Tourism academics Prof James Higham and Prof Michael Hall developed specialised resources for distance teaching, including a specific approach, teaching materials, and a platform (prior to Blackboard) working closely with a graduate from Information Science to design the web platform. Prof Higham's particular vision was to create module templates and while this worked well for him, others had their own templates and different approaches to teaching. Prof Higham found that the distance programme worked well for independent, disciplined learners with good time management skills.

Less visible than campus students, distance students who did not engage well were easily overlooked until a deadline was missed. Summer School is short and intense, so the first deadline might fall at the half way point, by which time it is usually too late to catch up. Prof Higham observed that distance learning is not for everyone, but those who want it 'take to it like ducks to water'. In the early days, not much pastoral care was offered to students and little personal contact was made. Over time this changed and more effort made to engage students and ensure student success. Prof Higham always intended the programme to stand alone on its own merit, and as a solid alternative to on-campus learning. In his view it has succeeded in doing so.

In 1999 the University purchased an early version of Blackboard called CourseInfo[6] which took some time to catch on. Yet Blackboard was a real breakthrough for distance teaching and learning, and by 2005 was well established at Otago. Blackboard is a teaching platform and provides a useful structure for course materials, increasing accessibility for students who need to work outside the constraints of time and place. Tourism aimed to create programmes with 100% flexibility to meet students' needs. With no real-time study demands, students could study anywhere in the world at any time of the day. An early Tourism success story features a young woman from the tourism industry in Queenstown, who studied by distance from Antarctica. She then took up study on the Dunedin campus when she returned to New Zealand.

The Tourism Department have offered papers in different arrangements and levels over time. For many years the distance papers were also taught on campus simultaneously. This dual approach is a good way to maximise enrolments and ensure a paper is worthwhile for a department. This pattern of dual offerings continued in Tourism until enrolments were sufficiently strong in distance papers for them to stand alone.

5. Personal communication with Professor James Higham (Department of Tourism) in June 2016.
6. Personal communication with Annemaree Senior, eLearning Manager, Information Technology Services in September, 2016. Annemaree notes that by August 2000, 41 papers used Blackboard with a reach to 4600 students and by 2005 was used in 1000 papers. Blackboard use increased rapidly until 2007, followed by steady growth.

Another important change was the switch from postgraduate to undergraduate papers in 2004, since the postgraduate initiative did not attract the hoped-for numbers. Conversely, undergraduate enrolments were strong and signalled the start of a winning combination for the department. The 100 level distance papers have been consistently popular from the start, routinely attracting around 100 students.

Another major change occurred in the Department's overall distance strategy. By 2006 Prof Higham was Head of Department and leading a small teaching team overworked because staff were offering too many papers. Prof Higham decided the Department would offer distance papers exclusively during Summer School. The decision solved a staffing problem and has worked very well. When permanent staff members cannot teach in the summer, new and emerging academics are employed to teach the distance papers, which is a good outcome for everyone.

The Department of Tourism's summer distance papers have allowed it to retain some of that innovative flexibility in their programme, meeting students' needs to study elsewhere and manage their own workload, perhaps alongside paid employment. These papers also provide for that small but important cohort needing one last paper to complete their degrees.

***Community and Family Studies***

The Department of Community and Family Studies began offering distance options in Summer School in 2006. Their participation in Summer School seems to have evolved from the Department's particular culture and history, rather than innovation per se. Training in social work has been offered at Otago since the late 1950s (although initially as short courses at the request of the social work professional associations)[7]. These courses came under University Extension in the 1970s, with the introduction of a Certificate taught part time over two years, and meeting a great need for social work training. In 1976 Dr Patrick Shannon was appointed to the new position of Lecturer in Social and Community Studies. From 1985 he taught the certificate course for many years in block courses around Otago and Southland, in an interesting hybrid of distance and community education. The Certificate was replaced by a Diploma in Social and Community Work in 1993, and in 2003 the social work programme lead by Raylee Kane was approved under a new professional certification process. A variety of postgraduate programmes were subsequently introduced and many of these were taught part time by distance. This was a continuation of the Department's approach to training social workers in Otago and Southland via part time, distance courses. From 2006, the Department of Community and Family Studies offered two or three distance papers each summer until 2013, after which time their involvement in Summer School came to an end.

7. Ali Clarke Blog 6 July, 2015. "Educating Social Workers" http://otago150years.wordpress.com/

***Information Science***

Information Science offered one postgraduate distance paper in Summer School between 2008 and 2013. The paper was a core paper in the Health Informatics Post Graduate Diploma, which was designed in 1997 as a distance programme for health professionals[8]. The Health Informatics group was also pioneers in distance teaching, creating an entirely online course using file sharing software developed in Germany. Course content was all about using electronic systems for data management, so computer literacy was a fundamental skill and fully integrated course content with teaching delivery. Although in the early days this approach presented challenges, by 2008 when the paper was offered in Summer School, most people could get a reasonable Internet connection. One exception was a rural student whose connection was constantly interrupted by the farm's electric fences, a mysterious disruption that was not solved until the last week of course. A wide range of health professionals enrolled in the course, including nurses, surgeons, GPS, health managers and even vets. Some professionals were interested mainly in credits for Continuing Medical Education while others became so interested they switched careers to health informatics.

Lecturer Alec Holt reported that he loved teaching in Summer School as he found the students more cohesive as a group, pouring everything into their study, turning up more regularly than in semester time, and consequently the failure rate was zero. The paper always involved group work, which at times created tensions and one year a student threatened to kill another student in his group project. However for the most part, Holt found the Summer School teaching period the best. This was a successful and worthwhile paper for many years, and although enrolments always remained on the low side, this is typical of postgraduate papers. In 2013, the paper was discontinued by the department and replaced by an undergraduate Summer School paper taught only on campus: a pragmatic switch. The replacement paper attracted much higher enrolments and gave a better return to the department.

***Religious Studies***

The Theology and Religious Studies Department[9] offered distance Religious Studies papers in Summer School for the first time in 2010. Drawing on a well-established model, the papers were taught both on campus and by distance at both 200 and 300 levels[10]. These combination papers meet a wide variety of student needs and maximise enrolment numbers, while minimising the cost of delivery. The Department was already well versed in this model, having taught about half their papers by distance since 1999. Their decision to offer in Summer School was part of a wider distance strategy. In 2016 all of the Department's papers (both semester and Summer School) were offered both on campus and by distance, with enrolments more or less evenly split between modes.

8. Personal communication with Mr Alec Holt, 15 July 2016.
9. Personal communication with Professor Murray Rae, 1 July 2016.
10. Content is the same for the 200 and 300 papers and classes are taught together; only assessment differs.

Summer School was also seen as an opportunity for Religious Studies to raise their profile both within Humanities and across the wider University. Since the Summer School programme usually offers about 60 papers, a block of four or six Religious Studies papers stands out. This strategy has proved successful, assisted by the Department's practice of frequently refreshing papers and offering topical content with creative, descriptive titles. Often, but not always taught by adjunct staff, these papers consistently attract sufficient enrolments to support the cost of contracting teachers: a good outcome for all concerned.

***Chemistry***

A more recent addition to Summer School distance papers is CHEM150 Concepts in Chemistry. Taught in Summer School since 2015, CHEM150 was developed for students with a limited chemistry background as a full-credit alternative to Bridging Chemistry (previously taught over summer as a non-credit three week course)[11]. In this new hybrid paper, students study theory by distance for the first four weeks and then complete practical laboratory work on campus during the last two weeks of Summer School. The paper structure was designed to ease students into university, since it is often their first experience of university study. Even so, the intensity of Summer School can be a tough introduction to university learning for students unused to independent study and campus life, and before the first year support systems get going at the start of the first academic semester. Most students do not yet know how to be a university student and they need a lot of support with learning systems and processes, such as how the University communicates with students, or what Blackboard is and how to access it. This disadvantage is mitigated by the fact that this group tend to be highly motivated and very committed to preparing for first year Health Sciences. Naturally, staff members in the Chemistry Department provide students with full support. The pass rates are good and the paper is a valuable addition to Summer School.

**Origins of distance education at Otago**

The involvement of both Tourism and Social Work in distance teaching had strong roots in University Extension, which was a department set up in 1965 to replace the Department of Adult Education[12]. Adult education was always about providing wider community access to education through a model which fundamentally differed to the university qualification system. The first distance papers offered in 1984 grew out of this community education, provided at Otago by the University Extension department. Another important link is Dr Claire Matthewson, appointed Teleconferencing Programme Officer at University Extension in 1984, a key role in the developing distance programme. Dr Matthewson was later appointed Director of Summer School, a

11. Personal communication with Dave McMorran, 20 July 2016.

12. Otago's Department of Adult Education was established in 1948, a post war development initiated by Peter Fraser, first Minister of Education in the Labour Government of 1935 and implemented through a new Education Act in 1947 (Morrell, W.P. (1969). *The University of Otago: A centennial history*. Dunedin, New Zealand: The University of Otago Press.). Thanks to Peter Sime, Hocken Library, for his assistance locating sources.

role which soon expanded to include both continuing education and distance learning[13].

**The University Extension Department**

University Extension was run as a satellite operation, independent of university systems and supports. All student and academic processes were managed within the unit, including enrolments, the production of materials, tracking assignments, controlling delivery through the network, and examinations. The department employed its own academics and for many years its courses were not for credit, offering a certificate instead. It was all about adult *access* to education and part of an alternative model focused on lifelong learning. This alternative recognises that the need for assessment to gain qualification changes the education experience, so is not for everyone. Yet lifelong learning is of tremendous importance to a democratic society, and through the golden years of adult education, was funded by government. University Extension offered non-credit courses, taught by academics who would travel by road or rail throughout Otago and Southland to teach. Courses were co-organised by local community committees in satellite offices with volunteers and some paid workers, in liaison with University Extension. Communities would ask for a course and University Extension would find an academic who would teach it as part of their community service.

**University Extension and Distance Education**

Distance learning was first offered at Otago in 1984 as a form of continuing education through the University Extension Department under Director Peter McMechan. McMechan came to Otago from the University of the South Pacific, the first university in the world to deliver education via satellite[14]. McMechan convinced Otago to teach by distance, accepting and meeting the challenge to enrol 1000 students within five years. To do this, a hard-wired fixed network was set up which connected every hospital and polytechnic in New Zealand, and owned by Otago. Students would decide on their course then select their location, turning up to class in some room somewhere in New Zealand and effectively learning in real time –invisible but heard, listening and contributing at the same time as everyone else. The focus remained on live tuition with students attending the same classes and taking part in the same discussions. Students were sent course materials including course books, projector slides, audio cassettes, and videos. Even teeth were sent out to Dentistry Masters' students, with plaster casts of teeth sent back for marking. Many classes were run in the evening, thus allowing working people to attend.

At that time, the delivery of distance papers was wholly determined by legislation which controlled the availability of extra-mural courses (i.e., a course where students could learn at a time that suited them). Legislation mandated that only Massey University could deliver in that asynchronous mode. To claim EFTS (equivalent full time students) for students living elsewhere, other universities such as Otago could only

13. Claire's appointment in 2002 followed the success of the pilot Summer School in 2001 under inaugural director Mervyn Smith.
14. Personal communication with Dr Claire Matthewson, 27 June 2016.

deliver *live* tuition i.e. all classes taught and everyone learning together in real time. To teach in real time necessitated a fixed network. Students were sent the prospectus and would select their course and location at one of many networked sites, usually a room in a polytechnic or hospital. Attendance was compulsory and students would turn up and let themselves in, then take part via telephone. Nobody ever charged for the use of these rooms, although phone costs were charged. Occasionally other entities bought time on the network for professional development classes, including the Ministry of Agriculture and Fisheries and some big commercial firms.

Dr Mattewson told of distance students in a language course who did markedly better than on-campus students, supposedly because distance students could focus on the sound without the visual distractions and inhibitions of being with other students in the on-campus class. Distance students were also able to practice alone without 'pushing the button'[15] to develop speaking confidence. In the interests of equity, a similar learning environment was set up for on campus students to replicate the success of distance learning. Dr Matthewson described this supposed equivalent environment as "some dark cupboard."

Many distance courses were run to support postgraduate learning in the health sector. Not only were these courses very important in the distance programme, they were very important to students. The whole learning space developed through this model of certification off campus, delivered in real-time distance learning. These courses included dentistry, occupational health, dietetics and nutrition, aviation medicine, pharmacy and others. Although Humanities subjects were also offered, it is unlikely they could have sustained the programme on their own.

Soon after the statute limiting distance delivery was repealed early in the 1990s, the University dismantled University Extension and took over distance teaching in the devolved model. Otago staff member Yvette Coutts continued to manage the network, but the equipment itself was sold and shipped to University of the South Pacific for use by the Fiji School of Medicine and the School of Nursing in Suva[16].

When Dr Matthewson returned to Dunedin in 2002 to take up her new role as director, Summer School, she was asked to include Continuing Education in her role, which was followed soon after by Distance Learning. Both these activities had been in disarray since the dismantling of the University Extension. There were two compelling financial reasons for re-engaging: adult education EFTS income was not being claimed for continuing education, and distance education was costing the University more with departments employing their own people to do the work instead of two people

15. Pushing the button turns the microphone on allowing other participants to hear you.
16. Claire Matthewson noted that many good people were employed in the UE department, many of whom maintained a connection with the university in other roles, or took up interesting careers elsewhere. One of these was filmproducer, Catherine Fitzgerald who started her career making video and audio resources for the department.

managing it centrally. Dr Matthewson held this distance role until Dr Bill Anderson was appointed to a full time academic position as Director, Distance Learning in 2008.

By then a clearer distinction was being made between adult, community, continuing education and distance learning. Adult education has been part of the University's activities for a long time. Adult or continuing education was an accepted dimension of the University, in recognition of the value of lifelong learning without the focus on qualifications that credit courses entailed. Distance learning arose out of the same model, providing access to education, yet without the emphasis on qualifications which characterises university culture now. Professional medical education students continue to seek certification instead of qualification, with its different emphasis on maintaining currency in skills over theoretical learning and assessment.

**Conclusion**

Distance teaching and learning in Summer School grew out of an approach to education which extended access to education and also tried to provide for diverse student needs. This approach sits comfortably within Summer School, which is itself a creative response to diverse student needs and was nourished through Dr Matthewson's experience and leadership, while responding to new opportunities for education opened up by the Internet.

Academics and teaching departments have approached Summer School either strategically or as a continuation of their department's culture and history. Some were clearly educational innovators and entrepreneurs; others responded directly to the particular demands of their students, especially those studying part-time while in full-time employment. Distance learning works very well for these distinct groups. As people have experimented with what works best for both students and departments in Summer School, the undergraduate distance papers have proven to be the most successful.

Summer School papers taught by distance vary in delivery mode, level, and popularity, yet remain an essential part of the Summer School programme. These papers cater for those who must juggle competing demands of work or family life, and meet the reality that degree study is not a simple progress over three years to completion, but rather a winding path of starts and changes, failures, about turns, and double ups. By enrolling in Summer School these students identify with an approach somewhat outside the norm, becoming proactive through choice or necessity, at a time when the other 90% of Otago students are doing something else. Summer School tries to give these students what they need, while distance papers give them a chance to study *where* they need it.

# Chapter 4

## Reflections on distance teaching and learning by Otago staff

***Fiona Stuart***

*I had the privilege of asking 10 key Otago distance teaching staff in 2016 to reflect on their roles, expectations, and highlights of distance teaching, as well as the challenges they had experienced as leaders and support staff of distance learning programmes. In this chapter the questions are presented in three sections. The first section is reflections from the distance learning leaders (Dr Claire Mathewson, Dr Bill Anderson, and Dr Sarah Stein). The second section includes interviews from 4 teaching staff (Dr Rosemary Beresford, Dr Rob Griffiths, Professor Murray Rae, and Professor Paul Trebilco), and the third section presents interviews of three support staff (Rosemary Clarkson, Veronica McGroggan, and Hayley Solomon).*

### Reflections of distance learning leaders:

***How did you view your role and what were your expectations?***

**Dr Claire Matthewson:** I was appointed in March 1984, on a half-time, fixed-term contract as the Programme Officer (Teleconferencing) within University Extension. There was just me and Jack Salmon, the retired New Zealand Post Office technician employed to design and build audio/teleconferencing units. In 1985, my Programme Officer contract became full-time. During that year three part-time staff joined me and Jack, and an embryonic "distance teaching unit" became visible. In 1986, I became the inaugural Head, Distance Teaching Unit (DTU).

On my first day on the job in March 1984, two key things happened. I met Jack Salmon in his workshop (full of wires, metal strips and tools) in Scott/Shand House, and saw the shoebox-size prototype of what would become the 4-wire Unitel. Four had just been placed for a network trialling around the region – one each in Oamaru, Alexandra, Balclutha, and Invercargill. Then I learned from the University Extension Director, Peter McMechan, that the half-time Programme Officer (Teleconferencing)'s role related directly to these boxes. The role, in brief, over the coming months was to consider and do whatever I could to:

- develop a specified suite of credential courses for national and regional delivery via a hard-wired network of Jack's teleconferencing units

- negotiate the physical location of teaching sites, regionally and nationally, for a "dispersed classroom", and reflecting two distinct educational sectors, health and non-health
- develop a system for the production and distribution of teaching/learning materials for distance students (with initial priority in Restorative Dentistry (postgraduate), and Social Work and Humanities (certificates)
- support the induction of academic staff to the technical aspects of teaching "live" and remotely to multiple sites
- create and manage enrolment and examination systems for distance students that met the University's regulations and requirements
- achieve 1000 credential enrolments by the end of the quinquennium
- develop an annual programme of Continuing Education (non-credit) courses for Southland and Otago communities via the network of teleconferencing units
- encourage appropriate use of the networks by outside professional groups and associations.

At the end of 1989 when I left Otago, the Distance Teaching Unit comprised a team of 16 employed on a range of contracts – in course and programme development, editing and publishing, enrolments, dispatch and distribution, Control Room management, technical development, and audio-visual media production. In addition, there were vital distance support positions in the University Library, key team members off-campus in Oamaru, Alexandra, Balclutha, Gore, Winton and Invercargill, and a collegial network of "go to" people in 30 hospitals, polytechnics/institutes of technology, community colleges and schools from Northland to Southland (all unpaid).

In 2002 I returned to Otago as Director, Summer School and Continuing Education, and from 2004–2006 I also had the 0.2 role of Advisor, Distance Learning. This role positively lapsed when the Distance Learning Advisory Group achieved its long fought aim of persuading the University to (re)establish a senior position of Director, Distance Learning (to which Dr Bill Anderson was appointed) and a Distance Learning Advisory Board of Senate. Thus my role in distance learning at Otago has been overtly "circular" – a journey from 0.5 to 0.2 with 20 years between.

Apart from once taking a Massey paper for interest, and having listened to the BBC's "Listen with Mother" and some wonderful New Zealand Correspondence School radio programmes when my children were small, I knew little about distance learning. At that time, however, neither did any New Zealand universities other than Massey [University], as Massey alone was legally mandated by the University Grants Committee (now Universities New Zealand) to teach at a distance. I had never heard of the

large distance programmes offered, since 1946, by the Technical Correspondence Institute (later to become The Open Polytechnic of New Zealand), and the trail-blazing distance work underway at several Australian universities and the United Kingdom's Open University I had yet to discover.

Although uninformed, my expectations about the role, from its 1984 inception, were that it was not only do-able and interesting but also creative, potentially full of adventure, and clearly well worth doing for students with unmet needs and myriad other learning communities. My expectations of the role were fulfilled. It proved to be hugely interesting, creative, full of adventure (sometimes risk), trial and error, and on-the-job learning. And the expectations actually kept expanding – as if the more one did, the greater potential one saw both for distance learning and the Unitel networks. With an evolving DTU, an increasing cohort of pioneer distance teachers (on three campuses), a predominance of articulate, confident, already well educated students, and the networks' operating day and night, work often felt like a co-creation of Choose Your Own Adventure.

**Dr Bill Anderson:** I was appointed Director, Distance Learning and started in March 2008. I retired from the position with effect from August 2013.

Although I knew of Otago's early history in distance education in New Zealand, I was aware that neither the institution nor the staff had had much involvement with the Distance Education (DE) community within New Zealand for a few years prior to my appointment. This meant that prior to the appointment process, I had relatively little idea about the structures and processes supporting DE at Otago and thus, had little on which to base any expectations. However, given that the University had decided to appoint a Director, I believed it was likely that there would be support from both staff and senior leaders. The appointment process confirmed this belief and meetings with staff at that time convinced me that there was real opportunity to develop a stronger role for distance education at the University. During my time at Otago I had expectations about two things. One was that staff teaching at a distance would always want the best for their students and, consequently, would be always looking to develop and improve their teaching role. The second was that other units within the University would be willing to engage with and support my activities as Director.

**Dr Sarah Stein:** I first became involved with Otago's distance learning through the Postgraduate Certificate and Diploma in Tertiary Teaching (now PGCert/Dip in Higher Education) which I taught and coordinated at various times while working in HEDC [Higher Education Development Centre] between 2005 and 2013. During my time in HEDC I also ran workshops on distance education for

University teaching staff - Dr Bill Anderson, the previous Director of Distance Learning and I developed the DISTAID programme, which was first run in 2008 and continues to the present. I was lucky enough to be asked to be a member of the Distance Learning Reference Group (DLRG) in about 2006 or 2007, and I remained a member until the establishment of the Distance Learning Advisory Board (DLAB) in 2008 when it became a Committee of Senate and the first Director of Distance Learning, Dr Bill Anderson, was employed. From the start of 2014, I moved out of HEDC and stepped into the position of Director, Distance Learning and I remain in that position today.

The expectations I had about distance learning when I started working in HEDC at Otago had been formed from my reading and general knowledge about distance education, my past experience of being a distance student, and from working as an academic staff developer at the University of New England in Australia, where most of the courses are offered by distance. During my time in HEDC I experienced first hand through the PGCert/Dip what it was like to teach and coordinate distance papers at Otago. My knowledge was enhanced by working closely with Bill through the DISTAID programme and other staff development activities I was involved in running, and my participation in DLRG/DLAB. I learned much about how distance education at Otago was understood, practiced, and experienced, especially by staff. So I had expectations that there were mixed understandings about distance learning and about staff and student involvement in distance learning.

## *What were the highlights and challenges?*

**Dr Claire Matthewson:** In its own way, each new course or technical development was a highlight (and more so if the work had been hard or problematic). Consistent, however, was the sense of creating something special, making some progress or a difference day-by-day. In my post-Otago life I held positions in which I inherited well established, substantial distance operations or projects. In these, where even minor changes were difficult or very slow to effect, I often thought about and missed the energising sense of flexibility and making a difference in those early Otago years. For example, when lecturers began to submit teaching material, it soon became clear that we needed a standard house style, and so the editors simply developed one, wrote the Handbook and produced the Sampler. Similarly, contemplating our first big dispatch of course books and readers, staff realised that both protective and efficient wrapping was needed. Someone had an idea; we had a meeting about it, and thereafter dispatched course material to students in a ring-binder inside a box bespoke-designed to fit snuggly. (The folder system was still in place 30 years later, I believe.) Thirdly, sometimes for a particular reason, it was important to extend the networked "classroom" to even smaller towns (like Owaka, Taihape, or Winton), and so Jack set to

and developed the portable 2-wire Unitel which could be sent out by courier, patched in for the session, and then returned. (Because of their flexibility, these 2-wire units eventually outlived the core networks' 4-wire units and become saleable items to other providers, including overseas).

Another consistent highlight for me in distance learning since 1984 was always working with wonderful colleagues, people not only deeply committed to the job and the students, but also open to new learning for themselves, interested in community and social equity, the nature of learning, and pushing boundaries to do things right or better.

Considering the "surprises," looking back there are three that strike me as major. The first is that for Unitel New Zealand's two streams (health and non-health), not one hospital, polytechnic/institute of technology, or community college refused us physical space for teaching and equipment storage, and not one of them charged the University rent or service fees. For Unitel South, the same applied; no local library, education centre, medical centre or school turned us down or charged rent, The University only had to pay the (then) New Zealand Post Office for the annual lease of the Unitel bridges and fixed circuitry. (The fee was substantial but entirely appropriate.)

The second surprise I could call "something I truly learnt at Otago" and it's that there seems to be nothing that cannot somehow be taught and learned at a distance. The subject range in those first five years was astonishingly wide, including musculoskeletal medicine, embroidery, Māori language, clinical pharmacy, boatbuilding, occupational health, geology, theology, aviation medicine, music, nursing, social work, and restorative dentistry.

A more personal surprise for me (unforeseen at any stage) was that what I learned at Otago in the DTU enabled me subsequently to work at the University of the South Pacific, Simon Fraser University, and The Open Polytechnic; also in South East Asia and Africa, and on Ministry of Foreign affairs and Trade (MFAT projects across the Pacific). From 1984 on, distance learning radically changed the course of my life (and my family's).

The University Extension's Director, Peter McMechan, had brought to his position both a grand vision and substantial experience of distance education from the University of the South Pacific, the first university in the world (from 1972) to use satellite technology to support teaching. In a strange way, however, the fact that the University of Otago *itself* had no history or experience as a distance educator – and, in general, little interest – was a challenge that, in my view, was out-weighed by positives. Basically, we could just get on with it, do whatever seemed best or needed, try things out and learn in the doing. Moreover, our partners in this new venture were only those Departments and academics who *wanted* to get into distance learning (i.e., had actively opted in), The same very positive circumstance applied to our students, for whom

distance learning "live", in a dispersed network of a hard-wired classroom, was both totally chosen and totally new.

Challenges in the main tended to be practical, resolvable and quite specific, such as:

- differential fees and levies, or not (relating to OUSA [Otago University Student Association], student services, buildings)
- legal confidence issues in the recording of "live" teaching
- how to transport plaster moulds of teeth safely
- students (not visible) taking their children to teaching sessions
- processing all our own enrolments (many of which involved Ad Eundem Statum admission) in order to confirm the sites needed for "live" teaching across the region or country in sufficient time before the start of each semester. (The DTU had a similar delegated authority in relation the distance students examinations.)

Less easy to resolve was the ongoing challenge of persuading many academic staff of the lead-time needed for their master material to be submitted – for formatting in the Otago house style, editing, copyright checks and clearances, and printing and posting in advance of the semester. Our deadlines for everything seemed ridiculous to many staff, relative to their internal teaching experience. The message repeated to every new teacher or coordinator was that, unlike their (then) ephemeral in-house lectures, their distance course package was an Otago artefact subject to public scrutiny, potentially anywhere, and for years to come.

**Dr Bill Anderson:** There were lots of remarkable things that happened, ranging from occasions when a staff member suddenly "got" what distance education could do, to Gordon Sanderson winning the Prime Minister's Award for Sustained Excellence in Teaching and Tim Cooper's University Teaching Award; from introducing Connect (which was significant because it marked the first real move to web conferencing for teaching) to Matthew Smart winning a DEANZ Award for the innovative use of mobile phones for providing study material to students. I grew to thoroughly enjoy the staff in Wellington who constantly strived to make their programmes better - every visit there was a highlight. The commitment of the library staff and of the ITS e-Learning team to enhancing opportunities for distance students and teaching staff was great. Heck, I used to go to work with a smile on my face because I knew that something wonderful was bound to happen each day!

[Challenges]: At times it felt that Otago was so focussed on being an on-campus University that parts of it did not understand or want to understand the difficulties that

off-campus students faced. Luckily, such occasions were infrequent. Overcoming the belief that all good education takes place in a lecture theatre or seminar room became easier as more courses, on- and off-campus, began to use online learning tools, and as more lecturers across the University accepted the role that digital technologies could play in supporting learning and teaching.

**Dr Sarah Stein:** I am very lucky to be still actively working in distance learning. I feel it is such a privilege to have a job that I thoroughly enjoy! One of the biggest highlights is the opportunity to work with staff who are innovative and dedicated to their teaching. I am continually bowled over by the dedication of all staff involved in supporting students and courses, and the teaching. And many of those people are from outside academic departments. Another highlight of my time so far in Distance Learning is realising how important the small scale approach to distance learning that we have at Otago is different from the way distance and online learning is offered at other institutions. I think we have something really special here, and I make opportunities everywhere I go to tell others about it.

I have a number of challenges in my role as Director, Distance Learning. Mostly, challenges are related to the way the University organises itself, being the very devolved institution that it is. Having said that, the devolved organisational arrangement has so many positive aspects. The challenges of consistency, comprehensiveness, and making sure that distance learning is not forgotten makes life interesting and presents lots of opportunities for creative thinking and action. They also present many opportunities for us in the Distance Learning Office to have lots of meaningful engagement with a variety of people at all levels across the University.

## *What were the strengths of distance teaching and learning at Otago?*

**Dr Claire Matthewson:** Otago's early distance teaching academics seemed pleased with their professionally produced course packages. Many felt their internal teaching improved as a result of their having focussed more sharply on instructional design and pedagogical matters (including appropriate assessment and evaluation). This flow-on effect of distance learning is surely one of its strengths in a dual mode university like Otago (to use the 1980s terminology). Lecturers also appreciated that some distance material was applicable to internal teaching, and that their front-end investment of time into course development was well repaid by time for other things, including research, within the learning package's life cycle.

An obvious strength of distance teaching on Otago's Unitel system was that it enabled

"live" input even at very short notice from colleagues anywhere in the world. In some of the highly specialised courses, a team teaching live with an overseas expert could quite easily be part of the basic design. (In the context of today's technologies, that seems totally unremarkable but for teachers and students in the 80s, this was a starkly wonderful contrast with solo teaching from the lectern). Distance learning technologies also enabled and supported international enrolment in very specialised professional areas such as those in Aviation Medicine.

The majority of Otago's target audience were practitioner-students who had no other way to access further professional development. Generally then (as now) through its distance programme, the University was meeting the current competency and special learning needs of graduates (many of these its own), especially so in Pharmacy and Dentistry. In the non-credit continuing education field, too, distance education had much to offer in Otago and Southland. The old Adult Education days, when university staff would drive around the countryside to teach classes in choral music, geography, or art history were well remembered but long gone, rendered non-viable by time and travel coasts and small local numbers. By removing the need to travel and enabling the numbers' aggregation of a few students in several places, the Unitel South network enabled the University once again to share its knowledge and skills with southern communities. It did so especially in the Humanities and, Medical continuing education.

Another particular strength of the Otago distance model in these years was that it *systemically* created a local study group in the environs of every Unitel site. With mandatory attendance at weekly (sometimes twice weekly) sessions, students met by schedule but often, as friendships formed, also by choice in informal peer tutorials. Even in the non-credential short courses, the distance delivery mode wrought similar wonders. One that I particularly recall occurred in the first of the Grand Rounds in General Practice series (developed and led by Professor Campbell Murdoch). When it was the turn of the Oamaru-based doctors to introduce themselves to the other groups around the region, they announced with considerable excitement that this was the first time they had all been together in the same place and, for some, it was even the first time that they had met.

**Dr Bill Anderson:** He tangata, he tangata, he tangata. At the University there were academics who knew their stuff and wanted to teach it well; administrators in Departments and support staff in Central units who worked tirelessly to help students. Fantastic help from Karen Logan and later Fiona Stuart in the Distance Learning Office. Off campus there were students who turned up at meetings to discover more about Otago and to fill their kits of knowledge to overflowing. It has to be recognised that distance education gave some very busy professionals the time (when they could) and the place (their place) to study. Otago distance education gives a very dispersed group of students access to some of the best minds in their field of study in New Zealand (and sometimes the world).

**Dr Sarah Stein:** I think that because of the nature of our distance learning suite of programmes, we can very clearly explain the strengths of distance learning at Otago. We are definitely capitalising on those strengths: through the provision of educational opportunities for those who cannot easily attend face to face courses; offerings that target specific topics and groups who have particular needs and who are from particular contexts; and shaping our programmes so that they make the most of the academic expertise we have at the University – some of which cannot be found anywhere else. Another strength is that people involved in distance learning at this university see it as a collaborative thing, so there is excellent support provided through the major service departments of the University such as ITS and the Library. Distance Learning could not survive without the services and support the people in those units provide.

## *Do you think our distance staff or students were disadvantaged?*

**Dr Claire Matthewson:** Over the period that I know best (1984–1989), I believe not. Otago's distance students in the main were (and are still) accessing courses developed especially with *their* learning profile and needs in mind. Putting it in a more general way, even if they were missing out on anything "because they were involved in distance education/learning," *without it* they were actually missing out on everything. Related to this, from the outset Otago's programme portfolio was characterised by specialist and minority disciplines. Distance delivery and enrolment was the only way to deal with the numbers game *and* the only way to address the profile of a geographically dispersed, professionally employed, relatively immobile, and highly time-poor cohort. In addition to the observations made about strengths, the predominance of practice-based older students was, I think, much valued and enjoyed by many academic staff. Involvement in Otago's distance courses facilitated regular interaction and engagement with their field of practice, and often enabling reciprocal learning in a way potentially less likely in their undergraduate teaching,

**Dr Bill Anderson:** Never!

**Dr Sarah Stein:** Absolutely not! In fact, they have gained! First, many, if not most of the distance students we have would have had no opportunity to undertake their courses if distance learning did not exist. Second, the mere fact that distance presents a different way of operating prompts immediate thoughts and actions about how to do things differently from the usual on-campus way of teaching and learning. Both students and teachers become innovative and creative as they strategize to make the learning and teaching opportunities work in the best possible ways. Final-

ly, for many it has become very clear that distance presents opportunities that would never have been thought of in on-campus situations and indeed some of the practices in place would not even work in an on-campus course.

### Reflections of distance learning teachers:

***How did you view your role and what were your expectations?***

**Dr Rosemary Beresford:**
*1987:* Introduction of distance (audio-conferenced) teaching of (New Zealand) postgraduate (Master, Diploma and Certificate) pharmacy students. (Teaching and administration)

*1991:* Introduction of University of Hong Kong/University of Otago MClinPharm programme (Teaching and administration)

*1995:* Appointed to oversee the disestablishment of University Extension and devolution of distance teaching to Divisions/Departments

*1995-9:* Convenor of Senate Distance Learning Committee

*1999:* Distance Learning representative of Committee for the Advancement of Learning and Teaching (CALT), following the disestablishment of Senate Distance Learning Committee

*2002:* Development and introduction of Postgraduate Certificate in Pharmacy (Herbal Medicines)

[Expectations] I thought at the start that it would be a brilliant way to engage people in education, especially at the post-graduate level. I never changed this view. I wanted to help it succeed.

**Rob Griffiths:** I have been the Academic Coordinator of the Occupational & Aviation Medicine programme since February 1987.

[Expectations] It was all very new then.

**Prof Murray Rae:** I was a teaching staff member at Knox Theological Hall in the early 1990s when Knox and Holy Cross College together established Distance Learning in theology. Knox and Holy Cross, at that time, constituted the faculty of theology in the University. As a teacher of distance courses, I wrote course books and team-taught papers in 1992 and 1993.

[Expectations] I regarded it as an exciting opportunity to make theological study available to students across New Zealand.

**Prof Paul Trebilco:** I have been teaching distance papers at the University of Otago in the Diploma in Theological Studies since 1990. I was on the Distance Learning Committee in 1999, when it was disbanded, and was Convenor or the Distance Learning Reference Group from when it was established in September 2000 until 2008. As Convenor I had a small role in encouraging and supporting distance learning across the University. In 2008, the Distance Learning Reference Group was replaced with the Distance Learning Advisory Board, and I have been on the Advisory Board since then.

[Expectations] When we first began the Diploma in Theological Studies in 1990, I had no idea what was involved! We quickly learnt about course books and audio-conferences!

## *What were the highlights and challenges?*

**Dr Rosemary Beresford:** Too many to enumerate, but briefly they include:

- seeing how many pharmacists wanted to enrol in distance learning.
- setting up a joint MClinPharm programme with the University of Hong Kong
- enabling university-wide distance learning to continue (and prosper) despite the disestablishment of University Extension.

The biggest challenge was walking into University Extension in July 1995 and facing people, who thought they were about to be made redundant and their achievements in fostering distance learning done away with, by a person who had been a member of the Review Panel that had recommended the disestablishment of University Extension. The challenge that followed was proving them wrong, to find all (almost all anyway) work within the Divisions, work that enabled them and their teaching units to take ownership and to strengthen, not lessen their distance teaching.

**Dr Rob Griffiths:** We had our first international students in 1990, the Harvard Medical School Dubai Center collaboration, 2006, the University of Washington Collaboration in Seattle. [I am also] the Foundations Program Director for the American College of Occupational & Environmental Medicine, responsible for developing online learning programmes.

[Challenges] Closure of University Extension. Otago University's focus on being an on-campus University.

**Prof Murray Rae:** In the early days, we team taught the papers and had two staff members in the audio-conference studio together. We could work off each other, keep track more easily of which students were not contributing to the conversation, and try to draw them into the conversation. Unfortunately, staff workloads now preclude that kind of team-teaching.

[Challenges] I have never really been comfortable in a studio, as distinct from a face-to-face classroom. The new video-conference technology does make things easier in this regard. Of course, getting to know the students is also more challenging when not interacting with them on a regular basis in classrooms.

**Prof Paul Trebilco:** The highlights have undoubtedly been the students. Many are very committed to their study in the midst of very busy lives. They are also focussed and enormously hard working. Often they have done lots of other study – sometimes even PhDs in other areas – and so are academically really able. It was great to be able to get funding for a Director of Distance Learning from the University budget. I was involved in the appointment of successive Directors and it's been great to see how each of the Directors has been able to contribute and add to the strengths of Distance Learning at Otago.

Writing and revising course books have always been a challenge. And preparing for audio- and then video-conferences is time consuming but worth it!

## *What were the strengths of distance teaching and learning at Otago?*

**Dr Rosemary Beresford:** Obviously, the removal of the need for on-campus study. Audio-conferences, which of course take/took place in real time, enabled people to feel part of a group and the regular, interactive teaching mode adopted in these audio-conferences enabled and encouraged students (most of whom were living very busy personal and professional lives) to keep up to date with their study requirements.

**Dr Rob Griffiths:** We were able to offer an international programme, where students were able to learn in their place.

**Prof Murray Rae:** Although I much prefer face-to-face teaching, the distance programme has been crucially important for the the Department of Theology and Religion in maintaining healthy EFTS levels, and it has provided opportunity to study theology for hundreds of students around the country who would not otherwise have been able to do so.

**Prof Paul Trebilco:** Distance Learning has become absolutely foundational for our Department – particularly since we are the only Department of Theology and Religion in a New Zealand University and so have a nation-wide focus. But many of our potential students can't come to Dunedin since they are involved in work elsewhere or have families, or careers and so on, so Distance Learning has been an ideal way for us to "go to them" as it were. Without the students that distance learning has brought in, our Department would be much smaller. So the accessibility of distance learning is the key. We also offer all our programmes by distance – from 100-level to PhD. Developing postgraduate qualifications by distance was one of the keys to increasing our Masters by Thesis and PhD student numbers.

## *Do you think our distance staff or students were disadvantaged?*

**Dr Rosemary Beresford:** No, quite the contrary. Staff were able to participate with colleagues across the University and its campuses to discuss issues, compare teaching and assessment techniques, and improve not only their distance but also their on-campus teaching. The biggest problem for most staff was their high level of enthusiasm, which resulted in them spending far more time communicating with their students than the guidelines suggested. Students did probably miss out on some leisure time because they had chosen to undertake distance learning and no

doubt many might have preferred to have been given the opportunity (i.e., financial and other resources) to study full-time on-campus, to spend time with other students. However, the way in which we constructed the teaching ensured that most were able to communicate easily with fellow students, both on-air and at workshops. Most importantly, they revelled in the fact that they could continue to work and, in many cases, use their professional experiences to inform their learning and their learning experiences to inform and enhance their professional lives.

**Dr Rob Griffiths:** No, our goal is to make distance learning better than class learning.

**Prof Murray Rae:** Yes. They miss out on lots of extra-curricula activities available at the university, including open lectures, and they do miss the higher levels of interaction with other students that are available for campus students.

**Prof Paul Trebilco:** Students often don't feel very "connected" to Otago as an institution. However, I think they do feel reasonably connected with our Department. We've tried to increase this sense of connectedness through regular emails, through face-to-face components of our teaching programme, and also through video-conferences, and I think these have helped a great deal. I feel I haven't got to know some of the distance students as well as I do with campus students who I teach face-to-face, semester by semester over several years. But without distance learning I would never get to know the distance students at all.

### Reflections of support staff:

***How did you view your role and what were your expectations?***

**Janet Sime: P**rogramme Officer (Course Materials), Distance Teaching Unit, 1985–1990; Senior Editor, Distance Teaching Unit, 1990–1995; and Senior Editor (Distance Learning), Dunedin School of Medicine, 1995–2016.

[Expectations] I understood that it was my responsibility to ensure that our distance students would receive high quality course materials that would set the University of Otago apart from other distance education providers. Our own DTU print guidelines were developed, and a distinctive house style established. Local students were employed over the Summer vacations to paste up master copies of required readings. One of these students, Tecwyn Evans, has gone on to become an internationally renowned conductor.

**Rosemary Clarkson:** Clerical Assistant 1986 -1992, and Administrative Assistant (Health Sciences Division) 1992 – 2003.

[Expectations] Not initially, as it was a clerical assistant position, but as time rolled on I loved being part of the team who delivered ongoing education to people. As a qualified ex-teacher I have always been interested in education and it was great to have a job where education was possible for people outside the university campus to continue their academic career.

**Veronica McGroggan:** Full time Postgraduate Programme Administrator from 1996 -2006 (although I was involved part time for a few years prior to that), then Departmental and Musculoskeletal Medicine Programmes Manager in the Department of Orthopaedic Surgery and Musculoskeletal Medicine from 2006 – 2016.

[Expectations] It was very much a "feel your way" situation! I first became involved after the disestablishment of the Distance Learning Unit in 1996 when responsibility for distance learning functions were devolved to individual departments, so we did have the opportunity to develop our own methods of communication with students.

**Hayley Solomon:** Distance Services Librarian, 1992 – 1996. Being the Distance Services Librarian was an exciting, very fulfilling role, critical for off-campus students. Otago had two thousand registered students living outside Dunedin, from Cape Reinga to the Bluff, all needing library assistance which fell under the Distance Services umbrella. What made this circumstance unique was the subject diversity and the means of accessing information was quite different than for the on-campus students. There were specific libraries for subject specialties (Science, Medical, Central (Humanities & Social Sciences), Commerce, and Law Libraries), and specific methods for accessing information (speak to a librarian, use databases, access abstracts, trudge to stacks, retrieve journals, read articles, stand in a queue for photocopying). These factors did not and could not apply to distance students.

Distance students were enrolled in very disparate courses, from Sports Medicine to Humanities. They had neither the means, the time, nor the location to undertake subject searches in the manner that on campus students did. That's where the Distance Library Service staff came in!

Yes, all that trudging, tramping, photocopying, printing, posting, parcelling – that was us! By *us*, of course, I mean myself, primarily, but over the years two fully dedicated distance services library assistants were appointed. We worked in tandem with the delightful reference team, headed by Jeff Kirkus Lamont. The exciting, professionally rewarding aspect of this job was the subject searches that streamed in on literally a daily basis. We had in-trays and more in-trays of pleas from desperate, isolated people who

had assignments due and no manner or means of accessing information to service these projects. Don't forget, this was pre Internet days, we were dinosaurs trampling though the information fields, harvesting information in tiny, succulent grains rather than with the combine harvesters available in today's information seeking world.

## *What were the highlights and challenges?*

**Janet Sime:** I always enjoyed DTU mail-out days, when all staff members were expected to drop everything else in order to help with the compiling, packaging and mailing out of course materials — a chain-gang team effort around the long benches in the despatch room on the ground floor of Scott House.

Another personal highlight was being told by the late Dr Pat Farry that I was the only person he knew who really could turn sows' ears into silk purses! A fitting epitaph, perhaps?!

When I returned to work in April 1992 from my honeymoon, I was surprised to find that it seemed to be common knowledge around the University that I had just got married. Eventually, I realised that one of my workmates had hung a huge banner under my office window (which was on the second floor of Scott/Shand House, facing the Registry building) proclaiming "Just Married Editor", but incorporating (on purpose) one or two obvious spelling errors…!

**Rosemary Clarkson:** Watching the Distance Learning Unit grow from running a few community-based teleconferences in Otago and Southland (in places like Tapanui,) to New Zealand wide, and then overseas with postgraduate certificates and diploma programmes. While I was there, the unit increased from 8-10 staff to over 20 at peak times, and being part of a dedicated group who took pride in their work and gave it their all was very satisfying and a great leveller, and we all attended weekly meetings and involving decision making.

The teamwork was fantastic when sharing workloads, especially when there was a huge mail-out and time was imperative. This created camaraderie when an urgent or a large mail-out involved all staff "pitching in" including the head of department who helped "fold and stuff" materials to go out to students.

Being part of a team delivering Pharmacy papers and Obstetrics and Gynaecology papers to Fijian students with localised interruptions such as coups and storms was challenging. The realisation that although we here in New Zealand talk about the techno age we are in and deliver electronically, it's not the same in other countries. Even using the telephone lines for audio-conferences were often fraught with difficulties.

[Challenges] Yes. Mailing the course material in time for lectures. A range of issues caused course materials to arrive from printery either late or not quite correct and then getting these to venues were a challenge.The mail-outs comprised of teeth, rocks and crystals, slides, and large ring binder course books. We invented a packaging system using an innovative design to make the mailing quicker and easier. In the early days we used to wrap the folder in newspaper then brown paper then brown tape and because New Zealand Post demanded it, string the parcels, a long weary job. Some classes were 40 plus students.

Another challenge was the co-ordination of preparing the exam rooms and making sure they were ready with invigilators and students all arriving at the same place and time, including International countries setting up examination rooms for these students in their country.

Another challenge was organising residential weekends outside of Dunedin, sourcing appropriate rooms to hold sessions in, finding accommodation and organising flights for lecturers.

As mentioned above, the technical issues of actually being able to deliver the audio-conference sessions to the remote areas was a challenge.

**Veronica McGroggan:** The highlights were being able to see students through the course of their qualifications, from their very first query about whether the course or individual papers would be right for them, right through to their eventual graduation. It was a bonus too to be able to interact with the students and even on occasions get to meet them when they attended on campus courses.

[Challenges] Changes in systems, changes in methods of delivery, and a lack of confidence with some students engaging in this. I would have liked to have had more time to spend with students who were having difficulties coping with the changing technology, or perhaps who were feeling a bit overwhelmed with the whole distance learning scenario.

**Hayley Solomon:** The Distance [library] staff read the assignment, identified which abstract indexes to access (that is, should we check Science Citation Index in the Science library, Index Medicus in the Medical Library, anything, possibly, in reference, all of the above?) We'd put on our gumboots, hats, coats, umbrellas – or none at all, which was usually the case with me. We marched out, braving the elements and black ice (sometimes with socks over our shoes for extra traction) and find our way to the relevant library, sometimes several blocks away in either direction. Once there, we would grab a computer and search the indices – all on CD ROM unable to search the wealth of academic resources now available online. We had to

choose relevant keywords and use Boolean logic to limit or broaden our meanderings.

[Challenges] It was very important to not make decisions for the students. We provided abstracts for them to choose which articles they would like to read and reference in their final work. We printed these and probably noted charges for printing, then posted the results to the student. We had to work quickly, because turnaround times were critical with assignment dates looming.

When we found the maybe ten articles required (and sometimes this amounted to multiple trips to do so), we had to personally stand photocopying each article, page by painstaking page, ensuring no blurring, no cutting off of last sentences, and, no omission of page numbers no matter what the size or format of the article. Sometimes the paper was yellow with age, especially in the case of retrospective studies. This was disastrous from a photocopying point of view, yielding many nasty grey pages and several attempts at improvement. Costs were tallied, and results were parcelled and posted as expeditiously as possible. Occasionally, books and inter-library loans were requested, which had separate but similar pathways. Distance Library staff collated all searches for the Science Library, the Medical Library, etc., for more effective use of our walking times. No email to just casually ask a medical librarian to check something out, or even texting to say "hey, walking over to science, is there a huge queue at the copiers?" Cell phones were in their infancy, but not owned (or used) by the majority of people. We thought we were very high tech with our CD ROMs!

We, (the reference team,) were some of the first people in the whole of this country (probably the whole WORLD!) to start using the World Wide Web, this mysterious thing with no decent user interface and a whole lot of slashes, dots, and http-ing. I remember clustering round Elizabeth as we were shown this miraculous new information source, all with specific addresses, no hyperlinks, but incredible, just mind bogglingly incredible. It was the first intimation of the transitions that were to occur, the necessity to grow, adapt, review our resource gathering strategies, blend traditional with eclectic, good practice with best practice.

And speaking of memories, my five years at the University of Otago Library brought me many things – three sons, a Master of Arts degree, a passionate love of latte (served in a bowl at the student union) a hatred of photocopiers, a delightful assortment of friends and colleagues, and most of all, a haze of happiness.

**Janet Sime:** Students were provided with virtually everything they needed for their course of study, including a copy of all the essential course readings, before their first teleconference. They could study from anywhere in NZ (including prison) — or even further afield, for some papers.

[There were] opportunities for informed participation in the teaching sessions, [and

there was] a high level of motivation amongst the majority of distance students.

**Rosemary Clarkson:** Students could continue their ongoing education without leaving home and stay in employment and have time with family; have babies (this did happen with O&G student who was pregnant and confined to bed rest. We re-organised her examination in a hospital room).

**Veronica McGroggan:** The ability for students to be able to continue studying from home, without having to physically go to a campus. The majority of our students work fulltime, and are also often trying to juggle children, family life and running a home, and have a limited amount of time to devote to study.

***Do you think our distance staff or students were disadvantaged?***

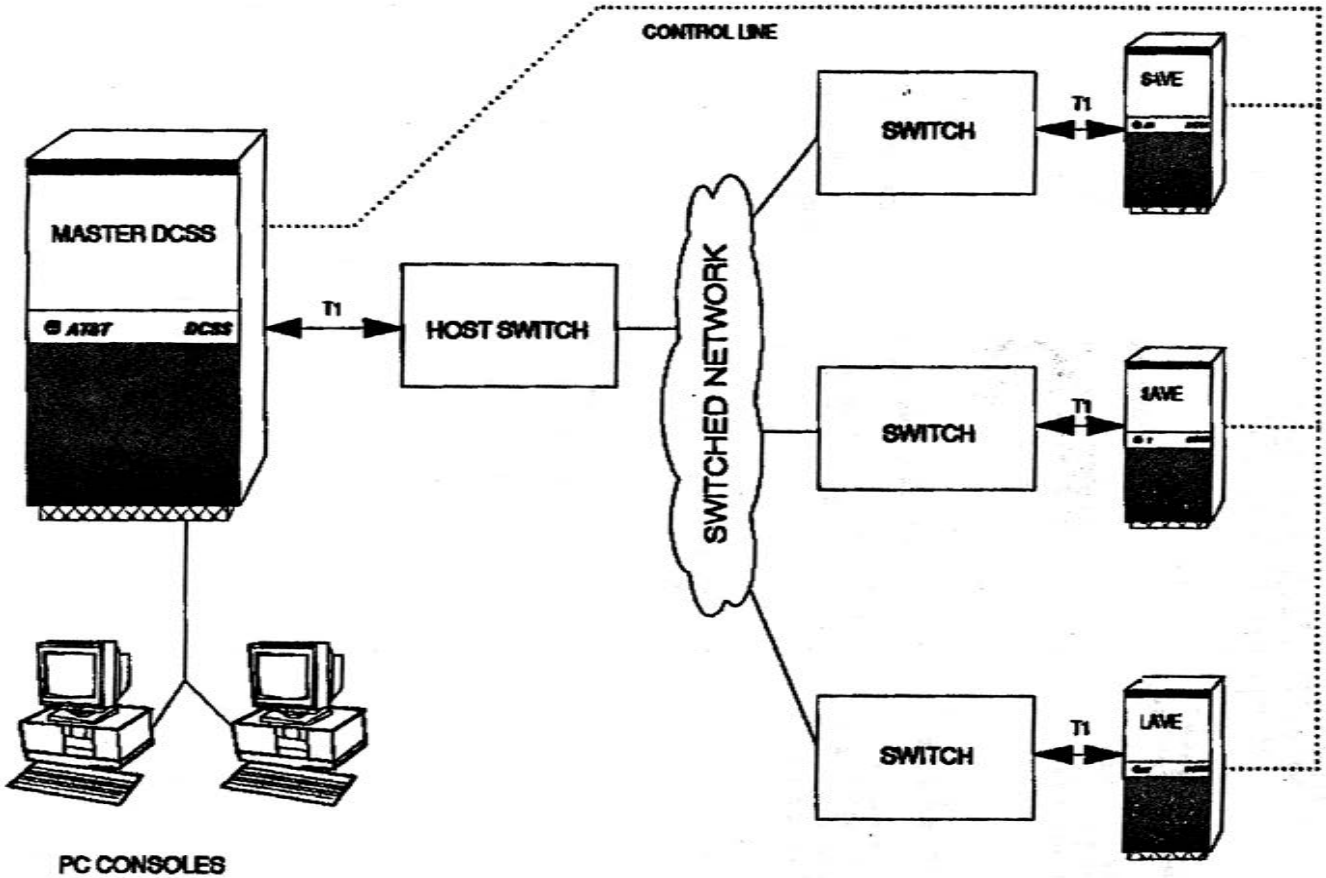
**Janet Sime:** No. If anything, I think that our distance students had significant advantages over on-campus students — in particular, the high quality both of the courses offered and the support provided.

**Rosemary Clarkson:** I feel it was an honour to be part of a group of a dedicated team who designed and developed an educational programme that offered people the chance to further their education outside a university without having to be on campus and to work with health professionals. I enrolled in geology papers as a distance student and loved it, getting the feel of the system from the other side. Our residential weeks were fantastic and one can't say enough about the energy, all of the staff academic and administrative on both sides of the fence. Some students may have felt isolated, but having the audio-conference made the difference when interaction could occur between students on line and this was innovative when compared to straight correspondence course. Also most courses had residential weeks or weekend which were a success for students meeting each other and their lecturers. Some forged lifetime friendships. Some of our students, because they were able to do our courses, succeeded in upgrading and up skilling and I saw them take on appointment s in higher positions.

**Veronica McGroggan:** From a personal perspective when studying myself, I found it really useful to have had the personal contact with other students in our class, as often it was great to be able to discuss aspects of the last lecture, or the upcoming assignment etc. It was good to share these things personally, and although I appreciate that

the distance students can do this by email or on discussion boards etc., sometimes it is really good to have the physical contact too.

*Having undertaken a Master of Library and Information Studies by distance at Victoria University of Wellington in the mid 90s, my only experience of distance teaching and learning was as a student. These responses provided me with an opportunity to hear from leaders, teachers, and support staff from quite a different perspective, and provided me with a number of insights of how distance teaching and learning should be administered. Thank you!*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# Chapter 5

## Otago distance learning: The early years

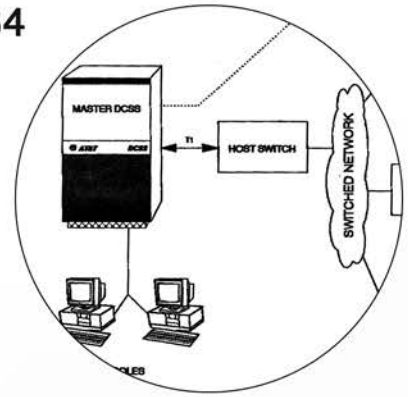
***Judy Fisher and Gala Hesson***

### 1980s


- University Extension offers huge variety of non-credit courses to the public, providing experienced teaching staff to travel around the region to present specialist courses.
- Peter McMehan is the University Extension Director, and coming from the University of South Pacific, has huge experience with using telecoms for Distance Learning.
- Jack Salmon from Computing Services (and formerly a Post Office engineer) leads project to create an audio conferencing network through Otago and Southland.
- Sadie Andrews: the last staff member of the once-thriving home science extension service who retired in 1994:

*"Jack Salmon who was the engineer who set up the system mentioned we needed a name for it. Off the top of my head I said Unitel, I think he agreed and that was that."*

## 1984




- Distance teaching mandate granted by University Grants Committee outlines four areas of responsibility for Distance Credit Courses, based on a permanent teleconference network.
- Centres in Dunedin, Invercargill, Gore, Balclutha, Alexandra, Cromwell and Oamaru.

## 1985


- Claire Matthewson is first manager of the Distance learning unit which is part of the University Extension.
- February: UniTel South is showcased and links the Westland United Council to Otago, and Government Ministers in the Beehive, and the Postmaster General in Wellington.

## 1986


- Certificate in Humanities begins 1986, Social Work Certificate launched also.
- Facuty of Dentistry launches Postgraduate Diploma in Clinical Dentistry.
- Unitel South used for teaching. Extramural statute prohibited universities other than Massey to teach extramurally For students to enrol, they had to be exempted from attending classes. For the first five years, students were required to:

  ***"attend a teleconference in real time".***

  The roll was always taken because of this.

## 1987

- MPharm in Clinical Pharmacy.
- Diploma in Aviation Medicine begins - taught from Wellington.
- University plans Sports Studies Diploma.

## 1988

**INAUGURAL ACADEMIC CEREMONY/NEW DISTANCE LEARNING CENTRE**

***CHRISTCHURCH SCHOOL OF MEDICINE***

The Christchurch School of Medicine now accommodates a new Distance Learning Centre which was opened on 4 March. This event combined with a ceremony to inaugurate the ac
year. The latter occasion
to become an annual
connection with thi
held at the School
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gley Nur

- Inaugural academic ceremony and opening of Distance Learning Unit at Christchurch Hospital (March 1988) Nursing Programme.
- First Distance Learning Unit graduation – 45 people receive the Certificate in Social Work and Theory 11th June 1988.

## 1989

- Diploma in Theological Studies approved to begin 1990 - 12 papers in all.
- Marilyn Forsyth appointed as first Distance Librarian (half-time)

## 1990

Otago, Hong Kong in
pharmacy degree ventu

By John Gibb

In an "exciting" new development at Otago University, 31 Hong Kong pharmacists have begun study for Master of Pharmacy degrees using the university distance teaching unit.

It was the first time Otago University had worked together with an overseas university to develop a shared degree programme, the Otago academic registrar, Mr Tim Gray, said this week.

It is also the first time master-level studies have been offered to overseas students through the University Extension unit.

The unit's teleconference system enables students to discuss their work via cable links with teachers based, in this case, thousands of metres away.

The Hong Kong pharmacists began the two-year degree course on September 27.

The students, who all have a first degree in pharmacy, are required to complete six papers and to prepare a thesis.

Two of the papers are offered by Hong Kong University, with the others being taught by Otago University pharmacy staff, using the teleconference facilities.

Fees are charged on a full cost-recovery basis. Teaching at Hong Kong has already begun, with Otago University teaching due to begin in March.

The University of Hong Kong has responded enthusiastically to the scheme.

Prof Brian Weatherhead

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- MPharm extended to University of Hong Kong and a truly international collaboration begins.


Peter Leech. Rural people have university chance. *Otago Daily Times*, 23rd December 1986.

Otago Hospital Board Chief Social Worker Mr Ivan Criglington, congratulates Ali Holmes, *Otago Daily Times,* 13th June 1988.

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*Unitel equipment.* (2016). Photo courtesy of J Fisher personal photographs. University of Otago.

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# Part 2
# *Designing and implementing distance learning programmes*

# Chapter 6

Plus ça change, plus c'est la même chose -
Jean-Baptiste Alphonse Karr, *Les Guêpes, 1849*

## "The more things change, the more they stay the same": Distance learning at the University of Otago College of Education

***Keryn Pratt***

**Introduction**

As we celebrate 30 years of distance learning at the University of Otago (henceforth, University), the University of Otago College of Education (UOCE) celebrates 19 years of distance learning. The distance courses offered at UOCE have largely been at the postgraduate level, although we have taught 300-level undergraduate papers by distance on occasion. Initially distance education comprised a component of one paper, with an Invercargill based cohort using some of the early asynchronous communication technologies. In 1997, two courses were offered by distance, with the offerings expanding since then. During this period the technology used to deliver online courses has continued to change, while other aspects of distance learning, such as the focus on best practice and on supporting students to ensure they have the best experience possible, have not. This chapter provides a brief history of distance learning in the UOCE over this period by initially exploring the issues that have seen much change, and then those for which change is less apparent.

**The more things change**

Over a period of 30 years, change is inevitable. Two areas of the distance education programmes at UOCE that have seen substantial change are the context in which our programmes are offered, and the technology used to deliver them.

***Context***

Since the institution that is now known as the UOCE was first involved in distance programmes, it has undergone a number of transformations that have impacted on its distance programme. In the 1990s, when distance and online learning first began, the Dunedin College of Education and University of Otago were two separate institutions, with the study of education within the University based in the Department of Education. In 2000, the Department became the School of Education, and then, in 2004, the Faculty of Education. The biggest change, however, came in 2007 with the merger of the Dunedin College of Education and the University of Otago's Faculty of Education to form UOCE. During this time, a number of aspects of our distance education programmes followed a similarly transformational path.

Our course offerings have grown from four in 1998 (one undergraduate and three postgraduate), to a stage where we currently have around 40 largely 400-level postgraduate papers available. Approximately 15 papers are offered annually. The papers originally offered focused on issues related to the use of information and communication technology in schools, however, papers now cover a wide range of topics, including research, leadership and management, social justice, and pedagogy and curriculum. Similarly, the range of programmes students can complete has grown, with the development of programmes designed specifically for distance students (Postgraduate Certificate in Teaching and Postgraduate Diploma in Teaching in 2000, Master of Teaching in 2004, and the Doctor of Education in 2008). The distance programmes have grown from being a small and limited offering to encompassing the majority of our postgraduate students.

While our papers and programmes have changed over the last 30 years, there have been similarly transformational changes for many of our students. There are two distinct groups of students undertaking distance papers at UOCE. The first are on a professional pathway; these are typically teachers who wish to advance their knowledge and/or upgrade their qualifications through completion of one or more of our professional qualifications (Postgraduate Certificate in Teaching, Postgraduate Diploma in Teaching, Master of Teaching, Master of Education, Doctor of Education). The second group follow an Education pathway, having completed a Bachelor of Arts in Education. They study Education at a postgraduate level through a Bachelor of Arts (Honours) or Postgraduate Diploma in Arts subjects (Education), and may carry on to a Master's or Doctoral (either PhD or EdD) programme.

With the majority of students doing our distance papers completing our professional qualifications, the changes in the teaching profession have resulted in changing demand for postgraduate qualifications. Initial teacher education has evolved over the last 30 years (see Berg, Gunn, Hill, & Haigh, 2017), and while the qualification for teaching used to be either a diploma (for primary) or a graduate diploma (for secondary) there are now degree and Master's level qualifications available. As the entry requirements for teachers have changed, many existing teachers have taken the opportunity to further their own qualifications, resulting in an increased demand for upgrade and postgraduate qualifications for current teachers.

***Technology***

Unsurprisingly, the biggest change since the UOCE distance programmes began has been the technologies used to deliver our distance courses. The Department of Education's first Internet-based courses were offered in 1997, using multiple technologies. Most of the information was provided via course websites, with asynchronous discussions using WebCrossing. Setting up the discussions required knowledge of a WebCrossing's own library of codes, which the then coordinator of distance programmes learned so these could be developed. Students were required to log in separately to both the webpages and the discussion boards, with neither system integrated with

those of the wider University.

The purpose-designed course websites provided all the information students needed to succeed in their courses. Each paper had its own website, with different papers indicated through the use of different colour schemes. The websites were designed using a school metaphor, with features such as classrooms, noticeboards, and filing cabinets (see Figure 1), so as to be familiar to the students, the majority of whom were teachers.

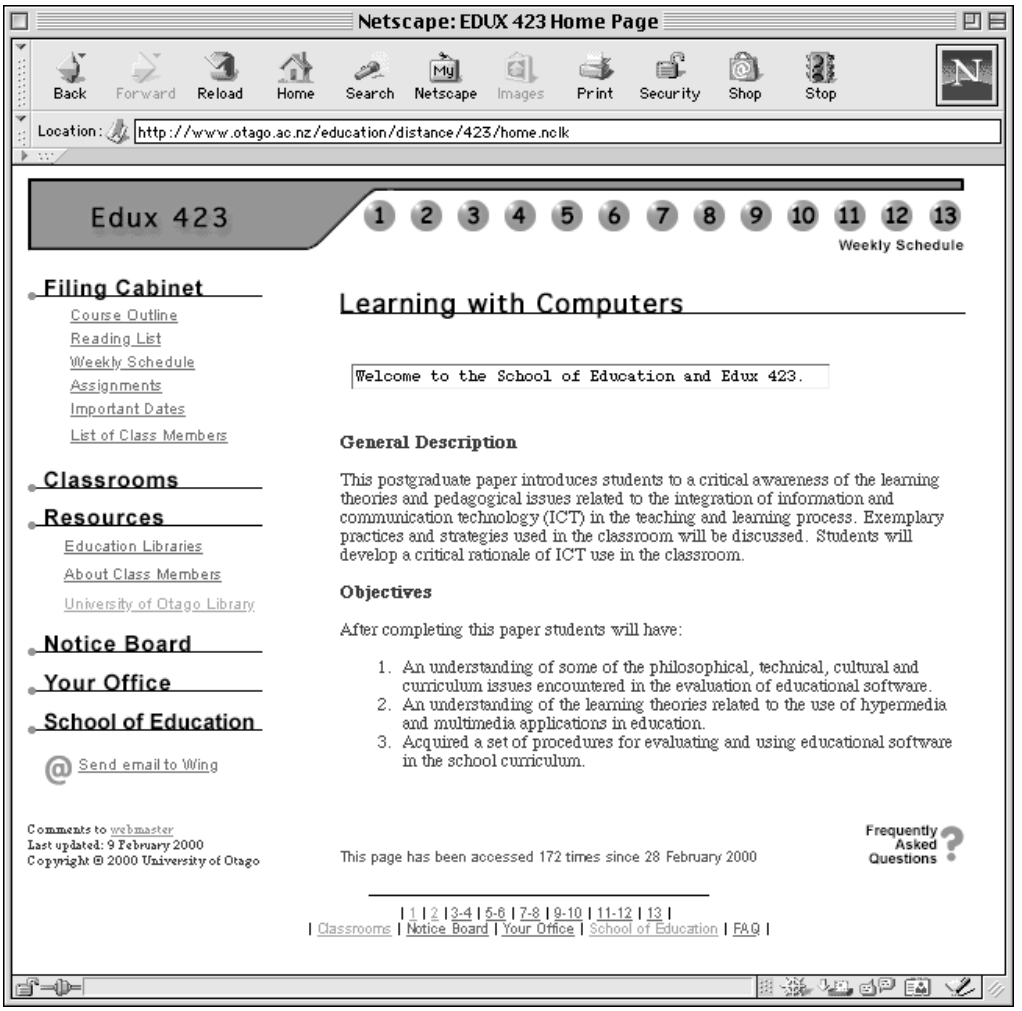


***Figure 1.*** **Example of a course website in 2000.**

As the figure shows, there were three main elements to the page. The menus were on the left hand side, with links to information about the course, the classrooms (asynchronous discussion board), and student offices (grades). In the body of the website was information about the course and a scrolling message bar, which was primarily updated on a weekly basis. Above the body of the page were the pacing buttons. Each

button represented that week in the semester. Clicking on the pacing button provided the information students needed to know for that week. As Figure 2 shows, this was divided into three sections: Introduction, What to read, and What to do.

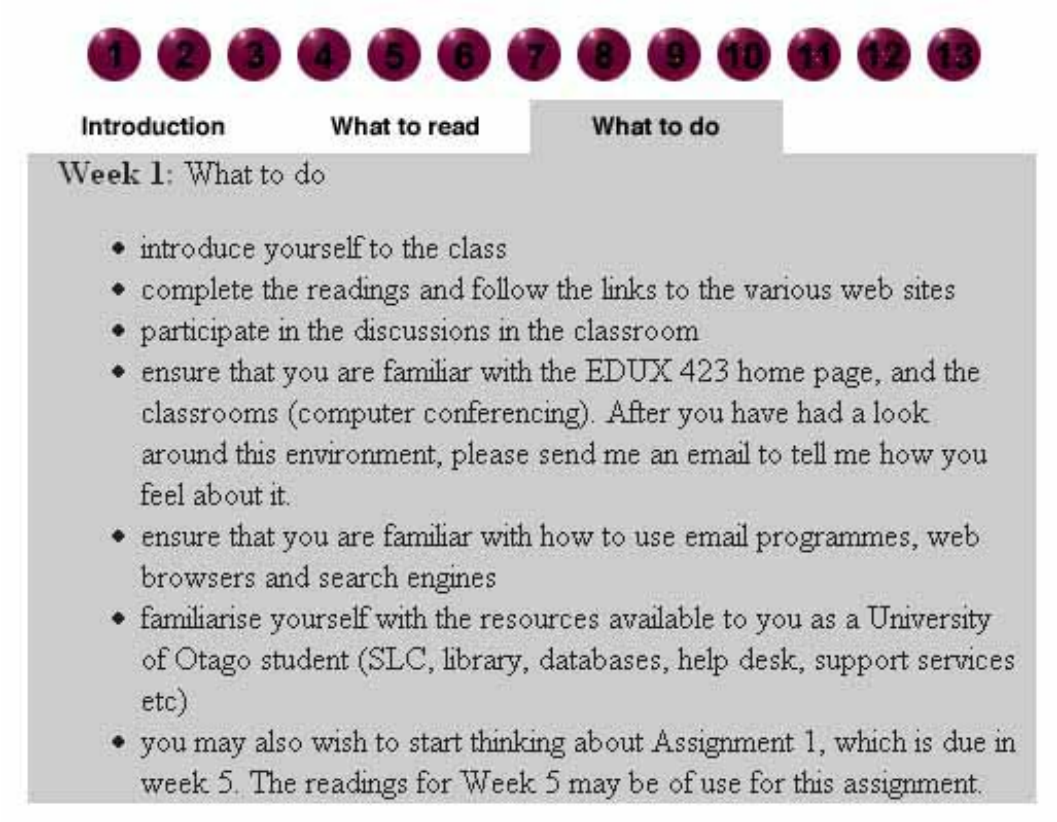


***Figure 2.*** **Example of weekly information (2000).**

As noted previously, asynchronous discussions were hosted separately, with students leaving their course webpages to access them. Upon logging into this system, students were presented with a list of papers in which they were enrolled (see Figure 3). This page also showed them whether or not there were any unread messages.

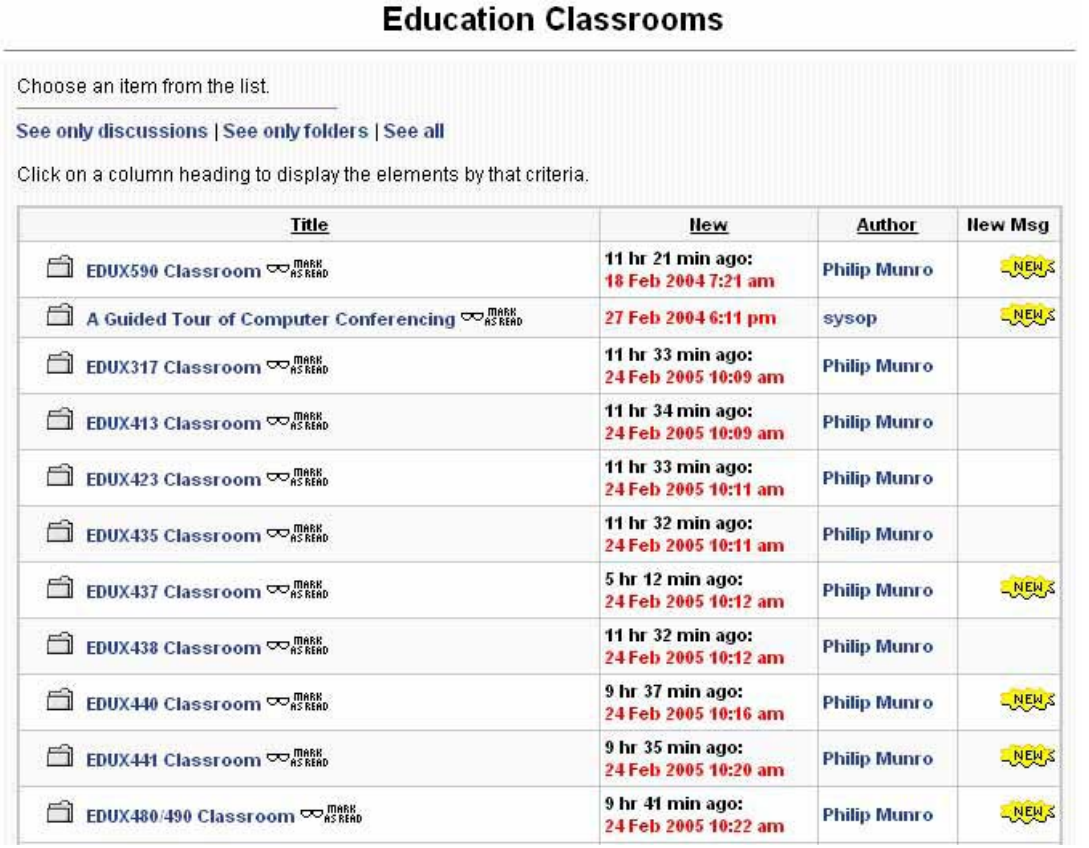


***Figure 3:*** **Example of the asynchronous discussion board (2005) Philip Munro was the system administrator at the time.**

The Dunedin College of Education, which had been using Blackboard to deliver their online courses, merged with the University in 2007. It was considered undesirable for both student and staff to be using two systems for distance papers, and, after discussion, a decision was made to shift to Moodle. Although Blackboard was centrally supported within the University, shortcomings with the online discussion boards meant that Moodle was preferred.

The Moodle course home pages shared a number of elements with the original distance webpages, but there were also key differences. Other than the overall appearance, the biggest change was the decision that the school metaphor was no longer needed, as our students were coming to study familiar with the terminology used in Learning Management Systems (LMS) such as Moodle. As Figure 4 shows, the Moodle webpages were divided into three columns. The left hand column contained information and links, the right hand column highlighted any news and events, and the content of the course was in the centre. Courses were still arranged on a weekly or fortnightly basis, and under each heading were links to the learning guide and discussion for that week, as well as to any other necessary resources related to that topic. As such,

these links took the place of the pacing buttons and tabs that were previously used.

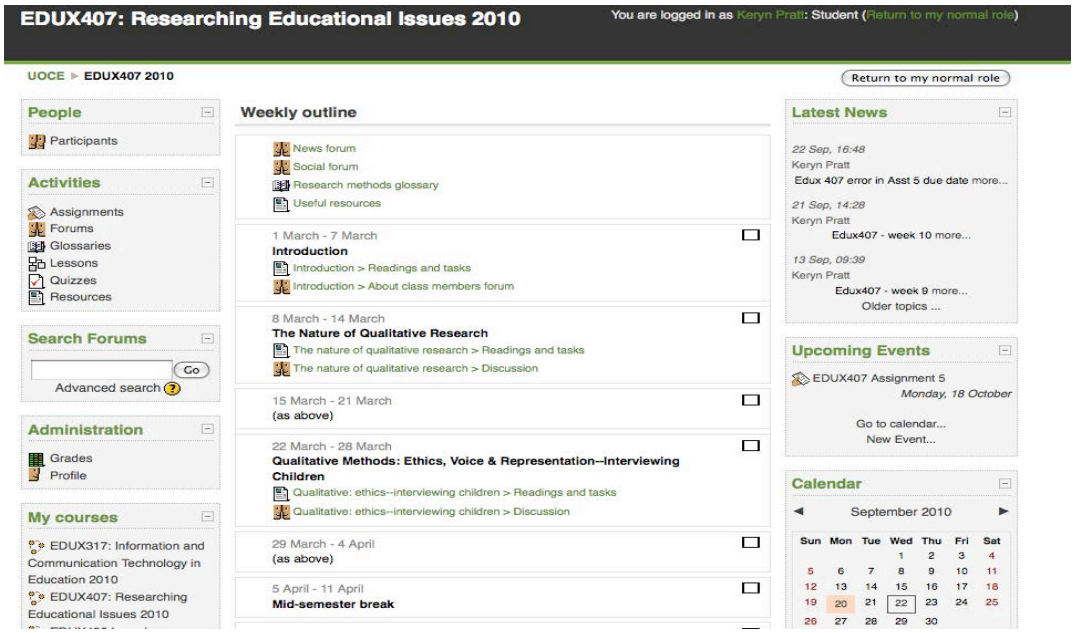


***Figure 4.*** **Example of a Moodle homepage (2010).**

Until 2014, Moodle was used successfully to deliver our distance education programme. At this stage the financial implications of hosting our own courses meant the UOCE needed to migrate to the centrally supported Blackboard LMS. While the overall appearance changed, key features of the Moodle courses were transferred to the Blackboard environment. As such, the main body of the LMS presented students with access to overall resources at the top, and then presented links to each weekly or fortnightly topic (see Figure 5). When students clicked on the relevant week, they were presented with a learning guide, and links to discussions as well as any other resources they needed for that week (see Figure 6).

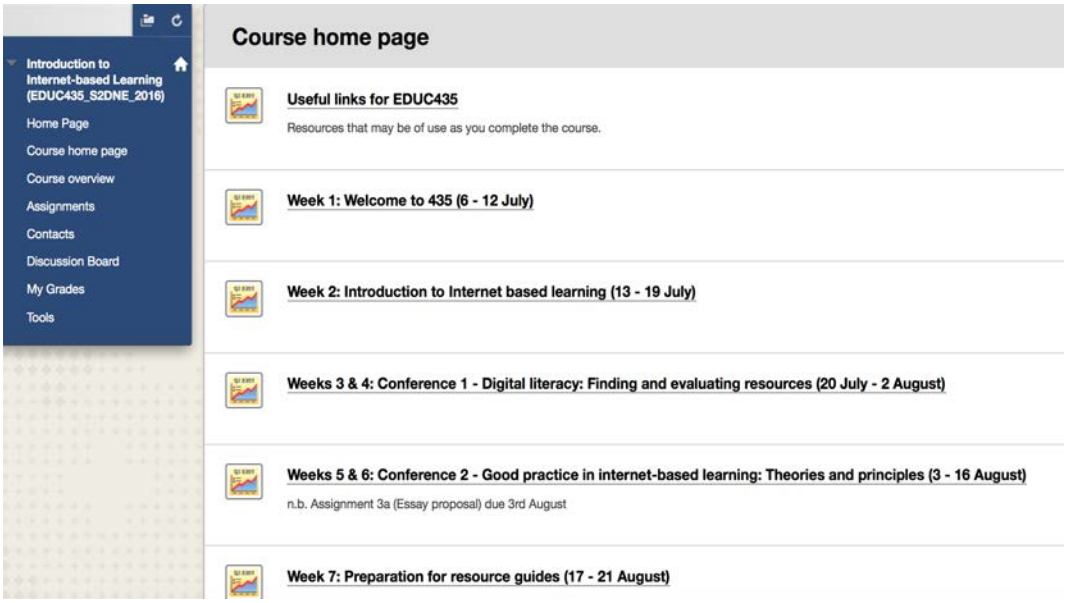


***Figure 5.*** **Example of a Blackboard homepage (2015).**

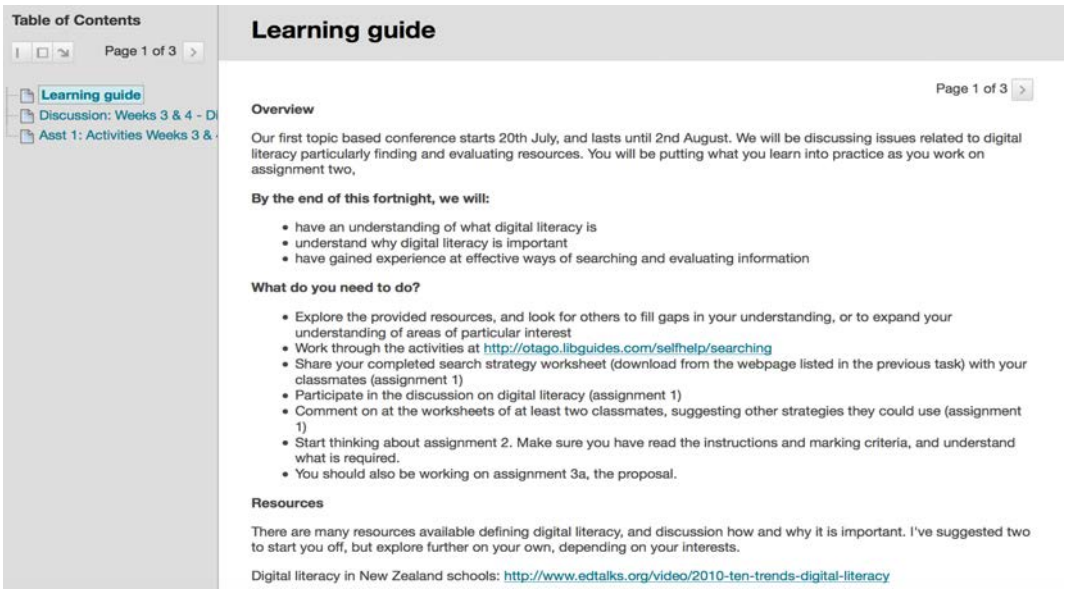


***Figure 6.*** **Example of a Blackboard weekly or fortnightly topic page (2015).**

**The more they stay the same**

While both the wider context and the technological context within which UOCE offered distance programmes have seen multiple changes, other aspects of our distance programmes have not changed over the 19-year period. In this section I will highlight

how key elements of the distance programme, notably the focus on the needs of our students and ensuring we are providing them with the best experience possible, have remained unchanged.

***Context***

Although the broad context within which our programmes were delivered changed considerably, with changes in departmental structures, and in the programmes and papers on offer, what remains unchanged with regards our context is that we still serve two distinct groups of students. The majority of our students remain those in our professional programmes. Research exploring the nature and needs of our distance students (Lai & Pratt, 2004) found that our typical students were female, mature, experienced teachers, and returning to study after some time away, which continues to describe the majority of our students today.

***Typical course activities***

As they have been since they were first designed, our online courses are generally designed around a series of 1- or 2-week topics, which we call conferences. A conference typically includes a learning guide, which tells students what they should be doing, readings and other resources related to the topic, and a discussion or other online activity for them to use to interact with their classmates and the lecturer. The discussions are moderated by lecturers or students, and are started by the moderator sharing a question or discussion point, with the class then responding. The moderator and students respond to the posts that are made, with the moderator providing direction as needed. All assessment in the courses is internal, and usually involves a mixture of formative and summative activities. The assignments are completed individually or as a group, and generally at least one assignment is related to students' practice.

***Pedagogy***

Since the initial distance course at UOCE, the design of our courses has been based on a number of theories related to learning and distance learning, as well as a number of design principles aimed at promoting teaching and learning in line with those theories. In general, the theories about effective teaching and learning online have undergone refinements rather than wholesale changes, and, in line with that, our courses have been refined rather than radically changed.

Social constructivism is the general learning theory that underpins all teaching at UOCE, including our distance courses. As its name suggests, it has arisen from the constructivist approach, which assumes that learners construct knowledge based on their experiences (Woo & Reeves, 2007). This emphasises the meaning that learners construct from the information that they are presented with, and the experiences they bring with them. As such, in a constructivist approach, the lecturer does not present 'truths', but rather enables students to make meaning. A social constructivist approach focuses on the role that social interaction plays in this meaning-making process, while also recognising that the knowledge and experience each individual brings to these

interactions will be different, and will impact on their learning (Vygotsky, 1978). It is a learner-centred approach, recognising that the goal of each learner may be different, and the meanings they create will be different based on both these goals as well as their previous experiences. Through sharing the different knowledge each learner is creating in social interaction, the group as a whole will be exposed to multiple perspectives, and have the opportunity for a much richer learning experience than if the focus was only on one individual. Within this social constructivist approach, the role of the lecturer is to scaffold these experiences, providing students with support to reach goals that they cannot, as yet, meet on their own (Vygotsky, 1978).

The social constructivist approach utilised in our courses manifests in a number of ways. Recognising the importance of learning through social interaction, asynchronous discussions and other similar activities are a key aspect of the courses. In these discussions the lecturer usually takes the role as a facilitator, encouraging students to draw on their own knowledge and experiences and share with the wider group, so that everyone may learn. Students are also often encouraged to take the role of the more knowledgeable other, leading discussions around particular topics. In our courses there is a focus on recognising and utilising the different experiences of those involved, while students are encouraged to set their own learning goals, within the confines of the paper as required by regulatory bodies. Similarly, assignments are designed to be flexible in order to meet students' needs, while challenging them to make use of the knowledge constructed within the discussion to advance their understanding beyond what they could have reached on their own. In addition, students are encouraged to work together to identify answers to any questions that they have, rather than relying on the lecturer for answers.

Sitting alongside the social constructivist approach to learning is a recognition that the process of social interaction often occurs within a community (Woo & Reeves, 2007). These courses base their notion of community on Garrison and colleagues' (e.g., Anderson, Rourke, Garrison, & Archer, 2001; Garrison, Anderson, & Archer, 2000; Garrison, Anderson, & Archer, 2003; Garrison, Anderson & Archer, 2010) work around the Community of Inquiry (sometimes referred to as a Community of Learners) framework. This framework identifies three key elements within a community: social presence, cognitive presence, and teaching presence, and presents them as a Venn diagram. The central intersection is the total educational experience of the student, while each two-way intersection represents a different element: supporting discourse, selecting content, and setting climate. This conceptual framework was as way of explaining the necessary elements of effective learning in an environment where computer supported communication, such as asynchronous discussion, was the key learning element (Garrison et al., 2003).

Within the Community of Inquiry framework, social presence refers to the degree to which participants can be seen as "real people"; that is, their ability to represent themselves both socially and emotionally. This is operationalised in our courses in a num-

ber of ways, from encouraging participants to introduce themselves and providing a number of personal details, through the use of photos in discussion boards. Lecturers often make regular contact with classes, sharing some details from their personal lives, with the aim of presenting themselves as three-dimensional. Students are also given the opportunity to share more of themselves through a social forum, which is an asynchronous discussion that is not monitored by the lecturer, thus allowing for wider discussions to occur. In contrast to social presence, cognitive presence is about the degree to which meaning can be constructed within the learning environment. In ensuring this is enacted in the courses, lecturers spend much time and effort designing their courses to promote meaning making, through "sustained reflection and discourse in a critical community of inquiry" (Garrison, Anderson, & Archer, 2001, p. 11). The final element of the framework, teaching presence, relates to the design of the learning environment as a whole. This includes not only the course itself, but also the LMS, and the activities being completed within it. Within the LMS, teaching presence is operationalised through having a clear and consistent layout across our courses, and through detailed learning guides that provide all the information needed by students to understand what they should be doing in a particular week, what the expected outcomes are, and any resources they might need to meet these outcomes. In order to enable students to focus on the content rather than the technology, we keep technical requirements to a minimum, with all technology used being chosen for a pedagogical reason.

In addition to the design of the LMS, as lecturers design their courses to promote teaching presence, as well as ensuring social presence and cognitive presence can be enacted, they consider a number of theories and design elements. In planning what students will be asked to do through their courses, lecturers consider and strive for a balance in the types of interaction students will be experiencing. Interaction, as noted previously, is a critical element in distance courses, with Moore (1989) defining three generally-agreed upon types of interaction: student-content, student-student, and student-teacher. As our courses are designed and evaluated, activities involving each of these forms of interaction are identified and included. Student-content interactions are perhaps those most commonly associated with forms of distance education, with pre-Internet forms of distance education using this approach as, for example, students completed readings and completed worksheets. In our online forms of distance education, the completion of readings remains as a student-content form of interaction, but is often supplemented by students working with the online learning environment or watching videos. Student-student interaction is generally represented in our courses through the asynchronous discussions, while this also occurs through any group assignments, and can occur in the social forums. Student-lecturer interaction can also occur through the asynchronous discussions, as well as through communications via email, phone calls, or video conferencing. In addition to considering these three forms of interaction, lecturers also generally consider variation in forms of interaction, ensuring they are not all text-based, as well as ensuring there are synchronous and asynchronous opportunities for interaction.

In considering how they will interact with students, and how students will interact with one another, our lecturers reflect on issues associated with transactional distance (Moore, 1993). This theory recognises that having a separation between teachers and students can lead to communication gaps and misunderstandings, as can the separation amongst students. This theory emphasises the need to consider which form of interaction will be the most appropriate for the desired outcome, emphasising quality and effectiveness rather than frequency. It also highlights the need for learners to have control over their learning. This is something that can be difficult to operationalise in a course that both has to work within the requirements of a University (e.g., semester schedules, assessment requirements) and is based on a community approach, where there is a need for people to be working together to build understanding, rather than working more autonomously. Having said this, it is still important to consider issues related to transacational distance, and strategies can be used to promote this, such as providing flexibility about when students must participate, and the nature and focus of assessments. For example, although the courses have set start and finish dates, and set dates on which assignments are due, there is generally no set time where students are required to be studying. Although some courses do schedule synchronous sessions, these are usually optional. The main aspects of the course, that is the discussions and readings, can be completed at times that suit students.

As issues associated with transactional distance highlight, it is important to recognise that while the courses are designed to function in the forms of communities, individuals are participating as members of the communities, and therefore may face their own challenges. As described previously, students taking our papers are typically working fulltime, and as such are balancing their study commitments with work and personal commitments.

***Support***

Another feature of our online courses that has remained largely unchanged over the preceding 19-years has been our focus on supporting students to ensure they have what they need to succeed. Many researchers have identified ways in which distance learning imposes a wide range of additional demands on learners (e.g., see Kazmer, 2000; Lai, 2002; Pratt, 2015; Sherry, 2000). In addition, distance students, as is the case with our students, tend to be older and more likely to be working fulltime than on-campus students, which places additional demands on them (Guiney, 2014). Those students who are new to online learning also have to become accustomed to this form of learning (McQuaid, 2010; Reisetter, Lapointe, & Korcuska, 2007), placing additional demands on them. In order to ensure that our distance students can succeed despite these demands, we have always emphasised the need to support them in their learning.

The types of support distance students need have been characterised in a number of ways. For example, Tait (2000, cited in Kenworthy, 2003) defined the required forms of support as being cognitive, affective, and systematic, while Simpson (2002) reports

that the support offered needs to be both academic and non-academic in nature. Using these texts as a starting point, we have identified five areas in which our distance students need support within our courses and context, and we provide them with that support. These areas are: content/course specific, general academic, general distance learning, general institution, and wider distance learning support.

The first area in which our students need support is with their specific course, and the content within it. Supporting students in this area is generally the responsibility of the lecturer. The aim is that this support needs be met in a proactive manner, with the course designed in line with the previously mentioned principles and theories so as to minimise the need for additional support. Our students are often returning to study after some time away, so another area where they often need support is with general academic skills, such as academic writing and referencing conventions. We provide support in this area though the inclusion of a resources area within each course that provides information about these topics, as well as directing them to sources of other support, such as the library and the Student Learning Centre. As our courses are often students' first experience of online learning, they also need support in gaining skills that help them succeed in this environment, such as managing their time and remaining motivated. As with the academic skills, students are provided with information regarding these aspects in the resources area within each course. Some individual lecturers also undertake additional activities to help students in this area (e.g., see Pratt, 2015).

Students often also need support in navigating the University's systems in general, particularly around course advice and enrolment processes. A key element of support in this area has been ensuring students have one point of contact for all non-course specific questions. The final area in which our distance students need support is in the broader domain of distance learning, ensuring that they receive the same quality of services as their on-campus peers. Working in this area often involves activities such as advocating for seminars that are aimed at helping students to be made available to distance students, rather than simply available on-campus.

***Research***

The final element of our distance programmes that has remained unchanged over the last two decades is our focus on research-informed practice. At the UOCE we are in a fortunate position that all the teaching staff in our distance programmes have an education-related research focus, while several of them work specifically in the field of distance education. In addition to using the University's standard course and lecturer evaluations, we work to apply lessons from international literature to our courses, as well as conducting our own research, all with the aim of improving distance learning and teaching for all involved.

With the exception of literature reviews looking at online communities of practice (Lai, Pratt, Anderson, & Stigter, 2005) and distance learning more generally (Lai,

Pratt, & Grant, 2003), research exploring distance education at UOCE has largely been empirical. General studies have explored how the Internet could be used to support university teaching (conducted in 2003) and evaluated the teaching and learning experiences of distance lecturers and learners (conducted in 2009), while a recent study explored the effectiveness of a number of changes to an online course (conducted in 2015) (e.g., see Lai, 2011a; Lai & Pratt, 2006). We have also conducted research that explored the use of games as a teaching tool (conducted in 2008), and how to effectively teach large classes online (conducted in 2007). A series of studies have explored how we can best support our students, exploring their learning and coping strategies (conducted in 2001), and identifying learning resources (conducted in 2006) and support strategies (conducted in 2011) (e.g., see Lai, 2011a, Lai, 2011b, Lai, 2014a; Pratt, 2009; Pratt, 2012; Pratt, 2015). One UOCE distance lecturer has done extensive work around knowledge construction in online communities (Lai, 2014b, 2015a) as well as exploring aspects of our largely online doctoral programme (Fields, Lai**,** Gibbs, Kirk, & Vemunt, 2016; Lai, 2011c, 2015b).

## Conclusion

Since 1997 we have been offering distance programmes to education professionals and those interested in studying education. Although the context in which they are delivered, and the technology through which they are delivered, has changed, the focus has remained firmly on ensuring that students have the best learning experience possible. This is done through a continual process of evaluating and refining our programmes as well as ensuring they remain in line with best practice. We look forward to this process continuing over the next 30 years, as we continue to provide opportunities for study to those who cannot, or who choose not to, attend traditional on-campus classes.

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# Chapter 7

## Educating New Zealand Dietitians at a distance: The Otago experience

*Penny Field*

**Introduction**

In the days before online learning, Zoom and laptops, expertise in distance learning based on audio-conferencing was a key factor in the University of Otago becoming New Zealand's sole provider of pre-entry postgraduate Dietetic education. The University held this privileged position from 1993-2011. Unique challenges arose in designing, delivering and evaluating a full-time, distance taught postgraduate diploma in Dietetics. At the time, health professional education, including Dietetic education in other countries, was based on the acquisition of knowledge, skills, and attitudes in courses where lectures complemented placement-based learning. Introducing an entirely distance taught pre-entry health professional course challenged this paradigm and produced numerous useful insights. A major success resulting from this programme has been the 19 cohorts of graduates who are now early - middle career Dietitians who are competent distance learners and are well prepared to engage in a wide range of continuing professional development activities. The establishment, management, pedagogy, outreach and technology use by the Dietetic Programme represent a unique chapter in health professional education in New Zealand and Distance Learning at Otago. In this chapter, I explain the development of the distance Dietetics papers at Otago, and explore the challenges and successes in regard to their implementation.

**Background**

In the early1990s, a review of health professional education in New Zealand led the Government to commence the move of hospital-based pre-entry health professional education programmes funded by Vote Health to University programmes funded by Vote Education. The Dietetic profession, which had a recent history of educational innovation, were early adopters of this change. With a long history of being the sole provider of undergraduate education for Dietetic students, the University of Otago was well placed to submit a strong case to the Dietitians Board of New Zealand for the new pre-entry programme. Distance learning was central to the University of Otago's proposal for an 18-month postgraduate diploma in Dietetics. Unlike the University of Auckland's proposal, the Otago proposal would enable students to undertake an integrated programme of formal learning and placement-based learning in five centres across New Zealand. The model was driven in part by the lack of local capacity in the then Otago Hospital Board for 22 student placements, and by the profession's desire for nationally consistent standards.

In 1993, 22 BSc Human Nutrition graduates, based in the Division of Sciences at Otago enrolled in the three semester, six paper Postgraduate Diploma in Dietetics (PG Dip Diet). Local tutor Dietitians employed as Professional Practice Fellows in Auckland, Hamilton, Wellington, Christchurch and Dunedin supported students in each centre. Students undertook five compulsory papers in a 42-week first year programme. Their weekly schedule included three mornings of audio-conferences, tutorials and 20 hours of professional placements over two and a half days. As earlier education programmes had not included learning how to formulate and answer research questions, the inclusion in year two of a 13-week practice-based research project, was a major innovation. With support from the University and the Dietitians Board student numbers were increased to 34 in 2001, and remained at this this level until 2011. Following the 2004 Dietitians Board Accreditation Review, the first year course was reduced to 39 weeks.

Audio-conferencing enabled students to learn from national and international guest presenters. Before the health system appreciated the value of inter-disciplinary health professional education, Dietetic students learnt from medical doctors, nurses, nutrition academics, clinical researchers, Ministry of Health and Food Standards ANZ officials, health service managers, health economists, politicians, union leaders, social workers, education and management academics, and learnt about all of these groups in the process. Audio-conferences also became the platform of choice for supporting distant research project supervisors, staff meetings, and placement supervisor training.

**Pedagogy**

In the 1980's, concerns about the need for students to bridge the knowledge-practice gap led the Dietetic profession to work with the New Zealand Council for Educational Research to undertake the process of Developing a Curriculum (DACUM) (Wagner, 1988). This work led the profession under the auspices of the Dietitians Board to develop and maintain current Statements of Registration Competency (Dietitians Board New Zealand, 2010). This innovation resulted in competency-based education (CBE) being well established in the profession by the early 1990s, which enabled acceptance of a potentially contentious proposal for course delivery at the political level and also provided guidelines for course design.

***Political Influence***

Approval of the PG Dip Diet proposal signalled implicit acceptance by the University of Otago and the Tertiary Education Commission that competency-based education applied beyond vocational training to higher education. The acquisition and assessment of higher-level skills, integrated with knowledge and attitudes, was now a bona fide University activity. Two factors coincided to make this endorsement possible at that time. Firstly, the professional registration authority - the Dietitians Board of New Zealand, had well-developed statements of registration competence. These statements were embedded within the Dietetic profession, and underpinned the previous hospital-based Dietetic course run by the Dietitians Board, which was undertaken by students with University of Otago Degrees and Diplomas in Home Science.

The original Dietetic competence statements reflected Dreyfus's (2004) conceptualisation of novice to expert levels of competence, with 'competent' being the standard required for professional registration. To date, New Zealand Dietitians have yet to complete the next steps and define the proficient and expert levels of practice, with the Dietitians Board continuing to focus on ensuring that entry-level competence statements remain current. These statements reflect recent understandings of competence as an integration of understanding, performance and values performed in practice settings by entry-level practitioners (Chambers, Gilmore, Maillet, & Mitchell, 1996). This set of statements was important for the University at the time, as the Dietitians Board Statements of Competence became the minimum learning outcomes for the PG Dip Diet course. With recognition of the University of Otago course, the Dietitians Board chose to discontinue their paper-based Board registration examination and delegate responsibility for assessing entry-level competency to the University.

Acceptance of the PG Dip Diet proposal also reflected a less conscious recognition that the learner is the centre of competency development, as competency acquisition occurred in more than one location and under the auspices of more than one institution, in this case University-led education and Hospital-based placements. Despite these issues being controversial in international CBE literature at that time (Burke, 1989), wider issues were the second and critical factor enabling approval of a competency based, postgraduate University course delivered by distance learning. Under Government policy of the day, an unsustainable cost structure of the hospital based training system being borne by the Department of Health created pressure for Dietetics to be one of the first health professional pre-entry courses being moved from Vote Health to Vote Education.

While the University of Otago's expertise in distance education helped win the competitive round bid for delivering the pre-entry course, prior to 1993 no other pre-entry health professional course in New Zealand had been delivered by distance. As far as we were aware this proposal was unique internationally for Dietetic education at the time (Field, 1996). The Department of Human Nutrition at Otago had confidence in developing the proposal as it had experience in delivering the postgraduate Diploma in Community Nutrition to graduates seeking a higher qualification in Nutrition. At that time, programmes within the Division of Health Science included distance components that supported students on placements, and for continuing professional education, but these were less comprehensive in scope.

***Guidelines for competency based education at a distance***

A significant design challenge for the PG Dip Diet course was to avoid University run audio-conferences being seen by staff and students as addressing knowledge acquisition perhaps didactically delivered, with hospital based placements being the place for more interactive learning of skills and professional attitudes. Several strategies addressed these issues. For example, local Dietitians employed as University tutors supported integrated student learning through tutorials, placement activities and professional coaching. By reinforcing the theory-practice links through practice-based and classroom activities, Tutors played a critical role in student learning. Tutors were

based in five centres Auckland, Waikato, Wellington, Christchurch and Dunedin at sites where the University was able to contract access for student placements.

Assessment practices were also deliberately designed to enhance learner-centred education. Consistent with the principles of competency development, formative feedback was integrated into major assessments. Assessments were designed to evaluate the integration of theory and practice. For example, effective nutrition counselling is a foundational competency for professional practice. Students at the novice stage would apply counselling principles discussed in audio-conferences in classroom role-plays. Structured peer and tutor feedback complemented self-assessment using a comprehensive assessment template. Students at the beginner stage then progressed to hospital placements where they practised under supervision and received feedback on their nutrition counselling skills. This incremental, learner-centred approach is evident in an excerpt from the Communication and Counselling Assessment form, in Figure 1 below.

**COMMUNICATION AND COUNSELLING ASSESSMENT**

**Student:** _____ **Date**: _____

**Assessor: Tutor, Supervising Dietitian, Peer, Self**: _____

**Assessment:** Formative / Summative (Please circle) In patient / out patient (Please circle)

Use this form for guidance/formative feedback when practising these skills.

**5 = Exceptional std, 4 = Very good std, 3 = Good std, 2 = Fair std, 1 = Poor std, 0 = not observed**

**NB Please take into consideration the difficulty of client /condition. For an area not well managed ask the student to reflect on the session. Take into consideration in your marking, a student who can reflect thoughtfully about the problems that occurred and potential improvements that could be made.**

1. **Preparation / accurate reading of patient notes, referral letter / considers the environment**
   Has read the referral notes/patient notes accurately. Has considered all background information and is ready for the interview. Attends to patient comfort and privacy, considers positioning of patient and self.
   5 4 3 2 1 0

2. **Getting started**
   **Introductions** – Greets the patient appropriately, uses patient's name, introduces self and supervisor, ensures patient gives consent to talk with student, purpose of consult discussed, gives time estimate of interview.
   5 4 3 2 1 0
   **Develops Rapport** – Wins confidence/co-operation of the patient, appears comfortable with patient, patient at ease
   5 4 3 2 1 0

***Figure 1.*** **Communication and counselling assessment excerpt.**

Whilst readily available expertise in audio-conferencing helped ensure interactive audio-conferences, additional resources were required for several reasons. Students' ability to achieve course outcomes depended to a large degree on their ability to learn through audio-conferences. Consequently, student engagement in audio-conferences

was critical. This was particularly important as a high number of audio-conferences were incorporated to address the extensive curriculum set by the Dietitians Board. Students participated in 300+ audio-conferences over a 38-week academic year, usually scheduled three mornings each week.

Although use of the audio-conference network allowed the Programme to access expert presenters across New Zealand, few of these presenters had experience with audio-conferencing. To address this issue the Dietetic Programme added detail to existing University guidelines for managing interactive audio-conferences. As well as templates for session outlines, readings and PowerPoint files, the Dietetic Programme guidelines included suggestions for guest lecturers to facilitate student engagement (see Figure 2 below). Student evaluations of audio-conferences were designed to capture the level of interaction, preparation activities and overall learning experience. Programme staff provided summary feedback comments to guest presenters, most of who acknowledged the input and modified their facilitation approach the following year.

The format we use for lecture outlines includes the following headings:

Lecturer Details

Briefly introduce yourself and your current professional practice/position, and provide a printed passport-size photo.

Aim

The aim is constructed from the *student's perspective* rather than the lecturers.

Learning Objectives

Learning objectives should allow the student to know exactly what is expected of them.

Preparation

The students will prepare for your session by reading the lecture outline and answer the questions asked about an essential reading.
Where there is other preparation you would like them to undertake, e.g. revision of topics covered in their undergraduate programme, viewing a PowerPoint presentation, an activity, or to prepare a solution to a case study, mention it here.

Outline

*Suggested format:*

1. Introduction, including an engaging overview of the topic.
2. Detail session content. Include references as readings, to effectively free students from taking notes during teleconferences, allowing them to both listen and actively participate in the activities.
3. Divide your session into 10 – 12min sections, include a range of interactive learning activities; case studies, debates, role plays, students comparing text cases with placement or other prior experiences, student-led discussion of readings or a short video, simple food based activities, illustrations from your professional practice, other student-centred activities.
4. Student led summary of session

***Figure 2.*** **Excerpt from guidelines for guest presenters.**

**Evolving Blended Education**

As learning technologies evolved, the Dietetic Programme staff became known for being early adopters of new platforms for student learning. Although the course inherently blended more formal learning with placement based and tutorial learning, enhancing the effectiveness of learning modalities was an ongoing challenge. It is well recognised that extensive use of audio-conferences does not suit all student learning styles (Kolb, 1976), so a range of bespoke strategies were used to enhance the learning experience of more visual and kinaesthetic learners. Refining the guidelines for audio-conference presenters was an ongoing process. Interactive activities received good student feedback, as although students generally knew each other from undergraduate Human Nutrition studies, and were participating in audio-conferences as centre-based groups, most recognised that deliberate use of a range of learning strategies enhanced their learning. However, ensuring that the large number of audio-conferences all offered effective learning was a continual challenge.

These challenges led to early exploration of computer based learning platforms with a 1997 University of Otago CALT grant supporting an 'Interactive Computer Learning' (ICL) pilot project (Field, 2000; Jensen, Field, & Stringer, 1999). The ICL project aimed to provide students with an alternative to aural based learning medium by using Claris Homepage software to deliver two modules in the Food Service Management paper in year one. Both modules required an applied approach and by necessity included a large component of visual learning. Learning activities included students reviewing content loaded on to a web page and undertaking tasks before engaging in a tutor facilitated real time chat zone. Students in each centre were encouraged to discuss material and post collective views online. An edited Chat zone summary was posted for students' reference. To enhance student learning ICL sessions applied the principles of learner-centred education: active learning, use of prior knowledge and experience and technology appropriate to the task.

Student evaluations using a Small Group Instructional Diagnosis (SGID) process were informative. Students found the learning objectives were clear, but processes took longer than expected and they also preferred a mix of synchronous and asynchronous activities. There was a strong preference for retaining paper based course material and also for the level of class synergy enjoyed in audio-conferences. Based on this feedback, a refined version of ICL continued in 1998 with a second paper also replacing some audio-conferences with ICL sessions.

ICL sessions continued until the University purchased access to the Blackboard Learning Management system in 2000. All PG DipDiet papers embraced this more sophisticated, integrated e-learning environment. Students valued the ability to access web based Blackboard pages from any computer at any time. Paper coordinators chose the Blackboard features that best fitted the learning strategies for their paper. As a result, students were offered a range of learning experiences, including interactive real time discussion board sessions, online videos, e-submission of assignments, online access to readings and other course materials. Interestingly the move to e-versions of course-related material was remarkably slow as students expressed strong preference

for print copies of all course materials.

In response to ongoing student feedback for learning technology that enabled "*hearing and seeing*" (endorsed by the Dietitians Board of New Zealand 2003 Accreditation Review), the Programme experimented with web based Adobe Connect. However, New Zealand network capability and cost issues meant that all centers north of Dunedin experienced Internet speed issues, which created ongoing quality issues and led to the retention of audio-conferences. These web-based platforms required higher speed reliable Internet connections and higher speed student computers that were not included in Programme budgets at the time and were not available centrally.

**Course Evaluation**
Ongoing evaluation by a number of course stakeholders led to major and incremental improvements in course design and delivery. Regular student evaluations, staff reviews, placement provider feedback and external examiners reports produced incremental change, whereas longer cycle University Programme Reviews and professional re-accreditation by the Dietitians Board of New Zealand prompted larger quantum changes.

Within the Dietetic Programme, only two evaluation tools; the student evaluation of audio conferences (developed before the Higher Education Development Centre (HEDC) distance questions existed), and staff reflective reviews, directly addressed distance learning aspects of the course. This feedback was, however, instrumental in initiating many of the developments and strategies outlined above that moved audio-conferences to becoming more interactive and the incorporation of new learning technologies.

**Resourcing**
The resources required to deliver a full-time national health professional postgraduate course by distance were not well recognised by Government or University resource allocation models of the day. The 1999 reduction in Government Equivalent Full Time Student (EFTS) funding put pressure on the University to provide ongoing top up allocations to the Dietetic Programme. High infrastructure costs were generated by the need for facilities and staff in five centres and the requirement for consistent student learning experiences. Although time and budget-intensive systems existed for ongoing communication between centres, staff travel and tutor training were critical for effective management of the Programme and incurred significant costs. Producing valued print-based course materials to support formal learning was also resource intensive. To coordinate the large number of guest presenters, Dietetic Programme Administrative staff carried responsibility for compiling, editing, and dispatching course workbooks for all six papers. In addition, staff scheduled all audio-conferences, administered in-house student evaluations and produced a detailed Placement Manual applicable to all placement providers.

As all academic staff involved with earlier models of distance learning knew, the workload was considerably larger than with campus-based face-to-face teaching. Before Internet-based learning management systems such as Blackboard and sophisticated email and e learning became everyday tools, supporting students at a distance was time intensive. The time involved in the cycle of activities - preparation of course materials, readings, delivery of sessions, providing feedback, assessment and individual student support was higher than for on campus courses. For many academic staff this workload was not well recognised by workload models, promotion criteria or funding allocations. Given the workforce constraints on Dietetic student numbers, the Programme rarely broke even and was under constant pressure to minimise costs.

Despite strenuous efforts by University administrative staff the EFTS funding level appeared inappropriately low from the Programme's inception. Under funding was the result of artificially low clinical access costs being identified and transferred from Vote Health to Vote Education. This combined with the Tertiary Education Commission funding bands that did not recognise the combination of distance learning and postgraduate, yet pre-entry health professional aspects of the course, led to chronic resource constraints.

Resource constraints, however, fuelled rather than stifled innovations for dietitians who had prior experience of constraints in the public health system, where financial limitations were a familiar part of the professional landscape. In addition to the low cost innovation components of student competency-based education outlined above, the Programme developed a number of other student, staff and professional initiatives based on distance learning principles. Noteworthy initiatives include:

- The instigation of two-week student placements in provincial centre hospitals.
  - The placements aimed to give students experiences that would enhance their understanding of professional practice in the provincial centres. Students and local dietitians were supported through distributed course materials and audio conferences.

- Audio-conference-based monthly programme staff meetings and staff development.
  - University-employed Dietetic Tutors and hospital based Supervising Dietitians both undertook a 'Practice Supervisors Course' developed by a Tutor Dietitian. This element, which was initially audio-conference based, provided a structured introduction to practice based learning pedagogy, with the aim of providing students with effective learning environments. To encourage local communities of practice in Dietetic education in each centre the course was designed around peer learning activities.

- An annual National Student Meeting held in conjunction with the New Zealand Dietetic Association's (NZDA) conference.
  - The meeting was a valuable opportunity for all students to engage face-

to-face, and network with members of the profession. It also provided an excellent environment for profiling student research posters and permitted Programme academic staff and tutors to meet and engage together.

- An effective response to concerns expressed by the NZDA Professional Development Subcommittee about the difficulty some members were experiencing in completing continuing competency activities.
  - In 1998 the Dietetic Programme established a highly successful programme of monthly Continuing Education audio-conferences for NZ dietitians. Experts from a range of sectors led interactive audio conferences supported by reference material. The programme grew rapidly with over 80 dietitians regularly participating each month (out of approximately 350 registered dietitians). The programme helped to forge strong links between the academic nutrition community and New Zealand dietitians.

- Development of post-entry courses as nutritional science evolved and models of practice changed.
  - NZDA members who had trained before the PG Dip Diet programme became increasingly aware of the need to update and upgrade their professional knowledge. In partnership with the profession in 2002, the Programme introduced a PG Certificate in Diabetes. This audio-conference based course became a pilot programme for a 2008 proposal for the audio-conference and web based PG Diplomas in Advanced Dietetics that were endorsed in Diabetes, or in Gerontology Nutrition. However, wide consultation with the profession subsequently led to this proposal being upgraded to a Master of Dietetics degree, with two endorsements.

**Learning Support**

Over 19 years, PG Dip Diet students regularly used all University learning support services that they were eligible to access. Students developed a close relationship with the University's Distance Librarian, who presented an audio-conference early each year to profile the range of library services offered. These services gave students access to specialist literature not available in most local Medical Libraries. They were used for accessing medical textbooks and journals. The Programme purchased a collection of bench books for each center to complement the collections held by students and local Dietetic tutors. The University's subsequent investment in e-journals, e-textbooks and online searchable databases had a large and immediate impact on Dietetic students' ability to engage with published literature.

Staff benefitted from the wide range of expertise in the HEDC. HEDC staff regularly contributed to biannual Programme academic and tutor staff meetings by leading sessions on learning facilitation and assessment. Students living outside Dunedin on the other hand experienced more difficulty in accessing Student Learning Centre services. Students in Christchurch and Wellington had intermittent access to learning support from the respective School of Medicine student services due to operational issues between the University Divisions of Sciences in which Dietetic training operated, and

Health Sciences which provided medical student and some other health professional education programmes.

Student access to health services was even more problematic with large variations between centres, until reciprocal arrangements between Student Health Services (SHS) were established. This removed the ability of local SHS to charge a levy - if they were willing to offer services to Otago distance students. Those centres where Dietetic students provided supervised nutrition counselling services for local SHS had less difficulty accessing student health services than their colleagues in centres without such 'work for reward' relationships. Overall these patchy, uncertain arrangements created unnecessary stress and hardship for cohorts of students with physical and psychological health issues.

Student access to computer-assisted learning (CAL) facilities or their equivalent was equally problematic for different, University-centred reasons. Student use of the University's helpdesk services was limited by the ability of ITS to resolve issues in centres not connected to the University network. In order for students in Wellington and Christchurch to access School of Medicine CAL facilities the Programme paid a fee of $500 per student to the Division of Health Sciences.

Initially Māori and Pacific Island students needed be pro-active to access support from the Dunedin-based Māori Centre and Pacific Island Centre. However, the Department of Human Nutrition's well-established Kaiwhina programme offered many compensatory support services including contacts with Māori Dietitians. With considerable support from a Māori Centre staff member a mentoring programme for Māori Students ' Ka Rikarika a Tane', introduced in 2010, offered additional support to Māori students. Local tutors largely provided support services for Asian students as initiatives to link these students with local Asian Dietitian mentors were difficult to sustain.

**Conclusion**

In 2012 the University of Otago replaced the distance delivered PG Dip Diet with a pre-entry Master of Dietetics degree. In this new model all students spend their first year on the Dunedin campus before undertaking placements and a research project in allocated centres in their second year. Although most of the 2nd year students are outside Dunedin, their course is designed for local delivery. The current Dietetic students are mainly taught and supervised by the generation of Dietitians who undertook their professional education through a distance learning programme. These Otago educated Dietitians who became flexible learners are excellent role models. They are very comfortable with webinars and use of collaborative learning spaces, and have a head start in the skills and understanding needed to maintain and enhance their competence.

This internationally unique model for Dietetic education demonstrates to educators in other countries that effective pre-entry education can be delivered at a distance. However, course development requires insightful design and use of appropriate learning technologies. For the distance learning community, the Dietetic experience provides insights into the pedagogical and resource requirements of offering a full time

pre-entry health professional programme to students at a distance. Many aspects of the course development and delivery where hindered by the Programme staff's limited expertise in learning design and by constrained resources. Nevertheless, a culture of innovation and evaluation ensured students attained their intended learning outcomes in a supportive and effective learning environment.

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# Chapter 8

## 30 Years of Occupational & Aviation Medicine

***Rob Griffiths***

**Background**
The Occupational and Aviation Medicine Unit (OAM) started teaching in February 1987, and has been part of the University of Otago's distance education programme ever since. It has grown from the "First Eleven", the first cohort of New Zealand doctors who formed the initial enrolment, to 80 plus students distributed around the globe. The story of this transformation, a rather complex and protracted one, was like the girl Topsy in the *Uncle Tom's Cabin* novel, "just growed".

**The germ of an idea**
The first step in developing any academic programme is to identify a learning need or niche. In this case, the need was identified outside the University. In late 1985, Dr Rob Griffiths had come to New Zealand to be the Principal Medical Officer of the Ministry of Transport (MOT) following the end of his short service commission with the Royal Air Force (RAF). Dr Griffiths had been a lecturer in aviation medicine for his last three years in the RAF, and was a United Kingdom trained occupational physician. He had been a Civil Aviation Authority (CAA) Aviation Medical Examiner, and had completed his occupational medicine training through being a 'guinea pig' on a pilot distance learning programme in occupational medicine run by the University of Manchester. Dr Griffiths had also won the Stewart Memorial Prize for the top-scoring examination result at the Farnborough Diploma in Aviation Medicine course, even though he was an external examination candidate, and had not taken the six month full-time training course. He was immediately asked by Professor Bill Glass to join the teaching team at the Otago Department of Preventive and Social Medicine in Dunedin in the Diploma in Industrial Health face-to-face teaching programme, an invitation that he accepted with alacrity. The year of 1986 was an exciting time, as Prof Glass was embarking on a new distance learning Diploma in Occupational Health Practice, and University Extension had been set up to manage and support distance learning programmes across the University, under the visionary academic Dr Peter McMechan as the head of University Extension and Dr Claire Matthewson as the head of the Distance Teaching Unit[1].

One of the initiatives that accompanied Dr Griffith's arrival from the United Kingdom was the establishment of an Aviation Medicine Advisory Board, to advise the Director of Civil Aviation on aviation medicine matters. They asked the MOT to survey current

1. Refer Purdie, Stein, & Webster's chapters in this book.

Civil Aviation Division (CAD) Aviation Medical Examiners to ascertain what scope of training they would be prepared to engage in, and this was undertaken promptly. However, Dr Griffiths had plans of his own as he had been part of a highly devolved aviation medicine examination and certification system in the United Kingdom, and wanted to implement something even more devolved for New Zealand. He wanted a 'one stop shop' for pilots to have their licence validity to be matched against a medical certificate issued by the Aviation Medical Examiner (AME).

New Zealand AME's unequivocally favoured a course that was longer and led to a formal University qualification, over shorter non-credit training. Len Thompson encouraged Dr Griffiths to use his University contacts to set up a Diploma in Aviation Medicine course, and use the new University Extension programme as the platform. Dr Griffiths initially demurred but agreed that his links with Preventive and Social Medicine and previous experience as a distance learning student in the United Kingdom would render this a 'less silly' idea than it appeared on first inspection.

**Early days**

The aviation programme offered its first papers in Semesters 1 and 2 of 1987. The initial drafting of the new aviation medicine papers was undertaken by Dr Griffiths, primarily in his spare time, but with the support of the Director of Civil Aviation. The first paper was a foundation course on the background to aviation medicine, including the principles of flight, the histories of aviation and aviation medicine, aviation medicine law, international civil aviation organisations, and so on. The second paper was on clinical aviation medicine relevant to AME. Writing gathered pace when Dr Griffiths stepped down from his job at the MOT to work part-time for the newly formed CAA and part time for Otago on drafting new papers. In March 1989, he reluctantly moved to Dunedin on a half-time salary to continue this work, supplementing his income by doing locum and private work; a very difficult and demanding year ensued.

Two factors threatened the emergence of the programme. The more generalised one was the 1987 financial crash, which meant that potential student markets had less job security and reduced funding for training. An immediate threat was a decision by the Ministry of Education to cut funding for distance education students from 1.00 EFTS to 0.25 EFTS in 1988, so that the course nearly ended before it began. The early days were characterised by instability and insecurity, and an intense focus on the financial stability of the programme.

The initial University Extension programme was highly centralised, with a programme officer appointed by University Extension to run the programme, and all written materials being edited by University Extension staff. Centralisation set structures and benchmarks for distance learning programmes and guided inexperienced distance teachers in what to plan and deliver.

As the programme matured, so did the staff and content. The initial four aviation medicine papers were written and delivered, with students on the Diploma in Occu-

pational Health Practice (DipOHP, Aviation Medicine) taking general occupational health papers before leading into the 'advanced' aviation medicine papers, to complete the programme for the Diploma, which required eight papers over four years, a much more onerous requirement than for Diploma courses today, and such a learning load would now meet the requirements for a Master's degree. A major change was the recruitment of the first group of Australian students in 1990. In terms of curriculum, there were two important changes. The first was that the regulations for the Postgraduate Diploma in Aviation Medicine were approved; students no longer took DipOHP papers, but instead two new general occupational medicine papers were introduced which were added to the Diploma in Aviation Medicine (DipAvMed), which was now based on six papers rather than eight. The second was the introduction of multimedia in the courses, which occurred in 1990. An audiocassette tutorial for each module and videos for selected modules were recorded and distributed with each coursebook, making international mail outs bulky and expensive.

A major upheaval occurred in 1995, with the closure of University Extension. The functions of the Distance Teaching Unit were transferred back to individual Departments, who were asked to take responsibility for managing their own distance learning programmes. This could have been a threat, but for Occupational and Aviation Medicine (OAM), it was an opportunity. It gave OAM autonomy and flexibility, which were seized and applied with enthusiasm. As a result, OAM withdrew from the Unitel system, cut course fees, and asked students to join via the new Telecom New Zealand Meet Me teleconferencing system that enabled more flexible teleconferences, which, after consultation with students, were reduced from 120 to 75 minutes. Editing was undertaken in the Department, which in 1993 became the Department of Medicine, University of Otago Wellington, shifting from its initial home at Preventive and Social Medicine. The new Head of Department, Professor Richard Beasley, was strongly supportive of occupational medicine education and distance learning.

**Coming of age**

With the new millennium, a number of changes occurred in the OAM programme. Dr Griffiths who had been an independent contractor for the previous decade, returned to the academic staff, and David Powell was appointed as his deputy. In line with other distance learning courses, a Master of Health Sciences endorsed in Aviation Medicine was introduced and three Master's students started their study and research in 2000. After consultation with the identified key stakeholder, International SOS in Singapore, a Post- Graduate Certificate in Aeromedical Retrieval and Transport was introduced in 2001. The regulations for the DipAvMed were revised to require students to enrol for either the Postgraduate Certificate in Aeromedical Retrieval and Transport or a new Postgraduate Certificate in Occupational Medicine before taking the four aviation medicine papers. The three streams of teaching within the OAM programme were starting to coalesce.

The changes were not without their problems. The initial tutor for the new Postgraduate Certificate in Aeromedical Retrieval and Transport papers succumbed to Dengue fever while in Papua New Guinea and developed a severe post-viral illness that incapacitated him for many months. After abortive attempts to find an expert and productive successor, many of the initial modules were written by David Powell. The new Occupational Medicine Certificate course was based on existing papers, which by this time were mature. Competition from the University of Auckland was an unexpected challenge, but one that reflected their perception that aviation medicine distance education (a la OAM), was a marketable commodity.
The event that changed the world at this time was the 9/11 atrocities which meant that the future of aviation, and with it aviation medicine, was threatened by this extreme terrorist threat. Airlines were cutting their flights, teleconferencing services were gearing up for international meetings, and it seemed as though the airline industry was doomed. Emirates Airlines on the other hand, took a long term view, and expanded to fill the vacuum left by retreating airlines around the world.

**Turbulent times**
It was the best of times, the worst of times. 2002 saw two events that significantly impacted on OAM's ability to operate effectively. The first was to change the strategy for OAM's international teaching forever. Ministry of Education officials decided that international distance learning students should pay the same fees as international on-campus students in 2002, effective in 2003. Previously, since OAM was the only part of the University of Otago offering enrolments to international studies, it had been allowed to calculate its fees on what it recorded as being full cost recovery for its offshore operations. The equivalence policy resulted in a 300% rise in international student fees. International students were now required to pay fees that matched notional 'costs' for teaching on-campus international students. Ironically, these costs became cheaper at the same time as bulky and expensive paper coursebooks were replaced by CD and then DVD course materials which were produced internally and were cheap to post.

Strategies to offset the rise in costs were "grandfathering" of existing students who were charged increased fees, rising over years rather than immediately. The second was to use some of the increased revenue to fund internal scholarships for international students. As the revenue rise was halved by the University overheads, this put considerable pressure on operating budgets. However, a new strategy was required to keep enrolments at a sustainable level.

The second significant event was the addition of a separate Aeromedical Retrieval and Transport Programme; after visiting Singapore to consult with International SOS, a Certificate in Aeromedical Retrieval and Transport (CertAeroRT) was introduced as part of the DipAvMed.. Writing two new AeroRT papers required significant effort, but created an important new stream of academic activity that enabled the development of the Master of Aviation Medicine degree subsequently. This attracted staff with

new skills and students who brought a vibrancy and clinical focus to the programme overall. For several years, we operated a parallel programme with the University of South Australia (UNISA), who offered a flight nurse programme, referring students and sharing resources. When UNISA decided to exit from the flight nurse certificate, Otago picked up the momentum, acquiring both curriculum and staff from UNISA (with their blessing) and started a parallel Certificate in Health Sciences endorsed in Aeromedical Retrieval and Transport. Graduates from both Certificate courses expressed a desire to continue their studies and so two parallel Diplomas and a common Master of Health Science (AeroRT) were introduced.

The third significant event was the beginning of OAM's involvement in the Middle East. Emirates Airlines asked Dr Griffiths to train the airline aircraft accident investigation and recovery teams, based on his extensive experience with Royal Air Force and New Zealand Transport Accident Investigation Commission. They offered to fly him back to Dubai periodically to upskill the Emirates Go Teams who would be brought back to Dubai for training. This provided an opportunity for Dr Griffiths to be independently funded to visit Dubai regularly, an initiative that opened up new opportunities to expand OAM's reputation and student market.

In the face of progressively rising international student fees, a new strategy was required; one that would maintain student enrolments when costs were high. The strategy had three elements: developing the 'perceived value of the brand' for OAM, a shift to new high value student markets, and an increase in the quality of the student experience. The value of the brand was a challenge. Otago University's international ratings and its focus on the on campus experience in Dunedin meant that a divergence in branding was inevitable. OAM had to raise its profile like never before and sell itself with a product that was highly priced even for the international education market. It also had to sell itself against competition that was cheaper, associated with well recognised and regarded names, that were more 'centrally' based in Europe or North America. OAM had to persuade the world market that it was more expensive because it was better and that its South Pacific Island administrative centre did not detract from its deep connection to occupational and aviation medicine practice around the world. OAM also had to shift from being a second tier provider (when compared to Kings College London and Wright State University, Ohio) to being the 'best of the best' and taking those more established institutions on head to head in their own student markets, being world dominators on quality and reputation. A huge amount of work was done to enhance student enrolment and their study experience. Accessibility and use of multimedia was intensified and residential schools were located so as to promote the visibility of the programme and local relationships. Dubai offered us the opportunity to develop strategies and systems to achieve all of that.

**The Dubai years**

The relationship with Emirates Airlines and subsequently Etihad had an energising effect on OAM. Independently funded travel enabled Dr Griffiths to establish new

horizons and new relationships. The most important of these was the link to Harvard Medical School as well as these new, rapidly expanding and reputable airlines in the Middle East, which had reputation value as well as promoting a new profile as a truly international profile. Dr Griffiths first met Professor Tom Aretz, the Harvard Medical International project manager for Dubai Health Care City (DHCC) at the Ritz in London in early 2003. Harvard Medical International, (later to become Partners Org), was the commercial arm of Harvard Medical School, and had been tasked with building and developing a tertiary level multispecialty health care complex with hospital and polyclinic services concentrated on a Free Zone (non Sharia law) area of Dubai, known as Dubai Health Care City (DHCC). The idea was that specialists from medical schools and top tier hospitals around the world would send their best consultants and attendings to Dubai to provide specialist care to people across the Middle East. Tom Aretz invited Dr Griffiths to be part of the DHCC planning meeting in late 2003 in Dubai, attended by Deans of Medical Schools from around the world. Harvard Medical International proposed an extension to the project at the meeting, namely that it would establish a post-graduate medical school at DHCC, known as Harvard Medical School Dubai Center (HMSDC). HMSDC would manage training posts for Middle East doctors who could acquire specialty skills in a Middle East setting as well as higher professional training overseas, and build the largest medical library in the Middle East. It was a bold and visionary proposal, and readily accepted and underwritten by the Sheikh of Dubai.

HMSDC was keen to establish educational activities while building was still underway, and was receptive to a proposal that HMSDC and Otago University would offer Occupational Medicine Continuing Medical Education (CME) for students across the Middle East. Tom Aretz encouraged external relationships and supported Otago OAM in an application to Education New Zealand for Education Export Innovation Programme (EEIP) funding to assist in developing a presence in the Middle East. We were successful in getting our first EEIP award in 2006, with the idea of starting an Occupational Medicine CME programme in Dubai in 2007 and as HMSDC grew, establishing an occupational medicine education programme as a joint HMSDC/Otago venture to address some of the completely inadequate occupational health issues there.

Several things all happened at once in 2007. The first was that we started the CME programme, but also the Diploma in Occupational Medicine and Master of Aviation Medicine were started in preparation for the proposed expansion into the Middle East and other exciting new markets. Four one-day CME sessions were held each year for the next three years, jointly offered by Otago and HMSDC, joined in 2009 by United Arab Emirates University (UAEU) and Faculty of Occupational Medicine, Royal College of Physicians of Ireland. Up to 50 students from across the Middle East participated in CME meetings, which benefitted from presenters from the United States, the United Kingdom, Canada, as well as New Zealand and the Middle East. The networks and reputation created during that period from the high quality of presentations and the profile of participants were incredible – and the international relationships strong

and enduring. The relationship with UAEU has continued for the past decade, and the 2008 residential school in Dubai and Doha will be repeated in 2017.

Spinoffs from this period were our local PhD students in Abu Dhabi, Bahrain and Oman, and the relationship with the Faculty of Occupational Medicine, Royal College of Physicians of Ireland. Many of our Diploma and Masters students across the world complement their academic studies with higher professional training with the Irish Faculty. In April 2008, we held the OAM annual residential school in Dubai which was very special. Support from Emirates Airlines was tremendous, and they generously hosted many of the meetings, visits and social events, including enabling us to hold the dinner at the ballroom of the Burj Dubai. The residential school charity for which we have an auction each year was to support the Emirates flight attendant who collects hotel supplies to provide support to impoverished communities; the most exciting auction item was David Powell having his head shaved. As groups competed for his hair to be shaved or not, the funds we raised for charity rose exponentially. Academically it was also an auspicious event, and on April 22, 2008, we held a Middle East Research Colloquium, and developed an Occupational Medicine Research Agenda for the region.

All good things have to come to an end, and the 2008 Global Financial Crash brought a surprising twist to the Middle East venture. The first was the implosion of the DHCC project. DHCC was heavily underwritten by the Dubai royal family, who made the Free Zone available, provided access to construction and finance services, and whose vision drove the project. The economy in Dubai, which does not have significant oil or gas reserves, was heavily dependent on trade being carried on in Dubai, which had flourished during the 21st Century, but had little reserves for declining trade activity. The second was a major economic loss to Harvard University's financial equity, which had been invested adventurously, and the US$36.9 Billion loss to the Harvard Endowment Fund reserves in 2008 posed a major threat to its viability and sustainability HMSDC was an early casualty of the global financial crisis, and was closed summarily in mid 2009, although it continued online to offer scholarships to Emirati wishing to study at Harvard Medical School. HMSDC started as a suite of offices above a local branch of Starbucks, and ended the same way, despite all the dreams and grand designs; the HMSDC Medical Library was abandoned. HMSDC withdrew from the Occupational Medicine CME programme in July 2009.

OAM continued its commitment to the Middle East, where two PhD students were working and studying, and morphed into a closer relationship with both the Emirati UAEU Medical School and the Faculty of Occupational Medicine, Royal College of Physicians of Ireland. In 2010, a revised CME programme based on two 2-day CME sessions, still with the support of Emirates Airlines, was run jointly by Otago and UAEU. The key supporter for this was Professor Tar-Ching Aw, Dean of UAEU Medical School and local Dean for the Irish Faculty. Professor Aw, headhunted from the United Kingdom and Singapore was an internationally renowned researcher and

teacher, and his considerable ability to globally attract funding enabled him to continue his work in the region. The first CME session in April was a great success, although Dr Griffiths and Peter Verow, the guest lecturer were unable to return home for another two weeks due to closure of European airspace by dust from the Icelandic volcano, Eyjafjallajökull.

A Memorandum of Understanding was signed between Otago University and UAEU in 2011 to encourage an ongoing presence in the Middle East, and authorised UAE University to provide local supervision and support to PhD students in the Middle East. Oman was keen to sponsor another PhD student, and the close relationship with Oman continues today.

The CME sessions were proving to be too expensive to run with overseas speakers, and were replaced by annual revision programmes and the Faculty videoconferences. The Irish Faculty and UAEU ran a revision course for the Membership of the Faculty of Occupational Medicine, Royal College of Physicians of Ireland (MFOMI) examination in 2013, and Dr Griffith participated in both teaching and the clinical examination of Membership students in Al Ain.

Otago continues to have strong enrolments across the Middle East in occupational medicine and aviation medicine, and OAM enjoys a high profile in occupational medicine practice. While in some ways it did not fulfil the dreams of wealth and fame originally hoped for, it did enable OAM to develop a unique brand, quite distinct from the on campus experience of the main University of Otago, and be seen as a significant tertiary education provider on a global canvas. It also generated a reputation of being a quality academic unit that 'did the hard yards', which was important for the next stage of its growth.

**North America**

The drive from 2003 to seek large volume, high value markets will always inevitably lead to North America. Canadian students consistently form our third largest student market, and we have and continue to train most of Canada's air ambulance medical directors. Until recently the President of the Canadian Board of Occupational Medicine (CBOM) was an OAM Master's degree graduate and the Vice-President a member of the OAM teaching staff. Dr Chris Stewart Patterson of Vancouver was a regular guest speaker at the Dubai CME meetings, and became a strong proponent for the OAM programme. Students requested approval of the OAM Diploma in Occupational Medicine (DipOccMed) as meeting the CBOM Fellowship training requirement for an academic component in about 2008, and in 2009, Dr Griffith flew from New York, where he was on leave, to Montreal to meet the then CBOM President and Vice-President, who were very enthusiastic about the course, until they heard the tuition fees. However, Canadian students continued to enroll for the DipOccMed and were approved ad personam. Dr Griffiths and Professor Chris Herdman of the Centre for Visualization and Simulation, Carleton University, Ottawa, an academic unit funded by

the Canadian Space Agency, began to co-supervise a Master of Health Science (Aviation Medicine) student wanting to study the effect of age on cognitive reserve and pilot performance, which she successfully completed in 2014.

In order to develop the burgeoning relationship with occupational medicine in Canada, Dr Griffith began attending annual scientific meetings of the Occupational and Environmental Medicine Association of Canada (OEMAC) every year, and in 2015 he was an OEMAC guest speaker discussing responses to the Germanwings accident[2] , and fatigue risk management in industry. He also met with occupational medicine residency programme directors in Toronto and Alberta, the only two programmes across Canada. During this period, the existing occupational medicine course at McGill University closed down, the College of Family Physicians included Mainpro[3] accreditation for occupational medicine, and a local programme in occupational medicine, without impacting on our programme. We continue to prepare students for Transport Canada and the CBOM Fellowship today.

The relationship with Harvard Medical School in Dubai opened doors to other US institutions. Dr Griffiths established contact with the University of Washington School of Public Health, Department of Environmental and Occupational Health Sciences (DEOHS), and the Washington State (WA) Department of Labor and Industries (L&I) in 2008 with a proposal for collaboration on online learning for doctors caring for injured workers in Washington. This was well received and a working party was set up to develop a grant application to support an online CME programme. A home for the project was found at the North West Center for Occupational Health, part of DEOHS charged (and funded) by the National Institute of Occupational Safety and Health (NIOSH) with providing postgraduate training for the entire Pacific North West (Washington, Wyoming, Alaska, Montana and Idaho). The development of the joint venture was funded through an Export Educational Innovation Programme award in 2010. A proposal for physically developing the online CME pilot focusing on Return to Work was submitted via DEOHS Medical and Accident Fund for L&I support later in 2011 and was accepted the same year. UW, L&I and Otago set up a Learning Management System (LMS) to oversee the project.

The working party reviewed the draft modules developed by Dr Griffiths and refined them into robust informative and concise educational packages, which could be delivered in a series of units using online interactive multimedia materials. The online programme finally went live on the NorthWest Center for Occupational and Environmental Health (COEH) website in June 2014, and continues to be offered as a joint venture between the OAM, Otago and the COEH Washington Universities.

2. Pilot suicide by aircraft in Germanwings Flight 9525 en route from Barcelona to Dusseldorf on 24 March 2015.
3. Refer http://www.cfpc.ca/mainpro/ for more information.

At the same time, Dr Griffith applied for a Safety and Health Initiatives Program award from the WA Department of Labor and Industries for funding to develop online support and Continuing Medical Education (CME) for doctors assessing injured construction workers in five specific trades, based on a five minute video lecture for each trade, ironworkers, sheet metal workers, plumbers, electricians, and general labourers. Partners in this proposal were the Washington State Building Trades Council (WSBTC) and the NorthWest Association for Occupational and Environmental Medicine, a regional component of the American College of Occupational & Environmental Medicine (ACOEM), who provided CME accreditation via the Washington State Medical Association.

Access to the various trade apprentice schools in the state was provided by WSBTC who also provided technical input to the fitness for duty assessments. Videography took place in June and July on site. Editing and re-recording of some sectors of video material was undertaken by the videography company and took much longer than the videography itself. In 15 months, 4,000 doctors from around the world had reviewed and used the video resources, mostly on an "as needed" basis, and the site remains active today.

In 2012, Dr Griffith was asked to become a member of the ACOEM Council on Education and Academic Affairs, where he has special responsibilities for online learning, and has been on the LMS and EBM Working Parties. In 2014, he was appointed Foundations Program Director responsible for entry level training of largely second career physicians wanting to enter occupational medicine. His first task was to reinvigorate the Foundations Program; it needed to move from a traditional long lecture format to shorter panel presentations, which enabled a major makeover to the curriculum with more applied content. Dr Griffiths, encouraged by the Council, also submitted a proposal to turn the historical two--day face- to- face sessions into a "'hybrid" ' 15 hours of online learning plus a two-day meeting just prior to the American Occupational Health Conference.The ACOEM Board not only agreed but also asked him to develop a totally online Foundations Program. All presentations recorded for Dr Griffiths clearly identify his whakapapa as the University of Otago, alongside Harvard, University of California, University of British Columbia (UBC), Berkeley, and other top universities in North America.

The proposal was to set up a mobile videography studio, co-located with face-to-face 'live' Foundations presentations and professionally produce 30 minute ProfCasts using the same presenters in studio. This was only made possible because the Council on Education and Academic Affairs Chair Dr Constantine Gean was also the medical adviser to the Oscars, had his own recording studio, and much experience as a film director. Dr Dean set up a professional studio in a suite in the same hotel as the last of the traditional model live Foundations Program two day course in San Diego in November 2014 and lecturers were required to give their presentations twice. This was not uneventful - most housekeeping staff figured that we were making pornographic

movies and were excessively interested.

Future filming sessions were also far from easy. The 2015 AOHC was in Baltimore at the time of the riots, and everyone was under strict curfew. A key baseball game was played to an empty stadium right outside the studio and coordinating speakers and producers was more than usually problematic, but intensely focused and productive. By this time, the second  two day Foundations Program session was replaced by online learning, reducing costs for staff and delegates, and the online Program became a reality. But occupational medicine is a textbook rather than a short story, and more content and a very capable Learning Management System (LMS) was needed if ACOEM was to become an online educator.

Content it proved was easy; presenters enjoyed participating in the video presentations, and it was possible to continue collecting video materials and developing ProfCasts. At each AOHC, at Chicago and the following year in Denver, more video-graphic material was being collected and enduring materials were created. Agreeing on a sustainable LMS platform not only for the Foundations Program but for other online offerings was a huge task, led by the indomitable Dr Gean. It required a vision for online learning that transcended our current capabilities, and again the ACOEM Board, not only gave us the funding we asked for, but gave us more, on condition that we delivered more than we could currently imagine.

OAM qualifications are now almost universally recognized and accredited where accreditation is required; the final frontiers for total world domination on reputation (since we cannot compete on price) are the USA and the Peoples' Republic of China. Establishing the credibility of a South Pacific Island University as a global leader requires an energetic and innovative approach to education, challenging the US educational establishment, and showing how nimble (a favourite description of New Zealand Trade and Enterprise) that New Zealand enterprises can be. It should be remembered that in 2016, international education was the third highest earner of incoming revenue into New Zealand, after primary industries and forestry, and that being the 'best of the best' in a high value educational market is of benefit to all New Zealanders and not just the University of Otago. At the beginning of the programme, international students were seen as important as adding volumes to student numbers so that boutique courses like ours could be viable and sustainable, but now our international engagement drives a focused investment on quality and the learning experience, with minimal funding from the University.  It also provides profile for the University of Otago.

While we are thinking about building profile and the 'perceived value of the brand', one development was unique. In 2014, ACOEM was asked by the United Nations to train all of its senior doctors, from the Food and Agriculture Organisation, International Atomic Energy Administration, UN Development Programme, World Bank and others, in occupational medicine. Dr Griffiths and Chris Stewart-Patterson, a

well-respected occupational physician in Vancouver affiliated to the UBC and Harvard Medical School, were asked by ACOEM to develop and deliver a two day face-to-face course at the United Nations headquarters in New York, which was supplemented by online materials from New Zealand, the USA and Canada.

**Cut to the present**

Occupational and Aviation Medicine has been focusing on consolidation for the past three years. Its strengths lay in its international reputation for delivering education that students and employers want, the quality of its course content, effective use of technology to make learning easier and more accessible, making distance learning better than the classroom experience, and building learning communities. Some of the progress it has made has paid dividends, but the big prize seems tantalizingly and elusively 'just around the corner'. Nevertheless,, there has been a coherence to the progress we have made, albeit not completely fulfilled. Acceptance in the USA would not have come without demonstrating an ability to think and act globally with Harvard Medical School in Dubai. Our students and staff have showcased the quality of the courses we offer, and at least 50% of enrolments are based on personal recommendation and much of the rest by reputation. Employers regularly approach OAM wanting us to recommend a student or graduate to join their team, and we try with limited investment funding available to stay at the 'leading edge' of learning technologies. However, taking a wider view of technology, it is not the software, it is the skill of our teaching staff in improving the techniques they use to help students learn. Strongly committed to adult learning theories, we gave the students ownership and control of their learning; they responded as we hoped, with greater self-direction and peer-to-peer interaction, enabling our long term goal of creating global learning communities. Use of the Moodle Forum, blogs, office hours, and student journals creates a connectedness between students and staff, as well as between students. We have explicitly pursued those goals and have sought to build on what we are good at – sharing the experience and expertise that our highly engaged and connected teaching staff have to offer; even if we stopped there, that would be a significant achievement.

However, standing still is not an option in a rapidly developing and growing international distance learning market, where courses are now commodities and students have choice as well as control over the way they want to study.  A rolling internal quality review of our aeromedical retrieval and transport papers has been completed, including a major stakeholder consultation process for the flight nurse/paramedic programme. A similar review of the quality, relevance, and synthesis of the aviation medicine papers has just begun. The occupational medicine papers, two of which are mature (but regularly updated), two other papers are relatively recent (developed specifically for international audiences), and two papers are brand new (targeted at students in the USA), are in good shape. We have developed virtual reality platforms for air ambulance simulations and occupational medicine site visits, and hope to develop these into commercial products.

Our teaching is all about our students. Student evaluations of teaching that we undertake each semester evidence high degrees of satisfaction with both papers and tutors. These evaluations are used as a basis for discussion and review with tutors as a way of continuous quality improvement. Graduate and employer surveys provide important feedback on whether our graduates exhibit the knowledge, skills, attitudes and behaviours that we try to inculcate in our students. The student experience both individually and collectively is an important part of our brand. This starts with pre-semester induction and course advising on both academic and professional levels; students start prepared to engage and are clear about our expectations as teachers, and the excellent resources offered by our library and the Student Learning Centre. The class has some group identity before study starts and grows as they propose and expand on important concepts that come from the class, not expounded by the tutors. The stories that tutors and the student group have to share from their own professional experiences bring ideas and theories to life. We have many students who regularly come back to share time with us, not for academic credit, but to be part of what it means to be on the OAM team.

**Academic approaches**

The programme is unique in offering vocationally oriented papers and qualifications that are professionally attractive to students and potential employers, as well as being accredited for higher professional development. Part of OAM's success has been the learning experience that it provides for its students, and 50% of recruitment of new students is recommendation by current or past students. OAM staff, who are distributed globally, combine technical expertise and experience, prestigious international industry networks, and a commitment to distance teaching, a rare combination. The vision of OAM is to create a learning experience that is better than classroom teaching, builds 'learning communities', and uses technology and teaching methods innovatively to achieve that. The student experience starts with student course advising, student support, research, academic matters and professional development. Student induction begins well before the semester starts, with introductory webinars and office hours to allow students to familiariise themselves with staff and technology, as well as meet staff from the Student Learning Centre, the Medical Sciences Library and other support staff.

Online learning enables students to participate in self-directed and self-prioritised study, individually and collectively, and promotes the growth of student 'learning communities'. These learning communities are independent of location, culture, and professional background, and study/discussion groups are truly international. All course materials are online, and webinars, podcasts and discussion forums are embedded within the platform.

Occupational and Aviation Medicine now uses a Moodle-based platform combined with other online learning applications to support student learning. Weekly blogs, email trails, student journals, tutor office hours, and the Moodle Forum all promote

structured assessable student participation, and focuses on push technology. Distance learning replicates the andragogic learning principles enunciated by Knowles, using work and part-time study to create learning demand and application of knowledge to real problems. Working online also allows collective participation under leadership and mentoring from teaching staff and external contributors.

Working across multiple time zones is most accessible if participation is asynchronous. There are four separate synchronous activities however, in the forms of monthly Zoom webinars, grand rounds, virtual reality small group activities, and the annual one week Professional Visits Programme. Staff and student networks have enabled access to experiential learning opportunities in Rio, Vancouver, Toronto, Kuala Lumpur, Stirling, Sydney and Dubai, to name a few. Learning flexibly and opportunistically is also a feature of busy professionals, and curricula and academic materials were reconfigured to meet the learning needs of students to study 'interstitially' while working, and 50% of students access academic resources and participate in their learning using mobile media.

**Reference**

Knowles, M. S. (1990) *The adult Learner. A neglected species* (4th ed.). Houston, TX: Gulf Publishing


*The "Home Team"*

**Staff involved in the programme throughout the years**

*Current* - Rob Griffiths, Julie Myers, Lou Gallagher, Kelli Fleming, Mark Newson-Smith, Dave Powell, David Fitzgerald, Ben Johnston, Geoff Tothill, Howard Roby, Russell Clarke, Peter Fortes, Tar-Ching Aw, Joan Saary, Sarah Dean, Michael Haney

*Previous* - Nick Kendall, Sandy Dawson, Jeff Stevenson

# Chapter 9

## The professional visits programme of the Occupation and Aviation Medicine programme

*Kelli Fleming*

### Introduction

Once a year, the Occupation and Aviation Medicine Unit (OAMU) invites students and alumni to attend the Professional Visits Programme (PVP)[1] . The PVP is a combination of site visits, lectures and social events, which take place over the course of a week with the location changing every year (see Table 1). The location of the PVP is very carefully considered in order to offer the quality and variety of site visits.

**Table 1**
***Locations of the Most Recent Professional Visits Programme***

| Year | Location |
|---|---|
| 2016 | Auckland, New Zealand |
| 2015 | Calgary, Canada |
| 2014 | Sydney, Australia |
| 2013 | Phoenix - Arizona, USA |
| 2012 | Kuala Lumpur, Malaysia |
| 2011 | Lisbon, Portugal |
| 2010 | Auckland, New Zealand |
| 2009 | Scotland, UK |
| 2008 | Dubai, UAE |
| 2007 | Toronto & Montreal, Canada |
| 2006 | Rio de Janeiro, Brazil |
| 2005 | Hong Kong, SAR, China |
| 2004 | Vancouver, Canada |
| 2003 | Auckland, New Zealand |
| 2002 | Honolulu, USA |
| 2001 | Sydney, Australia |

Varying the location and the PVP each year is necessary even though it adds multitudes of complexity from an organisational perspective. By being geographically flexible we also gain access to a number of facilities that are unequalled worldwide.

1. Originally termed the Residential School, the nomenclature of Professional Visits Programme (PVP) was adopted in 2015.

**Site visits**

The central focus of the PVP are the site visits. The OAMU programmes fall into three study streams: Aeromedical Retrieval and Transport, Occupational Medicine, and Aviation Medicine. These spheres of medicine lend themselves to some very interesting working environments. At the PVP we prioritise experiential learning, organising up to twenty four individual site visits within the one week. Students have previously been into underground coalmines, altitude chambers, flight simulators, and on tours of air traffic control towers. They have been to 25,000 feet to experience hypoxia, have participated in simulated patient emergency training, completed emergency escape and fire training, and have seen a huge range of different worksites. These site visits provide an opportunity for practical learning, giving students the authority and the skills to apply their theoretical learning in practice. Gaining access to many of these sites can be challenging. Consequently, we rely heavily on having excellent local hosts, often former students or faculty members, who are able to use their influence to allow our students access to places that are often off-limits to the public.

Interspersed throughout the week are formal lectures from local experts. These have included plane crash investigators and specialists on the intersection of law and medicine. Notably, during the 2009 PVP in Scotland, Professor Ernsting, whose long and distinguished career makes him an icon in aviation medicine, gave his last lecture.

***Image 1:*** **Professor Ernsting – 2009 PVP Scotland.**

Along with these formal lectures, informal teaching occurs throughout the PVP. With the Faculty of all three study streams on hand there is often a facilitated group discussion on the return from site visits. While on the bus to the next location, sometimes when stuck in traffic, tutors will make connections between what the students had just experienced and how it connects to current literature.

**Final dinner**

The PVP concludes with a final dinner, which takes place in a location that showcases the city where the PVP has taken place. For instance, one year it was on a dinner cruise in Sydney Harbour, and another year the Burj Al Arab in Dubai. The final dinner is an opportunity to celebrate the experiences shared over the past week and cement the networks that have been forming. At the final dinner the OAM staff award the High Flyer Award, which is awarded annually to a student who has overcome difficulties in order to excel during his or her studies. This award was made possible by the generous donation of a former student and current honorary lecturer, Nomy Ahmed. It comprises a unique glass-blown trophy with an accompanying cash prize. The highlight of the final dinner is the live charity auction. Attendees are requested to bring auction items to the final dinner, which often have an aviation theme. One legendary auction involved David Powell, long-time PVP organiser, auctioning off the opportunity to shave his head. As the tables competed against one another, the 'Shave Dave' verses the 'Save Dave', the funds raised rose exponentially. All funds raised at the auctions are then donated to a local charity. This is an opportunity for the PVP attendees to give back to the community in which we had been a part of, if only fleeting.

***Image 2:*** **The first residential school took place in Auckland in 1988.**

**Conclusion**

For almost thirty years the students and staff of the Occupational and Aviation Medicine Programme have made the PVP possible, giving their time and often traveling far from home. They also give their support through the registration fee, bringing items for the auction at the final dinner, as well as often supporting the programme as excellent local hosts. The Occupational and Aviation Medicine Unit is privileged to have students who are committed to the programme even long after they have completed their qualifications. As long as students continue to find the PVP valuable, the OAMU will endeavour to provide a great experience for all attendees of the Occupation and Aviation Medicine Professional Visits Programme wherever it may be. The 2016 PVP might look very different to when it was first established, but the focus of enabling students to experience something a little different and to connect with their fellow students and tutors continues to be evident.

**Acknowledgement**

Thanks to Katherine Harris, David Powell, and Rob Griffiths for providing much of the content for this chapter. For more information about the Professional Visits Programme and the Occupation and Aviation Medicine Unit please visit our website: www.otago.ac.nz/aviation_medicine

# Part 3
# *Researching distance learning*

# Chapter 10

## Mainstreaming open, flexible, and distance learning

*Som Naidu*

**Introduction**

Open, flexible and distance learning (hereafter simply, distance education) grew out of the need to address a socio-economic and political agenda, and largely because conventional campus-based educational practices could not meet the increasing demand for access to educational opportunity. As an alternative educational solution therefore, it was always compared with, and judged along criteria that favoured conventional campus-based learning and teaching practices such as the nature and degree of opportunities for student-teacher, student-student, and student-content interaction in it. This comparison was obviously based on the assumption that the greater the interaction, the better the educational experience. And because of limited opportunities for such interaction in it, distance education struggled to achieve comparable parity of esteem with its more established counterparts.

Increasing access to information and communications technologies is altering this imbalance somewhat, as these technologies are enabling greater opportunities for integrating interactivity in distance education and improving its viability as an effective and efficient educational form. As a result distance education methods are becoming attractive in a much wider set of circumstances, especially in conventional campus-based educational settings which are seeing opportunities in it for extending their reach and promoting their brand. Recent initiatives such as the establishment of the Global Learning Council (GLC) and Massachusetts Institute of Technology's (MIT) Online Education Policy Initiative (OEPI) capture some of the developments along these lines. The GLC is a grouping of prominent educational leaders led by Carnegie Mellon University (see GLC, 2016), and the OEPI is an initiative of the Massachusetts Institute of Technology. Note that neither of these initiatives has any significant background in the practice of distance education methods, nor any reasonable representation in it by those with such experience (Baggaley, in press). Yet in their eagerness to claim leadership in open educational practices, and online distance education including distance education more generally, many of these newcomers to the field are ignoring significant advances that have been made and the wealth of experience of pioneers in the field for more than a century, blissfully in the belief that distance education began with the emergence of the Internet and Web (see Willcox, Sarma, & Lippel, 2016), and boldly proclaiming that not much is known about this new and promising mode of learning and teaching (see O'Neill, 2013).

So as you look back at your own 30 years of experience in open, flexible and distance learning at the University of Otago, it seems appropriate that we take this time to reflect upon the substantial contributions of pioneers in the field, the extensive body of research and experience that exists on various aspects of distance education, your own substantial track record in it, and your different journeys in the field in order to clearly define the *critical issues*, identify the *challenges* that confront us today, and explore the *opportunities* that lie ahead for policy development and how best to spend our energies and resources now and in the future. I propose to do that with the help of six lenses into the form and function of *open, flexible and distance learning*. These lenses have been derived from the reflections of practitioners in the field, as well as contemporary developments that have the potential to influence the direction the field might take in the future. They are as follows: *(1) living on the fringes; (2) learning with an organisation; (3) learning through mediation; (4) learning to connect and communicate; (5) distributed learning; and (6) disaggregated learning*.

**Living on the fringes**

*Issues*. Open, flexible and distance learning grew out of the need to meet the educational needs of those who could not be in the same place and time with the teacher, and the basic premise that if learners couldn't get to where formal education was being offered, then that kind of education needed to go to them. As such, distance education was a response to a socio-economic and political agenda (see Lewis, 1986; Rowntree, 1992). And rightly so, because no government could afford to be neglecting to provide educational opportunities to its constituents because of some disadvantage.

That is how distance education began in the United Kingdom, Russia, the Unites States of America, India, Africa, China, Australia and elsewhere in the world, countries in which large sections of the population could not afford to, or were unable to access its conventional educational opportunities (see Blainey, 1966; Northcott, 1984; Stacey, 2005; White, 1982; http://bit.ly/1n2w72l). The value proposition of the adoption of distance education practices, was and has been, that education is a basic need which should be accessible to all, and as Nobel Laureate Amartya Sen reminded us, an instrument of change, and the path to real freedom because it is education that opens up doors to meaningful choices that are so essential for social and economic development (Sen, 1999).

*Challenges*. But despite being a liberating force which was geared towards addressing issues around access to educational opportunity and improving the quality of life of the not so privileged members of our society, learning at a distance was seen as "learning at the back door", which was not quite the same as learning through the "front door" (Wedemeyer, 1981). Because no matter how bad the classroom learning and teaching transaction was, and we know that some of it was bad, it was considered the gold standard and largely because of the mere presence of teachers and learners in the same place, and at the same time. As a latecomer to educational provision therefore, distance education was, and is still being compared to what was there before, and

asked if it was better than, let alone as good as what happened in the conventional classroom, always struggling to attract the comparable kudos that face-to-face learning and teaching methods have been able to attract.

And so it has been for a very long time, and in the minds of some even today distance education is not quite good enough and confined to living on the fringes of conventional campus-based educational practice, no matter how good it is, or how hard it tried. The assumption is that learners need structure and guidance as well as close supervision to be able to learn effectively and efficiently. This perception is based on the premise that there is a body of subject matter knowledge that has to be taught and learned, and that one group of people, i.e., the teachers have it and another group of people, i.e., the learners who do not have that knowledge, and they have to be taught it as efficiently as possible. Obviously, the most cost-effective and efficient way of doing that is to have a teacher teach learners that subject matter in the most direct manner that is possible.

*Opportunities*. But perceptions change and our perceptions of the robustness of distance education methods changed over time as distance education methods got better and in many cases, better than conventional campus-based education. Distance education could not be simply discarded as ineffective or inefficient and not as good enough. Because even if distance education was not the most robust form of learning and teaching, it was offering educational opportunities to populations who had no other alternative. So something was better than nothing for these learners. And for that reason alone, it was worth doing, and worth doing perhaps not that well (Chesterton, 2007).

A key sticking point with distance education was always the relative lack of structure and guidance in it, due largely to the physical absence of the teacher from the learning context. And this attribute was always proclaimed as a key strength of conventional campus-based education by defenders of it as a superior form of learning and teaching. Yet ironically, the absence of the teacher from the learning context, and the lack of at least adequate structure and guidance in learning from models of learning such as MOOCs (Massive Open Online Courses) and other forms of online learning that are currently being embraced and promoted by those from the mainstream, is now being seen as a strength and an opportunity for open, and flexible learning rather than a weakness or a sticking point, as it was seen in the case of distance education. Which begs the question, what do you think structure and guidance is about and what is its role in learning and teaching? How much structure and guidance is necessary for effective, efficient and engaging learning and teaching to take place (see Anderson, 2003)? How is that kind of structure and guidance best provided? Is the teacher the best, and the only source of it? These are key questions at the heart of our perceptions of teaching and learning in any mode, i.e., what we think it is about.

So after more than a century of distance education provision, would you still consider its practice less robust, and distance educators as fringe dwellers? And if so, then living on the fringes of what? Where do you think are the fringes of learning and teaching these days, and where is the centre, but more importantly, what is at that centre? Is face-to-face campus-based education some kind of gold standard, and at the centre? If so then when, where and why? And if it is not then when, where and why not, and what are its limitations? More importantly, how helpful is it to compare and contrast modes of learning and teaching? What are the implications of these considerations for institutions in the development of their goals, policies and processes around modes of learning and teaching in order to prevent the development of perceptions of relative superiority or inferiority among them?

**Learning with an organisation**

*Issues*. The kinds of distance education operations that we are talking about here are uniquely identifiable by their organised nature. These kinds of distance education operations comprise forms of formal educational practice that are managed and operated under the auspices of an educational institution (see Keegan, 1980). They could be either public in nature such as universities, schools and colleges, or private organisations such as professional bodies, industries, or commercial service providers. They are not to be confused with other kinds of independent and self-study, informal and non-formal educational forms, that we as humans, are always engaged with, and all the time, as there are lessons to be learned always and everywhere (see Brookfield, 1981).

Pioneering initiatives in this regard went by various labels such as *extramural studies, external studies, off-campus studies, continuing education, open, correspondence, and distance education* of course. While these labels were all subtly different, their adoption and use by different institutions depended very much on their educational tradition and the culture of that institution i.e., the way they perceived their role in educational provision. For instance, the use of the term *open learning* was intended to suggest that learners would have the ability and opportunity to study and learn at *anytime, anywhere* and *at any pace*, and not just on a physical campus and at specified times and locations. The value proposition of this affordance was that learners ought to have the freedom and the flexibility to choose the mode, medium, time, place and pace of their study (Lewis, 1986; Naidu, 2016; Rowntree, 1992). The terms *extension, extramural* and *correspondence studies* suggested efforts and initiatives which sought to *extend* learning and teaching opportunities beyond the conventional boundaries of an educational institution, and with the help and use of media and technology (Bewley, 1972).

*Challenges.* While the role of the educational institution was, and remains a defining characteristic of these kinds of educational opportunities, each one of these labels has been interrogated over time as adequate descriptors of their relevant operations. These questions have been raised partly because of our changing perceptions of what we were on about, but largely by emerging and changing media (see Paine, 1989). For instance, as the print medium and the postal mail service started to be superseded by

multimedia and electronic mail, the concept of written correspondence via the postal service was no longer an adequate descriptor of the educational transaction that was taking place.

Hence the emergence of the term *distance education*. But that too had issues as an accurate descriptor, as the concept of *distance* implied a physical separation, when that was not always the case. There were learners who would be living in situ, and on campus but for various reasons opting to study in the distance mode. Some of these reasons had to do with being able to take on electives which might not have been offered at the time that students needed to, or wanted to take them. Other reasons included the opportunity to take on additional units and in doing so speeding up the duration of their study programs. And then there was the opportunity to take advantage of the far better set of study materials that was becoming symptomatic of distance education courses, largely because of its adoption of instructional design principles and rigorous course team processes.

As more and more choices became available to learners and teachers, and as students began to take advantage of the opportunities that these choices afforded, the nature of the educational transaction changed. This was better reflected by labels such as *flexible learning*, *blended learning*, *distributed learning*, *disaggregated learning*, *online learning* and *elearning*. These labels were not exactly designed to replace the tired old terms for the same operation i.e., *extramural studies, external studies, off-campus studies, continuing education, open, correspondence,* and *distance education*. No, these were, and in many ways, different terms and they suggested different processes and things.

The term *flexible learn*ing, for instance, was closest to representing notions of open learning and distributed learning, which offered opportunities for learners to be able to study and learn at *anytime, anywhere* and at *any pace*. *Blended learning* was about mixing modes of study such as distance study, and particularly online distance learning with periods of face-to-face residential education. The terms *online* and *elearning* were of course identifiable by the type of technology that was part of the learning and teaching transaction in these contexts. And the term *disaggregated* learning reflected the changing role of the teacher in this new and evolving learning and teaching space with various aspects of the learning and teaching transaction being devolved to various parts and parties and not confined to the form and function of the subject matter expert (Peters, 1983; Rosenbloom, 2011).

*Opportunities.* While the influence and sponsorship of an educational institution remains the single most identifiable feature of distance education operations, the form and function of this defining attribute of distance education is undergoing considerable change. A very wide variety of educational institutions are starting to adopt and engage with distance education processes, and for a variety of reasons. These institutions include the conventional single mode distance education providers such as the United Kingdom Open University (UKOU), the University of South Africa (UNISA),

Indira Gandhi Open University (IGNOU), and many such others. Then there are mixed-mode providers, such as several in Australia and New Zealand including the University of Southern Queensland, and the University of New England in Australia, and Massey University in New Zealand which offer both distance education and face-to-face residential educational opportunities for its learners. And with growing interest in and the prevalence of online learning, many other players, both from the public and private sectors are getting into this learning and teaching space as well. These include Ivy leave institutions such as Harvard University, Massachusetts Institute of Technology, Stanford University and Carnegie Melon University in the United States of America, as well private provides such as the University of Phoenix, and various other commercial and public sector agencies.

There is an explosion of interest in all forms of open, flexible, and distance learning opportunities (Gallagher, & Garrett, 2013). A wide variety of players are emerging on the educational scene to offer learning opportunities wherever it is needed, and in ways that meet the needs of the students wherever they might be located. As such the nature of the educational institution is undergoing change, and there is no sign of that abating anytime soon. What do you think the educational organisation of the future will look like? Can educational provision be seen as the right or responsibility of a particular type of organisation, of some and not others? How critical is the role of an institution or organisation in teaching and learning, even though that has been seen as a hallmark feature of distance education? How viable and credible do you think is a concept like the OER university (OERu), an institution that is defined by the type of learning resources it chooses to use (https://oeru.org/)? What are the implications of this for governments and educational institutions in relation to policy development around accreditation, credit transfer and the award of qualifications?

**Learning through mediation**

*Issues*. However, learning at home and away from the educational institution had its challenges. Something was required to bridge the gap created by the separation of the distance learner from the teacher and the teaching institution without anyone of the two parties moving physically. In the early days of the emergence of distance education, the printed study materials and the postal services served the purpose of bridging this divide between the learners and the teachers. In the best of circumstances, these printed study materials comprised an information booklet which carried an introduction to the course and the assessment tasks, a book of essential reading articles, and a study guide that would talk the students through the subject matter. When carefully crafted this was expected to be the entire study package for the subject and all that a student would need to complete all the assessment requirements for it. The study guide would be written in a conversational and interactive style such that, instead of lecturing learners about the subject matter, it would talk them through it. And when this was the case, learning at a distance took the form of a guided didactic conversation between the learner and the teacher (see Holmberg, 1983). It would be a guided and personalised conversation, the best form of teaching you could possibly have. The

printed study materials were ideally suited for reuniting the distance learners from their teachers and for carrying the educational content to where the learners needed them. They afforded a great deal of *flexibility* and *independence* to the distance learners to enable them to study at their own place and pace.

*Challenges*. But despite these significant affordances, the printed form had its limitations in terms of its readability for those challenged by poor reading and writing skills, and in relation to the level of support that could be provided by the print medium. Many of these study packages were very poorly designed and developed, and as such they failed to offer the structure and guidance that learners needed without much direct instruction. Learning and teaching at a distance was always hard but especially challenging when it was stripped of the wide range of support services that are usually available to learners and teachers in campus-based educational settings. These would include informal and formal peer-group support, library services, and dedicated learning and teaching times and spaces for quiet and concentrated study. When out of sight and out of their minds, many distance educators also held somewhat lacklustre dispositions of their distance learners, giving them less time and attention than they would give their on-campus students who were there and in their face.

So despite the laudable intentions of distance education for being able to reach unreachable cohorts, distance learners were justified in feeling that they were receiving a second rate education with substandard study materials and support in their learning from their teachers and the teaching institution, especially when these opportunities were devoid of many of the support services that are readily available in campus-based educational settlings. Distance education was beginning to suffer from a parity of esteem with conventional campus-based education (Jevons, 1987; Smith, 1984). Distance learners hungered for more support and interaction with their peers and their teachers, just as distance educators were becoming increasingly frustrated by their inability to do more to keep them engaged with their studies and help avoid procrastination and attrition (Lim, 2016; Klingsieck, Fries, Horz, & Hofer, 2012). Being able to visit the educational institution for the occasional residential school for intensive periods of teaching and hands-on work despite its costs, was a special privilege, and students as well as their teachers looked forward to these rare opportunities.

Something had to give to save distance education from its challenges and declining popularity. The increasing availability of other means of mediation such as audio and video conferencing, and multimedia technologies helped as they offered opportunities for supplementing the printed study materials with voice and pictures. These technologies would go a long way towards addressing the deficit in the printed study materials for supporting the conversation between learners and teachers. The appearance of the Internet and the web which followed soon, offered additional opportunities to "unite the teacher and learner and carry the educational content", as Keegan (1980, p. 33) had put it, and bridge the divide caused by the separation of learners from their teachers.

But many of the solutions that were being adopted to address the void created by the separation of learners from their teachers and their teaching institution were in fact, making the distance education experience look more and more like conventional campus-based education. These strategies which included more face-to-face contact, more interaction, both synchronous and asynchronous, and less flexibility with time and pace of study were not in the spirit of distance education provision. The use of many of these advanced technologies such as audio and video-conferencing, and the Internet and the web, actually further alienated an already disenfranchised group of learners, and those it was meant to empower, turning distance education into an elitist educational provision that was accessible to the privileged few and not the masses for whom it was intended (see Baggaley, 2008).

Large numbers of distance learners, especially those in developing contexts, who needed distance education opportunities the most, were now being denied access to these learning opportunities because of their lack of access to reliable electricity supply. Initiatives such as online learning, elearning, cloud-based learning, and the incessant push for the adoption of open educational resources all negated the promises and principles of distance education because many of these tools and resources were available and accessible only in electronic forms (Cooper, 2013). The distance education printed study materials, however poorly designed it may have been, did not exclude anyone who was willing and eager to study, but the newer more advanced educational technologies did.

*Opportunities*. This begs the question -- is it possible to suggest distance education was and is still, misguided in its assumptions about the degree of structure and guidance that is necessary for effective, efficient and engaging learning and teaching to take place? If that were not the case, then clearly one size does not fit all, and that there ought to be room and place for different models of distance education operations for different distance learners and learning contexts (see Baggaley, 2008). Models of distance education, and methods of mediation that might be suited for a resource rich and developed educational setting will not suit a resource poor and developing educational context. And models that might suit the learning of one type of subject matter may not work for others. Therefore, is it possible that different models of distance education provision are required for different kinds of educational settings as well as different kinds of subject matter content.

And there must be some fundamental threshold principles to which distance education must adhere without compromising its integrity. What are these threshold principles and how can we ensure that these are not compromised in our eagerness to meet the demand in whichever way we can? What are the implications of upholding these principles for institutions in relation to policy development around the design and development of distance learners" learning experiences, and the continuing professional development of distance educators?

**Learning to connect and communicate**

*Issues*. The opportunity to connect and communicate with peers, experts and other resource persons regardless of the educational mode, is one of those critical threshold principles of any educational transaction. And it is especially crucial in distance education contexts to counter issues around delay, procrastination and attrition from the programme that are due to alienation caused by the separation of the learners from their teachers and the teaching institution. During the pioneering days, this kind of communication between learners and their teachers was sustained through the written letter. The written letter had many advantages. In the early days it might have been hand written, and therefore it could be personalised to meet the very specific needs of an individual learner. But this kind of letter writing couldn't be sustained as student numbers grew and resources shrank for such personalised correspondence. And even though contemporary word processing has made writing much easier, and the postal services have significantly improved its delivery, personalised letter writing remains a resource intensive activity that is unsustainable in the best of circumstances.

The arrival of the electronic mail, instant messaging and various social media tools, provided students had access to them, revolutionised modes of communication between students and teachers and among students themselves. Along with modern day word-processing programs, it made the ability of teachers to offer feedback and support to learners so much easier. And when combined with the affordances of the Internet and the web, email led to the emergence of innovative modes of communication for learning and teaching. These included *computer supported collaborative learning*, i.e., CSCL (see Stahl, 2002; 2006), *connectivism and connective knowledge building* (see Downes, 2012; Siemens, 2008; Siemens & Downes, 2011) and *massive open and online courses*, i.e., MOOCs (see Baggaley, 2014a; 2014b; Granger, 2013; Jona, & Naidu, 2014). Computer supported collaborative learning is simply about collaborative learning in an electronically networked environment, while connectivism suggests that knowledge building is best achieved through connection, communication and the sharing of ideas. And MOOCs are an artefact of that process of shared knowledge building.

*Challenges*. Yet these innovative learning and teaching practices are only possible in the context of an electronically networked educational environment. Neither computer supported collaborative learning, connectivism, connective knowledge building, nor massive open and online courses, would work without access to requisite educational technologies. These models of education are suitable only in contexts that have reliable access to networked communication technologies and they will exclude all those who do not have access to reliable and affordable sources of electricity, and connectivity to the Internet and the web. Yet these are the people who are likely to be living in the least developed regions of the world and who are most in need of educational opportunities, and who distance education, as an educational solution was intended to serve and empower.

*Opportunities*. How can connection and communication, which is seen as crucial to

the development of knowledge and understanding, be supported in models of distance education and in settings without reliable access to networked communications technologies? Or is it arguable that connection and communication are counterintuitive principles and counterproductive in distance education because of their time, place and pace implications, and where heutagogy, i.e., independence and self-study is valued, nurtured and promoted (see Hülsmann, & Shabalala, 2016). If so then, is distance education an impoverished form of learning and teaching and its value diminished somewhat in educational settings where it might be arguable that there should be little or no need at all to connect and communicate with student peers and teachers? And if not then why not?

Connection and communication between students and teachers, and among students themselves has cost implications for both, students and the educational institution. For students, it means paying for reliable and regular access to networking technologies and infrastructure from their place of study. And for the educational institution, it means access to the technological infrastructure along with the costs for nurturing, moderating and assessing this form of communication among students, and students and teachers. What are the implications of these cost considerations for distance learners, and for institutions in relation to policy development around widespread adoption of online learning and teaching strategies and their resourcing in distance education institutions?

**Distributed learning**

*Issues*. A result of ubiquitous connectivity is distributed learning which is learning and teaching that is feasible from any place, at any time and at any pace, characteristics that are also endemic to distance education operations. But there are a few essential differences between *distributed* and *distance learning*. Whereas in distance learning contexts, the teachers and the teaching institution continue to retain a level of control over the learning content and the context, in distributed learning such control is not centralised nor under anyone's control or direction (see Saltzberg, & Polyson, 1995). In these educational settings any kind of instructional control is dispersed and as such distributed, such that learners, teachers and their learning resources could be located anywhere and be accessible at any time and from anywhere. All that would be required for distributed learning to work effectively and efficiently would be reliable access to networked communications technologies (see Dede, 2004). As this kind of technological infrastructure became more widely available and accessible in distance education settings, distributed learning, as a term, seemed a more accurate descriptor of what was going on (see Vrasidas, & Glass, 2002). In these educational contexts, learners and teachers could be located anywhere and accessing educational resources from anywhere and at any time in the cloud via web-enabled tools and services, hence the term *cloud-based learning*.

*Challenges*. While distributed learning may seem like a more accurate descriptor of the learning and teaching transaction in a cloud-based learning environment, it was

not a replacement for the term distance education. True, the term distributed learning had many of the same characteristics of distance education such as the separation of learners from their teachers, the possibility of learning anytime, from anywhere and at any pace, and use of technology to mediate the learning and teaching transaction. But its viability and success was dependent on the availability of a robust and reliable networked infrastructure, in the absence of which it would fall apart completely. This is where it differed from conventional perceptions of distance education, in spirit and in form, as distance education was designed to be inclusive, and not excusive based on accessibility.

*Opportunities*. In being inclusive, it is arguable that distance education is a minimalist educational provision and for good reason too. Because the mission of distance education is to reach the previously unreachable, and the more independent it is, the better. The more complexity one adds to it, in terms of human resources and infrastructure requirements, greater student-teacher, student-student and student-content interaction, along with its constraints around time, place and pace of study, the more exclusive, costly and elitist it becomes (see Hülsmann, & Shabalala, 2016).

Is this is a risk distance education can afford to take? Should it take such a risk? If so then why and in which circumstances, and if not, then why not? What indeed, is and ought to be the mission of distance education? Is that up for discussion, review and reformulation? Do you think contemporary distance education has gone wrong, and against its own grain (see Baggaley, 2008; Cooper, 2013)? If so, then where and how? Or is it arguable that more than one model of distance education is required? Why can't we have a range of models of distance education? Why can't we have models of distance education that are suitable for the resource rich educational contexts, and others for resource poor contexts? What would be the policy imperatives of this suggestion for educational institutions? What would be the implications of this for learners in terms of their choice of modes of distance education?

**Disaggregated learning**

*Issues*. Regardless of its form and function, there is one thing that is clear about distance education. And that is its disaggregated nature. In the early days of its development, Otto Peters likened its form to industrial processes, suggesting that distance education was an industrialised form of education (see Peters, 1983; 2010). This seemed like so, not only because of its use of media to support learning and teaching, but the division of labor that it involved from different groups of people with specialist skills, in relation to the production of study materials, its delivery to students, and the provision of learning support to students. In this regard distance education was, and remains a very different operation from conventional campus-based and face-to-face learning and teaching.

In conventional campus-based learning, the teacher is the aggregate of all teaching activities. It includes the design and development of a course, selection of its content,

teaching it to students, assessing their learning outcomes and providing them with feedback. In distance education contexts these functions are often disaggregated and carried out by different people with specialist skills, and possibly in different locations and at different times (see Rosenbloom, 2011).

*Challenges*. There are many advantages of disaggregating teaching functions and having it carried out by dedicated and specialist staff. Foremost, it releases the subject matter experts from carrying out functions that they are not skilled at performing. And enabling academic staff, especially those in higher education settings, to concentrate on other scholarly activities that are also part of their role as teachers and scholars (Gallagher, & Garrett, 2013). This is becoming more of an imperative with the increasing complexity of the media and technology that is becoming symptomatic of the contemporary learning and teaching space. Subject matter experts will have content knowledge of course, but they cannot be assumed to be having comparable pedagogical as well as technological knowledge. Yet all three kinds of knowledge, i.e., content, pedagogical and technological knowledge are essential for effective, efficient and engaging teaching and learning (see Mishra, & Koehler, 2006; Chai, Koh, & Tsai, 2013). Allocating roles related to the provision of pedagogical and technological expertise to other specialist staff means a different approach to course design and development, and one with which many educators and subject matter specialists are not very familiar.

Another advantage of disaggregating teaching functions to specialist staff is to be able to rationalise teaching tasks such that some of these functions need not be performed all the time and every time there is a change in teaching staff. Course materials developed once by teams of people can be developed once and used a number of times before reaching a point where they need to be revised. This is advisable not only from the point of ensuring rigour in the design of the study materials but also guard against undue influences of individual teacher bias in the selection of a body of subject matter content, and in its teaching to students, which can be problematic in some discipline areas.

But disaggregating teaching functions and distributing these to specialist groups requires a shift in mindsets of staff, students and institutions about what it means to teach and who is responsible for what in it. Distance educators will be the first to recognise the problems with course team processes and with the complexity of relationships between subject matter specialists themselves and between subject matter specialists and educational designers about design principles for teaching and learning.

*Opportunities*. It is arguable that in a distributed and disaggregated learning and teaching space, the subject matter expert will have to relinquish some of their control over content knowledge as well as how it is taught and learned to other experts with pedagogical and technological knowledge, especially about the form and function of

mediation in this learning and teaching space. Will this be necessary, and if not, then to what extent is it important for teachers to possess technological and pedagogical competencies along with their knowledge of the subject matter content? And what would be the implications of this requirement for their training and accreditation to become teachers? But if this were necessary, and a prerequisite, then what would be the policy implications of this requirement for the recruitment of teachers to the academy, the criteria for their promotion, and their continuing professional development in terms of the content and coverage of such programmes. What does the teacher in this new educational space look like? What are their competencies, and how does one acquire them and from where (see Moore-Adams, Monty Jones, & Cohen, in press)?

**Race to the centre and parity of esteem, but can the centre hold?**

Notwithstanding all of the above, it is arguable that distance education in its various forms is here to stay. Because methods of teaching and learning that were pioneered as a part of distance education are now increasingly being adopted by the most conventional and established forms of educational practices. Some of this shift has been an outcome of the proliferation of all kinds of educational technologies for mediating the teaching and learning process, especially the Internet and the World Wide Web as viable platforms for teaching and learning. Other reasons are related to the appeal of distance education methods for a changing student population which includes a whole variety of learners as opposed to the typical high school leavers group.

Online learning technologies are fast becoming standard features of the campus-based educational experience, and lectures focused on the delivery of the subject matter content are becoming less relevant and less useful, and not only because subject matter content can be sourced from a variety of places and in numerous other ways. The lecture which was once at the centre and the mainstay of conventional campus-based experience is fast becoming an accompaniment, and in so doing, *flipping* over the conventional campus-based experience with the study of the more declarative content devoted to private study, and time for synchronous and asynchronous communication spent on active learning and for student-teacher and student-student interaction (see Baggaley, 2015; Sams, 2010).

Furthermore, notions of *openness* which were previously focused on *open access* to learning are now being extended to include the adoption of *open educational resources* and the practice of *open scholarship* (see Naidu, 2016; Naidu, in press). So much so, that many would venture to argue that contemporary forms of distance education have achieved that elusive parity of esteem that it has been seeking with conventional campus-based learning and teaching, though it might seem now that distance education has achieved more than mere parity of esteem, for distance education is no longer hovering around at the fringes and "looking in from the backdoor" (see Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Wallet, Fiset, & Huang, 2004). Methods of teaching and learning pioneered by distance education are becoming part of mainstream educational provision, as they replace outdated campus-based educational

practices such as fixed time, place and pace of study.

Do you think open, flexible and distance learning has achieved that parity of esteem with its more established forms? Does it compare favorably with campus-based educational practices? Do you think distance education is inside and at the centre? But then, where is the centre and, what is at the centre, and is it likely to change in the future? Can the centre hold? With these final questions, I leave you to ponder upon the apocalyptic words of William Butler Yates in his prophetic poem "The Second Coming" (http://www.potw.org/archive/potw351.html), especially its first stanza made more famous by the great Chinua Achebe in the epigraph of his novel "Things Fall Apart" (see http://bit.ly/2bq7bAy).

*Turning and turning in the widening gyre;*
*The falcon cannot hear the falconer;*
*Things fall apart; the center cannot hold;*
*Mere anarchy is loosed upon the world.*

Although, this is not to suggest that the integrity of distance education as a field of practice is under any serious threat from more conventional forms of educational practices, and in danger of falling apart. In fact the reverse is true. Conventional campus-based forms of learning and teaching are under the threat of change from methods and tools developed and fine-tuned by distance education. It is the centre that is in turmoil and in danger of falling apart. Can the center hold? Will it hold?

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# Chapter 11

## Developing a model of library support in eLearning

*Alison Fields*

**Introduction**

Developing lifelong learners is central to the mission of higher education institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, colleges and universities provide the foundation for continued growth throughout their careers, as well as in their roles as informed citizens and members of communities. Information literacy is a key component of, and contributor to, lifelong learning. (ACRL, 2016, p.4)

Library support is concerned with assisting students with the active learning of the content in the curriculum and developing lifelong learning skills needed for independent information use, both within and beyond the formal education setting. This support has needed to adapt to the new environment and challenges presented by eLearning. eLearning is a relatively new teaching and learning context for the provision of library support, with landmark texts such as Anderson's Theory and Practice of Online Learning appearing in 2004, and the ACRL (Association for College and Research Libraries) Guidelines for Distance Learning Library Services revised in the same year to match the growing demands of this new delivery style of education. At this same time, the term "embedded librarian" was first coined by Barbara Dewey (2004), which described the new practice of embedding a librarian within an online course as an additional instructor and participant during the delivery of the course. More recently, library support is being delivered at all points in all stages of course delivery including at the course design level with the relatively new role of instructional design librarian being created.

Innovations in delivery, learning outcomes and engagement are happening in eLearning, while advances in providing supporting services for learning are following closely. Once innovations in library support for eLearning become established and reliable, they may also provide alternative options for the delivery or enhancement of library support and services in on-campus and face-to-face settings.

This chapter looks at the Substitution, Augmentation, Modification, Redefinition (SAMR) model (Puentedura, 2006) of technological integration in education and explores how it can be adapted and applied to the integration of library support and information literacy within distance learning, specifically in eLearning. As a result,

a new SAMR/ILS model is proposed. A difficulty with an emerging practice, such as adaptive learner support within the developing field of eLearning, is that practice may need to progress by necessity ahead of theory. For this reason the SAMR model is currently being used to identify and express practice that already exists, and the SAMR/ILS model is being developed to further explain this emerging practice, as well as to guide those coming into this field by providing a framework for the provision of library support within eLearning.

**eLearning and the application of the SAMR model**

Over past decades the rise of distance education and eLearning has seen a shift in the way education is being provided, and opportunities for new ways of learning have resulted (Hrastinski, 2008; Laurillard, 2005; Nichols, 2008). In addition to online teaching, online support has had to adapt to this new medium and also find new ways to provide their services to students with best effect (Anderson, 2004). The theory surrounding the integration of technology into education is well documented, however the theory for integrating learner support in eLearning is only just beginning to emerge.

The SAMR model (Puentedura, 2006) was introduced a decade ago and has met with wide acceptance and uptake in the eLearning community. There are numerous examples in the literature explaining the model and its application, particularly in the primary and secondary school sectors (Chou, Block & Jesness, 2012; Thomson, 2015). The SAMR model has recently been applied in other settings and has also been refined and modified for different purposes. Puentedura (2016) authors an active blog focusing on the developments, applications and modifications of the SAMR model. Examples of recent additions to the model and further applications include the application of SAMR to the tertiary education sector (Cavanaugh, Hargis, Kamali, & Soto, 2013), the development of a model for the integration of computer gaming in the school curriculum (Zagami, 2014), adaptations of the SAMR model to mobile social media (Cochrane, Narayan, & Oldfield, 2014), and the development of a framework for evaluating mLearning (Romrell, Kidder & Wood, 2014).

Library support is an integral part of learning support, and educators have recognised that teaching has a supportive dimension (Biggs, 1999). The provision of support and structured learning experiences helps learners to complete the tasks and activities needed for successful learning (Laurillard, 2002). Literature on student learning demonstrates the concern for designing learning systems and learner support systems to effectively guide and support student learning (e.g., Inglis, Ling & Joosten, 2003; Roschelle & Teasley, 1995), which applies equally to learning in face-to-face and online settings (Brigham, 2001).

In the last two years tentative application of the SAMR model to library support has just started to appear (Herman, 2014; Green, 2014), but the literature in this area is somewhat scant. This suggests that the development of a theory applying SAMR to the

provision of library support is not yet formalised or widely considered, and so a gap exists in the current literature.

**Approach to developing a new model**

For a number of years I have been searching for a model specifically focusing on embedded librarianship, and more generally, for library support given to students working in distance education and online classrooms. I have found many descriptions of the practice of delivering this form of learning support to students. These include case studies showing different methods and systems that have been utilised, but nothing that can be applied universally or that outlines a theory which can be applied to all practices. I propose that this illustrates how the practice of providing learning support appears to be developing ahead of the theory.

Approaches to the development of a model began with an initial conceptual model that simply showed the difference in library contact and support for online students compared with those in face-to-face classrooms. This was useful for explaining to those who may lack insight into these differences, but it had little value beyond that. Following this came my attempt at developing an observational model, but this model could only depict one case study at a time. Next came the development of a transactional model, which was more detailed but once again it only related to one case study. Then came a theoretical mode, which I personally found very difficult to define or conceptualise. In an attempt to explain the difficulties in what I was encountering, I sought examples from other fields and came across the Perpetual Beta Model. The Perpetual Beta Model is not so much a model, as an explanation as to why a model cannot be developed. This is because creating a model of an emerging practice in a dynamic environment can only lead to a model that is out-dated before it is even conceptualised.

I then started thinking of all the various methods of providing library support to distance learners as interrelated on a form of a continuum, and it was then I found common ground among many of the examples I had seen in practice. I gathered together examples of librarian eLearning support in practice that I had observed in various national tertiary institutions, I found that I could group them by the degree of integration the library support had in the online classroom. This degree of integration was closely linked to the *type* of library support that was given in each case. I also found there was a high level of synergy with other existing models of support and integration in online classrooms, particularly the SAMR model, giving me some confidence that this form of thinking and emerging model of library support might have value.

**The SAMR/ILS model**

The resulting SAMR/ILS Model (see Figure 1) shows the degree of Integration of Library Support in the online classroom. The degree of integration has direct bearing on the types of support services offered to students and the ways in which these can be delivered. At one end of the scale, library support exists solely outside of the online

classroom, providing the same library support provided to face-to-face students on a campus setting while at the other end, library support is completely embedded in the online classroom at the course design level. Two markers have been allocated on the scale between these two ends. In one of these markers library support is delivered more within the library than the classroom, and at the other marker, library support delivered more within the classroom than within the library. This identifies four key points on the integration scale, providing the defining points on the SAMR/ILS model. An advantage of choosing these four markers on the scale is that both ends are defined, and examples of practice can be located within the scale with some degree of certainty.

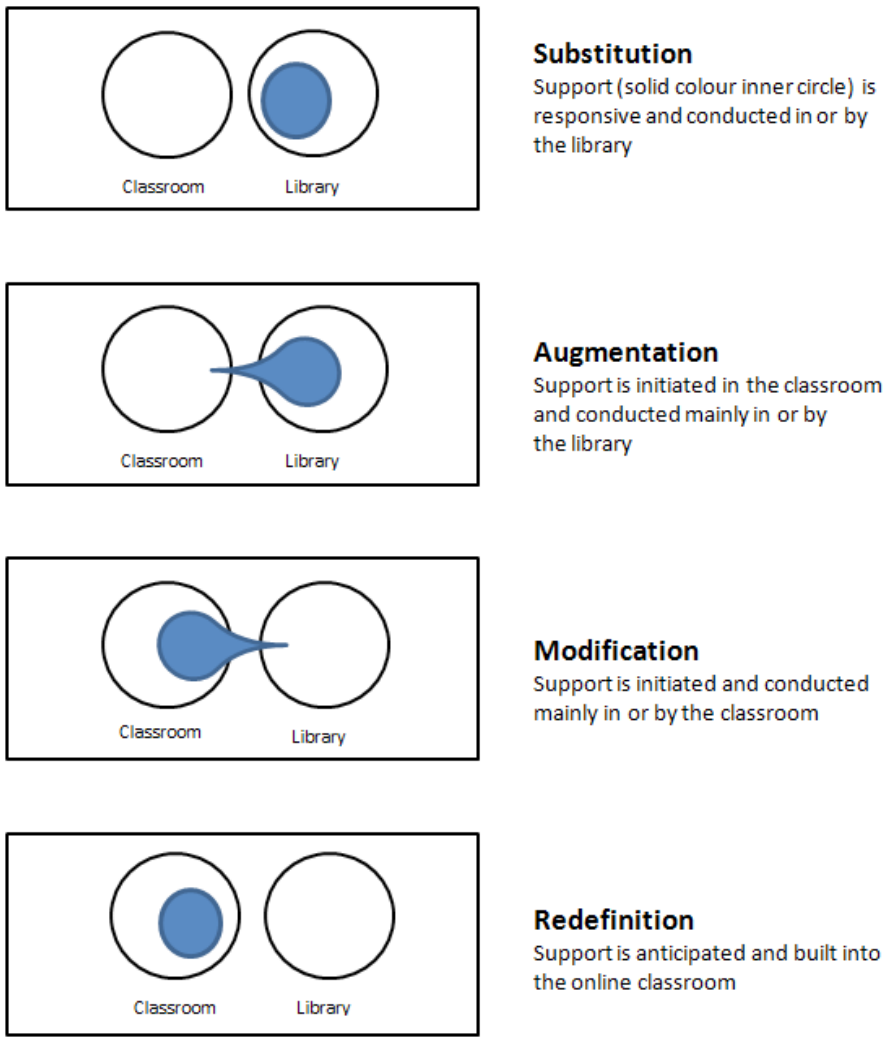


***Figure 1*. The SAMR/ILS model.**

**Explanation and discussion of the SAMR/ILS Model**
In describing the key features of each of the 4 stages of the ILS model, I have assigned names to the four stages. These names are taken from the SAMR model, and are discussed here to show the parallels with the SAMR model of integration of technology, and also where the SAMR/ILS model differs.

***Stage I Substitution*** – describes the use of traditional library support as used in face-to-face learning that is merely transcribed into the eLearning environment. In practice this means that a package of orientation and instruction is delivered without change, apart from possibly the delivery medium. A New Zealand example comes from one of the University of Otago's doctoral programmes. Although this particular programme is a distance learning course, it begins with a week-long residential school. During this week a library session occurs where instruction is given in accessing library resources, locating subject-specific resources, writing a literature review, and accessing a range of other support material through the library and other means.

In library science, this is known as 'one shot instruction'. This is because the librarian has a single opportunity to deliver all the goods and knowledge offered by the library, while knowing there may not be another opportunity to reach all of these students. One of the drawbacks of this type of instruction is that although it can deliver a great deal of information that will be needed during the students' course of study, it is not delivered at the point when it is needed. Furthermore, much of the information will not be remembered or actioned since the instruction will be given at a time that is not proximate to when it is needed. In this example, instruction on how to use Endnote was useful but was somewhat irrelevant during the first week of a 6-year long part-time doctoral programme, since Endnote was unlikely to be used until students are well past that introductory stage. Student A (three years into his/her doctorate) described this quandary as "I knew … [Endnote] was there but I couldn't use it … it would have saved me a lot of time".

Compared with the SAMR model, this first stage of SAMR/ILS model Substitution is very similar, as it delivers what has always been provided, but makes no use of the new environment. In short, it simply transcribes the traditional support, but gives no additional value or support.

***Stage II Augmentation*** – describes the start of an adaptation to the new learning environment, where the original service is being developed or augmented to make use of the new learning opportunities that are provided online. One New Zealand example comes from Massey University where there is a librarian presence within the online classroom environment. This librarian is available to answer quick questions or to make appointment times with students so that longer student-librarian discussions and teaching sessions can take place outside the confines of the classroom. In practice, this usually means that the point of contact is the online classroom, and the support that is given is tailored to individual student's needs for that particular subject

and class, although is delivered in the library (physically or online). In the SAMR/ILS model this is represented with a small contact area inside the classroom but a large area of contact within the library setting. This is because the contact is made within the online classroom, but the instruction and support is provided primarily within the library setting.

A milestone within library science was the publication of the first key text on embedded librarians by the ALA (American Library Association) titled *Embedded Librarians: Moving Beyond One-Shot Instruction* (Kvenild & Calkin, 2011). This work brought together examples of embedded librarianship from a range of higher education institutions in the United States, describing practices that were being implemented at that time in online and distance education. It denotes the first and significant departure of library support from the traditional face-to-face models.

There are again many similarities between the SAMR/ILS and SAMR models for this stage of the process, with Augmentation manifesting itself well within both the technology and the library support settings. One key departure though, is that in the SAMR model the application of Stage II Augmentation is about using the technology for a new purpose, while within the SAMR/ILS model the library support is being provided not just in a new way (initially within the online classroom, and then with the student in the library setting), but it also starts to provide individually tailored support that relates specifically to the students' course, information requirements and level of information literacy. In the SAMR model, augmentation is about the use of a tool, while in the SAMR/ILS model augmentation is about the benefits that are able to be given by a service provided by another human, with the possibility for added value to come from both humans involved in the student-librarian interaction. Student B described this by saying "I didn't think that that was that helpful when it was me in the whole class because of the different levels of people's ability … I think it didn't always feel helpful to do it together but I think that offering the individual appointments was pretty good".

***Stage III Modification*** – encompasses further integration of library support in the online classroom, shifting the delivery of service into the classroom space itself. The student-librarian interactions here become different in their nature. This is because the questions asked and the support given occurs in the context of the classroom and forms part of the classroom activity itself. This means that instead of interactions and support being given by one librarian to one student, they are now part of the activity of the online classroom. The interactions form a one-to-many teaching paradigm as all students are able to see and learn from the interactions of individual students with librarians. This has the effect of providing more support to the class as a whole, since all students can learn from individual interactions.

An example of this is the use of library forums on the Moodle teaching platform utilised in the Open Polytechnic's Bachelor's degree courses. Classes that traditionally

make heavy use of the library also tend to make heavy use of the embedded librarian support that is on offer in these courses in the form of a live librarian co-ordinating the library discussion forum within the class itself. Questions, discussions and answers are all given in these forums and this forms part of the permanent record of activity for the class. All students are able to access and use the information in these forums.

A second milestone in library science relating to library support within online classrooms was the publication (by the ALA) of a second key text titled *Virtually Embedded: The Librarian in an Online Environment* (Leonard & McCaffrey, 2013). This text is described as a casebook, showing a 'blueprint' for how academic librarians can become embedded within the online environment. This book is a distinct departure from the earlier text that was making the first tentative steps away from the traditional one-shot instruction model. The New Zealand example from the Open Polytechnic featured in this text alongside other developments that were happening in the United States at that time in higher education institutions.

The similarities between the SAMP/ILS the SAMR model in Stage III are clear. These include modification of the support structure, service delivery, or technological tool is offering new ways of providing learning opportunities and new ways and opportunities for students to interact and learn. The tasks that are being conducted are changing, and the points of contact and learning opportunities are beginning to appear in ways that have not been seen in previous online classrooms. Student C describes this in new interaction within the classroom: "Yes I saw forum posts that she [the embedded librarian] posted and she answered … I know she answered referencing questions that other people have asked and I made sure that I kept an eye [on] what she was feeding back in case there was anything I could learn".

***Stage IV Redefinition*** – is the final stage of integration where library support is now fully integrated into the structure and delivery of the course at the concept and design levels. At this point there is no visible library support as it is fully embedded in the course itself. This means that engagement with library support and resources is part of the very fabric of the course and not an optional extra that some students pursue. At this level, interactions do not take place with librarians separately during the conduct of the course, as all of the information literacy and lifelong learning activities and enhancements are integrated into the course itself. This works the same way as the Redefinition stage of the SAMR model and allows for an interweaving of tasks and resources in a way that was simply not possible if using separate library support.

An example of this arose in the recent restructuring of the library at the Ara Institute of Canterbury. One third of the Ara Institute's library staff were redeployed to work as instructional designers since they had previous experience as librarians teaching information literacy and research and referencing skills to students. A description of this process shows the "new roles work alongside educational designers and technology advisors in the course design process, and represents a significant change in

thinking towards integrating resourcing at the course design level, with a focus on creating excellent blended and online delivery" (McElwaine, 2016, p.1). In this new role the tasks undertaken by the redeployed staff differed significantly from the tasks undertaken in the library and included "planning resourcing for courses as they are designed, increased curatorial role in institutional repository, designing contextual training resources to be delivered electronically, staff training on copyright, expanding selection of resources to suit blended & online delivery" (McElwaine, 2016, p.7). In the resulting course delivery, library support was completely integral to the course design and no additional library support was given during the course delivery phase.

This follows the SAMR model in regard to producing new ways of delivering educational products, new ways of exploring material and engaging with students. There are, however, some difficulties with this stage of the SAMR/ILS model. Although the SAMR/ILS model works well, in practice lack of direct connection with the library has consequences for students, faculty and librarians. For students, it is easy to assume that the library is no longer as relevant to their learning as their courses are becoming more self-contained. It does not necessarily promote exploration of further resources unless this is specifically built into the course. For instance, Student D noted "The library wasn't any help to me at all … everything was in the course … I didn't need anywhere else". The delivery of the educational product has altered substantially at this stage of the model, and so also has the direct connection with the library and library support, which may still work for teaching information literacy, but may alter its effectiveness in promoting lifelong learning.

**Possible uses for the SAMR/ILS Model**

One practical use of the SAMR/ILS model already identified is the provision of a framework for those who are providing library support within eLearning, so that this new delivery medium can be used purposefully and effectively. It can help with the visualisation and understanding of practice, and with planning how to best derive benefit to learners at each of the SAMR stages.

The SAMR/ILS model also has the potential to serve as a component of a planning or management tool for the delivery of library learning support, particularly when linked with other data such as levels of information literacy demonstrated by students. For example, it may be possible to identify the most effective stage of integration of library support in terms of student information literacy, course results or cost to the institution, by using Cartesian coordinates to display values for the stage of integration of library support in relation to one of these other variables. For instance, if the variables of the level of integration of library support compared with the resulting level of information literacy demonstrated by students were plotted for a large number of institutions, it may be possible to determine which stage of integration was the most effective for delivering library support, or if the stage of integration was not really a determinant in the student's achievement in information literacy, depending on the shape of the scatter graph. Planning and management decisions could then be made

on an informed basis regarding the relative value and effect of providing any particular SAMR stage of library support in eLearning.

## Conclusion

The key relationship between the SAMR model as first proposed by Puentedura (2006) and the SAMR/ILS model proposed here is the use of the four stages identified as Substitution, Augmentation, Modification and Redefinition. Puentedura's model has been used most commonly for the integration of technology into learning at the primary and secondary school levels, while the SAMR/ILS model looks at the integration of library support to students in tertiary education and online settings. Library support is commonly linked with other learning support services to provide academic and research skills that will benefit students well beyond the individual courses they study. Expressed another way, the convergence of the SAMR and SAMR/ILS models is in the four key stages of integration, while the divergence of the two models is in the nature of the support being provided, as well as the subsequent engagement of students with library services and technology services outside of the immediate tasks being conducted in the course of study. The identification of the stages of integration of library support in eLearning is useful because it quantifies the degree of integration, and this has the potential to be used in conjunction with other measures to plan for the best delivery of library support in eLearning.

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# Chapter 12

## Connecting research to practice: An innovative design of a blended doctoral programme

***Kwok-Wing Lai***

**Introduction**

The College of Education launched the blended Doctor of Education (EdD) programme in 2007. Since its inception, the unique pedagogical design of the EdD has received commendation from students, lecturers, external examiners, and programme evaluators . In 2014, the National Centre for Tertiary Teaching Excellence awarded an Ako Aotearoa Good Practice Publication Grant to showcase the programme on its website (Lai, 2014). In this chapter I describe two innovative pedagogical features of the EdD programme and report findings of an evaluation undertaken in 2013, which focused on how effective these two aspects were perceived by EdD graduates. The two innovative features discussed in this chapter include a programme component designed to strengthen the link between research and practice, as well as the use of an online community approach to support doctoral study and research at a distance.

In recent years, the nature of professional doctorates such as the EdD has been discussed and debated in depth (Beliner, 2006; Richardson, 2006). One of the key focuses of this debate is how professional doctorates differ from a PhD. As an advanced research professional doctorate degree that has a strong focus on the link between research and practice and is primarily undertaken by practitioners studying part-time, then how can the EdD be distinguished from the more traditional PhD? This was the first pedagogical issue we tried to tackle when designing our EdD progrmme. In New Zealand, an EdD normally consists of a thesis (240 credit points) and a coursework component (120 credit points). In order to strengthen the link between research and practice in our EdD programme, we introduced a new component called the Research to Practice Portfolio (RPP). In the RPP, students are required to provide evidence that they have developed their thesis research through particiating in their own EdD cohort community, as well as a practice community related to their research, and to discuss the impact that these two communities have had on their practice. Thus, our EdD programme has three components:

- A research thesis (240 credit points)
- 12-months of coursework (60 credit points)
- A research to practice portfolio (60 credit points)

In the RPP, students are required to:

1. Explain how their research has linked to and/or impacted on their practice.
2. Provide evidence of active participation in, and support from, their online EdD cohort community.
3. Provide evidence of support from a local practice community during their thesis research process.
4. Provide evidence of contribution to the research and practice communities.

The second pedagogical innovation of the EdD programme is a response to the issue of how a doctoral programme can be offered primarily online, without compromising its quality and the students' learning experience . To provide academic and social support to online students, the design of our EdD programme is based on social constructivism and a socio-cultural approach to learning, where the learner is encouraged to actively construct knowledge within a community of practice (De Laat & Lally 2003; Lai et al. 2006; Lave & Wenger 1991; Vygotsky 1978). Each year students are admitted as a cohort and most take between five and seven years to complete their degree. At the beginning of the first and second years of the programme there is a five-day residential school. In the first year of study, students work together online as a community to complete 12-months of coursework where they engage in inquiries on particular issues and learn about research methodologies related to their research. This is followed by a six to nine month period when the student's thesis proposals are developed together as a cohort. During this period, students present their work to their peers, with feedback provided by other members of the community, including their supervisors. The students' thesis proposals are subsequently presented in a public symposium and if the thesis proposals are approved, students can commence data collection.

**The Study**

In 2013, I conducted a small research project aimed at investigating whether these two pedagogical features were effective in supporting students academically and socially, as well as successful in forging a link between their research and practice. By the end of 2013, six EdD students had graduated from the programme and five (one male and four female) consented to be interviewed. Interviews were conducted face-to-face or by telephone and each interview was approximately an hour. All the interviews were transcribed and the interview transcripts were analysed using an thematic approach based on the constant comparative method of qualitative data analysis (Maykut and Morehouse, 1994). Five themes were identified in the interview transcripts, which are discussed in the following section.

**Findings**

*The role of communities of practice in academic and social support*

One of the components of the RPP is that students are required to participate in two communities of practice, one is the EdD cohort online community, and the second is

a practice community of the student's choice. The participants' comments suggested that the EdD cohort online community was particularly effective in providing students' with academic and social support. For example, when asked how they felt about the communities of practice, P2 said "When I am thinking about the communities of practice, I immediately think of the [EdD] cohort". P3 stated that the online discussion with their cohort provided an opportunity for reflection. For example:

> I mean you'd talk to them about your research and how to get them to understand it…we had to do that online, and that was very useful because here you had a person who didn't know what you were researching, and you had to make it clear to them, and then if they could understand it, then you knew you had it…so it was good because they had to go through the same thing, convince the rest of us, this was their research and this was understandable and things like that…the learning community definitely helped [to] clarify your thinking and your thoughts...

P5 considered the cohort community as the distinguishing factor between the PhD and the EdD and that "the nature of being part of a cohort, which was really valuable". P5 went on to state how the cohort community also provided a link between research and practice:

> Being part of…a cohort of people with strong sort of practical understandings of teaching and learning and so…there were often times where people would challenge theory and…people would challenge theory in a way that if I had been perhaps been working on my own locked in my office, I wouldn't have been challenged.

*Community of practice and linking research to practice*

The majority of interviewees framed the practice communities as most valuable in providing a link between research and practice. For example, P2 stated "[The practice community] makes you consider and reflect upon our practice" (P2). When asked which component of the RPP provided the best link between research and practice, P4 also said, "Oh definitely… my own professional community". She went on to describe her practice community:

> Not all of them were New Zealand [professionals] so they weren't familiar with the structure that we have to do in order to be registered to practice, but that notion of professional development and regulatory authorities and self-directed learning is common across the group…so that was probably the most helpful for me…the main value in it was making me think about ways to reach out to my professional community and in doing that, I actually got back quite a bit that did help to frame up or make me think further, or look wider or find something that I wouldn't otherwise found…it showed the examiners possibly how my community might have influenced my thesis, which was practice focused.

The practice community also enabled P1 to clarify her ideas. She commented:

> The conversations that you have with people that help you clarify your thinking…I think working in isolation is quite hard…and I guess really as a result of doing the EdD, I'm very aware of how much I do use sort of constructivist approaches to building ideas too. (P1)

P4 reported that the practice community was helpful for her because it was a professional community and provided encouragement to continue on her research journey. For instance:

> They were also the ones that also encouraged me you know when I was kind of going these look like some tentative findings what do you think, does this sit with you, not sit with you, that was the group.

When asked whether the EdD programme provided a good link between theory and practice, P1 responded "Yes, yes I think it has, and it's made me more aware of the role of critical reflection and…the importance of…some of those things link into…teaching practice and so on too".

Two of the five interviewees taught in schools and found it harder to link their research into their current practice. One of these interviewees, P2 stated that the community was particularly useful for her. For example:

> [The local community of practice] was particularly important to me because I was so isolated in [a small town], and I don't get a lot of opportunities for professional development…so…I could kind of engage in a wider group, which was awesome…for giving feedback…informing my practice. I guess it helped me understand the nature of [the research topic] in schools and also my research skills were much more developed at the end, and so I've been using that to feedback into secondary school students who are just about to go to university, and I'm basically teaching them research skills at a university level, so that helped me with sort of that, like my teaching practice but also the research behind what I'm teaching.

The professional communities were able to provide students with practical support for consolidating their research. As commented by P4:

> I think probably the main way the learning community supported where I went was that we were two different disciplines, predominantly people from teaching background and then myself as [a practicing professional], and... so the value of the community was that in the questions they raised and my need to explain very clearly what I was doing, that helped to consolidate what I wanted to do, and why I wanted to do it, so it was valuable in that sense,

> and their challenges and their suggestions when I tried to work out why they weren't helpful, made me work out what I was actually trying to get to.

P4 went on to emphasis how the link between research and practice was a distinguishing factor between the PhD and the EdD:

> I didn't see it any other way really…a PhD that was very much around knowledge generation, this is knowledge application, regardless of what programme I ended up in, I probably would have focused it towards making a change in practice.

*The research to practice portfolio and students' learning journeys*

Since they had to start collecting evidence of their participation in the two communities of practice from the first day of their course, the RPP allowed students to document their research journeys. Four of the five interviewees made comments showing that they saw the RPP as a record of their research journey. For example, P1 explained that writing the RPP was like writing "a story of your [learning] journey", while P3 described how her journey progressed:

> I found it really fascinating to follow my journey, when I was reading back through those old posts…It was more just the reflecting has it changed what I've done, and this is how I've done my journey I guess, and why I started off my statement overview of why I even decided to do my topic from when I was teaching before I came to New Zealand, so that's kind of got into constructivism, why I studied that so…could I have done without it [laughs], I could, did it help me, it helped me see my journey.

For P5, writing the RPP was like sharing evidence, "I see the whole process as valuable, the putting of the portfolio was really about me sharing evidence…the value is in what the portfolio reflects rather than the portfolio itself, and the portfolio is a way of capturing evidence of what's happened". Associating the RPP with one's research journey was again mentioned by P4, when she commented on the value of the online EdD cohort community. For instance, "The fact that you kick started to get through the first 18 months to two years is quite valuable…That notion that community will help shape your whole research journey I'm sure it's actually possible once you get into that.

P3 articulated how writing the RPP helped her see clearly how she had developed her research through participating in the EdD cohort community. She stated:

> We had online discussions that we had to contribute to. The one I found really interesting was going through, when we had to post our potential research question and the academics that were hosting…the session could comment and ask questions so that you could clarify your thinking, what you were going to do and…you [could] actually see my research developing as it went through…You

> could see a very clear pathway of where my research was going, so I found that [was] probably most surprising and most useful in my portfolio.

*Workload issues*

I was interested in whether the inclusion of the RPP component had increased the students' workload. For P5, a full time student after the first year of study, the workload was high but reasonable.. For instance:

> There'd been a whole heap of other things so there were assignments in the first year…there was the portfolio, so there was the thesis and then a whole load of extra stuff, so in that sense the workload was really high. However, I was able to use in a way I'm sure it was designed, a lot of those earlier things, the earlier assignments fed right into my thesis so they gave me a structure in my first year that became valuable towards writing my thesis…the workload was good. (P5)

The other students all studied part-time throughout the course of study. These students also saw the workload of the EdD as similar to that of a PhD. As explained by F4, "[Doing] assignments was a bit of a hard work, but once I got into the actual implementing of my research, and in the final write up, I think that's no different to any doctoral journey".

When P2 was asked this question, her comments implied that she did not consider the workload as being too hard. She commented:

> [it was] an ongoing thing, because we had to like contribute to those discussions online on a regular and ongoing basis, but that actually helped me…to write the reflective practice portfolio, but it was like, I felt like I was double dipping a little bit, because now I was having to like I've already done that, but I was having to formulate those into this document…that was all work for me to have to try and kind of pull everything together, but it already existed so it was kind of like...I've already done this…but in itself it wasn't a huge amount of work because it was so valuable. Gosh isn't that funny, that's why I don't think it's hard work because of the…benefits I was getting from it.

When asked whether the RPP had increased her workload, P1 made a similar comment. For instance:

> Not, not really because mine sort of happened naturally and…it also gave me a chance to sort of trial and discuss some of the artefacts I was using with other people, and getting some constructive feedback, and I don't know quite how I would have gotten some of that if you hadn't had that…grouping.

*Overall value of the RPP*

Reflecting on the overall value of the RPP, all five interviewees were positive about the programme. It seems that the RPP had 'forced' the students to engage in communities of

practice to develop their research, and enable them to relate their research more closely to their practice. Although it was hard, P2 statement suggests the effort was worth it in the long run.

> To pull it all together…I felt that I had gained the purpose of the learning now I was just documenting it and it was like well painful but necessary, oh don't say painful. No cross out the word painful…necessary [laughs]… it formalised like the process of the reflective practice.

## Conclusion

In this paper I have briefly described two innovative pedagogical aspects of our online EdD programme, communities of practice and the RPP. The student evaluation provided evidence that these two pedagogical features were beneficial to the participants in terms of social and academic support during their study, which I consider are essential for distance students. The RPP provided a stronger focus for the participants' research, in terms of linking theory to practice. The evaluation was conducted as a qualitative case study, and as such its findings cannot be generalised to other educational contexts. However, I believe that insights can be gleaned from the information reported here, which will be useful for designers of distance learning programmes.

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# Notes on Contributors

***Kelli Fleming*** is the Teaching & Research Fellow for the Occupational & Aviation Medicine (OAM) Unit. She supports the continuous improvement in the OAM programme through the implementation of teaching and research initiatives for distance learning. Kelli has a Masters in the cross-disciplinary field of Intercultural Relations with a focus on Adult Education.

***Alison Field*** is a senior lecturer at the Open Polytechnic of New Zealand where she teaches Information and Library Studies. She also sits on the Professional Registration Board of the Library and Information Association of New Zealand Aotearoa (LIANZA). Her research areas encompass e-learning, library services, and continuing professional development. Alison is an Associate Editor of the *Journal of Open, Flexible and Distance Learning.*

***Dr Penny Field*** led the academic development, implementation and delivery of the distance Post Graduate Diploma in Dietetics programme, 1992-2011. Over this time Penny developed a strong interest in competency based education, reflective learning and maintaining competence for students, staff and colleagues at a distance. Penny has represented the Division of Sciences on the Distance Learning Advisory Board since 2008. In her role as a senior lecturer in the Department of Human Nutrition Penny works with postgraduate and undergraduate students. As a Dietitian and Public Health Nutrition policy researcher she is committed to finding ways to change food-related environments in New Zealand. With the goal of enhancing access to healthy, sustainable, affordable locally produced food.

***Judy Fisher's*** involvement with Distance Learning began as a Library assistant in the Remote Library service in 2001, and then from 2006 as a secondment to the position of Remote Services Librarian, which continued to a full appointment in early 2009. Having studied at a distance herself, she is very aware of the problems and difficulties faced by distance students. Judy has worked in a variety of libraries for over 30 years, and is currently the Learning Services Librarian for the University Library, leading and supporting the Library's educational and research skills programmes. Having a passion for Distance Education, she has maintained relationships with the Distance office to continue to promote library involvement with distance learning. Researching the history of Distance at Otago exhibition has been a very rewarding and fascinating process, as there are so many staff at Otago, both general and academic, who are also passionate about distance learning, and willing to help with information and artefacts.

***Dr Rob Griffiths*** is the Director of Occupational and Aviation Medicine at the University of Otago Wellington, leading a team of part time academics in an international distance teaching programme. He is also an Affiliate Professorate of the University of Washington Seattle, and Foundations Program Director for the American College of Occupational and Environmental Medicine.

***Gala Hesson*** creates educational media and designs fun things. She is passionate about the role communication design plays in teaching and learning. GemFire design is her boutique business based in Dunedin. https://gemfiredesign.com/

***Professor Kwok-Wing Lai*** is Professor of Education and Director of the Centre for Distance Education and Learning Technologies at the University of Otago College of Education. Wing has been designing and teaching distance education courses and programmes since 1997. He was the founding co-ordinator of the Doctor of Education programme. Wing's current research interest is in the field of knowledge creation.

***Dr Som Naidu***, Monash University, Australia, has spent most of his professional life in the higher education sector in a variety of roles to do with enhancing learning and teaching practices in distance education, online learning and elearning, as well as education more generally, in various jurisdictions and geographical locations. Dr. Naidu possesses undergraduate qualifications in Education from the University of Waikato in New Zealand and graduate qualifications in Distance Education and in Educational Technology from Concordia University in Montreal, Canada. He is the current president of the Open and Distance Learning Association of Australia and executive editor of its journal Distance Education. In May 2014 the Open University of Sri Lanka awarded Dr. Naidu a D.Litt. (Honoris Causa), in recognition of his extensive contribution to the field of open, flexible, distance and e-learning both regionally and internationally.

***Dr Keryn Pratt*** is a senior lecturer and the Postgraduate & Distance coordinator (Education) at the University of Otago College of Education. Here she teaches, largely online, in the areas of ICT in education and quantitative research methods. Her research interests include all aspects of ICT in education, but she has a particular interest in distance learning at both the tertiary and compulsory schooling levels.

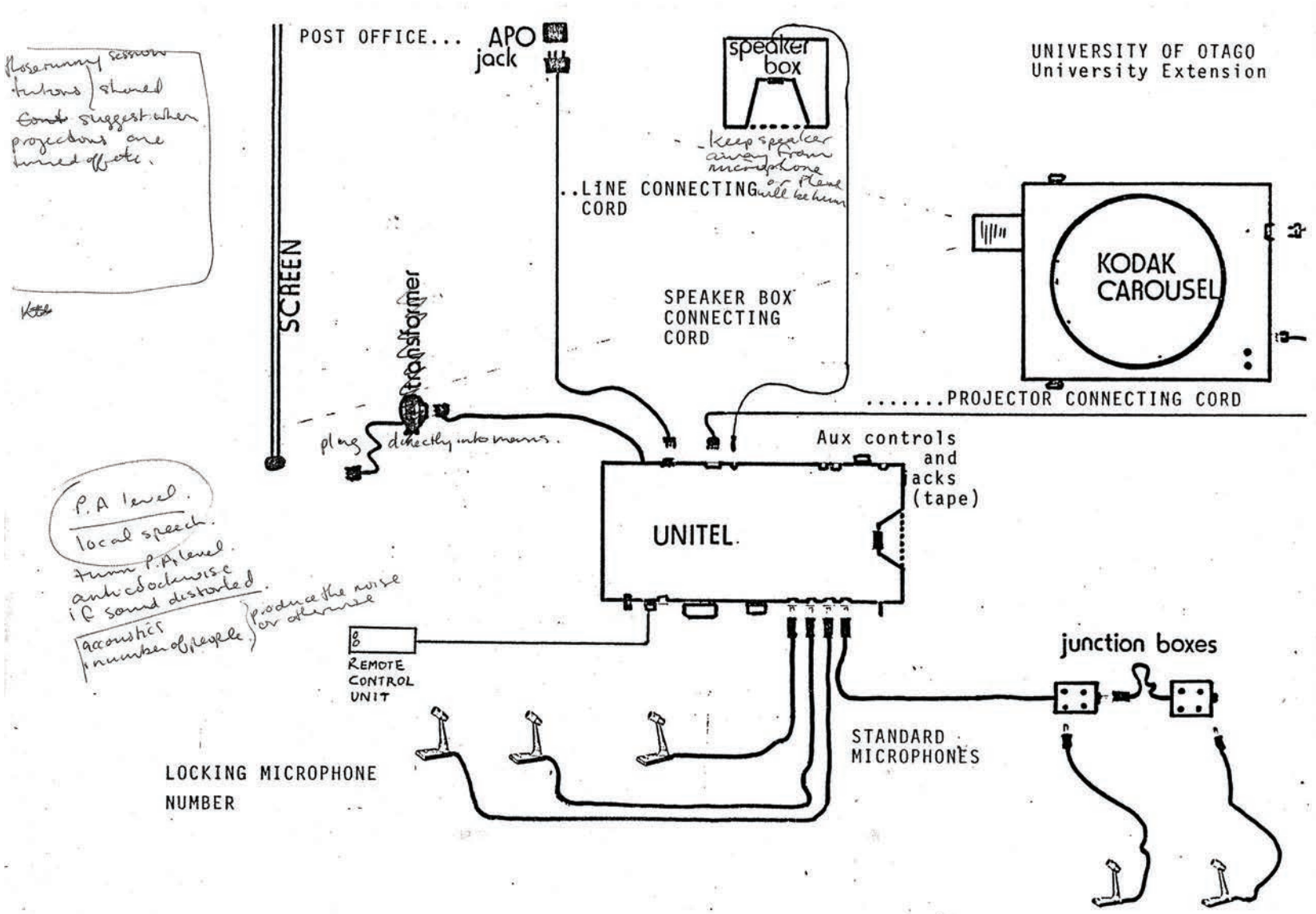
***Elizabeth Purdie*** joined the Distance Teaching Unit, University Extension, at the University of Otago in 1986, and in 1993 was appointed Deputy Head. In 1995 she took up the position of Head of Student Enquiries and Examinations at the then Academic Registry. Elizabeth was seconded in June and October 1992 by the Commonwealth of Learning to set up a distance teaching network and its administrative infrastructure in the Solomon Islands, training academic staff at the University of the South Pacific's Solomon Islands Centre and at the Solomon Islands College of Higher Education in distance teaching methods appropriate to the context in which they were working. A DEANZ member from 1989, Elizabeth served on the Executive (1993-95) and on

the Organising Committee for the 1992 DEANZ National Conference. She served as Secretary to the University's Distance Learning Committee (1996-99), was a member of the Distance Learning Reference Group, and Chair of the Distance Learning and Teaching Forum (from 2000). She left her University career in 2011 to take up increased family responsibilities.

***Dr Sarah Stein*** is the Director, Distance Learning at the University of Otago. Sarah works in collaboration with the Deputy Vice Chancellor (Academic), Pro-Vice Chancellors, Heads of Departments and others to facilitate change and development in distance education. Sarah is currently the president of the Flexible Learning Association of New Zealand (formerly known as DEANZ). She is also a member of the Ako Aotearoa (New Zealand's National Centre for Tertiary Teaching Excellence) Southern Hub Advisory Group. Sarah's past work experience includes primary school teaching, curriculum advising in primary and secondary schools, and academic staff development in Australian universities, including the University of New England and the University of Queensland. Sarah also researches and publishes in the areas of teaching, learning, curriculum and evaluation in higher education settings, and has a specific focus on distance education, student evaluations, teacher professional development, and technology and science education.

***Fiona Stuart*** has been the half-time Administrative Assistant in the Distance Learning Office since April 2013. She has personal experience of distance learning, having completed a Master of Library and Information Studies at Victoria University of Wellington in 1999, so understands what distance study is like from a student perspective. Studying half time while working full time at the University of Otago Library were two of the most challenging years she has experienced, but it was ultimately very rewarding and opened up opportunities that would not have been available to her otherwise. After 15 years working as a librarian, Fiona returned to Otago in 2009 and has worked in a variety of positions including Administrative Assistant, Receptionist, Research Assistant, and Assistant Research Fellow. Fiona is passionate about distance learning, and enjoys her work in the Distance Learning Office.

***Dr Elaine Webster*** was appointed Director Summer School & Continuing Education late in 2011, having previously worked at Otago as an academic and in research management. Coming to university study as a mature student with a background in art, small business and the community sector, Elaine appreciates the value of alternative pathways into tertiary education and is passionate about lifelong learning. She completed her doctorate in 2006.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University Extension
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speaker box
Keep speaker away from microphone or Howl will be heard
..LINE CONNECTING CORD
SCREEN
Transformer
plug directly into mains.
SPEAKER BOX CONNECTING CORD
KODAK CAROUSEL
.....PROJECTOR CONNECTING CORD
Aux controls and jacks (tape)
UNITEL.
P.A level.
local speech.
turn P.A level anticlockwise if sound distorted.
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REMOTE CONTROL UNIT
junction boxes
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LOCKING MICROPHONE NUMBER