TE IARE WAVELENGTH

Communication across distance, people and disciplines. A pulse across Taranaki, the energy province.

The Māori equivalent of Wavelength is “Iarere.” From a Māori perspective, “Te Iarere” is a positive way of communicating over vast distances.

Cover: Second cultural identification
Ian M Clothier

This digital print was gifted to WITT by the artist. It was part of a project exhibited in San Jose in 2006, where the online audience first filled out a questionnaire about cultural identity. The responses were visualised according to a constructed lexicon - the cover image is an example.

Te Iarere Wavelength
As the Interdisciplinary Journal of Academic Activity at WITT, Te Iarere Wavelength provides a forum for the publication of scholarly articles, points of view and creative works from all academic disciplines and subjects of general interest. Submission Guidelines are found on the following page.

Te Iarere Wavelength is published annually by WITT, Private Bag 2030, New Plymouth, www.witt.ac.nz, ph (06) 757 3100.

Te Iarere Wavelength Committee
Ann Bride, Ian M Clothier, Andrea Corbett, Christine Fenton, Tengaru Wineera.

Disclaimer
All articles and creative works published in Te Iarere Wavelength are reviewed for accuracy of information (where applicable) and consistency of style and presentation. The views and creative philosophies expressed in this journal, however, are those of the author(s) and artist(s), and should not be taken to represent or reflect any aspect of institutional policy.

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Aim

*Te Iarere Wavelength* provides a forum for the publication of academic articles, points of view and creative works by current WITT staff members. Co-authored articles, in which one or more of the authors is either a WITT student or a non-WITT employee, will also be considered for publication.

Submissions are not limited to research or scholarly activity that relates directly or indirectly to WITT programmes of study. Any subject of general interest on which sensible and well-informed opinions may be expressed, and creative works e.g. short stories and graphic images, will be considered for publication.

Readership

It is intended that *Te Iarere Wavelength* is published in hard copy at least once a year. Copies will be distributed internally to all WITT faculties, interested staff, divisions, service areas, and nationally to other institutions.

Editorial Committee

An editorial committee drawn from Research Committee members will receive and review each article or creative work submitted for publication. The editorial committee may seek specialist opinion outside its membership where this is deemed to be helpful or necessary.

The editorial committee reserves the right to accept, edit or decline any piece of work submitted for consideration, and to make suggestions for - or seek - clarification of meaning where appropriate. A call for submissions is made approximately three months prior to publication dates.

Articles (including print based creative works)

Academic articles are expected to be formally structured with adherence to academic standards and should aim to be up to 2,500 words (longer ones will be considered). Point of View articles are informal and can be vary in length. All submissions selected for publication will be subject to editing.

All articles should be submitted electronically, preferably as a Word document. Articles should be presented in single-line spacing in 10pt Verdana font. Headings should be printed in bold type, in 10pt Verdana font. Any footnotes and references should follow the American Psychological Association (APA) format. Copies of the WITT APA Referencing Guide are available in hard copy at the Learning Centre.

Articles should not normally be submitted if they have been published elsewhere. In the case of prior publication, permission must be sought and obtained from the original publisher before the article is submitted to the editorial committee. Articles should be submitted to the Research Administrator (research@witt.ac.nz).

Graphics

Any written text accompanying graphics should follow the same guidelines as per the section “Articles (including print based creative works)”, above. Graphic images should be supplied in JPG or TIF format at no less than 300dpi.
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IN THIS ISSUE

To google or not to google? by Debra Hitchcock
Discussing the role of the library in a technological age, Debra happily declares her bias and defends her stance that in a world of information overload, the library is just as important as ever. Debra is the Collection Services Librarian in the WITT library.

Where have all the scientists gone? by Christine Fenton
This article is a point of view article written by former Head of Science and current convenor of the New Zealand Microbiological Society’s special interest group in Education. Christine is also co-founder of the Nexus Research Group, a group that supports science in schools and is a Waikato University Doctoral scholar recipient. This article is a personal viewpoint on the state of NZ science education.

Te Hā Oranganui – spiritual physical wellness by Te Huirangi Waikerepuru
Dr Te Huirangi Eruera Waikerepuru composed this pure for personal use to settle the spirit, mind and body. It is performed in the early morning at the break of day to welcome the sunrise, acknowledge life and the challenges it brings to each new day.

He pure tēnei hei whakararau i te wairua, i te ngākau, i te tinana. E kawea ana i te atatū, i te ata hāpara, i te takiritanga mai o te ata. Me te mihi anō hoki ki te huranga mai o te rā, ngā painga, me ngā karo ka puta ki tēnei ao.

Drawing the digital by Kurt Adams
These images provide an example from Kurt’s ongoing research into the use of drawing as a spontaneous device for dismantling digital conventions and exploring the excessive manipulation of our environment. The process of digitally sculpting dirty pixels and finger smudges allows new possibilities in the development and engagement with hand drawn artifacts. The work has been exhibited throughout New Zealand and currently Kurt teaches various computer graphic papers in the BVA.

Queen Street, Winter Night and Riwaka by Murray Strong
We present a collection of three poems written by Murray Strong, the Crown Commissioner. Some of Murray’s poems have been visualised by WITT art tutor Donna Wiliard-Moore and have been successfully exhibited. Murray has a background in governance and senior management experience in the commercial and tertiary education sectors.

A guided tour through past hospitality industry training by John Hudson
John Hudson, a hospitality tutor with a specialist area in catering and a Masters Degree in Adult Education provides a guided tour through changes in the NZ hospitality industry. A diverse industry, John advocates communication and unity instead of competition to meet the needs of the student.

ESOL learning disability by Barbara Morris
Barbara is an experienced and passionate learning skills tutor who has written an informative article on the difficulties of identifying and working with an almost hidden aspect of education: English for speakers of other languages (ESOL) students who have learning disabilities.

Linking research to teaching and learning by Barbara Chamberlain and Lorette Rayner
A collaboration of educationists, Barbara and Lorette teamed up to investigate the relationship between academic departments and the library and attempted to identify roles of each in teaching and learning. Barbara Chamberlain has since retired from WITT after service in the business and computing area and Lorette has a new role out of the library as the institute’s Flexible Learning Facilitator.
When I studied at university, I went to lectures. When I began my teaching career, I too lectured. If you look into the history of universities, most knowledge was communicated by standing in front an audience, and talking. The audience would gather around, and write their own notes if they needed to. In the very early universities, no textbooks would have been available to support the learning as the printing press hadn’t been invented yet. It was just the word of the teacher - the ‘professor’, the academic leader, the thinker, renowned in his (very rarely her) discipline area - knowledge was taken straight from the thinker’s mouth.

It hasn’t changed much. In fact, New Zealand law legislates that lecturers of a degree must be active researchers. That is because anything in a printed textbook is probably at least two years old. Degree teachers in particular, should be discoverers of new information that the student can immediately benefit from. Students should still be gaining up-to-date information from the thinker’s mouth. Lecturers should have written the book, instead of just read from it.

However, recent information is much more readily available with online journals for example - information that is perhaps only six months old. So, why are we still lecturing? A simple answer might be that now there is too much information. The lecturer becomes the guide for the student through the textbook, through the digital media, through the internet, and through the content.

Now, because there is too much information, we may trip over content. There is too much to deliver in the short contact time given; we must teach them what is required for the current workplace so we fill them with knowledge, and we test this knowledge with assessment. But, does this help them become independent learners? Does this enable them to react to the unforeseeable future workplace?

Instead of being the sole source of information (as in the ancient universities), the lecturer is now the content guide who structures the course and adds meaning through their own study or experience. As the lecturing/tutor role changes
from ‘sage on the stage’ to ‘guide on the side’ the teaching methodologies also have to change. How do we facilitate learning and ensure that graduates become the ‘independent learners’ that is required of a degree by the Amendment to the Education Act? Independent learners will be able to react in the workplace of the future with all its unknowns, by seeking knowledge for themselves – one of the pivotal differences between being ‘trained’ and being ‘educated’.

How does this apply in the ITP (Institutes of Technology and Polytechnics) sector where often the content is vocational and practical? The worker of the future will have to be adaptable, and may have to function in an environment that, perhaps, we have not yet contemplated. The production of independent thinkers which has been facilitated by teaching methods that are based on research and scholarly activity is of vital importance, no matter what the content, no matter what the level.

As educators, we need to alter our focus from the delivery of content towards the facilitation of learning. We help by guiding and demonstrating, creating opportunities for students to engage with the content and develop life-long learning skills. Students may not like it, but we are required by law to teach them not to need us, to be discoverers of their own information by thinking independently and reflecting on their own practice. Just like a lecturer.
QUEEN STREET

They walk with heads bowed
Striding without purpose
Pretending to think
Wanting no one
Other than themselves
One rises, contact
Smile offered, returned
But quickly caught
And thrust back with hands
Into pockets stuffed with self

Murray Strong
Debra Hitchcock

We live in the Age of Digital Information, with so many new bells and whistles on the Internet that a library could now be considered obsolete. If you spend half a thought on the image of a library, you might think of the library of yesterday, with stacks of books, a spinsterish woman at the front desk with her hair in a bun, sporting glasses, a twin-set and ‘sensible’ shoes; perpetually saying “shush”. Another half a thought might bring you into today, where there are a few new computers – and perhaps a more fashionable twin-set – but not many other visual differences. And with that in mind, why would you consider visiting a library when the Internet is available? Why wouldn’t you think the Internet the best option?

Here’s where I have to own up to a bias. I’ve lived, breathed, and worked in all sorts of libraries for most of my life, and I know that you’ve been short-changed if you think libraries are redundant. So, I’d like to discuss what you may be missing.

HISTORY

For a start, the collection of books you might think of as ‘the traditional library’ is just a stereotype of 20-50 years ago. Libraries have a much more colourful history than this. In ancient Europe the few books in existence were the treasure of a privileged elite, including Alexander the Great, who acquired every written item he could track down, building a great, private library. The Chinese philosopher Lao-tzu (604BC – 531BC) complained that “People are difficult to govern because they have too much knowledge” – so some form of readily-accessible ‘library’ must have existed in a part of ancient China. Medieval monks chained books in place to protect them, and also wrote them in Latin to keep their ideas even more secure. In pre-European Aotearoa, Māori worked to earn the right to knowledge, and tohunga protected their body of knowledge, carefully vetting acolytes over a period of time before disseminating parcels of information. Back then it was widely believed that repositories of information were repositories of power, and power must be kept secure.

During the latter part of the English Industrial Age, the invention of the printing press helped to create an environment
of economically accessible books, written in an accessible language. This situation led to the establishment of lending libraries which were the beginnings of our ‘traditional’ public libraries. Another feature of this time was the itinerant lecturer who went from hall to hall describing and discussing the latest inventions and discoveries. So many people had a good general knowledge of, and interest in, their environment and in emerging technologies. Although having accessible collections of books was perceived as the pivotal new development, it was actually the accessibility of ideas which was radical. Indicators of the time suggest this availability of information, or power, wasn’t a calamity; rather it was a comparatively healthy cultural period for most people.

INFORMATION BARRIERS

Despite these advances, there are more modern examples of attempts at restricting access to ideas. Hitler burned books: many, many books. Calculated destruction of books like this is called “Biblioclasm”. Chinese officials ‘rewrote’ the end of World War II by restricting general access to international books for Chinese people, and carefully constructing their own history books. And more recently, in the early stages of the so-called War on Terror, arson devastated the national library and museum in Iran. No-one claimed responsibility for the burning, but it was specific to the buildings housing the nation’s history, and flying bullets ensured that no-one fought the fires. The emails flying around in library circles at the time spoke of the irreplaceable, global loss of some of our oldest, unique manuscripts and artefacts. Macintyre (2003) lists other dictators, and other losses. In the New Zealand context, had the Crime Reform Bill passed into law when it was debated some ten years ago, the information on the Internet in this country would have been as tightly controlled as it was in China at this same time. Also around then, legislation was passed which allowed politicians to decide which of their records were preserved in our National Archives, and which they quietly shredded; although that provision has recently passed back into the control of the Chief Archivist.

SEMANTICS

Have you noticed that I’m using the terms “books”, “records”, “ideas”, “information” and “knowledge” fairly interchangeably? Libraries were never just “books”; I was taught that libraries are for the collection, preservation and dissemination of information
and ideas. Dissemination is a key word to note here. In knowledge management and information literacy terms, information is considered to be a static collection of details, while knowledge is the consequence of people mixing information with their own experiences to create a new understanding. For example, I’ve strung together a discrete set of details around a theme in this viewpoint article, in order to create a new perspective, a new piece of knowledge. The librarian’s responsibilities include a professional obligation, or vocation, actively to promote not just information but also knowledge.

In 1993 a joint New Zealand National Library and Ministry of Education report found that over half of our school teachers do not feel comfortable enough with research skills to teach them (Chalmers, 1993, p.34), and this is still an area of concern (Henri, cited in Moore, 2003, p.16). Librarians endeavour to work in tandem with teachers, in helping students to work systematically through the information literacy skills continuum. This is a repeating cycle of recognising a need for information; identifying appropriate sources; reading with discernment to assess the content; using the content in context with their original question; and creating new knowledge. Don’t ever be misled by the assumed stereotype of a librarian. Many are – albeit often quietly – passionately committed to assisting people to make informed decisions that promote self-determination and a sense of personal responsibility.

INFORMATION OVERLOAD

If you put in context the idea of modern life’s information overload: the amount of printed information doubling every few years (Lyman, 2003); common 500,000-odd hits on a single Google site; advertising which masquerades as “published information”; and personal blogs saying, well, anything; do you see a place for the organising skills of librarians? Our society has less ready access to general knowledge compared to people living in the latter part of the Industrial Revolution. Part of the ‘collection’ vocation of librarians is selecting timely, accurate and appropriate information. Part of the ‘preservation’ vocation is a responsibility for organisation. And organisation is what the Internet needs.

When you use the Internet, you might discover that you’re actually using librarian-created search directories. Have you ever heard of the Internet Library? The Virtual Reference Desk? AnyQuestions.co.nz? Te Puna? All of these directories
were developed by librarians. Have you ever wondered how the (comparative) effectiveness of search engines was achieved? Some years ago a group of librarians got together with some techno gurus in Dublin, and worked through library cataloguing procedure fields for authors, titles, subjects, keywords, date and place of publication etc. These fields were migrated for Internet use, in something now known as the Dublin Core Metadata Standards. Search engines use these Standards to determine the subjects and rankings of the sites they list. As the Internet started becoming more accessible here, in New Plymouth, some ten years ago when I was working in the Public Library I developed a series of brief introductory tutorials for members of the public. The high point for me was the number of parents and teenagers who came together to learn. Public libraries don’t often see much of teenagers, and possibly parents don’t either, so their attendance together was an additional, unexpected, bonus.

A huge amount of information is now being produced digitally, and will never have a print form, and our National Librarian Penny Carnaby took a global lead in arranging for its capture and organisation. Penny has been a leading contributor to the Public Records Act 2005, and the National Digital Strategy. Other librarians are working with other interested people in developing digital, or creative, commons. These are sites where financial and copyright considerations can be put to one side to allow information to be shared in the interests of the public good. For the large numbers of informational sites which are not freely available, many libraries are paying subscriptions to allow you access – often through your library card PIN.

Web 2.0 came along: a mini-revolution/evolution of interactive features on the web, such as blogs; wikis; rss feeds; podcasts and so on (O’Reilly, 2005). Shortly afterwards Library 2.0 appeared, generating discussions in the profession of where libraries should be more interactive. The most utilised area so far is the rss feeds: catalogues which will email you with alerts of new items of interest. More will come. The idea that you don’t need the library because the Internet exists is a red herring; significant parts of the Internet are the library. If you visit the library you may find this to be the case, and you may receive assistance with a range of other issues as well.
CONCLUSION

This short viewpoint article doesn’t begin to address other benefits from having a library, such as providing a warm, dry place where serendipity is everywhere to be discovered, with books and people, and so much more. You may have picked up that some of the ideals mentioned in this article are ideals which people other than librarians may also possess. We’re happy to work together with you in our vocation: sharing information is something we’ve had a lot of practice in, and part of this Information Age is the overlap and evolution of job positions. The worst joke in the library world, however, is that to command a reasonable salary you need to drop the term ‘librarian’ from your job title and perhaps become an ‘Information Officer’, ‘Knowledge Manager’, ‘Information Analyst’, ‘Webmaster’ or something else. I’d actually like to stay being a librarian: one professional among a team of professionals.

So, the answer to my original question of Google versus a library? It is, use both as appropriate; as long as you have the judgement to evaluate their relative fitness for purpose, and the skills and resources to utilise them effectively. And to acquire these skills and resources, a library is a good place to start and a good place to continue with; and will keep you well informed of future developments!
References


WHERE HAVE ALL THE SCIENTISTS GONE?

Christine Fenton

New Zealand has a proud history of boxing above its weight in many international arenas. Sport is just one particular arena in which New Zealand has enjoyed huge successes (just don’t mention World Cup rugby), and any average Joe on the street could tell you the names of many world famous New Zealanders – not just world famous in this country, such as Sir Edmund Hillary and Dame Kiri Te Kanawa. We all have our own areas of interest, and if you were to press your average Joes a little further to name more famous New Zealanders, they would of course be influenced by their particular pursuits and hobbies – sport, music, literature, politics, art or science for example.

In the field of science, New Zealanders have done us proud and been at the forefront of many modern scientific theories and discoveries. Standing tall among these luminaries are Rutherford (modern atomic physics – Nobel Prize in Chemistry 1908); Wilkins (structure of DNA – Nobel Prize in Medicine 1962); and more recently, MacDiarmid (synthetic metals – Nobel Prize in Chemistry 2000). Other achievements by New Zealanders include the discovery of the link between the human influenza virus and bird flu (Robert Webster); NASA space pioneering (William Pickering); and the development of many technologies taken for granted all over the world. Apart from being born in New Zealand these people have another thing in common: they all left New Zealand, and the only one still alive is Robert Webster.

That is not to say that New Zealand’s current scientists aren’t achieving in the international arena, because they are. Ask any scientist and they will quote you world famous (in the scientific community) New Zealand achievers, and some of them are still living here. But there is a problem. Biotechnology companies are predicting a severe shortage of scientists in the next two decades. They suggest that in 20 years over half the practising scientists will be retired, and there is no one to replace them.

So, where have all the scientists gone?
Looking at Rutherford, he was brought up in modest circumstances at Brightwater near Nelson, and was part of a large family with hardworking parents who valued education. He spent many carefree days poking around in the countryside observing, investigating and ‘mucking about’. He himself attributed his willingness to experiment and find unorthodox solutions to his background in rural New Zealand, stating: “We don’t have the money, so we have to think”. He also grew up relatively free of social constraints and without the automatic acceptance of intellectual assumptions: which in turn enabled him to become an innovative thinker and experimenter. Another important factor was that the young Rutherford was exposed to people who recognised his potential, and who supported and inspired him.

Maurice Wilkins was born near Pahiatua in rural New Zealand, the son of a doctor. Moving to Wellington he often described his upbringing as the happiest period of his life. He firmly believed that the opportunities for exploration and discovery while living in New Zealand nurtured and shaped his development as a scientist. He was quoted as saying: “In the time of my parents, before World War One, most people who came to New Zealand from Europe were the more enterprising people; the people who were stronger mentally. It takes a certain amount of imagination to make a life on the other side of the world, the same imagination it takes to climb the tallest mountain.”

Alan MacDiarmid also grew up in a large, hardworking family in regional New Zealand (New Plymouth and later Masterton). He said: “It is my home life while growing up through high school, which I consider to have been the single most important factor in any success which I may have had in life. As my parents always said, an ‘A’ grade in a class is not a sign of success. Success is knowing that you have done your best and have exploited your God-given or gene-given abilities to the maximum extent. More than this, no one can do.” He had to leave school at age 16 but got a job in the Chemistry Department at Victoria University where he became mesmerised by the colour of chemicals, and began to study part time.

These three Nobel Prize winners all started from humble beginnings in small town New Zealand, where their modest financial situations instilled in them an ethic of hard work, innovation and application. Their natural ‘Kiwi-kid’ wonderings of curiosity, observation and experimentation were strengthened by family support which provided them with encouragement, confidence and a ‘can-do’ attitude.
So, what has changed? A great deal. We live in a ‘throw-away’ society for a start. If an appliance is broken we simply buy another one; the average New Zealander has access to many modern technologies and usually enough cash to purchase a replacement item. We don’t need to use number 8 fencing wire to improve that television reception, or a metal coat hanger to improve car radio reception. On the contrary: we have Sky TV, DVDs, free-to-air, internet, pod casts…. If an item is broken, we don’t try to fix it ourselves. We don’t get out the duct tape and pliers and give it a go. Instead, we take it back. It was under guarantee. If we tried to fix it, that would void that guarantee.

As a consequence, the 21st-century child by and large has nothing to pull apart, or to build. How many children do you know who have built their own bicycle or go-cart? Overwhelmingly they would have bought it (or had it bought for them). The old radio, the old telephone, the old television – anything ‘old’ – used to be put in the shed for spare parts; or children were given leave to pull things apart and experiment with the resulting bits and pieces. What do young children do now when they are bored? Do they roam the countryside, poking at birds’ nests, wading through marshes and rivers, going through rock pools chasing crabs, climbing trees and building forts? I think not. These active pursuits have largely been replaced by passive, technocentric engagement: children watch television and DVDs; go to the movies; text their friends; listen to I-pods; chat on their mobiles; play with their Playstations and X-boxes... Wandering around, observing natural phenomena is just boring.

And what of their mentors? What is happening at school? Has NCEA (National Certificate of Educational Achievement) exerted any influence on the development of young scientists? Can teachers in an environment of constant assessment provide an environment that encourages observation, mentorship, experimentation and innovation?

Statistics of the science and mathematics subjects since NCEA began show that the number of New Zealand children succeeding in these areas is decreasing (Figure 1). So, fewer and fewer of them are choosing science and mathematics as options. Professional bodies of scientists are becoming more and more concerned about the knowledge erosion evident in some assessment standards. All of this doesn’t matter if students are still being enthused, motivated, encouraged and inspired, but if you look at local science fair entries you can
see that throughout the country senior high school students aren’t interested, aren’t inspired, or do not have enough time to participate. Practical, laboratory investigations are time consuming; they need resources, mentoring and supervision; and as a consequence less and less practical experimentation is taking place. If students aren’t being encouraged to develop the skills of observation, experimentation, innovation, and if they don’t have the attitudes of ‘can-do’, ‘give-it-a-go’, and ‘what-will-happen-if?’, it becomes a point of debate as to whether or not New Zealand can continue to produce world influencing thinkers.

Or maybe it’s our attitudes that have changed or are changing. Issues such as climate change, technology, oil prices, genetic engineering, medical ethics and biotechnology are all part of our daily lives. On some aspects such as climate change and genetic engineering, even scientists can’t agree. The stereotypical, visual concept of a scientist is of a slightly mad fellow with bad hair in a white lab coat. Not exactly an appealing image. But the point here is that I suspect the world’s public has become impatient with ‘science’. I think there is a major backlash against it, in fact. Nuclear war, climate change, messing with our food chain is all because someone in a white lab coat decided it might be timely and opportune to find out ‘what if?’

It is also unfortunate that apart from fading memories of secondary school science, members of the public at large tend to get their science knowledge/data from the media and from movies. The media often gets it wrong, misquotes and misrepresents. Scientists know this, but as many scientists are not good at explaining their work in a simple way, communication can be a problem. And think of the number of blockbuster movies that show scientists as unemotional, arrogant and all-knowing – and ultimately flawed and/or impotent in applying their knowledge and insights in times of crisis. This is a huge change in characterisation of the scientist compared to popular media earlier in the 20th Century. Jules Vern, Mary Shelly, then to “Star Trek”, “Lost in Space”, “Land of the Giants”, “Dr Who”, and a vast array of science-fiction, futuristic media that showed ultimate confidence in the scientist. Even “Gilligan’s Island” had a scientist that had an answer for everything, and was kind, trustworthy and dependable. Kids wanted to grow up and be a scientist. Now, nuclear war, genetically altered viruses, machines with artificial intelligence that threatens human existence in its entirety – all good movie topics, all with the basic premise that some scientist started it.
However, science is NOT really the problem. It is the application of science – technology that causes these perceived problems. Science is the pursuit of knowledge – technology is the use of it. The science behind the nuclear bomb relates to the forces that hold the atom together – the technology is the application of that scientific knowledge that makes a bomb. Technology is responsible for greenhouse gases, not science. Bio-technology would be responsible for genetically engineered viruses and marauding clones, not science. Science seeks to understand the mechanisms, understand the patterns, observe; technology uses that knowledge.

Is there really any difference? The difference is in the funding. ‘Blue-sky’ research does not attract funding. Research that could be applied in some manner (technology) is what attracts funding. New Zealand is a small country, so its researchers have to produce innovation in technology, enterprise, medicine (application of knowledge) that is to say, research has to produce something that will cure, sell, fix, innovate ..... happy scientific accidents like the discovery of penicillin and conducting plastics are unlikely to happen in this environment.

When my husband had an interview for Teachers’ College, the interview panel noted that he was a ‘scientist of some note’, and questioned whether he might become bored in the secondary school system. He couldn’t see how: enthusing, motivating, innovating and inventing would be fun! We weren’t prepared, however, for the philosophical narrowness of outlook underpinning the modern secondary school system; the staffroom politics; the sacrifice of traditional subjects that require experimentation, analysis and critical reflection.

Remember Archimedes, Pythagoras, Newton, da Vinci (a scientist with artistic talent) and Einstein: observers all, first and foremost. They were curious, dedicated and able to communicate, experiment, and be innovative. Science then was not about learning and regurgitating a series of facts as it is in the current education system. Another important link these historical greats have with our NZ Nobel Prize winners is the fact that they were teachers themselves. Archimedes, Pythagoras, Rutherford, all took on students who worked alongside them, participated in analytical and robust discussion and experimentation. They acted as mentors, motivators and encouragers. That link of passing on the passion is an important one and probably not one readily available to those coming up through the system. Are our teachers able to do this for our high
school students when the education system is so assessment driven? Are our university teachers able to do this for our tertiary students when the funding system is so technology driven? Are our scientists able to regain the confidence of the public at large when information is so media driven?

So, where have all the scientists gone? They, like me, are simply doing something else. Education plays a huge part in preparing the young scientist. Employment conditions play a huge part in retaining the young scientist. If both conditions (education and employment) are NOT ideal, then we do have an uphill battle. If we address some of these issues as a society, value the pursuit of science (observing, predicting, critically analyzing), encourage positive role modeling and communication from the scientific community, then maybe we can start to plan and grow a whole new generation of potential Nobel Prize winners.

Figure 1. Fail rates for Level 1 learning areas, pooled over all years.

Figure used by permission of Mary Jane Sneyd BSc, MBChB, PhD (Otago)
Dr Te Huirangi Eruera Waikerepuru

This is a *pure* for personal use to settle your own spirit, mind and body. It is performed in the early morning at the break of day to welcome the sunrise, acknowledge life and the challenges it brings to each new day.

He pure tēnei hei whakararau i te wairua, i te ngākau, i te tīnana. E kawea ana i te atatū, i te ata hāpara, i te takiritanga mai o te ata. Me te mihi anō hoki ki te huranga mai o te rā, ngā painga, me ngā karo ka puta ki tēnei ao.

Nau mai e te ao awatea,
Ūhia mai to hā ki tēnei mōuri ora.
Hurihia te pōuriuri, te pō hangū ki tua,
Kei te tuhi, kei te rarama, hura mai te rā.
Uruuru te mōata, totoro te pūhina,
Takiri te pūata kaipō.
Hira mai te haeta ki tēnei tauira,
Te ohonga o tēnei manawa ora.
Te aro ake nei ki te Tūramarama,
Te Áiō Nuku, te Pū Takeake Rongo.
Te hau angiangi e taiāwhio nei,
I ngā koroputa o te ihunui, o te ihuroa,
O tama ihu ngongo hau takiri ata,
Ka ao ka ao, ā, ka wātea.

Nau mai e te ao.
Kawea mai ngā hua o tēnei rā.
Hei whakamātau atu,
Hei whakamātau mai.
Nau mai, tau mai whakapūmoutia,
Te hauoranga o tēnei hautū tangata.
Ngā tōpito o runga, o raro,
O roto, o waho o tēnei piringa,
O te mōuri matatū, o te ngākau ohooho,
O te hinengaro, o Wai Tuawhakarere.
Tū pakari e-e rangahia e te uri pāroa.
Titokona kia eke atu ki Taupae Nui,
O Piki te ora, Piki te kaha,
Piki te māramatanga.
E rongo e-e-e, whakairihia!
E Kui mā, e Koro mā i te pō!
Ko te uri whai muri i o koutou tapuwae,
Whātoro atu ana te ngākau o tēnei,
Ki a koutou tātaiinga kōrero!
I whakairihia ki ngā maunga whakahī.
Tohia rā e Wai Nui! Wai Roa!
Wai Ora! Wai Rere!
I kōkoiawa, taheke, pōkare i puke tāhuahua,
Ki te mania, ki ngā takutai moana,
Te Hā-oro-oro mai rā!
Te moana uriuri, Tangaroa, Takapou
Whāriki i Papa Tuanuku e takoto nei!
Ko a koutou kōrero, hei aratakinga ake,
I ngā huarahi kei mua i te aroaro!
E tōtika ai te noho o to uri,
To mokopuna i te mata o te whenua,
I roto i te tika, i te pono,
I te māramatanga.

Ka ū, ka ū te mouri ora,
O tēnei tauira.
Ka ū, ka ū te manawa ora,
I te Kawa Nui, i te Kawa Tapu.
Tū hikitia, tū hapai nga te mana tangata,
I roto i te Kawa Tapu.
Tū te ngana, tū ka maranga,
Te tuhi, te rarama, te atamai.
E Kui mā, e Koro mā ki a koutou kōrero,
Ki a koutou tikanga.
Maranga mai, te korowai whakahira mōku,
Te whakanaketaunga mai Matua te kore, tatū
Ki tēnei ara toi roa, ara toi matua.
Koia rā e Rongo Whakairihia ki runga.
Tūturu whakamoua ki tīnā!
Tīnā! hui e-e-e Taiki e-e-e-e!
Oriori video image by Kurt Adams from the video directed by Rachel Rakena
WINTER NIGHT

Sun going  
West but  
Looking past  
Mountains changing  
Sinister, low  
Two dimensional  
Razor back

Sky to  
Orange, crimson  
Red, purple  
Glimmers too  
Still air  
And sound  
Now black

Silver, rising  
Full two  
To three  
Sheen and  
Light guide  
To longing  
Moving too,  
Noisy mountain  
Shining, white

Chill and  
Cold silver  
Dipping crisp,  
Sound crystal  
Glistening purple  
Too, but  
Hope awakening  
The ground

Life again  
Noise humming,  
Like yesterday,  
Beginning in  
Sun but  
Looking forward  
It’s coming  
Summer

Murray Strong
Abstract

Tertiary training that best meets industry needs has been an ongoing pursuit and objective of consecutive New Zealand governments in our recent history. The Minister of Tertiary Education, Dr Michael Cullen, stated:

It is vital we have a tertiary education sector capable of driving economic transformation and meeting our environmental and social challenges. A highly skilled workforce in particular is essential if we are to develop a more resilient and flexible economy to meet the challenges we face in the global marketplace (Cullen, 2007).

This article suggests that if the tertiary education sector is to achieve these goals, a solid foundation for this development needs to be established. Fundamental questions need to be asked: Is the tertiary training sector and the hospitality industry sector fully aligned in their objectives for training? What constitutes a successful outcome for both sectors?

From 1980 onwards changes have occurred that have seen a paradigm shift (Kuhn, 1970) in how tertiary education is delivered in New Zealand. This article examines how certain changes have affected the specific trade sector of catering and looks objectively at its past history with a view to strengthening our future approaches.

INTRODUCTION

The ITP Sector (Institutes of Technology and Polytechnics) is currently working through a significant period of change in response to legislation. A sum of $127 million will fund the overhaul in the sector that will see a move away from the model of payment by student volume through education programmes to a focus of ‘investment’ in tertiary education (New Zealand Press Association NZPA, 2007) as “it is vital we have a tertiary education sector capable of driving economic transformation and meeting our environmental and social challenges” (Cullen, 2007). Michael Cullen reiterated the need for a responsive labour market,
“a highly skilled workforce ... is essential if we are to develop a more resilient and flexible economy to meet the challenges we face in the global market place” (Cullen, 2007). This position is reinforced in the Organisation for Economic Co-operation and Development (OECD) Thematic Review of Tertiary Education 2004 – 2007 (Ministry of Education, 2007). The rhetoric is not new. Tertiary education has been legislated and will be the driver of New Zealand’s economic transformation for the next twenty five years. The de-regulated and free market policies of the 1984 Lange-led Labour Government, saw major change in how tertiary education and trades training, in particular, was delivered and evolved into a ‘user pays’ marketable commodity. This trend continued under the National Government of 1990. A combination of government subsidies and student fees funded tertiary education. These aspects remain, and continue to be a feature of today’s tertiary landscape. Figure 1 illustrates a timeline of specific legislation that has impacted tertiary training in New Zealand over a 23-year period.
CRITICAL FACTORS THAT INFLUENCED CHANGE OVER THE TERTIARY EDUCATION SECTOR

The Hawke Report (Hawke, 1988) was built on from the Picot Report, which suggested major restructuring and reform of the education sector. Tomorrow’s Schools and the introduction of Bulk Funding to schools were two examples of initiatives that resulted from the Picot Report. The Hawke Report targeted the tertiary education sector, applying many of the same philosophies as the Picot Report including: over-centralisation of decision making, vulnerability to pressure group politics, lack of accountabilities, feelings of powerlessness and that change was required (p. 4).

The Hawke Report made recommendations that introduced a number of changes which would filter through not only the tertiary education sector, but New Zealand society at large. Some of the proposed changes were to funding, a move to a system of national educational qualifications, and to enable portability of qualifications between institutions. The report also highlighted low participation rates in post compulsory education relative to other OECD countries and high attrition rates. It suggested that poor retention might be attributed to poorly designed courses or inadequate guidance and support to students. To counter the problem of retention the report recommended that “it may be desirable to reorganise courses into modules which will permit documentation of what has been achieved” (p. 21). The enormity of the task of implementing amendments to Acts and regulations of other affected statutes, hinted at the impending impact on the tertiary education sector. The legislative vehicle to initiate these and other changes, was to be the Education Amendment Act 1990. While the changes were ‘major ones’ the report suggested a “very tight timetable of change” be implemented (Hudson, 2003, p. 7).

The Porter Project (Crocombe, Enright & Porter, 1991) supported the initiatives of a National Government to further align the tertiary sector to the economy. But it questioned the relevance of the then current curriculum and its inability to prepare students for the competitive world and its global economy (Butterworth & Butterworth, 1998). All this was prior to the formation of the National Qualifications Framework (NQF).

The draft curriculum framework - Designing the Framework - was introduced in late 1991. It represented some clear shifts from the ideology and political intent of previous curriculum
statements (syllabus). Dr Lockwood Smith drew attention to the need for New Zealand to compete in the modern international economy and achieve educational standards that would produce a workforce capable of raising the nation’s competitiveness. He argued that “citizens’ future standards of living depended upon reaching higher standards in education” (McGee, 1997, p. 61).

LEGISLATION

Legislation that altered the course of the tertiary education sector and its delivery of hospitality education was the Education Amendment Act 1990. This act established the New Zealand Qualifications Authority (NZQA), the Ministry of Education’s single centralised qualifications accreditation body. The New Zealand Qualifications Framework became the single structure used to standardise all New Zealand’s tertiary qualifications in the ITP sector, into one cohesive model.

The Industry Training Act (1992) was established to provide recognition and funding to organisations (Industry Training Organisations or ITOs); to set the skill standards for industry and administer the delivery of industry-based training as well as to encourage and improve industry-based training (Industry Training Act, 1992).

Now Industry Training Organisations were able to advise NZQA of the skill requirements of industry and all aspects of qualifications. “They would replace the existing education-sector focused standing committees and would provide assistance in to the Authority in strategic planning for all qualifications and for national skills development” (NZQA, 1991, p. 16).

New Zealand Qualifications Authority (NZQA)

NZQA is a crown agency governed by a board, appointed by the Minister of Education, replacing over 30 different government organisations formerly responsible for different aspects of national qualifications. The NZQA described it as ‘unsatisfactory’ that so many organisations were responsible for different qualifications systems. This created obstacles when moving between systems as qualifications did not link well with each other and “discouraged participation in learning” (NZQA, 1991, p. 8). An OECD report called Pathways for Learning (OECD, 1986) also suggested standardisation under one authority.
In *Designing the framework* NZQA (1991, p. 17) recognised the need to develop a common currency for qualifications as was happening in other countries including Britain, the European Community and Australia. NZQA established the National Qualification Framework which continues to be the unified structure for all New Zealand trade and educational qualifications based on unit standards.

**CHANGE IN THE HOSPITALITY SECTOR AND ITS EFFECT ON TRAINING**

An argument prevails that political influences have shaped how New Zealand qualifications now look, which has in turn shaped the delivery and assessment of hospitality training. It also created a hierarchy that determined who delivers the training. The last 17 years have seen a significant ‘decentralised’ and portable approach where students can now obtain their tertiary training in a location of their choosing. An example is catering training where it could only be accessed at larger regional centres in conjunction with working in the hospitality industry, mostly under an apprenticeship system. However, it is now available at high schools, through private providers, and institutes of technology and polytechnics across the country. The Modern Apprenticeship system is a recent initiative that also provides training and on-the-job assessment to people working in their place of employment. The modern apprenticeship approach demonstrates a further example of the political direction, empowering all trades sectors in New Zealand industry to establish benchmark standards. Broken into ‘modules’, they are known as unit standards. The NQF, comprising of unit standards and their corresponding assessments, effectively establishes the curriculum for the approximately 40 trade and industry sectors, represented by Industry Trade Organisations.

The Hospitality industry has been transformed over the last 25 years. A mushrooming of small owner-operated businesses now employs the largest percentage of workers in the sector. These facts from the Restaurant Association of New Zealand website illustrate the make up of our industry in terms of business profile.

- The average food service business turns over approx $400,000 or $66,100 per full time employee.
- 6 out of 10 cafes & restaurants are individual ownership or partnerships.
7 in 10 food service outlets employ no more than 5 full time staff.
64,340 employees work in the food service sector making it the nation’s largest private sector employee (3.8% of the total workforce in New Zealand).
Average daily sales from the café and restaurant sector exceed $9 million.

Restaurant Industry sales are forecast to reach $4,300 million comprising of:

Restaurants, cafes, coffee houses and caterers will make up $3,320 mil (77.2 per cent) of total.
Fish and chips, ethnic food, Chinese and hamburger $611 mil (14.2 per cent).
Lunch Bars, Ice cream $254 mil (5.9 per cent).
Pizza/Takeaway $116.0 mil. (2.7 per cent)

(Restaurant Association of New Zealand, 2006).

A typical profile of a food service business in the hospitality industry is that it is labour intensive, not heavily dependent upon technology, (although this trend appears to be changing as technology is being identified as a means of boosting productivity and efficiency), owner-operated and, employing a higher ratio of female employees than male (RANZ, 2006). The hospitality industry is diverse and complex in its strata and the range of business that it comprises; from the takeaway business, to the rest home caterer, and to the signature hotel restaurant. The industry is competitive and fast growing, with anecdotal evidence suggesting that the rate of growth is exceeding the supply of labour, especially when it comes to qualified and experienced personnel.

Previous research (Hudson, 2003) highlighted factors specific to the catering area. Of specific importance is the strong emphasis on research being key to the education strategy for the future (Cullen, 2007). Another factor affecting catering is the inconsistency of standards within qualifications due to four different training structures for catering trade training over a twenty year period from 1980 – 2000. Also relevant is the number of partially-qualified hospitality trades people, (many who enter first year training by completing 2000 hours in industry but who did not return to complete the higher level qualifications in catering). There is confusion in the roles and responsibilities of training in the catering area.
With the diversity of the hospitality industry workplaces it is a logical supposition that standards will vary amongst businesses according to the type of work that they do. There is a marked difference, for instance, between a fast food restaurant and a fine-dining hotel restaurant. Both establishments respond differently to the requirements of their customers. The catering industry is a clear example of an industry sector where one size does not fit all.

Expectations of industry differ from that of the training outcomes of providers. Tertiary education providers and the industry sector appear to be working at cross-purposes when it relates to the purpose of training. While industry attempts to reflect the diverse requirements of the hospitality sector, the education sector prioritises student learning and achievement. Although this seems obvious, throughout the post-nineties period, there was an underlying assumption that tertiary providers had a dual role of maintaining industry standards as well as meeting the needs of the student. The tertiary education reforms highlights the need for the tertiary education sector to continue to consider the needs of students while maintaining and fostering a competitive labour force for a fast moving competitive industry. Figure 2 emphasises four critical elements that impact upon teaching practice which have affected, and will continue to affect, what we deliver in terms of ‘quality’ training.

The Future of the Hospitality Sector and the Investment of Training

The Tertiary Education Commission (TEC, 2007, p. 15) identifies its immediate outcomes as:

- Access and achievement – all learners have the opportunity to reach their full potential.
- Relevance – Learning and research that meets the needs of our country, our communities and our industries.
- Excellence – Effective and innovative teaching, learning and research

These outcomes are underpinned by developing system capability which includes:

- Strong stakeholder relationships and effective communication to facilitate change.
A sustainable funding system to provide support and incentives aligned with the Tertiary Education Strategy.
A robust evidence base and analysis to inform change.
Steering instruments to support change.

Achieving the objectives required for the tertiary sector will require a tripartite approach, with the ITO, Industry and the ITP sector collectively bringing their specific areas of expertise to the table.

An honest and reflective position is required to identify what the strengths and weakness of our current system are in relation to current and future priorities for our industry. This is underway with the Hospitality Standard Institute (HSI) assessing the future needs of our industry with the HSI LIASE series of stakeholder workshops. While the industry is collectively a major force, it is made up of an extremely diverse and fragmented enterprise base. Communication issues have been catalysts for change in our sector. The Vocational Training Council (1980) reported several areas of weakness in the traditional apprenticeship training, delivered in the workplace. Problems identified included: that there were no guarantees that apprentices were trained in all the required skills, there were inconsistencies in training practices, and there was poor record keeping (p. 10).

While the Hawke Report (1988) called for a number of changes to educational administration and the vulnerability to pressure group politics (p. 4), a situation that still appears to be prevalent in catering training, according to the research.

From an educational perspective a robust curriculum backed up by valid assessment provides the necessary infrastructure to sustainable training. This, in turn, will allow flexibility in delivery, promote creativity and ownership and, reduce the volume of text-based written evidence required in the current system. If we are to achieve a standard 'across the board' it has to meet everyone's needs. If we are to achieve and foster excellence, develop cognitive lateral thinking and leadership for our competitive industry, these elements need to be evident in our curriculum. Values within tertiary education require inclusivity. The competency-based assessment system (used in both the secondary and tertiary education sectors) only relates to outcomes. It was suggested that a grading system be integrated within National Certificate of Educational Achievement (NCEA) to distinguish between levels of student achievement. This could benefit the hospitality curriculum. The ITP sector has, collectively, significant educational and hospitality expertise and
knowledge across the spectrum. It could use this expertise to work conjointly with the Hospitality Standards Institute to meet the challenges of the future. To fully capitalise New Zealand’s investment in the ITP sector depends upon quality, meaningful collaboration and flexibility between Industry, ITO and the ITP sectors by combining their talents, knowledge, diversity and creativity to meet the challenges of the future.

Figure 2: Critical elements that impact upon teaching
References


Night vision 2 Kurt Adams
ESOL LEARNING DISABILITY - AN ENIGMA IN TERTIARY CLASSROOMS

Barbara Morris

Introduction

As the numbers of English speakers of other languages (ESOL) visiting or living in New Zealand increase, so do their numbers within our tertiary education system. Such students have presented their tutors with a puzzling dilemma. Some seemingly competent ESOL students (L2 learners – English as their second language) are not learning as well as expected. Such students present with underlying characteristics indicative of a learning disability (LD). Defining, identifying, and assessing LD for native English speaking students (L1 learners – English as their first language), can in itself be very challenging but include ESOL and the issues intensify and cause even greater concern. Separating out causation of learning issues for ESOL LD learners is intensified by cultural differences, especially when assessment processes are carried out in a language other than their native tongue. Exploring both concepts individually reveals the difficulties of their co-existence, emphasising the importance of early identification, assessment and intervention. Early intervention not only provides the ESOL LD student with enhanced opportunities for success but has both political and institutional ‘success, retention and completion’ implications.

BACKGROUND

The New Zealand Ministry of Education Adult ESOL Strategy (2003), noted that 50,700 residents’ English was not strong enough to converse about everyday things/events and that 200,000 - 210,000 adults from non-English speaking backgrounds had less than adequate levels of literacy. It was also noted that there were 54,025 visiting international students within the New Zealand education system (Ministry of Education, 2006). Such statistics indicate that currently approximately 250,000 internationals living in New Zealand have the potential for learning issues. Monarez (1992, as cited in Root, 1994) suggests that between 5 to 15% of the population, across all cultures, have learning disabilities which potentially equates to a least 12,500 – 37,500 ESOL in the aforementioned group.

The New Zealand tertiary education sector “is committed to ensuring that all New Zealanders achieve their potential in life, ... are able to engage in critical analysis of the world around
them”, and that it is the responsibility of the education sector to match the diversity of learner needs to appropriate provisions (Ministry of Education, 2003, pp. 6-7). In theory, all learners can expect that the tertiary system will meet their needs. Studies in this area are not only necessary for student success and retention but also for meeting the requirements under the Ministry’s guidelines. However, research has revealed difficulties associated with the identification of not only ESOL LD but with LD itself, as worldwide, the LD concept presents real problems in areas of determining what it is. There is a consequential lack of unified definition, assessment and identification processes.

**Learning Disabilities (LD)**

An LD literature review revealed that at least seventeen definitions have arisen since 1962. Definitions vary according to the writer’s discipline and specific political requirements for funding and accommodation of learning issues (Bradley, Danielson, & Hallahan, 2001; Lerner, 2006; Lyon, 1996; Payne & Irons, 2003; Stevens & van Werkhoven, 2001; Tsuge, 2001;
Vogel, 1998). Its conceptual development has traversed many approaches, theories and disciplines. Figure 1 summarises this fragmented and often conflicting field.

Shaywitz (1996, as cited in McLoughlin, Leather, & Stringer, 2002) attempted to simplify findings describing LD as “an unexpected weakness in a sea of strengths”. Ysseldyke, et al. (1983 as cited in McLoughlin, et al., 2002) suggested that after five years of trying, describing LD with any precision was near impossible. The importance of recognition relates specifically to classroom and examination accommodations and services.

Despite the dissention in the field, a set of generally agreed commonalities have emerged:

i) That LD exists throughout the life span
ii) The recognition of intra-individual difference and its heterogeneous nature
iii) That it appears to be a central nervous system dysfunction/difference
iv) Learning problems are associated with learning processes and there is a linkage to academic learning issues
v) There are frequently other conditions and co-existing (co-morbidity) or excluded disabilities (Myers, 1998-2005).

The use of these commonalities is not without critics but they provide a foundation for understanding of what LD is.

Essentially, LD is a learning difficulty/difference that can occur within any person, at any age. It is seen as specific, unexpected, uneven underachievement, manifesting itself in any subject area/s (while not in others). It is not caused by other disabilities such as sight, hearing, etc., but can co-exist with them; it is intrinsic to the individual and can be demonstrated through a variety of differences/impairments in processing information (Brinckerhoff, Shaw, & McGuire, 1993; Vogel & Reder, 1998; Walcot-Gayda, 2004).

The development of assessment tools has been guided by the differing historical perspectives, making “[t]he assessment and diagnosis of traditional college-age students and adults with learning disabilities ... one of the most controversial topics in the area of postsecondary ... services delivery” (Brinckerhoff et al., 1993, p. 90). The traditional assessment has elements of each of the seven phases, seemingly to attempt to cover all options with no finite answers. This has resulted 117 different possible tests (Lerner, 2006) with 76 specifically for adults (Brinckerhoff et al., 1993).
Cultural Difference

Causes for ESOL students experiencing learning issues are varied and can relate to their literacy levels; a mismatch of transferable skills between languages; inefficient study habits; stress or trauma associated with moving to an English speaking country; cultural disharmony; sporadic attendance in class; or the lack of opportunity to practise the skills learnt outside of the classroom; and/or physical/visual/hearing impairments.

The length of exposure to English is a major consideration - seven to ten years usually produces L2 English efficiency. Also noted is that the natural learning trajectory in other cultures has little written documentation. It is possible that there is a correlation between these factors? As LD affects the acquisition of language skills, ESOL students with LD will be challenged when mastering the mechanics of a new language but may manage the content. This has been demonstrated aptly with many of L1 LD participants in studies, who demonstrate higher levels in comprehension than reading (Schwarz & Terrill, 2000).

The need to identify and understand ESOL LD is twofold. Firstly, the student develops an understanding of why learning English is so challenging. Removing personal responsibility for causation often impacts positively on the learner’s self esteem. Secondly, for tutors, it provides foundations for intervention and accommodations. Unfortunately, many tutors lack training in working with culturally and linguistically diverse learners - even fewer in LD and as the diversity of students intensifies, such knowledge is imperative for successful classroom experiences for both tutor and learner (Artiles & Ortz, 2002; Schwarz & Terrill, 2000).

Understanding how cultural difference impacts on adult education, establishes the need to appreciate that culture provides the blueprint for beliefs, values, attitudes, role expectations and practices of a group who share a common worldview. This worldview has been handed down through generations, and is reinforced and perpetuated by the language of that culture (Hofstede, 1986; Pitt, 2005) for both teacher and learner.

Culture is dynamic. It constantly changes through contact with other ideas and other cultures but generally the foundations are constant and provide the basis for life within that culture (Cheng, as cited in United States Department of Education [USDOE],
Since the first contact between cultures, cross-cultural differences have arisen and are often problematic for both tutor and student (Hofstede, 1986). Consequently, what is considered a successful pedagogy in one culture may lack transferability.

Ziegahn (2001) provides a simplification of the five main dimensions of culture that impact on adult learning which can cause many misunderstandings and tension. Firstly, the concept of individualism versus collectivist thinking; individualism focuses on actions for personal gain, self-reliance and individual autonomy whereas collectivist thinking centres on the importance of community and appreciates the importance of group efforts in harmony. Secondly, monochromic time versus polychromic time, where personal interaction can be sacrificed for scheduling for efficiency. Thirdly, egalitarianism versus hierarchy, where fairness and equality of opportunity for all are valued rather than open acknowledgement of innate differences and inequalities. Fourthly, ‘action’ orientation versus ‘being’ orientation; which involves sacrificing personal interaction and moving straight to action, rather than taking time to appreciate the moment. Lastly, change versus tradition, where a culture looks to the future while resisting a historical perspective rather than reflecting on the lessons of history as an important guide to the future.

The challenge for many Asian American students is that they come to institutions that value individual achievement and survival of the fittest. However, the voices from their hearts tell them that they are pursuing higher education to bring honour to their family by what they learn from elders at the college and university. Asian American students are looking for guidance, but few members of the institution understand the cultural conflicts that these students encounter on campus (Chew-Ogi, 2002, p. 94).

Student failure, in these circumstances, reflects not only on the learner but on the whole family and if not approached sensitively, brings disgrace. The importance of ‘saving face’ for the student is a significant example of the importance of understanding cultural differences and of how communication can cement or create barriers in a relationship (Matsu & Ting-Toomey, 1992).

Where student and tutor cultures arise from opposing dimensions, conflict can arise. Consequently, it is not enough for the tutors from the dominant culture to just value diversity at personal,
educational and social political levels, there is a need to know how to adjust instruction and communication so that all students “feel visible and valued” (Li, n.d., p. 1). The importance of recognising personal values, while appreciating that students may not share them, is crucial to unlocking personal “prejudice and bias, and its impact on actions and to ‘hear’ [the student’s] needs over personally preconceived beliefs” (Chew-Ogi, 2002, p. 93).

Hofstede (1986) identified four cross communication teaching/learning factors influenced by cultural difference:

1. The cultural image of student and teacher within each society.
2. Differences in expected tutor/student interaction.
3. Differences in profiles of cognitive abilities between populations.
4. The difference in relevance of curriculum in the two societies.

Ballard and Clanchy (1997) summarise the impact of these differences into four discrete approaches to teaching and learning: attitudes to knowledge; learning approaches; teaching strategies and learning strategies. What these models present is that the base structure and attitudes to government, knowledge/power relations, comfort with structured/unstructured learning situations, the power of teachers/learners, and learning behaviours that are rewarded or admonished, are culturally based and impact on cross cultural learning.

ESOL LD

Existing LD literature has provided a starting point for the identification of ESOL LD. Many approaches have been suggested, such as: utilisation of the same process for L1 LD with the addition of L2 translators/interpreters (Burnette, 2000); utilisation of interviews, questionnaires and portfolio development (Schwarz and Terrill, 2000); curriculum-based assessment (Barrera as cited in United States Department of Education - USDOE, 2003); and the identification of underlying non linguistic information processing skills (manifestations) (Kohnert, as cited in USDOE, 2003).

The literature offers both support and rebuttal for each of the systems (Abrams, Ferguson, & Laud, 2001; Burnette,
Problems with existing assessment tools relate to cultural and linguistic issues resulting in conflicting ideas about the appropriateness of English as the tool but this also causes concern as where tests have been translated, there are often validity issues. Taking into account the number of languages, the size of the task of ensuring equity would be enormous, if not impossible, as would finding the personnel to meet the linguistic requirements. Where tests have been in L1 language they are producing results that suggest that LD may look different in different languages, therefore questioning the usefulness of such practices (Schwarz & Terrill, 2000).

Questions used in assessment frequently require cultural knowledge which L2 learners may/may not have. Other assessments such as oral vocabulary tests frequently are more a test of English, than vocabulary. Phonological processing tests may be affected by elements in the learner’s first language and discussion about previous education and life experience may be culturally uncomfortable and lead to unreliable answers (ibid). Rooney (2002) stated that “one instructor reported that it took almost a semester to break down a student’s cultural ‘wall of politeness’” (p. 10) before needs could be identified.

Closest scrutiny has been directed at IQ tests in cross cultural assessments (Abrams, et al., 2001; LDA, 2002; Burnette, 2000; Henning, 2005). Such tests are greatly affected by life experience, culture and native language, and often ignore the unique learning characteristics of the individual (Lerner, 2006). Their focus is on learned skills not potential skills (Seigel, 1999 as cited in Wong & Hutchinson, 2001). Brinckerhoff, et al. (1993), Ross-Gordon, Plotts, Joesel, and Wells (2003) have suggested that today, the assessment process has become so complex that the reports generated are almost too complicated and overwhelming for either the prospective teacher or the adult with LD to fully understand.

What does become apparent is that working from the known to the unknown may reveal a way through this maze. What is already known relates to the moving from one culture/language to another. Lowering the recognised barriers may provide a beginning. LD affects specific areas of the learning process (Figure 2) and these are manifested in outputs such as reading and writing which become apparent in the tertiary classroom.
Schwarz and Terrill (2000) have suggested the following questions may guide identification:

1. Has the problem persisted over time?
2. Has the problem resisted normal instruction?
3. Does the learner show a clear pattern of strengths and weaknesses inside and outside the classroom?
4. Does the problem interfere with the learning or a life activity in some way to a significant degree? (p. 2).

If the questions were answered affirmatively then identification should be confirmed through the use of:

i) Interviews (with the aid of an interpreter) encompassing “educational and language history, social background, learner’s strengths, and the learner’s perception of academic problems” (p. 2).

ii) A portfolio to include measures of progress, samples of reading and writing, other classroom work, attendance data, teaching methods and materials and with the learner, a report...
of their success (or lack of success), and autobiographical information.

iii) Results of recent vision/hearing testing to remove sensory problems.

Such questions will provide a useful profile which assists the monitoring of learning behaviours, progress and guidelines for appropriate support.

Maybe the answer is something much simpler, such as looking for the answers in the non linguistic (executive functioning) characteristics of LD (Figure 2) or a combination of these? What is clear is that it is not as simple as looking at “an island of competence in a sea of weaknesses” (Brooks, as cited in Root, 1994, p. 2). Alternatively, it may be that a ‘definitive identification’ of an ESOL LD learner, may be virtually impossible at this point in time (Rance-Raney, 2000, as cited in LDA, 2002).

A concluding thought in relation to identification processes - no matter what the assessment process looks like, no matter which tools are used, irrespective of what any assessor believes about any assessment process, none of these are as important as the student and guiding them to achieve their goals. All too often the assessment process is determined by the rules surrounding accommodations.

CONCLUSION

With the increasing numbers of ESOL in New Zealand and the political expectations placed on the tertiary sector educators comes an increased responsibility in student success and completion. Reflecting on current practices relating to identification and assessment of ESOL LD has identified the importance for all staff to develop an understanding of cultural difference and its impact on learners. The disparity and complications within the current LD identification and assessment processes highlight the importance of being very selective about how this area is approached. The inclusion of Schwarz and Terrill’s (2000) five questions are a welcome addition to the assessment process as they highlight the differences between assessing L1 and L2 students with LD and also the importance of probing unexpected underachievement. If LD is suspected, it is important to provide multiple assessments to determine an appropriate intervention process for as Ysseldyke and Algozzine (1990) suggest, “there is no recipe for assessment – no single battery of tests, form of observation, or specific rating scale that can tell us everything
we want to know about any student... Only if all students had the same kinds of problems could there be one right way to assess them”. Assessment must be flexible and “tailored to the individual and to the nature of the instructional setting” (p. 349). Working with ESOL LD students is not just the domain of the learning support staff. Knowledge of such differences should be shared with mainstream tutorial staff, making it a shared responsibility, thus uncovering the mystery of a current enigma that hides within many tertiary classrooms today.

References


Installation view Kurt Adams
Abstract

As a result of a visit by Professor Henry Walker of Grinnell College, Iowa, to Western Institute of Technology at Taranaki (WITT), a teaching partnership developed between a librarian with a specialist interest in information literacy, and a computing lecturer teaching primarily on the Bachelor of Applied Information Systems (BAppIS). This partnership was formed with a view to integrating information literacy skills into the curriculum, and developing and teaching the crucial skills necessary for students to survive the first year in an academic information environment.

As students progress into the second and third year courses of the BAppIS this challenge escalates, as it becomes evident that not all of these students continue to use the taught strategies to develop information literacy and apply their research skills. Once again ‘googling it’ appears to be the favourite source of information, and skills to check the verification of this information fall away. Plagiarism is a persistent sphinx among our mix of students, and independent learning is not perceived as being important.

This paper opens with a reflection on the initial collaboration between a librarian and a computing lecturer. It then reports on a survey taken to determine how lecturers are managing information for their needs and the needs of their students; supporting information literacy skills in their courses; and requiring students to support research through independent learning whilst being cognisant of plagiarism. The results of this survey show that keeping up to date with new information is a priority for lecturers. A range of strategies was used to integrate new information into course work, from involving students in current debates to being very selective in the type of assessment used. Working with international students presented challenges in terms of independent learning and their understanding of what constitutes plagiarism. This paper concluded that integrating skills in course work and embedding information literacy skills into the curriculum needed further development. Achieving these aims may assist students to accept that information literacy is a necessary skill for lifelong learning.
1. INTRODUCTION

Sophisticated technologies are making it easier to write and download information from the Internet. Access to journals, databases, e-books, and other types of information is ever-increasing and creates a challenge for lecturers to both keep abreast in their discipline, and to require students to access and use this information appropriately. The quantity and complexity of information that is available and which we expect students to manage, continues to increase exponentially (Barnard, Nash & O’Brien, 2005). Teaching students strategies to develop the skills to effectively seek, select, evaluate and use information is an important goal in education, not only for their immediate benefit at a tertiary institution, but also to enable them to become ‘lifelong learners’.

The phrase “information literacy” is well established nationally and internationally. Chamberlain and Rayner (2004), note that the past approach to information literacy has been loosely interpreted as: skills in using the Library and this is considered to be the domain of the Librarian. The University of Canterbury’s Library (n.d., p. 1), states that “Information Literacy forms the basis for lifelong learning”, and cites the University’s Charter which recognises that information literacy equips “students with the skills they require to participate in work and wider society throughout life”. The American Library Association (2000, p. 1) defines information literacy as a set of abilities requiring individuals to “recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information”.

In our initial approach to integrating information literacy skills into a first-year computing course in 2004, we demonstrated success in achieving the objectives of embedding information literacy skills into the curriculum, and creating a measure of intellectual independence for the students. Wartho (n.d.) suggests that the process of embedding information literacy involves aligning information literacy objectives with the learning outcomes within an academic course or programme. Notwithstanding this initial success in 2004, the structures of the second and third year courses that the computing lecturer was responsible for teaching did not provide for the involvement of the librarian to further develop the information literacy module. A tendency has continued for comprehensive training in information literacy to be offered in the first year and taught as an isolated pocket within a single course.
Two years on, and the computing lecturer is interested in learning how information literacy skills are being developed or reinforced by lecturers not only in the BAppIS, but in other degrees offered at WITT. Barnard et. al. (2005) suggests that pedagogical weaknesses can occur if information literacy is inadequately applied within skill development models that do not focus on an entire curriculum. To gain information on how lecturers – not only in the BAppIS but in other degrees – are supporting information literacy, we constructed a short survey.

This paper presents the results of the survey of lecturers who are involved in teaching degrees at a regional ITP. Our survey focused on how lecturers were modelling information literacy skills, and requiring students to support research through independent learning, whilst being cognisant of plagiarism. This paper also presents the issues encountered and strategies used to overcome these difficulties.

2. BACKGROUND

As a lecturer of ‘soft skills’ in an applied computing degree, the computing lecturer is aware that students place importance on the ‘practical-hands on’ courses in the BAppIS. However, there needs to be an appropriate focus on underlying theory. Students generally accept that there is a need to source information for course work and assessments, but in the main the ‘research thingie’ is not always regarded as being of equal importance. Generally, students have accepted ‘googling it’ as a quick means of finding information, without a great deal of thought as to the validity and quality of this information. Being able to retrieve information, master computer technology, and write and work with computer programmes does not, however, presuppose proficiency in information literacy. None of these skills guarantee that the student is able to reflect critically on the nature of the information retrieved.

With the increased technologies for communication, the resultant e-commerce, and the rapid changes in information systems with the accompanying information technology, students enrolled in the BAppIS need to acquire information literacy skills not only to integrate the new information into their current courses, but also to continue to critically evaluate, manage and use the continuous flow of information that will impact on them in their careers. Moreover, employers expect graduates to have these skills.
2.1 Student Induction to the Library

Until recently, teaching research strategies to students has generally been viewed as the domain of the librarian and has been carried out in the library as part of student induction to the resources available at WITT. Lecturers and librarians noted that this was a passive process, and once the induction process was completed, students enrolled in computing programmes made few return visits to the library (Chamberlain & Rayner, 2004). Discussion between a computing lecturer and a visiting professor re-assured the lecturer that this was not an uncommon occurrence, and led to a joint project by the lecturer and the librarian. This section reviews and reports on the results of that project.

2.2 Review of the Project

During 2003, Dr Henry Walker of Grinnell College, Iowa visited WITT. A discussion of research techniques between a lecturer in the Department of Computing and Dr Walker resulted in the lecturer adapting a model used at Grinnell College to embed information literacy skills into a first year course of the BAppIS. This model built on taking the librarian out of the library and into the classroom to give instruction on appropriate research techniques on a ‘just-in-time’ basis. Students were given a series of three sets of two questions to research and answer, and were asked to comment on the process they used. Each set of questions had a progressively greater degree of difficulty. As the exercises were completed, students received feedback on their findings and the processes used. Further instruction focussed on the use of library resources, for example, on-line databases, encyclopaedias, and reference books. The aim was to build on students’ strengths and eliminate their weaknesses in the research process (Chamberlain & Rayner, 2004).

2.3 Results of the Project

When the series of exercises were completed, students were asked to participate in a survey. This survey grouped questions into the four areas of assignment, workload, attitudes and confidence in library research. Respondents noted that generally they had developed a more positive attitude toward using the library, and their skills had improved when using library resources and in understanding how the library’s facilities and resources were organised. Overall, students reported feeling more confident in carrying out research and were more
comfortable when asking for help in the library. The lecturer and the librarian agreed that they had met their mutual goals of the collaboration, which were to embed research skills into the curriculum and in doing so create intellectual independence for the students (Chamberlain & Rayner, 2004).

2.4 The Ever-present Need

Three years on, with the ever-present and increasing challenge for new information in our discipline, and working with a diverse student mix, the need continues in the BAppIS to support our students with information literacy skills and techniques that will encourage independent learning. At the same time, the quality of information has to be addressed and plagiarism discouraged. Barnard et al. (2005, p. 63) cite O’Hanlon (2002) as suggesting “that one experience is not enough to develop true competence, as students quickly lose the skills. Skills evaluation needs to be followed by a multilevel training approach disbursed across a curriculum”.

3. METHOD

This study had three goals:

I. To explore how lecturers teaching degree courses at WITT were keeping up with the challenge of new information and keeping abreast in their discipline
II. To support research whilst encouraging independent student learning
III. To maintain boundaries on plagiarism

A short questionnaire was developed and used as a survey tool.

3.1 The Survey

A questionnaire consisting of three questions was used, to collect data from lecturers. The questions were broad, open-ended and allowed for descriptive data, and the provision of lecturers’ own personal perspectives. The questions were:

1. How do you forge a connection between your course content and the increasing challenges for new information in your discipline?
2. How do you address a diverse student mix to support research to encourage independent learning?

3. Having introduced the students to the vast range of information resources that are available, how do you then require the student to be aware of the perils of plagiarism?

A brief explanation accompanied the survey. The questionnaire was distributed, via email, to lecturers in departments that offer degrees.

3.2 Data Analysis

As participants responded to the open-ended questions qualitative data was collected. This was a limited survey as it represented the situation at a single point in time. To assist with data analysis, statements were extracted from the email responses and ‘like’ statements were grouped together to gain a uniformity of insights (see Table 1 above).

4. RESULTS

Nine responses were received from lecturers teaching on degree programmes. The responses were from lecturers in the Departments of Business and Computing, Media and Art, and Nursing. The departments all had a diverse mix of students, with the Business and Computing Department having a large number of Asian students.
4.1 Forging Connections

Responses to the question ‘How do we forge a connection between our course content and the increasing challenges for new information in the discipline?’ were divided into two parts. Five lecturers answered from the perspective of keeping up to date with the new information, and the other four responded by suggesting strategies to forge a connection between the course content and new information in the discipline.

Keeping up to date with new information was seen as a priority for the lecturers. Reading journals and new books, and using relevant websites were common activities, as was networking with colleagues and attending conferences. It was interesting to note, however, that although students are encouraged to access the on-line databases at the library, for example Proquest 5000, Masterfile Premier, Infotrac, Joanna Briggs and Cochrane, no lecturers had named or reported using these databases. Similarly no mention was made of utilising the subscriptions to the paper-based periodicals for each discipline available in the library, or taking advantage of Blackwell’s alert system.

A number of interesting strategies were reported to forge a connection between the course content and new information. These varied from involving students in current debates around a topic of interest, and incorporating content from actual stories. One lecturer who did not adopt this method to keep her own knowledge current did, however, encourage the use of databases and current literature as a strategy for students. The comment “Be very selective in the type of assessment used” did not give enough information to assist our understanding of the strategy employed. However Baron (2001, p. 3.), advocates structuring assignments “to highlight the process of identifying, searching, accessing, evaluating, and integrating information as an integral part of what is expected”.

4.2 Research and Independent Learning

To assist with approaches to support research and encourage independent learning we asked the question: ‘How do you address a diverse student mix to support research to encourage independent learning?’

Respondents replied to this question with a range of strategies and these responses were grouped into the three areas of ‘diverse student mix’, ‘support research’ and ‘encourage independent learning’ and are summarised in Table 2 following.
<table>
<thead>
<tr>
<th>Issue</th>
<th>Strategies used</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diverse student mix</strong></td>
<td>Support from tutor (lecturer), Learning Centre and International Support. Support from Learning Centre to teach APA referencing to discourage “copying”, and to tell the students what constitutes &quot;plagiarism&quot;. Student focused teaching; be aware of learning groups - visual, audio and kinesics learners; encourage student work in the areas that interest them most. Small classes allow for individual tuition to address diverse needs Offering ‘unofficial” support classes reinforces required skills in the students’ first year. Work closely with individual students to meet their individual needs Invite Student Services into the class to assist students with skills in citing information and APA referencing, and to cope with the “copying” challenge.</td>
</tr>
<tr>
<td><strong>Support research</strong></td>
<td>Use business examples/case studies/techniques that a diversity of students (age education, ethnicity) will relate to, or have experienced. Use library support programmes, encourage students to use student services and Kopa Manaaki. With first-year students, set exercises as part of an assessment (marks allocated), that requires research into information not given in class Invite the librarian into class to receive feedback on the process used to find the answers to the questions, and the information gained. Have the librarian give instruction to the students to build their skills in finding and evaluating information. Use practical exercises to “explore” student backgrounds, allow for observation of skills and learning styles. Using the Internet in conjunction with this exercise identifies further interest and gives the opportunity to demonstrate and advise about research methods.</td>
</tr>
<tr>
<td><strong>Encourage independent learning</strong></td>
<td>Use the students’ motivation to study of ideation for projects; independent learning means sometimes stepping back and letting the student take control and run the risk of failure – in this case the lecturer is akin to a support network for process; never do students’ work for them except at the very start of introductory courses at lower levels of study. Give the students worksheets to complete for some chapters of the course test. In class, discuss any issues/comments from the worksheets. Highlight important aspects (must know stuff), and then put up scenarios and multi-choice questions in class related to the worksheets. Ensure students are comfortable finding sources of information. Then give students exercises to encourage them to find out information. Have students share their information in the classroom. Praise the students for their efforts. Ask students to prepare a PowerPoint (only on the PC for use, not for presenting to the class) provides the basis for much dialogue.</td>
</tr>
</tbody>
</table>

Table 2. Issues and strategies
Some of the strategies address more than one issue, and where possible we sorted each strategy into the issue where we considered it had the most application.

4.3 Diverse Student Mix

The strategies used indicated that lecturers had the best interests of the students at heart as they catered for the different needs of these students. The Learning Centre staff and International Student support staff were engaged, but only in terms of language and APA referencing support. At the other end of the scale, lecturers took a one-on-one approach or 'unofficial support' class with students. This approach while meeting the international and domestic students' particular needs, impacted on lecturers' time. One lecturer practised student focused teaching by recognising the different styles of learning appropriate to the diverse student mix. In terms of the 'diverse student mix', there was little emphasis on using library resources. Baron and Strought-Dapaz (2001) identified challenges in using the library as of equal importance in this process.

A comment was made by a lecturer on the huge challenge and clash of expectations of having international students (Chinese) in the classroom. Generally lecturers acknowledge that international students have to undergo an enormous change in teaching/learning styles to become independent learners and to contribute their views in class and in their writing. This method of learning independently is in direct contrast to the (Confucian) tradition of scholarship, where there is an “emphasis on the conservation and reproduction of knowledge rather than the critical challenge or individual interpretation” (Kennedy, 2002, p. 11).

Domestic students returning to tertiary study to work towards a career change also share the international students' learning challenge of independent learning. Some of the returning students may only have limited school experience to build on, and also require knowledge to build research and referencing skills to avoid committing plagiarism unknowingly.

4.4 Strategies to Support Research

A variety of suggested strategies were received from lecturers to build research skills for their students. It was not asked, however, and nor did lecturers volunteer, whether the students in their classes were Year One, Year Two, or Year Three of
their respective degrees. Three lecturers reported using library
programmes or using the librarian to work with the students
to build their research skills. Using research exercises in
assessments, giving immediate feedback, then having the
librarian suggest new strategies to assist with the research
process for the next set of exercises, all reinforced research
techniques. Business examples, case studies and practical
exercises involving the use of the Internet, assisted in integrating
research into class work.

Having Student Services work alongside students assisting
them to acquire referencing and citation skills, also helped
them to acknowledge the importance (and place) of using other
people’s information to write up their research. Deducting marks
or not awarding marks where it was evident that information
had been downloaded and used in assessments reinforced the
need to reference information. Fitzgerald (1999) suggests
that students can be encouraged to perform to their optimal
capabilities by giving them an authentic research problem or by
relating research to their personal interests.

4.5 Strategies to Encourage Independent Learning

Three lecturers suggested that motivation was a key element
in promoting independent learning. This “motivation” ranged
from completing worksheets to prepare for tests, to setting
exercises to find and share information in class. One lecturer
used the students’ hobbies as a vehicle to source information.
This lecturer commented on the dialogue produced as a
result of this exercise. Duffield (1997) suggests that class
discussions or individual interests may help the students to
define the purpose, goals and objectives. When students are
genuinely interested in learning about a topic, they will be more
determined to continue if and when the task becomes difficult.
Involving the students in setting their own targets encourages
independent learning. Students have many options for obtaining
information on independent learning, including paper based and
on-line resources.

The Information Literacy Competency Standards for Higher
Education (American Library Association, 2006, p. 3) state that:
“Gaining skills in information literacy multiplies the opportunities
for students’ self directed learning, as they become engaged
in using a wide variety of information sources to expand their
knowledge, ask informed questions, and sharpen their critical
thinking for still further self-directed learning”.
4.6 Awareness of the Perils of Plagiarism

All the lecturers replied strongly to this issue, which impacted across the three Departments of Art, Nursing and Computing. Lecturers were very clear about the penalties for plagiarism, from loss of marks for assessments to more severe punitive measures. From lecturers’ responses, it was apparent that all departments were using strategies to ensure that students were fully informed about the penalties for plagiarism.

4.7 Strategies to Cope with Plagiarism

Two lecturers replied that they used Student Services to teach APA referencing to their students early in the course. Course Outlines also had very clear guidelines on the penalties for plagiarism, and these guidelines were reinforced during orientation.

One lecturer replied that she reinforced referencing and citations with - “repetition, repetition, and repetition throughout the course” and noted that it was an “on-going battle”. All of the lecturers reported that they actively addressed this issue in class; one lecturer noted that he ensured the students were taught by good example, as all student handouts and notes are accurately referenced.

Whilst responses from the majority of the lecturers ensured that students were familiar with information sources, one lecturer noted that no attempt was made to introduce the students to a vast range of information resources: they had to find them for themselves. The strategy recommended by this particular lecturer was to design assessments that were “multi-faceted and required unique answers”. From the responses received it was evident that the problem of plagiarism was still an issue in all departments, despite the efforts of lecturers to inform students about the nature and consequences of plagiarism.

5. DISCUSSIONS AND CONCLUSION

There is a significant amount of published research on promoting information literacy for students in the United States; conversely, there is a scarcity of reported research in New Zealand on the ways that lecturers model and integrate information literacy into their mainstream courses.

Differing approaches were offered by lecturers about how they keep up to date with the new information, and align this
information with course content. The range of approaches cited reflected the differing requirements for integrating specific new information into the degree programmes. It must also be recognised that the content of courses and the learning outcomes are prescribed, and new information needs to be assimilated at an appropriate level. Wartho (n.d.) suggests that many staff and students require more assistance than is possible to offer in traditional education programmes and adequate resources are not yet available to embed information literacy into the curriculum in every subject.

Why is information literacy important to lecturers? Assessments given by the lecturer to students in the first year of the BAppIS have generally shown that students entering tertiary education do not necessarily have the basic skills to evaluate information constructively. Rockman (n.d., p. 9) defines fundamental information competence skills as “the ability to formulate a research question, then efficiently and effectively find, evaluate, synthesize, and ethically use information pertaining to that question”. Our lecturers are utilising Student Services, International Student Support and the library to assist with information literacy for the students. Some lecturers are supporting information literacy on campus by inviting the librarian to teach these skills in the classroom, and including information literacy outcomes in their assessment criteria.

The Australian and New Zealand Information Literacy Framework (ANZILF) Standards (Bundy, 2004) outline competencies under six standards. The Information Literacy Competency Standards for Higher Education document discusses standards that focus on the needs of students in higher education at all levels. These standards also list a range of outcomes for assessing student progress in information literacy that will serve as guidelines for departmental, library and other staff. Wartho (n.d.) discusses a three tier model for developing information literacy at a tertiary teaching institution and advises that the ANZILF could be used as a guide for selecting appropriate information literacy competencies for courses.

The mix of students at WITT is diverse. It includes students straight from secondary schools, people returning to tertiary study to begin a new career, and in the past four years an increasing number of Chinese students. Students’ expectations of learning vary, with many students expecting all new knowledge acquisition to occur in the classroom. The expectation of students leaving a tertiary institution with the skills to continue ‘learning for life’ requires a shift away from delivery of knowledge
that is ‘packaged up’ from the expertise of the lecturer. Smith, (2000, p. 2) states that the “concept of learning requires a shift in focus from the teacher’s knowledge to the student’s understandings and capabilities. More than anything it requires the faculty to bring the strength of the research paradigm into the learning process”.

Encouraging independent learning is a bit like exposing students to “the face of Janus”. On the one hand students need to be introduced to the vast resources of information; and on the other, they need to know and understand the processes around defining and refining research, so that they do not become knowingly or unwittingly involved with plagiarism. This imperative applied particularly to international students. Dixon (2005) emphasises that upon arrival in New Zealand, most students have not even heard the words ‘plagiarism’, ‘citation’, or ‘referencing’, and cites McKay, (2001), stating that in many Asian countries originality in work, especially in young people, is often seen as arrogance or considered disrespectful. To overcome these perceptions, lecturers need to teach ‘Western academic skills’; let students know that independent thought is to be valued; and be very clear about their expectations of students’ written work.

Despite these precautions plagiarism will continue to surface as an ongoing issue. Allegations of plagiarism are dealt with by the Heads of Faculties at WITT, and follow a set procedure. The first offence will generally incur a penalty of zero marks. Repeat offences are dealt with more severely. To combat the incidence of plagiarism Joyce (2003) reports on the successful use of a software programme called Turnitin.com. This programme is available via the Internet, and students can utilise it to check their own assignments for originality. Joyce reports that “Turnitin.com compares the text of submitted assignments to its database of previous submissions and a wide selection of websites. If it finds a match, it highlights the matching text, and in the case of websites it will display the source if the user clicks on highlighted text” (p. 303). The text can then be checked for accurate referencing. Students checking their own work decrease the incidence of ‘forgotten references’, and increase the level of responsibility for their own actions.

5.1 Limitations

This study was exploratory, and was limited to collecting a restricted amount of data from lecturers in one location. Three broad questions were asked, which upon reflection would have
yielded more data had they been more prescriptive. There were issues around definitions in question one, in relation to the data being required to be elicited from the question. Providing an exemplar or trialling the questions prior to distributing the survey may have clarified terminology and expected responses. There were considerable time restraints and limited time available for reflection on results. This study does raise some questions that would benefit from further research across a wider audience in terms of developing students' information literacy skills.

5.2 Conclusions

This study presented the results of a survey of lecturers across departments in one ITP. Keeping abreast of new information in a subject discipline, and integrating information literacy into the curriculum have gained in importance with the proliferation of new information. Lecturers have offered various strategies to address this situation.

All lecturers recognised the need for information literacy skill development within their degree programmes, often calling on the librarian to teach and reinforce information literacy to support the research needs of their students. In addition, Student Support Services was called upon for assistance with learning and referencing to assist with plagiarism issues. International student support was also sought when issues of ethnic diversity arose.

Gaining skills in information literacy assists students to use a variety of sources to seek the information required, and builds their independent learning skills. Students need to take a constructivist approach, building on the learning progressively accrued during the course. These transferable skills will assist students when they go into the workplace, so that they may continue to inform themselves and become lifelong learners.

As students advance from Year One into Year Two and then into the final year, we need to build into our courses constant opportunities for students to continue to seek, critically evaluate, manage and use the continuous flow of information that will impact on them in their careers.

To teach information literacy skill development successfully requires a 'scaffolding' approach. Actually embedding information literacy skills into the curriculum by aligning objectives with the learning outcomes is a future aim of this research.
REFERENCES


RIWAKA

Deep green
Glistening borders
Corralled but boiling
Slow graceful power

Trees dipping
With swallows
Into river space
Mocking lightly

Speckled sun dances
On waters edge
Throwing light
And catching eyes

Easy contemplation
For those with time
To sit and love
The nature of things

*Murray Strong*