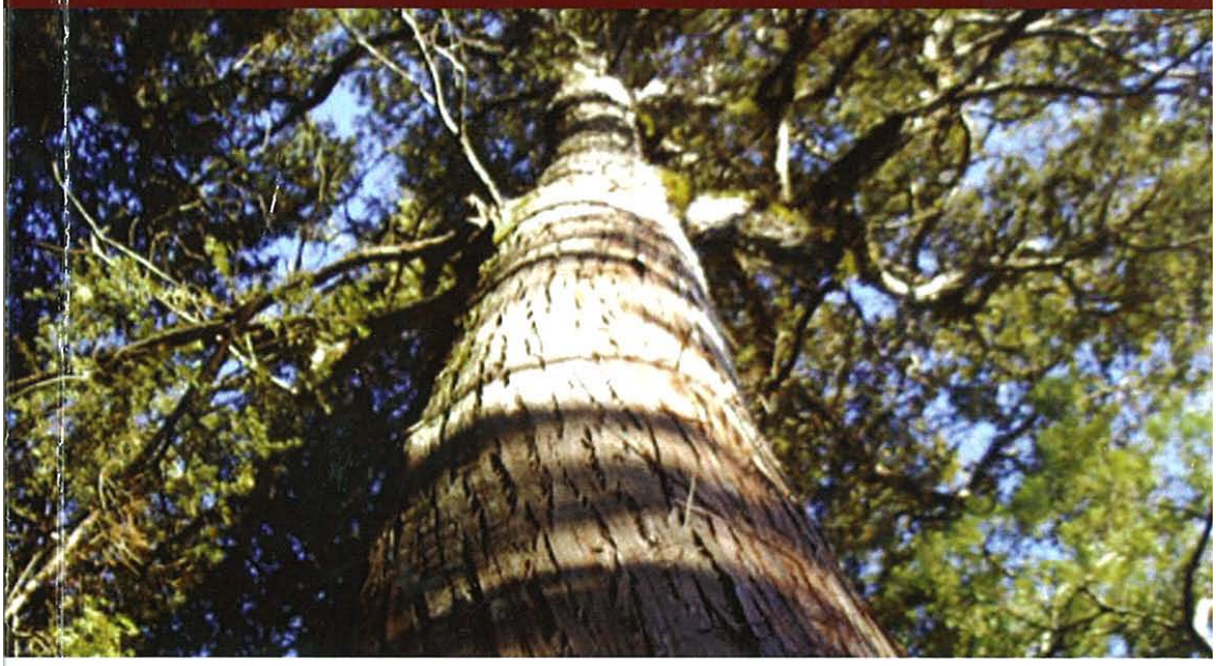
TRANSFORMATIONS



Mary Silvester • EDITOR

The Association of Tertiary Learning Advisors
Aotearoa/New Zealand
ATLAANZ

VOLUME 4

Transformations

He iti te matakahi, pakaru rikiriki te tōtara.

A wedge may be small but it can fragment the tōtara.

A small effort properly applied can achieve success.

Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa/New Zealand (ATLAANZ)

19 – 21 November 2008, Porirua, New Zealand

Editor
Mary Silvester

Learning Skills Centre
Whitireia Community Polytechnic

Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa/New Zealand (ATLAANZ)

ISBN 978-0-9582889-2-7

Published 2009 by the *Association of Tertiary Learning Advisors of Aotearoa/New Zealand* Inc (ATLAANZ)

Address: c/o Student Learning Centre
The University of Auckland
Private Bag 92019
Auckland 1142
New Zealand

Telephone: +64 3 321 8583 |

Facsimile: +64 3 325 3673
Email: atlaanz.web@gmail.com

Cover design:	Niki Ash, Bay of Plenty Polytechnic, Tauranga, New Zealand
Cover photo:	Peggy Humphrey, Whitireia Community Polytechnic
Page layout and design:	Mary Silvester and Kataraina Mateparae, Whitireia Community Polytechnic
Printed by:	Kale Print and Design Limited, Tauranga, New Zealand

Table of contents

Preface and acknowledgements

The 2006, 2007 and 2008 volumes of the series of proceedings of the annual international conferences of the Association of Tertiary Learning Advisors Aotearoa/New Zealand (ATLAANZ) have been a vital showcase of the profession of tertiary learning advising. I sincerely hope that this latest collection of papers from the 2008 conference will prove to be of the same high calibre.

All the articles that were accepted for the proceedings underwent a double blind refereeing process using at least two referees. Statistics are included as Appendix 1. The editor wishes to acknowledge several groups of people.

Firstly, thanks are extended to the referees, who graciously committed time and energy to provide significant assistance to contributing authors, some of whom were submitting their first article for publication. The value of their crucial contribution to authors was conveyed to the editor in feedback. The names of the referees are shown below:

Liz Bayliss
Caitriona Cameron
Susan Carter
Cath Fraser
Marcus Henning
Deborah Laurs
Emmanuel Manalo
Jenny Marshall
David McCrone
Mona O'Shea
Mary Silvester
Josta Van Rij-Heyligers
Barry White
Glenis Wong-Toi

Secondly, I want to thank the authors who submitted their papers for review and then revised their papers to publication standard. We appreciate their commitment to achieving a successful outcome.

Thirdly, I would like to acknowledge the contribution of the ATLAANZ executive to the 2008 conference, especially David McCrone, Liz Merton and Tim Barrie.

Finally, I would like to thank the students and staff of Whitireia Community Polytechnic, particularly the Learning Skills Centre staff– Peg Humphrey, Helen Borren, Margaret Collinge, Liz Bayliss, Adèle Holland, Clare Hazledine, Kathy Eketone and Kataraina Mateparae - whose untiring efforts made the 2008 ATLAANZ Conference such a memorable occasion

Mary Silvester
Learning Skills Centre
Whitireia Community Polytechnic

Foreword

The theme of the 2008 ATLAANZ conference was 'transformations' – of students, institutions, and learning advisors – and the publication of this, the 4th volume of refereed conference proceedings, reflects the transformation that has taken place over the past two decades in the professional identity of learning advisors in Aotearoa New Zealand.

Learning advisors have been working in tertiary institutions in Aotearoa New Zealand for over twenty years and, since the early 1990s, have been meeting annually. The value of these meetings in developing a community of practice cannot be overstated; the low population density of New Zealand means that many tertiary institutions are small and isolated, so for the many learning advisors working alone, or with only one other colleague, meeting with colleagues at an annual conference was (and still is) invaluable in sharing practice and clarifying what it means to be a learning advisor.

While the early meetings were relatively informal, by the end of the 1990s we were meeting as members of a professional organisation, known (since 2000) as the Association of Tertiary Learning Advisors of Aotearoa/New Zealand (ATLAANZ). The establishment of that organisation, and subsequently of our own refereed journal, has played an important role in our further developing a clear sense of professional identity as learning advisors.

While in many ways the evolution of learning advisors in Aotearoa New Zealand has paralleled that of our colleagues in the United States, the United Kingdom and Australia, we have also developed our own unique character. That character owes much to the diversity of our membership, of the settings in which we work, and of our practice. We are culturally diverse and celebrate that in vibrant caucuses for Maori and Pacific Learning Advisors. We work in a wide range of institutions – both public and private, and in universities, polytechnics, technical institutes, wānanga, and independent training organizations. We also work in very different Learning Centre configurations. As a result, our practice is diverse.

Our diversity not only distinguishes ATLAANZ, but strengthens us because it means we cannot take for granted what it means to be a learning advisor in Aotearoa New Zealand – we must continually reaffirm our common identity. The papers in this volume reflect both that diversity and common identity.

We owe our colleagues at Whitireia Community Polytechnic, Massey University Wellington and Welted a huge debt of gratitude for organising a conference that was both collegial and professionally stimulating. On behalf of the ATLAANZ executive committee, I would also like to thank the contributors to the conference proceedings for the time and effort they have put into their papers, and the referees for their

invaluable role in helping to prepare those papers for publication. Not least, I would like to thank Mary Silvester for her unstinting editorial efforts.

Your efforts have produced another fine volume of papers that help us to understand and celebrate our identity as learning advisors.

Caitriona Cameron
President, ATLAANZ
August 2009

Editor's introduction

Transformations

He iti te matakahi, pakaru rikiriki te tōtara.

A wedge may be small but it can fragment the tōtara.

A small effort properly applied can achieve success.

Tertiary learning advisors are well placed to be catalysts for student success. This was evident at the 2008 ATLAANZ conference. Wānanga, universities and polytechnics from within New Zealand and from Australia, Malaysia and Japan were represented. The theme of 'Transformations' aptly reflected the impact of learning advisors in enabling students to journey successfully to completion of their courses.

This volume explores strands of transformations – learning within cultural contexts, service delivery, student literacy and numeracy, graduate students and professional practice. Although the eight contributors use a variety of terms to describe learning advisors – tertiary learning advisor, academic learning developer, learning tutor, academic advisor, tertiary learning advisor, cognitive counsellor and learning development lecturer – the role of the learning advisor as a catalyst for transformation is central.

Changing demographics create demand for appropriate tertiary education facilities to better service a diverse cultural mix. Kay Hammond describes the establishment of a holistic academic advising team at the Waitakere campus of Unitec in West Auckland. She identifies their guiding philosophy and the structure of their multicultural team and reflects on the issues of the first year of operation and possible future directions.

Liz Craven considers the future implications of reforms to Australia's skilled migration policy which have led to an upsurge in the proportion of skilled migrants who have previously been international students. She describes how the transformations in the migration context and the accompanying transformations in the aims and desires of international students have led to transformations in the role of tertiary learning advisors at the University of Technology Sydney. The differences between the 'sojourner' international student and this new category of student have implications for learning advisors.

Nishani Singh and Kate Harris from the University of Adelaide investigate the discrepancies between the identified needs of students and their uptake of learning support services. Their research supports an integrated, discipline- and course-specific approach, adapted to students' needs, with a high level of teamwork between teaching staff and learning advisors as the recommended model to providing learning support for maximum student access and benefit.

Marcia Johnson, Andrea Haines and Patricia Strang discuss the experience of designing an elearning environment at the University of Waikato, and transforming their practice from being solely centred in physical space to providing a mixed virtual and physical learning place. This has implications for institutional culture. They reflect on institutional culture change and future initiatives.

The New Zealand government has placed considerable emphasis on the improvement of language, literacy and numeracy (LLN) especially in courses below Level 4 of the NZQA framework. This has required a transformation in the provision of these skills in polytechnics. Moira Hobbs outlines the needs of the students on the drainlaying course at Unitec, the challenges of dealing with low numeracy levels and the resources available to improve student literacy and numeracy.

At the other end of the student spectrum, Deborah Laurs examines the potential of two programmes – Peer Assisted Study Support (PASS) and Campus Coaches – to contribute to the holistic success of graduates at Victoria University of Wellington. Evidence indicates that not only do these academic and social support networks enhance the experience of first-year students, but the involvement of senior students develops their attributes of communication, creative and critical thinking and leadership skills.

Yuri Uesaka, Mikiko Seo and Shin'ichi Ichikawa discuss the importance of considering students' beliefs about learning when assessing the reason for their study difficulties and supporting them in solving their problems. Psychological research in the area of cognitive counselling in Japan has produced findings about these beliefs which have shown that they are linked to use of ineffective learning strategies and low achievement.

Being able to demonstrate tangible transformations or positive changes in students' academic performance is important for those in the tertiary learning advisor profession. In his paper, Emmanuel Manalo considers the various ways in which learning advisors may be able to provide evidence that such transformations do occur regularly via the teaching and support work they undertake with students. He suggests the kinds of data that need to be gathered, strategies to obtain the necessary data and possible ways for effectively reporting the transformations.

Just as a tōtara is only felled in order to make a waka, the effort of study and the interventions of learning advisors occur in the larger context of producing graduates who contribute significantly to their world.

Transformation of student academic support at the Waitakere campus of Unitec: Issues and directions

Kay Hammond[1]
Unitec
New Zealand

Abstract

Academic advising has transformed to encompass a greater emphasis on retention and completion, connection with community, and ensuring a quality student experience for an increasingly diverse population of students across a number of demographic dimensions. Unitec offers both trade focused and traditional academic certificate, diploma and degree programmes in Auckland. This year a new multicultural team of five academic advisors was created to provide a holistic focus that facilitates equity of access to a diverse range of students at the rapidly expanding Waitakere campus. This paper describes the guiding philosophy and structure of this team, its relationship to other learning support services at Unitec, and reflects on issues encountered in this first year of operation, and our future directions.

Introduction

The profession of academic advising has become increasingly complex over time. Advisors currently assist students to become accustomed to academic disciplines and modes of thought, and to integrate this with what they know so they can make sense of their educational experience (Schulenberg & Lindhorst, 2008). Schulenberg and Lindhorst (2008) recommend that academic advising units should record their local growth histories. These histories should be shared with the wider advising community so that connections between national and international development of the profession can be made. Academic advising has changed in response to the increasing diversity of students (Upcraft & Stephens, 2000). The degree of diversity may vary across geographical regions. Therefore it is necessary to understand the local profile of students as this may differ from national profiles (Teitelbaum, 2000; Upcraft & Stephens, 2000). This paper is a description of the establishment and first year of operation of a multicultural academic advising team located within a broader student services team at the West Auckland campus of Unitec.

[1] Hammond, K. (2009). Transformation of student academic support at the Waitakere campus of Unitec: Issues and directions. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 1-12). Auckland, New Zealand: ATLAANZ.

Industry and our local context

Unitec is a tertiary education institution that offers both trade focused and traditional academic certificate, diploma and degree programmes in Auckland. There are three campuses: the main one at Mt Albert, one in Henderson, West Auckland, and recently a small campus has been established in Takapuna on the North Shore of Auckland. The Henderson campus was established in 2002 by the city council in response to the need for a tertiary educational institution in Waitakere city (Unitec, 2007).

Waitakere city is part of the Auckland region and is New Zealand's fifth largest city. It is ethnically diverse with increasing populations of Asian, Pacific Island and Māori residents. The population is relatively young (61percent were aged under 40 in 2006), and 34 percent were born overseas in 2006. Compared with national figures, educational attainment in Waitakere city is lower as approximately a fifth of school leavers left school with little or no formal qualifications (Statistics New Zealand, 2006). Therefore tertiary education providers in Waitakere city need to consider the ethnic diversity, students with English as a second language, a young demographic and the considerable number of students who are not familiar with tertiary education institutional culture.

Advising practices should follow the local context (Singh, 2000) and the local goals should be located within the institution's values and aims (Schulenberg & Lindhorst, 2008). The Unitec academic strategy aims to "educate people for work, in work and through work" and to "ensure that students can learn, grow and succeed within a consistent and supportive environment" (p. 2). The guiding culture and philosophy (Unitec, March, 2008) includes the directive to:

> Recognise and celebrate the diverse backgrounds of our students and commit ourselves to providing them with a socially, culturally and spiritually responsive environment. In particular, we will seek to provide excellent academic and pastoral support for, and to interact with, students in whatever ways best suit their learning needs and their physical and intellectual capacities (p. 3).

Part of the key performance indicators are that there will be an increase in students accessing learning/pastoral support at the Waitakere campus (Unitec, 2007). This support is particularly important for Pacific Island, Māori and migrant students. Up until this year the learning service providers were Maia, the Centre for Pacific Development and Support (CPDS), and Te Tari Awhina (TTA). In 2001 Maia and TTA worked together to support Māori and Pacific students (prior to the establishment of CPDS) (Pelling & Utumapu-McBride, 2004). Linda Aumua, the current head of CPDS says of the establishment of the unit that, "it evolved ... didn't really establish...but if you need a date when two Pacific people decided to bring their desks together in building 48 - it was in 2001" (Personal communication, August 9, 2008). There is a history of collaborative support between these learning service providers.

In 2006 academic development support at Waitakere was provided by one full time staff member from Maia and TTA staff were rostered part time to provide service to the Waitakere students. Due to the growing demand for the services of TTA at the Mt Albert and Waitakere campuses, a new team was established in 2008 to be based full time within Te Whare Manaaki student services at the Waitakere campus (Unitec, 2008).

Te Whare Manaaki - student support services at Waitakere

To support students, especially those who are unfamiliar with tertiary education requirements, Te Whare Manaaki student support services at the Waitakere campus are located together to provide a one-stop-shop model of service provision. This model is underpinned by the philosophy of holistic care where students can access both academic and pastoral care. A student satisfaction report showed that students were positive towards this model and felt that it contributed to their success (Unitec, 2006). Figure 1 shows the team structure and the list below describes the services available within Whare Manaaki.

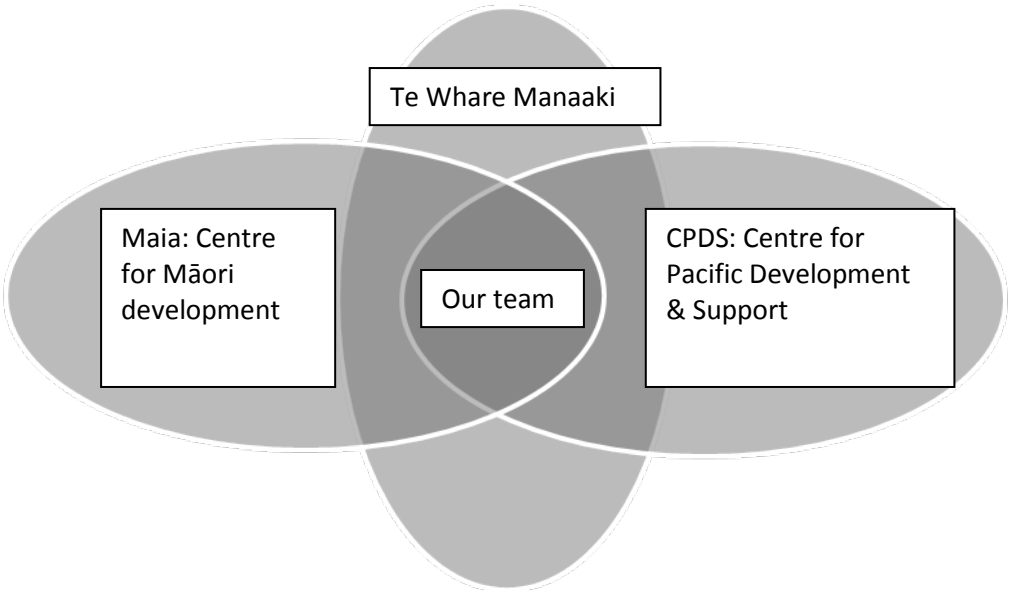


Figure 1. Overlapping team structure of Te Whare Manaaki with Maia and CPDS

Student funding

- Advises students on financial matters such as Study Link, Work and Income, Scholarships and Awards

Career and employment

- Facilitates student assessment of their values, interests and skills for making informed decisions about employment, training and study

Māori development centre (Maia)

- Focuses holistic support on Māori students, their whanau and staff to achieve well-being through academic achievement, career advancement, and cultural validation
- This also includes support of any student or staff member who identifies with kaupapa Māori
- Whanaungatanga (relationship building) events include shared lunches, kapa haka and noho marae (marae stay)

Centre for Pacific development and support (CPDS)

- Provides holistic support of Pacific peoples through academic and pastoral care to achieve academic success, and career advancement
- Organised events and clubs aim to strengthen the Pacific student community

Te Tari Awhina learning centre

- Provides academic assistance to develop skills to study independently and successfully
- Rostered on a part time basis

General academic development

- Provides academic assistance to develop skills to study independently and successfully
- Available full time

English additional language support

- Basic grammar, conversational language and spelling assistance for students with English as an additional language
- Embedded within this support is guidance on New Zealand colloquial language and culture, and issues relating to students' integration into New Zealand society

Disability liaison

- Supports students with disabilities to maximise their academic potential

Counselling

- Helps students address issues that may affect wellbeing and academic progress

Chaplaincy

- Guidance is offered to students and staff of all faiths and beliefs

Student Union

- Assists students make maximise their time at Unitec through services such as advocacy, events and clubs, student discounts, student job search and a free student magazine.

Extra services

- Student plus – a programme in which extended hours are offered on Tuesday, Wednesday and Thursday evenings until 8pm
- A children's activity programme is run so that student parents are free to focus on their studies

The following section describes in more detail the academic development support staff.

The academic development team

Modern academic advisors come from a diverse range of academic and professional backgrounds (Schulenberg & Lindhorst, 2008). Having a range of experiences and skills within a team also helps meet a variety of student needs (Reinarz, 2000). The five full time and one part time members of our academic development team also reflect this diversity. The first member began in February, 2008 and the last member joined in September. We are listed as academic positions as academic advisors. In terms of individual backgrounds:

Centre for Pacific development and support

There are two Pasifika learning support advisors. One has a background in New Zealand literature and Pacific History. She worked at the Auckland University of Technology in student services, and at University of Auckland in multiple roles including Pacific mentor in the Department of History, High School Pasifika mentoring programmes, and as a Recruitment and Course Advisor.

The other has been at Unitec for four months and has previously worked at University of Auckland as a tutor at the Centre for Pacific Studies. He has been involved in a number of research projects on issues such as literacy, obesity amongst Pasifika teenagers and the effectiveness of Work and Income initiatives in reducing unemployment.

EAL focused support

The EAL support person has six years experience with EAL students at Unitec prior to joining the team. She is skilled in helping students cope with their English language course requirements and language requirements for adapting to life in New Zealand.

General

There are two general learning support advisors. One has a background in psychology and teaching English. She has experience with students through tutoring at the University of Auckland, and experience with educational materials development and teaching English during her ten years in Japan. The other joined the team in April of this year after spending 11 years teaching in foundation education with Unitec's School of Foundation Studies. He balances the pastoral and academic needs of students.

Maia

There is one Māori learning support advisor. She has a background in physical education and at secondary school taught physical education, Te Reo Māori, and assisted students with social studies, English and life skills. Currently she actively offers support for the pastoral, cultural and academic needs of Māori students and any students who identify with tikanga Māori.

Thus our team consists of advisors working together from three different teams (Maia, CPDS and Te Whare Manaaki – general and EAL support) that focus on different student groups.

Teitelbaum (2000) states that coordination of academic advising across units helps toward working on advising issues collaboratively. This is achieved at Te Whare Manaaki through members of the academic team being from Maia and CPDS, and also TTA connections are maintained as some TTA staff are still rostered part time for tutorials and in class workshops. In addition, minutes of the TTA meetings are shared between TTA and Te Whare Manaaki academic advisors.

Our service

In general we all provide academic development assistance to students through one-to-one tutorials (support friends welcome), generic academic skills workshops, and assignment specific in-class workshops that preferably include the participation of the class lecturer. Students may actively seek us out or be referred by staff. Our services include not only remedial level assistance but help to any student who wishes to improve. We focus on providing students with skills and strategies to obtain their goals rather than fixing mistakes.

There is also a focus on targeted populations of students. The presence of two CPDS staff in the team is part of the main CPDS strategy based on the Na Kuita (Fijian for octopus) model. This model strategically places Pasifika support within the mainstream. The strategy manifests in our team with the placement of two CPDS staff to work collaboratively as part of a one stop shop. The two staff members facilitate the CPDS to build a relationship with other staff in the student services. In addition the model also allows for the sprinkling of Pacific Academic Support all over Waitakere campus as it suits a multi-disciplinary campus institute (Talakai et al., 2008). The Pacific staff members facilitate tutorial sessions for the Talanoa Pasifika paper within the Bachelor of Social Practice, provide workshops for the Pasifika students' tutorial sessions for Nursing, and hold events such as a joint Māori and Pasifika financial information session and Pasifika BBQs. They also participate in CPDS events, such as graduation, across all of Unitec.

Māori student success is supported by Maia. On the Mt Albert campus Maia was established in July 1998 as one of Unitec's initiatives to improve the participation and success of Māori students on campus. Maia's mission statement is: Maia provides

matauranga Māori leadership, education and support for all of Unitec's communities. Maia plays an important role in achieving one of Unitec's key strategic goals to "build the aspirations of Māori students and communities" (Unitec, 2007, p. 30). In practical terms institutional support is provided through activities such as guest lecturing on Te Tiriti o Waitangi, giving support at powhiri and organising and facilitating orientation events. Holistic support is about having a one stop shop system that students can feel comfortable about accessing. Maia operates to validate te ao Māori (Māori world-view) and epistemologies in a traditionally Euro-centric context. Community engagement manifests in initiatives such as attendance at the ASB polyfest, many kōrero, the AUT Māori expo and free te reo Māori classes.

At Waitakere the Maia staff member notices the advantage of her location out at Waitakere:

> Being situated in with all the other services contributes to my accessibility to Māori students. I see them studying in the commons area and often stop and chat to see how their progress is, but in addition to this, students don't have to go looking for me in another location (as is the case for Maia at the Mt Albert campus), I'm just there, where they go for everything else.

She also points out the opportunity for professional development as a result of staff collaboration. She says of her role at Waitakere that:

> I am still part of a team, therefore, I can work collaboratively with my Whare Manaaki colleagues on projects. This allows the exchange of many things, one of them being wisdom from a range of perspectives. I can share wisdom from the perspective of a Māori world view that my colleagues might not have been aware of, and vice versa.

Our team structure allows us to share generic service provision in addition to services for targeted populations. In addition, as our team(s) are located together we are able to direct students easily to other services such as counselling, career guidance and financial assistance. Furthermore, our close proximity allows us to learn from each other and establish strong networks.

Issues and directions

This section describes some the issues most noticeable for our team in our daily work, and our plans to address these in the coming year.

English as another language

Many students do not speak English as their first language (Unitec, 2007). The lower level students study for a certificate or diploma in English. We have a part time language tutor who is available to support the lower level English language students with their literacy needs in relation to their study and everyday life in New Zealand.

Even though English support is offered through tutorials and workshops on grammar checking, there is not enough time for all students to have appointments outside of classes, and grammar workshops are not well attended. Many of these students are adults with families who have to leave promptly after class to care for children.

A possible future direction would be to hold workshops focused on helping students to engage in a group discussion and to hold grammar checking strategies workshops in one of the guided study hours available within their programmes.

The other team members frequently see students who are non-native speakers of English in degree programmes such as nursing or social practice. Mostly their academic concerns are the same as those of native speakers such as organising their writing or learning referencing conventions. Other times their concerns are English language related such as use of tenses, understanding vocabulary, or checking for grammar they do not know is incorrect. In these individual tutorials, students can participate well as the session is tailored to the particular student. In classroom situations, however, students can often feel lost when they have to interact in groups. Students comment that they have trouble understanding conversations in groups and then in being able to express their ideas. These students also do not attend grammar checking workshops, possibly due to time constraints.

A possible future direction to assist these students could be to work with the course teacher to arrange a workshop at a suitable time that would focus on participating in group discussions and strategies for checking grammar in written work.

Multi-team membership tensions

One of the issues is that sitting within the matrix of two teams creates tension if any visions or plans disagree between the teams. Having to be accountable to the main CPDS body at Mt Albert, yet working daily within another team at Waitakere, creates disconnection at times with the central body for the CPDS and Maia staff members.

As a current and future direction regular meetings and constant communication via email or phone are needed. Even thought this can be time consuming, it is worth it to ensure quality of service to students.

The advisor from Maia points out that as part of two teams with very similar and yet very different objectives she constantly needs to reflect on how her work in either team might complement or contradict the objectives of the other. For example, generic workshops not targeted at Māori students may not validate a Māori world-view. In addition some of the development undertaken that is valuable to the success of one team might not be as valuable in the other team. Whilst the provision of funding to participate in dual manners of professional development has not been an issue, the provision of time for dual development has been overlooked. This is an issue for future discussion.

Establishing relationships

As the Waitakere campus increases in student numbers, it is important for Pacific and Māori students to have the opportunity to form supportive study groups. This year the Māori staff and student shared lunch was continued. This was also attended by non-Māori staff and students. Future directions for the Pacific students include using the Na Kuita Model and CPDS would like to look at forming a Pacific Students' Club as well as establishing a mentoring programme. In addition, we envisage establishing joint events and activities with CPDS and Whare Manaaki Staff to strengthen the staff networks.

Access to Maia services by non-Māori

Although Maia is underpinned by Kaupapa Māori principles, service is not refused to non-Māori who identify with this. The tension here is that many non-Māori in the past have enjoyed the way Maia works and taken advantage of the services provided. This is positive; however, it reduces availability of service for Māori students, and therefore sustains disparities.

The future direction is to continue to manage this on a case by case basis to ensure equity of service delivery. This may be less of a problem in the future as there are many full time academic advising staff at Waitakere now, whereas in previous times the only full time staff member was from Maia. In addition, the staff members at the front desk direct Māori students and any others who specifically ask for the Maia staff member to her, and they refer non-Māori students to other available staff.

Researching and teaching balance

It is well noted that academic advisors are under pressure to perform in both research and teaching areas (Kreber, 2006). This pressure arises in part from wider economic pressures that transform businesses and higher education alike towards greater efficiency, cost effectiveness and competitiveness (Teitelbaum, 2000). Reductions in funding have been accompanied by the promotion of accountability and performance indicators to measure it (Polster & Newson, 1998). This pressure also exists from the movement to develop the scholarly identity of the academic advising profession. Schulenberg and Lindhorst (2008) state, "we believe that all those who practice academic advising have a responsibility to also participate in scholarly endeavours related to academic advising" (p. 44). They consider it important to consider the identity of academic advising in terms of its practical service, the theoretical base underlying practice and continued scholarly investigation of practice. They see academic advisors as being in a good position to research questions (alone or collaboratively) based on practice. Furthermore, advisors can bring their diversity of perspectives into research to develop useful applications. Institution specific research also needs to be located within the wider professional community. Use of, and participation in scholarship should be supported by administrators for both the development of the advisors and for the field itself (Schulenberg & Lindhorst, 2008). The Unitec academic strategy values the "inter-dependence of teaching and research"

(Unitec, March, 2008, p. 10). Research is an important activity to promote research informed practice that will contribute to student success.

Directions for next year include to carefully plan availability for research and student contact hours. Research will be based on issues related to service provision for students. Opportunities for participating in relationship building events will also form part of the direction for the coming year. I have noticed the importance placed on relationship building between staff and students in the Maia and CPDS staff.

Evaluation

Universities are increasingly modelling their practices on those of the corporate world where efficiency, effectiveness and profit are valued (Kreber, 2006). However, corporate based measures of evaluation will not capture the complete picture of good practice within our service at Unitec. It is necessary to use multiple measures of evaluation to consider multicultural perspectives on good practice. Knowledge is related to culture and value systems so evaluation should contain elements that are generated from these values (House, 2008). The general evaluation of Te Whare Manaaki includes focus on the provision of interconnected services that represents the diversity found in students and the community. This diversity is also reflected in the staff.

The evaluation of Whare Manaaki involves both common milestones and targeted achievements. Common milestones across interrelated teams include professional development, research projects, contact hours and the provision of services. Targeted achievements include retention and completion statistics for Māori and Pacific Island students that reach projected increases. The one stop shop model also helps to keep costs down through the sharing of spaces, resources and expertise.

Evaluations over the coming year will include not only the quantitative measures such as number of contact hours, workshops and student demographics, but also qualitative measures of the students' experiences. These evaluations may be conducted within each sub team to be inclusive of the cultural values that underpin service provision.

Workshops on demand

A number of authors have noted low attendance at generic academic skills workshops that are not embedded within a discipline-specific curriculum (Bartlett & Chanock, 2003; Singh, 2000). This is problematic because the proportion of learning development services resources used to create these workshops is disproportionate to the number of students using them. In the first year of our team, we also noticed low attendance at generic workshops. It is difficult to schedule workshops at times that will suit many students and there is a wide variety of course class times during the week, and even within classes some students may be on off-campus placements while others begin new topics in class. During tutorials students have mentioned an interest in the workshops but said that they were not scheduled at times they could attend.

Like other institutions, we also aim to increase our course-specific workshops in collaboration with course lecturers. In response to the inefficiency of scheduled generic workshops, we are also considering introducing a modified procedure for these workshops. We will still offer these workshops by scheduling fewer of them and encouraging students to gather at least three students together and arrange the workshop time with one of us. Workshops on demand will enable students to come with their friends and possibly work on the same assignment. This would make the workshop more context specific. In addition, workshops on demand would also help us to match Māori and Pacific Island groups with the appropriate academic development lecturers.

Conclusion

This transition year from mostly part time academic advising staff to a full-time multicultural team has progressed relatively smoothly. We have gained an understanding of our students' needs and the possibilities for collaborative work within our team and with other staff members. The directions identified provide exciting challenges for the development of quality service to the rich diversity of Unitec's students.

Acknowledgements

I would like to acknowledge the support of the Te Whare Manaaki learning services team in the presentation of this paper at ATLAANZ: Deborah Faaiuaso, Aisea Mahina, Kelly Panapa, and Stephen Matai'a. I would especially like to acknowledge the contributions by Deborah Faaiuaso and Aisea Mahina on the information relating to the CPDS, and by Kelly Panapa for information on Maia.

References

Bartlett, A., & Chanock, K. (2003). Introduction. In A. Bartlett, & K. Chanock (Eds.), *The missing part of student profile jigsaw: Academic skills advising for Australian tertiary students from non-English speaking backgrounds* (pp. 3–9). Canberra: Academic skills and learning centre, Australian National University.

House, E. (2008). *Democratic evaluation, multiculturalism and 'real politik'*. Paper presented at Aotearoa New Zealand Evaluation Association, Rotorua, New Zealand.

Kreber, C. (2006). Setting the context: The climate of university teaching and learning [Electronic version]. *New Directions for Higher Education, 133*, 5-11.

Pelling, N., & Utumapu-McBride, T. (2004). Breaking down the barriers and empowering Māori and Pacific students. *Building Bridges: Diversity in Practice. Conference Proceedings of ATLAANZ,* 2004 (pp. 169-179). New Plymouth, New Zealand: ATLAANZ.

Polster, C., & Newson, J. (1998). Don't count your blessings: The social accomplishments of performance indicators. In J. Currie & J. Newson (Eds.), *Universities and Globalization: Critical Perspectives* (pp. 173-191). Thousand Oaks, CA: Sage.

Reinarz, A. G. (2000). Delivering academic advising. In V. N. Gordon & W. R. Habley (Eds.). *Academic advising: A comprehensive handbook* (pp. 210-219). San Francisco: Jossey-Bass.

Singh, S. (2004). A learning advisor journeying the teaching and learning bridges across the institution. *Building Bridges: Diversity in Practice. Conference Proceedings of ATLAANZ,* 2004 (pp. 214-230). New Plymouth, New Zealand: ATLAANZ.

Statistics New Zealand. (2006). *Education – Territorial Authority and Highest Qualification – Census Usually Resident Population Count – 1996–2006*. Retrieved 1 November, 2008 from http://www.stats.govt.nz/census/census-outputs/tables/detailed/place/tab5/ta-highest-qualification.htm

Talakai, M., Aumua, L., Faaiuaso, D., Tominiko, F., Solomona, M., & Fuluifaga, R. (2008). *The Na Kuita model: Embedding Pasifika in the mainstream*. Paper presented at ATLAANZ Conference, Porirua, New Zealand.

Teitelbaum, H. (2000). Anticipating, implementing, and adapting to changes in academic advising. In V. N. Gordon & W. R. Habley (Eds.), Academic *advising: A comprehensive handbook* (pp. 393-408). San Francisco: Jossey-Bass.

Unitec. (2006). *Whare Manaaki student services Waitakere campus one-stop-support-shop*. Auckland: Unitec New Zealand.

Unitec. (2007). *Waitakere campus annual report*. Auckland: Unitec New Zealand.

Unitec. (2008, March). *Academic strategy: A statement of academic strategy to guide strategic decision-making at Unitec*. Auckland: Unitec New Zealand.

Unitec. (2008). *Waitakere campus annual report*. Auckland: Unitec New Zealand.

Upcraft, M. L., & Stephens, P. S. (2000). Academic advising and today's changing students. In V. N. Gordon & W. R. Habley (Eds.), *Academic advising: A comprehensive handbook* (pp. 73-83). San Francisco: Jossey-Bass.

International students: Sojourners or immigrants? A changing role for tertiary learning advisors

Elizabeth Craven[2]
University of Technology Sydney
Australia

Abstract

Reforms to Australia's skilled migration policy since 1999 have led to a marked increase in the proportion of the skilled migration intake coming from former international students, in particular from students graduating from accounting programmes. Birrell (2009) indicated that many of these former students who obtained permanent residence visas by this route in 2005-06 had not achieved a proficiency level in English required for employment as professionals. This paper describes how the transformations in the migration context and the accompanying transformations in the aims and desires of international students have led to transformations in the role of tertiary learning advisors in one context in Australia.

Introduction

Since 1999, there have been a series of changes to Australia's skilled migration policy that have encouraged international students who have completed higher education courses in occupational areas in which there is a skills shortage in Australia to apply for permanent residence. This transformation in Australia's migration policy has resulted in two other sorts of transformation: a transformation in the aims and desires of some international students and a transformation in the role of tertiary learning advisors whose role it is to assist these students achieve their goals. This paper outlines these migration policy changes, some of the outcomes of the changes and how one faculty in one Australian university is responding.

Transformations in the migration context

From the mid-1990s Australia's immigration programme shifted in emphasis from family reunion and humanitarian streams to a focus on skilled migration and, since 1999, international students have been favoured over other applicants in the point system used to evaluate skilled migration applications. In 2001 a new visa category was introduced specifically for applicants with Australian tertiary qualifications, which

[2] Craven, E. (2009). International students: Sojourners or immigrants? A changing role for tertiary learning advisors. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 13-20). Auckland, New Zealand: ATLAANZ.

enabled recent graduates to apply for temporary or permanent residence visas 'onshore'. The results of these visa changes have had significant effects on enrolments in Australian universities. Not only has there been a marked growth in the total number of enrolments, but also a shift towards fields of study related to the list of 'occupations in demand'. Prominent amongst these occupations in demand is that of accounting and, in 2003-2004, for example, international students enrolling in accounting courses made up 65% of all students commencing accounting courses at postgraduate level (Birrell & Rapson, 2005). In 2003-04, the onshore visa category enabled 2,500 international students who had recently graduated with accounting degrees to obtain permanent residence visas (Birrell & Rapson, 2005). In 2004-05, the figure was 4,010 (Birrell, Hawthorne & Richardson, 2006) and in 2005-06, it had grown to 6,595 (Birrell, 2006).

However, this shift in focus in the immigration programme towards skilled immigration and the granting of permanent residence to those with Australian tertiary qualifications, has not produced entirely expected outcomes. Graduation from an Australian university with academic qualifications in an occupational area in demand, has not automatically ensured employability. When these onshore visas were first introduced, it was assumed a degree from an Australian university would imply a certain level of proficiency in English. It turned out, however, that this was not always the case and in 2004 a new requirement was introduced that visa applicants must achieve a minimum band of 6.0 in the General Module of the International English Language Testing System (IELTS) test. In 2005-06, approximately a third of the applicants for onshore visas failed to reach this level of proficiency and for Chinese applicants, who constituted the majority of the applicants, the percentage failing to reach the required level was 43% (Birrell, 2006). When these figures were publicised a media sensation ensued and universities in Australia have subsequently become acutely aware of the need to enhance international students' proficiency in English.

One specific outcome of the attention given to the inadequate English language proficiency of applicants for permanent residency was the creation, in September 2007, of a new permanent residence visa category with increased English language proficiency requirements. Applicants in the age bracket 19-29, with Australian qualifications obtained in a course of at least two years' duration in an occupational area that is in the list of occupations in demand and who obtain a band level of at least 7.0 in each component of the General Module of the IELTS test can now meet the requirements for a permanent residence visa even though they might have no work experience in the occupation in demand.

Transformations in the aims and desires of international students

Prior to 1999 international students upon graduation from Australian universities had to return to their home countries. This was a requirement of their student visas. They may at some stage then apply for a migration visa to return to Australia to work and live, but it was reasonable for any lecturer teaching or assisting these students to

assume that the students were seeking Australian qualifications that they would use to gain employment in their home country. The availability of temporary and permanent residence visas for Australian graduates applying on shore has changed that. Now, many international students in Australia are future migrants. Robertson (2006) notes their uniqueness in this respect:

> Their period of temporary residence in Australia as students acts a transitional stage, during which decisions to stay or motivations behind these decisions may alter or develop considerably. The transitory phase of study also constitutes a 'double adaption' whereby individuals undergo two adjustments, first as a student at a foreign university and then as a permanent migrant [*sic*]. The effect of this two-phase transition into Australian society may have a distinct affect on their experiences and the way in which they position themselves as migrants. Secondly, although they will be highly familiar with Australian life and culture due to their exposure during their period of study, they would also have migrated as adults and probably maintain close familial, friendship or organisational ties with their country of origin (Robertson, 2006, p. 4).

Robertson raises interesting questions about issues of belonging, mobility, citizenship and permanence relating to these students who are transitioning to migrants and perhaps to global professionals with a transnational sense of belonging. It is important for tertiary learning advisors and academic language lecturers working with these students to understand the complexity of their aims and desires: aims and desires that go beyond success in academic study, to that of reaching a high level of proficiency in English and an understanding of Australian workplace culture as well as world knowledge that will enhance their employability in a wide range of contexts. Yet little research has been reported to date that considers this category of student as distinct from international students who are educational 'sojourners' planning to return to their home countries on completion of their studies.

Transformations in the role of tertiary learning advisors

The inadequate English language proficiency of many university graduates and the implications made clear in the media that universities were failing in one of their assumed roles has led to an increased focus on communication skills in Australian universities. At a national level, the Department of Education, Employment and Workplace Relations (DEEWRA) has funded a project to develop a set of good practice principles for English language competence in academic studies. Courses that focus on communication, for example, Engineering Communication, Communication for IT Professionals, are becoming more common either as electives or core subjects within degree programmes.

In 2008 the Graduate School of Business at the University of Technology Sydney (UTS), aware of the interest that this new skilled migration visa sub-class was attracting among international students, introduced a Masters in Professional

‘Accounting (MPA) Extended’ specifically intended for international students. This degree programme would provide students with academic qualifications in accounting – one of the occupations in demand; it would provide them with Australian qualifications in a course of two years duration, and it would provide them adequate opportunity to improve their proficiency in English and therefore meet the IELTS requirement.

The UTS Handbook describes the MPA Extended as follows:

> The Masters of Professional Accounting Extended is designed to provide non-accounting graduates with the necessary skills and knowledge required for a career in professional accounting. The completion of the course satisfies the academic requirements for membership to CPA Australian and the Institute of Chartered Accountants of Australia (ICAA) (University of Technology Sydney, 2008).

The degree comprises sixteen subjects: twelve are accounting, finance, legal or economics subjects and four are ‘communication’ subjects. The purpose of the communication subjects is described in the Handbook as being to ‘enhance the English language skills of non-accounting graduates who want professional accreditation so as to improve their prospects of gaining accounting employment’.

The UTS Graduate School of Business asked the university’s academic language and learning centre to design and deliver these four ‘communication’ subjects. In Australia, tertiary academic language and learning advisors have positioned themselves as advisors and lecturers whose core expertise is in developing the ‘academic’ language and learning skills of students in order that the students can meet the requirements of their academic programme. The Association for Academic Language and Learning describes it thus:

> Academic Language and Learning staff work with students, both local and international, at every level from first year through postgraduate. They recognise that the challenges of moving through higher education are not remedial, but ones that every student faces: understanding the cultures of enquiry in academic disciplines, and developing control of their discourses (AALL, 2008).

There has been a conscious effort to distinguish the work academic language and learning lecturers do from that of ‘general’ English teachers, of study skills advisors and of remedial teachers. The request from the Graduate School of Business, however, was for academic language and learning advisors to develop subjects that would not only meet the ‘academic’ language and learning needs of the students, but also to develop subjects that would prepare them for the professional workplace as well as to prepare the students for achieving a particular English language proficiency level in a standardised English language proficiency test. While much time and effort had been

spent in defining the core role of academic language and learning advisors as one that supports students in 'academic' contexts, the transformed context was asking that the role be greatly expanded.

According to research undertaken by Melles, Millar, Morton and Fegan (2005) around half of Australia's universities were offering some form of English as a Second Language (ESL) courses for credit in 2002-03. Most were not discipline specific, although they may have been content based. However, the more typical models of support offered by tertiary academic language and learning advisors in Australia are still one-to-one consultations, non-credit workshops or (increasingly) working collaboratively with disciplinary staff (Arkoudis & Starfield, 2007). It has been external factors, in the case discussed here the request from the Graduate School of Business at UTS, which are influencing the prioritising of the credit subject model over other possible models of in-course support. Any future research into the effectiveness of these subjects will need not only to consider whether the students enrolled in the subjects are assisted in 'understanding the cultures of enquiry in academic disciplines, and developing control of their discourses' but also meeting immigration requirements and being successfully employed and settled in Australia.

Communication skills in the Masters of Professional Accounting

The task then of developing communication subjects for this group of students was a complex one – and one that some tertiary academic language and learning advisors would argue did not fall in the ambit of academic language and learning advising. Nevertheless, the transformed context did result in UTS academic language and learning advisors accepting a transformation of roles. There follows below a description of the four subjects that were developed to meet the aims and desires of students who would transition to migrants and, in all likelihood, global professionals who are 'at home' in at least two countries.

All students enrolling in the MPA Extended are required to enrol in a core subject named, perhaps not entirely aptly, 'Business Communication Skills'. This subject is compulsory and taken by students in their first semester. As all students in the programme are required to pass 'Business Communication Skills', the skills focus of this subject is that which academic language and learning advisors see as central to their expertise: helping the students to develop an academic voice and to meet the language requirements of the other subjects they are studying. While some students are much more proficient in English than others, all can benefit from practice in paraphrasing, summarising and referencing correctly; in thinking critically; in working in groups; in the discussion of issues and the oral presentation of research findings. Based on the belief that language skills are most effectively acquired when used in meaningful exchange, a theme for the subject was selected that is important for the understanding of business principles in Australia today, but which could be new for some of the students enrolled in the programme: corporate social responsibility.

The other three communication subjects in the MPA Extended are electives and each is focused on one of the purposes for which the students need to improve their communication skills. 'English for Accounting Studies' has been designed to give additional English language development support for those students whose English is identified as inadequate as a result of their performance in 'Business Communication' Skills. There is a review of the skills practised in 'Business Communication Skills', but a greater focus is given to improving speaking skills in informal situations and to acceptable usage of English in report writing. The theme for this subject is cross-cultural communication. For those students who see themselves becoming residents of Australia or becoming global professionals whose existence is permanently transnational, greater cross-cultural awareness is an essential attribute.

'Workplace Communications', as the name suggests, is designed to enable students to understand the culture of the accounting workplace in Australia, to identify work opportunities, to effectively market themselves to appropriate employers and to develop professional skills and behaviours sought by employers that enable students to transition effectively into the accounting workplace. This subject has been developed by academic language and learning advisors with advice and input from the UTS Careers Service.

'English for Professional Purposes' is the subject designed to enable students to meet what for many is their most pressing purpose – to achieve the desired results in the IELTS test. This subject is designed to enable students to have as many opportunities as possible to use English in a range of contexts: academic and social as well as professional so that they develop their ability to use English with flexibility and precision with an awareness of what is appropriate for any given context. The subject is also designed to give students preparation and practice for the Cambridge ESOL Examinations 'International Certificate in Financial English' should they choose to sit for this test as well.

The task of developing these subjects has been an interesting one for the learning advisors, but also a challenging one. Discipline lecturers within the Faculty of Business were willing and interested to collaborate in initial course design. Their major concern, however, was that the English language proficiency of the students improve. For learning advisors, an understanding that language and content do not exist independently of each other is a given. This understanding is not, however, always shared by academics whose formation has been in non-linguistic disciplines. Thus far, therefore, the onus has been on the learning advisors developing the subjects to gain a more in-depth knowledge of course content and assessment in the accounting and other business subjects the students are studying. This greater understanding has enhanced the learning advisors' capacity to contribute to the other modes of support they provide such as the more traditional one-to-one consultations and non-credit workshops. While the ideal arrangement might be team teaching of these business communication subjects with discipline staff and a mutual sharing of expertise, this ideal is yet to be realised. The primary role the learning advisor has been asked to play

is that of the English language expert who can equip the students not only to meet the language requirements of their academic programme, but also to meet language requirements external to that programme – requirements defined by the Department of Immigration and Citizenship.

Conclusion

This paper has considered three transformations: the transformation in the migration context in Australia; the transformation in the aims and aspirations of many of the international students coming to Australia, and the accompanying transformation of the roles of academic language and learning advisors working with these students. As academic language and learning advisors strive to establish a particular identity and define their core role, new demands are placed on them. Many international students in the 21st century are not simply educational sojourners, but potential migrants who require not only support in adjusting to the academic demands of their study programmes, but support in preparing for employment and settlement in the country to which they have come initially as students. Attention both within Australian universities and within the media to a lack of satisfactory English language proficiency of some of these potential migrants is likely to lead to an increased demand for learning advisors to focus on developing students' English language proficiency and communication skills that prepare them for the Australian workplace. ESL and communication skills for credit subjects offered within the context of professional degrees are likely to increase. The content of these subjects will not only aim to develop the communication skills students require for academic success at university but also for employment and life as professionals in Australia after graduation.

References

Arkoudis, S., & Starfield, S. (2007, August). *In-course language development and support*. A discussion paper prepared for the National Symposium: English Language Competence of International Students, Sydney, NSW, Australia.

Association of Academic Language and Learning. (2008). *Welcome to AALL*. Retrieved December 1, 2008, from http://www.aall.org.au/.

Birrell, R. (2006). Implications of low English standards among overseas students at Australian universities. *People and Place, 14*(4), 54-64.

Birrell, R., & Rapson, V. (2005). *Migration and the accounting profession in Australia: Report prepared for CPA Australia*. Melbourne, VIC, Australia: Monash University Centre for Urban Research.

Birrell, R., Hawthorne, L., & Richardson, S. (2006). *Evaluation of the general skilled migration categories*. Retrieved October 15, 2008 from http://www.immi.gov.au/media/publications/research/gsm-report/

Melles, G., Millar, G., Morton, J., & Fegan, S. (2005). Credit-based discipline specific English for Academic Purposes programmes in higher education: Revitalizing the profession. *Arts and Humanities in Higher Education*, *4*(3), 283-303.

Robertson, S. (2006, July). *Students-turned-migrants in contemporary Australia: Questions of membership, mobility and belonging.* Refereed paper presented to the Second Oceanic Conference on International Studies, University of Melbourne, Melbourne, VIC, Australia.

University of Technology, Sydney. (2008). *UTS Handbook 2008*. Retrieved October 15, 2008, from http://www.handbook.uts.edu.au/courses/c04237.html

Needs analysis: Identifying learning and academic needs of undergraduate students within a faculty

Nishani Singh and Kate Harris[3]
University of Adelaide
Australia

Abstract

This research study investigated the need for learning support services for undergraduate students and their perceptions of how these needs could best be met. Responses to the survey showed that although students recognised the need for learning support, particularly in discipline specific areas, over half were unaware of the services offered, and even less has accessed existing services. Most students either worked independently or sought help from friends. This finding has implications for how, when and where learning support is provided and advertised. An integrated, discipline- and course-specific approach, adapted to students' needs, with a high level of teamwork between teaching staff and learning advisors is the recommended model to providing learning support for maximum student access and benefit.

Introduction

The central purpose of a learning support programme is to facilitate students' academic acculturation and transition to the university environment by enabling students to access the curriculum. The focus is on providing the scaffolding to develop students' independent learning skills, enabling them to navigate the new learning environment and understand the academic conventions required to access their course content and curriculum.

Collaboration with academic staff to integrate academic and literacy support programmes within disciplinary contexts and courses is essential to achieving enhanced student learning outcomes. Webb, English and Bonnano (1995) have identified benefits to students in locating learning support services where the learning and teaching occurs, where the needs of students can be identified and supported within a more discipline-specific context.

A survey of undergraduate students in a large faculty was conducted in December 2007 to determine if learning support was needed, in what areas it was most needed,

---

[3] Singh, N., & Harris, K. (2009). Needs analysis: Identifying learning and academic needs of undergraduate students within a faculty. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 21-36). Auckland, New Zealand: ATLAANZ.

and students' awareness and use of existing learning support. They were also asked to rate the type of learning support they required. The results of the survey indicate that a majority of the students indicated a need for some learning support, mostly in the area of 'course content', yet around half of the international students surveyed expressed the need for both study and language skills support. If students did experience difficulties with their studies they were more likely to work on their own or with friends than to go for assistance at a learning support service within the university. Less than half of the students were aware of support services available, and their perception of learning support offered was limited to study and language skills support – the more generic learning support. Only a small proportion of students actually used a learning support service in 2007, and they used what tended to be more readily accessible – for example on-line course material. When asked what learning support was required, it was evident that course specific support was very important.

The need for learning support is evident from the survey; however, the use of existing support is limited. Students indicated that the greatest need for support was in more discipline-specific areas, which suggests that a faculty-based learning support centre with extensive collaboration between learning support staff and academic staff may be in the best model to meet students' needs.

This paper is organised as follows: a review of the relevant literature on learning support and the rationale for this study is followed by an outline of the method used to develop the survey and analysis of the responses. Next, the results are described and discussed along with the limitations of the survey, and finally conclusions are drawn.

Literature review

The changing demographics of the student population at university in respect of a range of factors, including, language, culture, age, disability, gender, previous educational experience, entry pathway into university has called for rethinking the approach to meeting the learning and academic support needs of this diverse group. There is a move away from the conventional learning support programmes in the form of delivering ad hoc, generic workshops, seminars and lectures on academic literacy skills to one that is contextualised and situated within students' courses.

This review of the literature therefore examines different examples and studies on best practice in developing and implementing learning support programmes to undergraduate students.

The traditional model of a centralised language or learning centre has thus shifted to locating learning units within faculties, where the teaching and learning actually occurs allowing for the identification of the learning and academic needs of students and staff within the contexts of their disciplines. This also enables teaching staff to be accessed for their input. The increasing diversity of the undergraduate student population in Australian universities and the trend towards formal measurement of

graduate outcomes in higher education further highlights the need for integrated literacy programmes. These dual factors necessitate a more interventionist approach to student literacy skills. Universities 'can no longer expect their students to develop these skills spontaneously' (Webb, English & Bonanno, 1995, p. 338).

In their first pilot study, accounting lecturers collaborated with learning support staff to integrate the academic literacy skills within first year Accounting course. Using content specific material, writing skills were also emphasised through various activities in the course. This integration of the teaching of communication skills within the first year Accounting course, (Webb, English & Bonanno, 1995) identified the following benefits to students of an integrated approach:

- Holistic approach: 'there are no false dichotomies between the substance of the course (knowledge) and the language used to represent it.'
- Importance of literacy skills highlighted for students: 'their development is an integral part of the course.'
- Increased transparency for teaching staff about curriculum goals in literacy.

The second pilot study involved testing students' writing skills using the content of their (first year) Accounting course. The results of the test highlighted that most students had difficulty in organising, structuring, developing a cohesive argument, and using formal language in their writing.

A support programme was launched to address these skill needs for students who were deemed to be at risk of failure, based on the result of the writing test. Webb, English and Bonanno (1995) found that for the 10 (of the 35 invited) students who elected to participate in an intensive remedial workshop, there was a noticeable improvement in certain aspects of literacy skills of the students. This illustrates that while these integrated programmes are an effective tool which can help to address students' areas of weakness in literacy, if it is not compulsory for students to attend, the benefit will only be to those few who choose to attend.

In recognition of the growing debate regarding "literacy needs and practices at university … and the expectations of industry of graduates" Hazell and Woodward-Kron (1996, p. 3) integrated the teaching of effective reading (such as the use of reading guides to demonstrate reading strategies including scanning, questioning, summarising) and essay writing strategies (including workshops on unpacking the essay question and structure of the essay) into the Costing Principles and Methods course.

The reading guides that were developed were initially not being maximally used by students as they were seen to be separate from the course materials. To overcome this, the reading tasks that students had to complete were more related to lecturer's questions and discussion. The writing workshops were well attended and informal feedback indicated that students found them useful (Hazell & Woodward-Kron, 1996).

However, the study lacks any formal evaluation of the intervention, therefore the strengths and weaknesses of this programme are unclear.

A pre-course survey of students' learning experiences found that nearly half of students regularly had difficulty with key essay-writing skills such as structure, referencing, discipline-specific language and understanding essay requirements. Further, most students reported being generally unable to learn from the feedback they received on written work. The literacy intervention programme aimed to address these problems. The authors conclude that the intervention was low cost but 'time intensive' for the staff members involved and engaging casual tutors for subjects in the literacy programme was problematic as this part was not funded (Hazell & Woodward-Kron,1996).

The study by Murphy and Stewart is based on the following principles drawn from the literature on language and learning support, which illustrates:

- That language and learning skills are fundamental to the construction of meaning, and that language and academic programmes which teach these skills should be contextualised and embedded in the content being learned.
- An effective way of contextualising learning is through the development of a collaborative working arrangement between the language and learning lecturer and the subject lecturer', in which 'the contribution of the language and learning lecturer should be integrated into the subject content.
- The collaboration of subject lecturer and language and learning lecturer is 'to dispel the belief that language and learning skills are remedial; rather, … these skills are developmental and need to be learned within their authentic context of use'. Thus, students and staff who perceive learning support as being required only for students who are at risk need to realise that all students need to be continuously developing these skills (Murphy & Stewart, 1999).

A language and learning skills programme was integrated into a first-year Business Law course in a three-stage process, at Victoria University of Technology. This process began with a voluntary language and learning skills programme which ran in parallel with compulsory course requirements. In the second stage, the regular tutorial programme was adapted to include a language and learning component. In the final stage of the programme, a supplementary website was developed for voluntary use, alongside the tutorial programme. Again it was found that the collaboration between subject lecturers and learning advisors was central to the success of this programme (Murphy and Stewart, 1999). 'The project was underpinned by the principles of equity and accessibility, and the need to develop lifelong learning skills' (Murphy and Stewart, 1999, p. 1). Assessment results showed that those who attended the workshops performed better than those who did not. The success of this project was dependent on collaboration between subject lecturing staff and learning advisors (Murphy and Stewart, 1999).

Drawing on Murphy and Stewart's comments regarding the first stage of the integration process (which was a content-based voluntary adjunct programme), we may note that adjunct programmes may sometimes achieve limited outcomes because of resource constraints, their non-compulsory nature, and the fact that they are unlikely to be attended by those students most needing assistance.

English as Additional Language (EAL) students encounter a host of challenges when undertaking undergraduate university studies, in Australia, not the least of which is that there are "Cultural differences in such areas as learning styles, patterns of discourse and ways of relating with lecturers are of great importance" (Cargill, 1996, p. 177).

Some American universities have successfully employed an adjunct model of language teaching with undergraduate students from non-English speaking backgrounds, "in which an ESL … course is linked with a selected content course and provides integrated language instruction using the course content and materials" (Cargill, 1996, p.178). She stresses, however, that collaboration between learning support staff and teaching staff from specific disciplines requires "a high level of goodwill … mutual interest and understanding" (Cargill, 1996, p. 184).

A range of factors, both social and academic, impact on attrition rates at university. Although some of the literature is conflicting, there is a strong support in the literature for adequate, accessible student support services (such as academic skills advisors) to be provided to support students in what can be a very stressful time for students first entering university (Darlaston-Jones, Cohen, Haunold, Pike, Young & Drew, 2003). While there is no conclusive causal link between providing student support services and attrition, what is recognised is that a range of student support services are an essential resource for students, in particular first year students, having difficulties to transit to university (Promnitz & Germaine, 1996). The literature also supports effective orientation programmes which have been found to improve retention rates.

Tinto (2003) lists the provision of student support services as an important condition (amongst four others) for student retention. He states that:

> Students are more likely to persist and graduate in settings that provide academic, social and personal support, most students, especially those in their first year …require some form of support. ...whether it is academic assistance, social or personal support, support needs to be readily available and connected to other parts of student collegiate experience (p. 3).

The literature suggests that the key component of a learning support programme is integrating academic literacy skills within disciplines, for which a high degree of collaboration between teaching staff and learning advisors is necessary. Involvement of learning advisors provides the opportunity for relationship building and

collaboration with staff to integrate and embed academic literacy and learning support programmes within courses and programmes.

A collaborative, coordinated, structured approach is required so that academic literacy and learning support programmes are driven both by teaching staff and learning advisors, to maximise benefits to academic staff and students. Thus, learning support programmes are planned, customised and need to be targeted to students' specific learning needs.

Academic teaching staff draw insights from their interactions with students which learning advisors may not have. At the same time, interaction that learning advisors have with students provides insights into students' perspectives of and reactions to their learning experiences, which lecturers may not have. Thus, academic staff and learning advisors can share such insights, in a collaborative process, creating a feedback loop, to enhance our understanding of the factors that impact students' learning and how we may best address these.

There is some support for the development of contextualised learning support programmes located within a school or faculty (Webb, English & Bonnano, 1995). With this as background, this study surveyed undergraduate students in a large faculty, where currently no faculty-based learning support is available to undergraduate students, to determine their learning support needs and if these needs could be met either within the faculty or in a central learning support facility.

Any need for learning support identified by the survey would entail considering how learning support can be delivered to maximise undergraduate students' retention, transition to and success at university.

Method

Undergraduate students in the Faculty were surveyed about their need for, knowledge of and use of existing learning support services. Initially, student focus groups were conducted to develop a framework for the questionnaire. As well as demographic information, the questionnaires had several sections and asked students for their responses in the following areas:

- Student needs and learning strategies - in which section students were asked if they had felt the need for learning support in 2007, in what areas they felt they needed support and what support they sought when they encountered difficulties in their studies.
- Student awareness of existing learning support services - in which students were asked if they were aware of any learning support services in the university and how they became aware of the existence of these resources. They were also asked if one of their lecturers or tutors had recommended the use of to a learning support service. If so, had they used the recommended service and what might prevent them from using the services.

- Student perceptions of learning support services - in which students were asked what they thought learning support services offered, and what benefits they would get from the services.
- Student use of existing learning support services - in which students were asked if they had used a learning support service in 2007, and if so, which service they had used, why they chose the service they attended and if they found it helpful.
- Suggestions for learning support services - in which students were asked how learning support could be offered most effectively.

In each section, the alternatives provided as responses to questions were developed as a result of the student focus groups, with students providing what they thought would be the most likely alternatives. The questionnaires also gave students the opportunity to add further alternatives. The questionnaire was pre-tested with a small group of students and no further changes were made. After pre-testing the questionnaire, the final version was mailed to all undergraduate students in the faculty.

Results

In total 311 students responded to the survey. The response rate was low as the questionnaire was mailed to students at the end of the academic year, however, the students who responded did represent all of the schools in the faculty. Of the 311 students who responded, 70% were Australian and 23% international, 42% were in the first year of their degree, 26% in the second year and 21% in third year, and almost all (84%) were in the 17 – 24 age group. All statistical analyses of the data were performed using SAS version 9.1. The results are organised according to the categories of questions in the survey.

Student needs and learning strategies

Of the 311 respondents, 227 (or 73%) indicated they felt they needed learning support in 2007. The need for support is reasonably consistent across Schools in the Faculty. The results, in Table 1, below, show that while a larger proportion of international students indicated the need for learning and academic support (79%), the proportion of Australian students who indicated a need for support was also high (71%). The need for learning support was reasonably consistent across year level of study.

Table 1. *Need for Support by Background of Student*

	No Answer		International		Australian		Total	
Need for Support	N	%	N	%	N	%	N	%
No Answer	1	4.2	1	1.4			2	0.6
No	6	25	14	20	62	28.6	82	26.4
Yes	17	70.8	55	78.6	155	71.4	227	73
Total	24	100	70	100	217	100	311	100

Table 2 shows the areas in which the students surveyed felt they required learning and academic support. The area in which support was most required was course content. 53% of all students expressed the need for support in this area. Just over half of both international and Australian students felt a need for support in course content, and nearly 60% of 1st year students reported a need for this support, marginally more so than those in later years of their degrees (50%). No specific detail was provided for the meaning of 'course content' in the questionnaire, however, interpretations in focus groups and in pre-testing gave this to mean the knowledge that students are required to understand. If this is the case, then this result would suggest that the students prefer to have more discipline specific support, perhaps requiring more additional information from lecturers and tutors about course expectations.

The area of support in which students indicated they required least support was language skills. This was not surprising considering that the largest group of students completing the questionnaire were Australians. However, 47% of international students felt they needed support in this area, compared to only 6% of Australian students.

Over 40% of students felt that they needed support with administrative requirements. This was more prevalent among local students (44%) than among international students (34%). Administrative requirements may be school or specific programme issues – or they could be university wide issues relating to such areas as examinations policy, plagiarism, and student responsibilities. This area of support requires further investigation.

Study skills were listed by 32% of students as being an area in which they needed support. 54% of international students who responded and only 23% of Australian students indicated they needed this support. There are international undergraduate students in both Level 1 and Level 2 courses who may be in their first semester or year at university. The need for study skills support is important for students in their initial exposure to new study environments where often different skill sets are required to achieve.

Table 2. *Areas of Support Needed*

	Admin Support		Course Content		Study Skills		Language Skills	
	N	%	N	%	N	%	N	%
No answers	66	21.2	58	18.6	78	25.1	100	32.2
No	116	37.3	88	28.3	135	43.4	165	53.1
Yes	129	41.5	165	53.1	98	31.5	46	14.8
Total	311	100	311	100	311	100	311	100

Students were also asked what strategies they used to overcome any difficulty they had with their studies. The results are given in Table 3. The table indicates the most likely strategies students used to overcome any difficulty they had with their studies. Clearly, the most common strategy students use to overcome difficulties is to work by themselves or to work with other students/friends. Very few are not likely to use either a private tutor or a learning support service. The average response for the former two strategies is around 2 (at the most likely end of the scale) compared to the average response to using a private tutor and learning support service of 4.7 and 4.2 respectively (nearer the least likely position of 6).

Table 3. *Strategies to Overcome Difficulties*

	Work on my own		Work with friends/other students		Talk to a tutor/lecturer		Go to a learning support service		Work with a private tutor	
	N	%	N	%	N	%	N	%	N	%
No answer	14	5	17	6	15	5	24	8	27	9
1. Most likely	136	44	99	32	47	15	4	1	4	1
2.	60	19	129	42	87	28	8	3	2	1
3.	78	25	40	13	123	40	22	7	15	5
4.	15	5	15	5	26	8	133	43	69	22
5	4	1	8	3	9	3	101	33	150	48
6. Least likely	4	1	3	1	4	1	19	6	44	14
Total*	311	100	311	101	311	100	311	101	311	100
Mean	2.000		2.024		2.578		4.310		4.729	
STD	1.124		1.043		1.042		0.915		0.909	

** % may not add to 100 because of rounding*

Student awareness of learning support services

In this section, students were asked if they were aware of any learning support services in the university, how they became aware of the existence of these resources, if they had been recommended to use a learning support service, and if they had followed up on the recommendation. Table 4 indicates the level of awareness of learning support services among the students who responded to the questionnaire. Twenty percent were aware of learning support services in the faculty. There are currently no undergraduate learning support services located in the faculty, so this suggests that perhaps the students have a relatively broad definition of learning support, or that they are confusing faculty support with other services available in the university. It is easier to explain students' awareness of learning support services in Schools – much of this support could be from both academic and professional staff – course advice or assessment support etc.

Less than half of the students were aware of the learning support services offered by the University's central learning centre. This should be of concern as the service is widely advertised within the university and on student services and course specific web sites.

Table 4. *Awareness of Learning Support Services*

Awareness of learning support services	% Yes*
University learning support centre	45
Student's School	37
Faculty	20
Other areas in the University	18

* *Note that the percentage in the table will not add to 100 – some students would have responded positively to knowledge of two or more support services.*

Table 5 indicates that students became aware of the learning support services in the university from a variety of sources, with the most common source being course-based – from the course web site or from their lecturers or tutors.

Table 5. *How Students Became Aware of Learning Support Services in the University*

Source of information:	%
Course specific web site	22
Tutors/lecturers	22
Emails/e-newsletters from Schools	18
University of Adelaide website	15
Posters/brochures	10
Friends/other students	13

35% of students indicated that a lecturer or tutor had suggested that they go to a learning support service; however of these students only 31% followed the advice. This is a very poor response as teaching staff would be unlikely to recommend a service unless it was thought that the student would benefit from developing their skills in a particular area.

Table 6 highlights the factors that may prevent students from using learning support services offered by the University and adds to our understanding of why students do not make greater use of learning support services offered.

Lack of knowledge about the services offered and lack of time to access those services were cited as the main reasons preventing students using the services. Together with the number of students who listed difficulty in finding information and the location of the services, the results in Table 6 have implications for the Faculty and Schools. Providing clear information on the types of services offered, details of those services, the location and the outcomes that could be expected may increase the number of

students who access learning support services. Establishment of faculty based learning support services should also increase both the awareness of and use of learning support.

Table 6. *Factors Preventing Students Using Learning Support Services*

Factors preventing use of learning support:	%
Lack of knowledge about the services	23
Lack of time to access the services	20
Not knowing location of the services	16
Difficulty finding information about the services	14
Feeling intimidated about approaching the service	10
Not directly related to the course	10
Not compulsory	7

Student perceptions of learning support services

Students were asked what they thought learning support services offered, and what benefits they would get from the services. In Table 7 help with study skills and help with language skills could be classified as generic skills, whereas help with course content and supplement to lectures and tutorials could be seen as more discipline specific skills. The table shows that help with study skills was seen by students as the main service that was offered by student learning support services. Almost a half of the respondents thought that learning support services helped with language skills. Thus, it would seem that most students see learning support services as offering help with generic learning skills.

Table 7. *What Students Think Learning Support Services Offer*

Learning support services offer:	% Strongly Agree/Agree
Help with study skills	67
Help with language skills	47
Help with course content	37
A supplement to lectures and tutorials	26
A remedial service	24

This is supported in Table 8 which shows that almost three quarters of the students expected the benefits of learning support services to be improved writing and study skills. Increased confidence could well follow from improved study skills, and better understanding of course content may be a result of improved language and study skills.

Table 8. *What Benefits Students Think They Might Get from a Learning Support Service*

Benefits of learning support services:	% Strongly Agree/Agree
Improved study and writing skills	72
Increased confidence	62
Improved language skills	52
Better understanding of course content	50

Student use of learning support services

This section asked students if they had used a learning support service in 2007, and if so, which service they had used. They were also asked why they chose the service they attended and if they found it helpful.

Twenty-six percent (81) of all respondents indicated they used a learning support service in 2007. There was little difference between the proportion of international students and the proportion of Australian students who used the services in 2007, and a slightly higher proportion of first year undergraduates used learning support services than did those in later years of their degree.

The learning support services used are given in Table 9. Clearly, those support services that are more readily accessible to students are better used than those which may involve some uncertainty and require more effort on behalf of the students to access. Alternatively, they may not be aware of the availability of university learning support services.

Table 9. *Learning Support Services Used*

Learning Support Service	% who used the service
Orientation-week lectures	58
Course specific web site	38
University learning support services drop-in desk	22
Workshops/courses run by Schools	31
University learning support services workshops	20
Other	9

Students were asked why they chose the services they attended. Their responses are given in Table 10.

Table 10. *Reasons for Choosing the Learning Support Services Used*

Reasons for choosing services used:	% who gave this reason
Offered the support needed	58
Recommended by a tutor/lecturer	47
Required for the course	35
Convenient time	31
Convenient location	23
Recommended by a friend/other student	17
Other	<1

When asked if they found the services they attended were helpful, 79% indicated that the services were either helpful or very helpful.

Suggestions for learning support services

The students were asked how learning support could be offered. The responses are summarised in Table 11. Apart from bridging programmes, a clear majority of students agreed that all the alternatives suggested could be offered to support learning in the Faculty. Students were most supportive of support being offered in lectures – perhaps reinforcing earlier responses where students indicated that little time for attending learning support services, not knowing where to find them and lack of knowledge about the services contributed to preventing them attending the services. This also supports earlier responses from students where they indicated that course content, and administrative requirements were the areas of support most likely to be needed. It should also be noted that specific assessment tasks and individual consultations were popular suggested areas of learning support, indicating that students are focussed on specific course related tasks.

The results in Table 11 and Table 7 indicate that students perceive learning support services as currently offering generic study and language skills rather than course specific skills, but that they would like learning support to offer more help in specific course related tasks.

Table 11. *Learning Support – How Could it be Offered?*

Learning support	% Strongly Agree/Agree
Information given during lectures	76
Workshops on specific assessment tasks	71
Individual consultations	69
Drop-in services	66
Workshops for specific groups of students	61
Bridging programme	38

Discussion

The results highlight the student need for learning support. Unfortunately, although the need does exist less than half the students surveyed are aware of what support does exist. Only a small proportion of students used the learning support facilities currently provided, and these are mostly discipline-based support, readily accessible on course websites, through orientation lectures and workshops provided through the schools. Very few students had used the centralised university learning support services, even when recommended by academic staff. Whilst one of the main areas of need for students was 'course content', generally, students understood the university support service to provide help with the more generic skills, for example language and study skills, which may explain why it was more likely they would use course- or school-based learning support. Students also indicated they were more likely to seek help from their friends than a learning support service if they encountered difficulties with their studies. When asked what learning support could be offered, consistent with other responses, the students indicated that discipline-based support was the most appropriate.

Generally, the students have expressed a need for discipline-based learning support that is readily accessible. This confirms the contention of Webb, English and Bonnano (1995) that cooperation with teaching staff is important in helping to identify the learning needs of students in the context of their discipline and for implementing more appropriate learning support services. Thus, consideration needs to be given to how learning support should be delivered in order to maximise students' success at university.

Student literacy programmes that are offered in little pockets, uncoordinatedly and arbitrarily, taken on only by a handful of teaching staff within a school are not fully effective. Developing a whole Faculty and School approach, involving all teaching staff is integral to addressing issues in student literacy more effectively. It is essential for the School management and leadership to reflect a commitment to measures, in policy and practice to address this issue. The conversations about student literacy within the school need to be ongoing, so that learning programmes are reviewed, evaluated and improved.

The development of strong collaborative partnerships, between learning support, teaching staff and Schools to ensure learning support programmes are relevant to students' learning needs, is essential to a sound academic literacy programme and improved learning outcomes for students. Such an approach combines the expertise of both the learning advisors and lecturing staff to the benefit of the students.

Such an integrated whole school and collaborative approach requires an investment of time in the immediate term which teaching staff may be reluctant to sacrifice given their already demanding schedules. Once established, these programmes can

potentially, in the medium to long term, ease staff schedules as students develop these required academic skills and become more confident.

Another issue that requires consideration is how to get the most number of students, who really need these programmes, to attend them. If the learning centre programmes are not compulsory, students who most need this intervention often choose not to attend. This situation is compounded because those students most in need of this support may "already [be] under a great deal of pressure to keep up" with their compulsory course requirements (Webb, English & Bonnano, 1995, p. 348). Again a whole school approach, where the emphasis of student literacy is emphasised throughout the students' programme is one that can help in this respect.

There are some limitations to this study. Firstly, since the survey was mailed to students at the end of the semester, this may have had a bearing on the number of responses received. It is also possible that those who really need this support did not respond because of their lack of time and English language proficiency.

Secondly, although the survey was developed using focus groups of students, and pre-tested, there are elements of the survey instrument that are not clearly specified. For example, there is no indication of what the students understand by 'course content'.

Conclusion

The analysis of the results of the study from students' perspectives demonstrates that students feel there is significant need for course and discipline specific learning and academic support. There is general consensus in students' responses that this service is beneficial to their studies. However in order for this service to be effective, it needs to be flexible, as immediately located and as easily accessible as possible.

A faculty learning support learning centre could provide discipline and course specific support in a number of ways, including in mathematics, statistics, transition and orientation programmes, integrating language and study skills support into courses with extensive collaboration with teaching staff by conducting, for example, course specific assessment workshops. The student experience at University, in particular, the first year experience can be a more positive one.

A more systematic and integrated approach to the development and implementation of learning support programmes is required to more effectively equip students with the academic literacy skills they need to be successful in their study programmes and in the workplace.

References

Cargill, M. (1996). An integrated bridging program for international students. *Higher Education Research and Development, 15*(2), 177-188.

Darlaston-Jones, D., Cohen, L., Haunold, S., Pike, L., Young, A., & Drew, N. (2003). The retention and persistence support (RAPS) project: A transition initiative. *Issues in Educational Research, 13*(2).

Hazell, S., & Woodward-Kron, R. (1996, 8-12 July). *Integrating academic skills: literacy objectives in a second year commerce course*. Paper presented at the HERDSA Conference, Perth, Western Australia. Retrieved June 26, 2007 from http://www.herdsa.org.au/confs/1996/hazell.html.

Murphy, H. & Stewart, B. (1999, 12-15 July). *The integration of a language and learning program into a business law subject*. Paper presented at the HERDSA Annual International Conference, Melbourne, Australia. Retrieved June 26, 2007 from http://www.herdsa.org.au/wp-content/uploads/conference/1999/pdf/Murphy/.PDF.

Promnitz, J., & Germaine, C. (1996). *Student support services and academic outcomes: Achieving positive outcomes.* Retrieved May 11, 2008, from http://www.dest.gov.au/archive/highered/eippubs/student/eip96-10htm.

Ramburuth, P. (1999, September 27-30). *Managing language and learning diversity in higher education: enhancing the graduate experience*. Refereed paper presented at the Sixth International Literacy and Education Research Network Conference on learning, Penang, Malaysia. Retrieved January 9, 2007 from http://lc03.commongroundconferences.com/Other-Conferences/LearningConferenceArchive/1999/index.html

Terenzini, P., Rendon, L., Upcraft, L., Millar, S., Allison, K., Gregg, P., & Jalomo, R. (1994). The transition to college: Diverse students, diverse stories. *Research in Higher Education, 35*(1), 57-53.

Webb, C., English, L., & Bonanno, H. (1995). Collaboration in subject design: integration of the teaching and assessment of literacy skills into a first-year accounting course. *Accounting Education,* 4(4), 335-350.

Transforming our work: Elearning initiatives

E. Marcia Johnson, Andrea Haines and Patricia Strang[4]
The University of Waikato
Hamilton, New Zealand

Abstract

This paper focuses on the process through which a small team of tertiary-level academic learning developers transformed their practice from one centered in physical space to a mixed virtual / physical learning place. It discusses key design decisions affecting online developments including the overall structure of the eLearning environment, the use and importance of Moodle and other open source software tools, and the selection and organization of pedagogical content. Following discussion of the development and use of effective online learning places and the consequent implications for change within learning environments, the paper concludes with reflections on institutional change processes and a description of future initiatives.

Introduction

At the University of Waikato the transformation of academic literacy support from one provided predominantly through a face-to-face (physical) mode to one using a mixed virtual / physical mode has been influenced by both external and internal factors. Externally there has been a shift by the Tertiary Education Commission (TEC) from a university funding model based on student enrolments to one focused on student achievement, university programme distinctiveness, and research outputs (Russell, 2007). Issues relating to student retention and completion (Government of New Zealand, 2006; Hipkins, Roberts, Bolstad & Ferral, 2006) and student satisfaction with learning opportunities (Forrett, Eames, & Coll, 2004; Otrel-Cass, Campbell, & Cowie, 2006; Watson, 2003) have also emerged. In addition, factors internal to the university played a key role in changing how student learning development would be provided. These included an increasingly diverse student body (culturally and linguistically) (Franken, 2005) and a renewed focus on elearning.

In 2007 the introduction of Moodle, an open source learning management system (LMS) at the University of Waikato, provided the opportunity to develop online resources and interactive activities that would extend contact with students beyond office and classroom walls. An LMS can be defined as a software application used for organizing and managing digital content and for providing collaborative tools to

[4] Johnson, E.M., Haines, A., & Strang, P. (2009). Transforming our work: Elearning initiatives. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 37-49). Auckland, New Zealand: ATLAANZ.

support community development (Johnson, 2006). Importantly, an online presence, particularly in the tertiary sector, is entirely consistent with international best practice (Forrett, Eames, & Coll, 2006; Goodfellow, 2007; Kvavik & Caruso, 2005; Wesch, 2009). While it is acknowledged that elearning is not the preferred option for all students, there is ample evidence that academic literacy skills can be developed and enhanced in an online environment (Johnson, 2008) as learners work through academic content at their own pace (Buzzetto-More, 2008; Kasper, 2000; Salmon, 2002).

In spite of all these changes, the fundamental aim of Student Learning Support (SLS) at the University of Waikato (as at other universities in New Zealand and overseas) remains unchanged; it is the development of students' academic literacy skills, such as interpretation of assignment requirements, assignment writing, conducting research, or exam preparation, and the raising of students' awareness that meta-cognitive learning processes and strategies are transferable across a variety of tasks.

Until 2008, learning development at the university was normally provided in physical spaces, through face-to-face meetings (tutor-student) or group workshops (generic or tailored to specific university papers). While it can be argued that face-to-face teaching is pedagogically effective, it is nevertheless labour-intensive and, importantly, time-bound. Not all students conduct their academic study between 8:30 and 5:00 when the learning tutors are (physically) available. Widespread access to computers and the Internet means that students expect support and resources to be available on-demand (Wesch, 2009). This is particularly so if they study off-campus or are enrolled in fully online papers in which they rarely or never (physically) meet their teachers or learning peers. Given these factors it was decided to supplement present learning support by developing an on-line presence.

Initial design decisions

Conceptual framework

Initial key design decisions for a new online environment were guided and shaped by principles of general systems theory, an interdisciplinary conceptual framework in which separate objects, which interact to produce a unified result, are systematically analyzed and described (von Bertalanffy, 1968). Without an appreciation for and understanding of the total environment as observed from several points of view, designers might fail to recognize key events, people, or relationships in an overall system. We were also guided by the Ministry of Education Tertiary eLearning Framework (2004-07), in particular the principles of innovative elearning practice and the development of learner-centred pedagogies within the New Zealand context (Ministry of Education, 2004).

A small collaborative team of staff with overlapping expertise in educational computing theory, learning support development, curriculum design and development, and teaching and learning processes was formed. One key point is that none of the

development team was a specialist online instructional designer or computer programmer. There were several initial decisions that needed to occur before any development work commenced, including user identification and analysis of their learning needs, review of pedagogical approaches in online environments, evaluation and selection of software tools, choice of appropriate learning content (resources), and development of a robust framework for structuring the environment. Although the initial planning features are described here separately and briefly, they all interacted and affected final, unified design and development decisions, as is consistent with a general systems theory approach.

User identification and analysis of learning needs

While the team intended the main users of the website to be tertiary-level students, we were also aware that numerous other key stakeholders would be interested in using the resource. For example, the learning development tutors in our centre planned to use the online environment during face-to-face sessions with students – either as an instructional tool (to work collaboratively with students through interactive workshop content), or as an instructional resource (showing students where text-based information could be located and downloaded). By working collaboratively in an interactive (online) workshop, tutors could better assess students' learning needs and they could also demonstrate how a student's own independent learning could continue later. Such collaboration could help raise student awareness of important features of academic literacy and provide an emotionally supportive learning environment (Chanock, 2007). In addition, we envisioned the online environment to be of interest to lecturers, language teachers, librarians, or other student support staff on campus who could direct students to our independent learning resources and workshops. Finally, if the materials were accessible through the University of Waikato website, potential users could be literally anywhere in the world.

A second key consideration of the user identification process was students' learning needs. For example, a History undergraduate might have quite different learning development needs than a postgraduate Biology student – or, conversely they might share certain learning needs, such as how to correctly reference in-text quotes, but benefit from having contextually based materials to practise with. We needed to start somewhere though and thus decided to focus on general undergraduate academic skills such as paraphrasing and paragraph writing with a view to incorporating subject-specific content over time.

Pedagogy

Effective pedagogical principles are fundamental to learning and must remain the focus in online teaching (Mayes, 2001). Technology that is overlain on existing poor practices can, and usually does, magnify and exacerbate imperfections in that pedagogy (McLaughlin, 2002). In some cases of computer implementation, the transformative potential of technology has not been realised often because carefully planned, resourced, and structured learning environments were lacking (Alexander & Boud, 2001; Johnson & Walker, 2007; Kopyc, 2006; Lomas & Oblinger, 2006). In

fact, the necessity of implementing clear organizational structures in elearning contexts is well established (Clarebout & Elen, 2008; Marshall, 2006).

However, problematic within our context was the fact there would be no course structure in the traditional sense of a discernible beginning and end to instruction (a teaching term), an overall body of knowledge to master (a curriculum), assessment (leading to a qualification), or regular interaction with an instructor and peers (collaboration). Instead, our elearning environment had to attract students and support their self-study, yet be integrated, if needed, into students' private or online meetings with a tutor. In order to achieve deep learning of concepts within online environments students need multiple opportunities to cognitively engage with and think critically about learning materials, as opposed to being passive recipients of text (Stephenson, 2001). As a result, we agreed that in addition to computer-generated responses, online feedback from a tutor to students' questions was essential. Given staffing constraints, we also agreed that such support would be impossible if the interactive materials were publicly accessible. Students from anywhere in the world might expect personalized, tailored feedback to their learning problems and enquiries, yet we lacked the resources to provide it. We decided therefore that some text-based material would be viewable by anyone but that other more interactive workshop activities, requiring personal feedback, needed to be restricted to the specific university community.

Software tools

Another key planning decision was whether or not to use Moodle, to develop a series of linked pages within the main University web environment, or to use a mix of software tools. We wanted the online organizational structure to be flexible in order to support its continuing development, but in addition, and particularly salient to this discussion, no-one on the team was an expert programmer nor did the unit have access to additional financial resources. Therefore, we needed access to powerful, but user-friendly and cost-effective computing tools and for this we turned to open source software – Moodle and SCORM.

With open source software the source code for computer programmes is made freely available and software users are also free to redevelop and redistribute the code. There are several key advantages to this approach over the use of proprietary software (for example, Blackboard). First, the cost of obtaining software is significantly reduced or eliminated altogether although it cannot be assumed that open source means free-of-charge. In some cases, use of open source software does require payment of a licensing fee, but it is typically much lower than that charged for proprietary software. More importantly, people who participate in the development or refinement of open source software become part of a global community of authors and users who share not only programming code, but also programming bug 'fixes' (UNESCO, 2002). This final point is significant for small, non-specialist development teams with limited access to funding.

Two key features of Moodle made it particularly attractive for our purposes. One was its excellent community building tools and the other its powerful resource management tools. The former can be defined as the types of tools teachers can use to facilitate the co-construction of knowledge among students including, for example, asynchronous discussion forums, the ability to thread discussions by date or topic so that arguments can be followed either by time or by theme, chat tools (to support synchronous text-based communication), VoIP (voice-over internet protocol) tools (to support audio/visual resources), or wikis (forums within which texts can be co-constructed by groups of users). Resource management tools within Moodle can be defined as the types of tools developers can use to facilitate file management and course design, including for example the ability to upload, incorporate, and use multiple file formats, and the use of Sharable Content Object Reference Model (SCORM) to create, import, or export learning pathway sequences (Johnson, 2006).

SCORM was an easy-to-use tool for our non-specialist (computing) development staff due to its uncomplicated editing and updating facilities. Interactive SCORM workshop material integrated easily into the majority of Moodle's elearning features. However, because SCORM is an authoring tool that is separate from the Moodle environment, whenever a change is made to a workshop lesson, the new file version must be imported again into Moodle. In practical terms this means that a developer must keep careful track of the different file versions on his/her computer. Nevertheless, SCORM has facilitated a smooth-flowing and professional-looking presentation style for workshop content in that learners can begin a lesson but leave it at any time and return to it later. Alternatively, a student can enter individual workshop pages to seek clarification on a particular learning point or reread and reflect on material already completed.

Learning content

The team's initial discussion of what learning content to include was shaped by our knowledge that a wide range of excellent material, created by other learning providers, is available on the Internet. Initially it seemed time-consuming and redundant to create our own. There were two issues with this, however. The first is that University of Waikato students must pay in order to access off-campus Internet resources and thus if we were to electronically direct students to external websites, they would be charged. Enrolled students could access resources stored on a local Waikato server for free (although printing would incur a cost). Second, Student Learning Support (SLS) had already developed its own assortment of handouts and booklets, specifically created to develop student understanding of academic literacy processes and academic conventions within our own university context. Paper copies of these materials had proven popular with students in the past and we believed that online access to locally contextualised resources could extend SLS support at a minimal cost to students.

The materials could not simply be uploaded in the same format as they appeared in print, however. Some texts were either too lengthy or the writing style was overly complex, and with increasing numbers of international students for whom English is

an additional language, a straightforward presentation style was deemed essential (Johnson, 2008). By deciding to use our own material, we understood that we were also making a commitment to extensive editing and rewriting of those texts although this did provide an opportunity to adopt a simplified and standard presentation style for all SLS resources. All static material now fits within one double-sided page, is presented in a large, easily readable font, and uses the University of Waikato colours and crest. Overall, the team is satisfied that the revised textual content has benefited from the editorial overhaul.

A model for structuring the website

As a result of these independent, but interacting issues and practical constraints, we adopted a four-tiered organizational framework. It is important to note that the tiered framework does not imply a hierarchy, but is a virtual, non-directional model for the structuring of resources. There was a particular focus on using straightforward navigation from the University's homepage to branch into undergraduate or postgraduate resources, the publicly accessible resources, or the interactive, login-protected Moodle workshops. Instructions for navigating the workshop pages were written in clear, easily visible, and brief language. Each workshop contained a link to a pre-reading to ensure that all learners had some prior knowledge of the topic. Focus questions were used to raise consciousness of the skills being taught and to check acquired knowledge; examples were given to illustrate important principles; tasks were provided to check understanding. The overall design principle was 'simplicity' in order to facilitate intuitive movement through material, interesting and relevant feedback to promote learning processes, and emotional support, when required, through opportunities to communicate (asynchronously) with learning tutors. An overview of the organizational structure can be referenced in Figure 1.

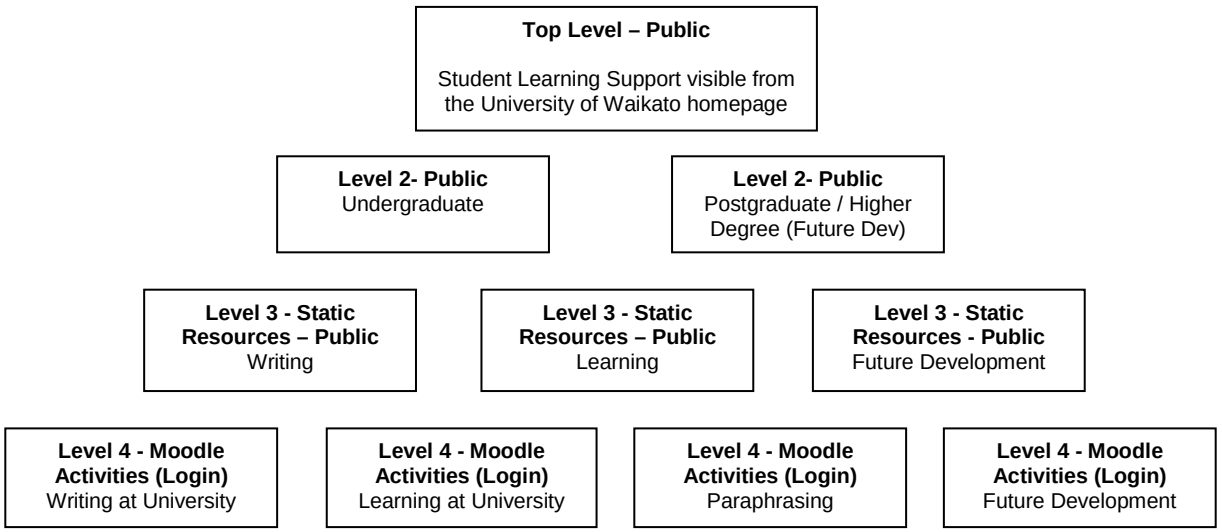


Figure 1. Student learning support website – organizational framework

The created elearning environment

Wahlstedt, Pekkola, and Niemela (2008) in their discussion of elearning communities argue that when students go online, they anticipate collaborative spaces complete with social rules, hierarchies, and virtual places to interact, not just a collection of static materials. Other research studies report that learners prefer mixed-mode environments in which they can interact privately with text and activities, as well as reflect on their personal learning needs and achievements (Clarebout & Elen, 2008; Goldberg & Riemers, 2006; Salaway, Caruso, Nelson, & Dede, 2007). It was with these ideas in mind that our learning website activities were shaped; we wanted to populate both the SLS website (public space) and the private Moodle elearning space with appropriate resources and interactivity in order to create an overall elearning 'place' for our students.

Information and communication technology (ICT) use is increasingly implicated in what it means to be socially, economically, culturally and politically involved in 21st century society (Selwyn & Facer, 2007). An ability to bring people and places together has emerged as one of the defining characteristics of ICTs; they can be seen to underpin the development of a more networked and interconnected society (Castells, 1996). However, although the 'net' generation has arrived at tertiary level, we cannot assume that our students are experienced 'eLearners'. Familiarity with social networking sites or short message service (sms) text messaging does not guarantee that students possess the skills needed to participate in academic elearning environments. Young people, but particularly adults returning to study, often have had unequal access to opportunities, experiences, skills, and knowledge that prepare them for full and productive participation in tertiary elearning contexts (Jenkins, Purushotma, Clinton, Weigel, & Robison, 2006/7). They need structured, collaboratively supportive, elearning opportunities.

The Moodle community building tools (collaborative forums and the dialogue tool, for example) facilitate just the type of elearning places that we require. Forums have been established as public knowledge-building places where students can ask and answer each other's questions. A private one-to-one conversation area where a student can ask a tutor a specific learning question is created automatically by the Moodle dialogue tool when a student first logs in. Individual tutorial environments have been developed through interactive workshops created in SCORM, while quizzes have been created so that students can participate in self-paced, knowledge-testing activities. The initial workshops directly target key academic literacy processes such as paraphrasing and paragraph writing and are intended for bridging or undergraduate students (although any student can use them). One early design decision was to restrict the screen display to about 16 lines, thereby eliminating the need for scrolling. Finally, there are artefacts that add meaning to our Moodle elearning place, such as links to the library, to other student support services, and to the text-based information sheets accompanying the interactive workshops.

The activities used in the SCORM interactive workshops include a combination of texts for concept explanation, reading activity for setting learning tasks, and true-false, multi-choice, and completion item types for assessing understanding. All item types permit explanations to be added for both correct and incorrect answers, which means that students are presented with more complex and nuanced learning feedback than is often the case in online testing environments (Johnson & Brine, 2001). Each workshop topic includes a non-graded practice exercise, which can be submitted as a Moodle assignment for tutor feedback and then returned to the student through the private dialogue area. Multi-choice practice quizzes are also used so that students can self-assess understanding and obtain feedback in a more immediate fashion. As a result both types of practice and self-assessment quizzes cater to students' more immediate or longer-term developmental learning needs and increase the flexibility of our environment.

Thus our approach has been to synchronize the physical and virtual environments, not to establish them as either/or alternatives in the provision of learning development support. Through the establishment of pedagogically challenging activities, which can be stand-alone or used collaboratively with a tutor, we believe that the best of both approaches can be used.

Implications and future work

There is a wide range of practical constraints to consider when designing a virtual learning development environment. One particular issue is that the activities are almost always done on a voluntary basis and there is no immediate extrinsic motivation, such as assessment, to stimulate a learner's continued online participation. Instead, students must recognize an intrinsic value in the online resources and activities and appreciate their usefulness for acquiring or improving academic skills. In Student Learning Support (SLS), although tutors are (physically) available to support learners as they work through the activities, the students are generally expected to then take responsibility for their own learning needs and work autonomously in the virtual environment. Clear, visually attractive, yet succinct explanation of the overall purpose of the website and its individual activities has thus been an essential design consideration in order to attract and maintain student interest (Salmon, 2002). This has included keeping activities short and focused, providing content focused on well established local learning needs, developing activities that can provide students with a sense of skills-mastery, and making explicit the ways in which the knowledge can be transferred across learning tasks.

Achieving our goal of transforming practice has presented challenges and has necessitated a change to the culture of SLS. While it is relatively easy to change surface-level culture within an educational institution, it is much more difficult to transform beliefs and norms about delivery of education. The transformation described in this paper has required a pedagogical shift from face-to-face support of students' learning development to one in which online, self-paced and self-directed

(autonomous) activities supplement (or replace entirely) physical meetings with a tutor. Such change deeply affected the culture of the unit as beliefs, values, and established practice were challenged. Clearly, without careful consideration of change factors, resistance to new systems could have jeopardized the project's success.

Fullan, in his seminal work on the meaning of educational change has stated that:

> The answer to large-scale reform is not to try to emulate the characteristics of the minority who are getting somewhere *under present conditions* … Rather, we must change existing conditions so that it is normal and possible for a majority of people to move forward (2001, p. 268, [emphasis in original]).

In our case, reform was focused within a relatively small-scale environment, but Fullan's principles are still apt. The 'existing conditions' of the unit had to change so that all staff could 'move forward'. To this end, there was careful reflection on the overall purpose of the unit, the variety of tasks that were required to achieve our transformed approach to learning development, and the expertise of individuals in the group. We cooperatively made decisions about how tasks and personal skills could be best matched. Deliberate scheduling of work occurred so that everyone was allocated at least half a day per week to develop content, create the SCORM workshops, and agree on how structure and content would be integrated. Finally, everyone recognized and accepted that transformation of the unit's work would be a long-term, cooperative endeavor. The website was launched in late 2008 and in its initial state has focused on general materials and workshops for undergraduate students.

Future developments for 2009 include the incorporation of FLAX exercises into Moodle, and the design and implementation of robust evaluation mechanisms for all of the activities. FLAX is open source software developed at the University of Waikato and importantly is available as a Moodle plug-in. It can be used to organize authentic texts and multimedia resources as input for genre-specific language exercises. Importantly, within our virtual learning development place, exercises can be tailored to a variety of language-specific types of problems (punctuation, grammar, sentential – level word organisation) to extend the software's usefulness to a wide range of domestic or international students. Further, the evaluation of all our SLS activities and resources, whether in physical or online space, will be a top priority. Although formative student evaluation of the interactive workshop format and content occurred during development, we are not yet able to obtain a coherent overview of the website's efficacy over the longer-term. Given the external change factors mentioned at the outset of this paper, accountability, including evidence of students' retention and completion of academic programmes, necessitates robust evaluation and reporting techniques.

The use of elearning to transform our work has been a stimulating, yet time-consuming process and one that has challenged existing notions about the nature of learning

development practice. The process is well underway and we anticipate additional exciting challenges during the next few years.

References

Alexander, S., & Boud, D. (2001). Learners still learn from experience when online. In J. Stephenson (Ed.), *Teaching and Learning Online: Pedagogies for New Technologies* (pp. 3-15). Abington, Oxon, UK: RoutledgeFalmer.

Buzzetto-More, N. A. (2008). Student perceptions of various e-learning components. *Interdisciplinary Journal of E-Learning and Learning Objects*, *4*, 113-135.

Castells, M. (1996). The Information Age Economy: Economy, Society and Culture. Volume 1-The Rise of the Network Society. Oxford, UK: Blackwell.

Chanock, K. (2007). Valuing individual consultations as input into other modes of teaching. *Journal of Academic Language and Learning*, *1*(1), A-1-A-9.

Clarebout, G., & Elen, J. (2008). Advice on tool use in open learning environments. *Journal of Educational Multimedia and Hypermedia*, *17*(1), 81-97.

Forrett, M., Eames, C., & Coll, R. (2006). *Understanding and enhancing learning communities in tertiary education in science and engineering*. Wellington, New Zealand: Teaching and Learning Research Initiative.

Franken, M. (2005). Some principles of good pedagogical practice for tertiary international students. *The TESOLANZ Journal*, *13*, 43-56.

Goldberg, A. K., & Riemer, F. J. (2006). All aboard - destination unknown: A sociological discussion of online learning. *Educational Technology & Society*, *9*(4), 166-172.

Goodfellow, R. (2007). Learning technologies in the university: From 'tools for learning' to 'sites of practice'. In R. Goodfellow & M. R. Lea (Eds.). *Challenging e-learning in the university: A literacies perspective* (pp. 29-49). Maidenhead, England: Open University Press.

Government of New Zealand (2006). Education Counts. *Education attainment of the population*. Retrieved April 7, 2008, from http://www.educationcounts.govt.nz/statistics/tertiary_education/retention_and_achievement

Fullan, M. (2001). *The new meaning of educational change*. New York, New York, USA: Teachers' College Press.

Hipkins, R., Roberts, J., Bolstad, R., & Ferral, H. (2006). *Staying in science 2: Transitions to tertiary study from the perspectives of New Zealand year 13 science students*. Wellington, New Zealand: New Zealand Council for Educational Research.

Jenkins, H., Clinton, K., Purushotma, R., Robison, A. J., & Weigel, A. (2006/7). *Confronting the challenges of participatory culture: Media education for the 21st century*. Chicago, Illinois, USA: The MacArthur Foundation.

Johnson, E. M. (2006). An investigation of open-source software tools to support collaborative second language teaching and learning: Final research report, Contestable Grant TT76 (2006). Hamilton, New Zealand: The University of Waikato.

Johnson, E. M. (2008). An investigation into pedagogical challenges facing international tertiary-level students in New Zealand. *Higher Education Research & Development, 27*(3), 231-243.

Johnson, E. M., & Brine, J. W. (2001). Computer-based testing: Background, issues, and new directions for assessment. *TESOLANZ Journal, 9*, 1-14.

Johnson, E. M., & Walker, R. M. (2007). The promise and practice of e-learning within complex tertiary environments. In J. M. Spector et al. (Eds.), *Proceedings of the International Conference on Advanced Learning Technologies (ICALT 2007)*, 753-757. Los Alamitos, CA: IEEE Computer Society

Kasper, (2000). New technologies, new literacies: Focus discipline research and ESL learning communities. *Language Learning & Technology, 4*(2), 105-128.

Kopyc, S. (2006). Enhancing teaching with technology: are we there yet? *Innovate: Journal of Online Education, 3*(2). Retrieved December 5, 2006, from http://www.innovateonline.info/index.php?view=article&id=74.

Kvavik, R. B., & Caruso, J. B. (2005). *Convenience, communications, and control: How students use technology*. Retrieved April 22, 2008, from http://www.educause.edu/LibraryDetailPage/666?ID=ERS0506

Lomas, C., & Oblinger, D. G. (2006). Student practices and their impact on learning spaces. In D. G. Oblinger (Ed.), *Learning Spaces. An EduCause e-book.* Retrieved January 17, 2007, from http://www.educause.edu/learningspaces/.

Marshall, S. (2006). *eMM Version Two Process Assessment Workbook.* Victoria University of Wellington, New Zealand. Retrieved July 15, 2008 from http://www.utdc.vuw.ac.nz/research/emm/Publications.shtml

Mayes, T. (2001). Learning technology and learning relationships. In J. Stephenson (Ed.), *Teaching & Learning Online. Pedagogies for New Technologies* (pp. 16-26). Abington, Oxon, UK: RoutledgeFalmer.

McLoughlin, C. (2002). The online experience: Implications of web-based learning for student support in first year. *JANZSSA, 19, 18*-31.

Ministry of Education, (2004). *Taking the next step: The interim tertiary eLearning framework*. Wellington, New Zealand: Ministry of Education.

Otrel-Cass, K., Campbell, A., & Cowie, B. (2006). *Factors influencing student retention/satisfaction in the School of Science and Engineering*. Paper presented at the annual conference of the New Zealand Association for Research in Education (NZARE), Rotorua, New Zealand.

Russell, M. (2007). Slicing up the funding pie. Tertiary funding in New Zealand: Where it's been and where it's going. *New Zealand Journal of Teacher's Work, 4*(2*),* 111-116.

Salaway, G., Caruso, J. B., & Nelson, M. R. (2007). *The ECAR Study of Undergraduate Students and Information Technology, 2007*. Research study from the EDUCAUSE Centre for Applied Research. Retrieved July 22, 2008, from http://www.educause.edu/ecar

Salmon, G. (2002). *E-tivities: The key to active online learning.* Epping Forest, UK: Routledge.

Selwyn, N., & Facer, K. (2007). Beyond the digital divide: Rethinking digital inclusion for the 21st Century. Futurelab.

Stephenson, J. (2001). Learner-managed learning – an emerging pedagogy for learning online. In J. Stephenson (Ed.), *Teaching and Learning Online: Pedagogies for New Technologies* (pp. 219-224). Abington, Oxon, UK: RoutledgeFalmer.

von Bertalanffy, L. (1968). *General systems theory: Foundations, development, applications*. New York, New York, USA: G. Braziller.

UNESCO (2002). *Forum on the impact of open courseware for higher education in developing countries (final report)*. Paris, France. Retrieved August 15, 2008 from http://www.wcet.info/resources/publications/unescofinalreport.pdf

Wahlstedt, A., Pekkola, S., & Niemela, M. (2008). From e-learning space to e-learning place. *British Journal of Educational Technology, 39*(6), 1020-1030. Retrieved November 16, 2008 from

http://www3.interscience.wiley.com/journal/120776417/abstract?CRETRY=1&SRETRY=0

Watson, S. (2003). Closing the feedback loop: Ensuring effective action from student feedback. *Tertiary Education and Management*, *9*(2), 145-157.

Wesch, M. (2009). *From knowledgable to knowledge-able: Learning in new media environments*. Retrieved January 21, 2009, from http://www.academiccommons.org/commons/essay/knowledgable-knowledge-able

Get your head in the gutter

Moira Hobbs[5]
Unitec
New Zealand

Abstract

This year has seen the writer take on a new role as the part time learning development lecturer on a new campus. One of the cohorts of students arriving at the desk-face is a group of drainlayers studying a night-class one evening a week, with the aim of passing the national Drainlaying Registration Examination prescribed by the New Zealand Plumbers, Gasfitters and Drainlayers Board. This paper profiles the students, in particular those making use of numeracy assistance from the learning development lecturer. It then discusses the students' learning needs, some methods used to address these needs, and some of the resources available.

Introduction

At the beginning of this year, the writer started employment in a new role, as the part-time academic learning development lecturer (ALDL) at a new campus specifically focusing on vocational level courses. The main course to be considered in this paper is drainlaying, and I will discuss the numeracy difficulties experienced by some of the students and how these were dealt with, and also outline how my role this year has influenced my thinking about academic development work and support for these students. I will then describe the process and practice of offering our vocational students a hand across the Mathematics Learning Development Bridge to a position of strong subject knowledge, and the ability to autonomously build and cross their own bridges in the future.

Background

During 2006 the Government developed the Tertiary Education Strategy 2007-12 and produced the Statement of Tertiary Education Priorities (STEP) (Ministry of Education, 2007). This document "highlighted areas of urgent action for the next three years… and this included 'increasing literacy and numeracy skills of the workforce' and 'achieving qualifications at level 4 and above by age 25' as two of four national priorities" (Benseman, 2008, p.18). There was a study completed in August 2007, the Review of Tertiary Needs in the North and West, and this identified a vocational training need in the north-eastern corridor of the Auckland region. As a result, the new Unitec North Shore campus was first envisaged in late 2007, and came to fruition in

[5] Hobbs, M. (2009). Get your head in the gutter. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 50-67). Auckland, New Zealand: ATLAANZ.

February of the following year (now called Dept of Community Studies - Te Pae Whanaki North Shore) with a preliminary three year start-up period underwritten by TEC. It is seen as an incubator project for the institution.

The current range of Certificate courses offered are in Applied Technology (Interior Design, Autotronics, Electronics Engineering), Foundation Studies, English, Business Administration and Computing, Community Skills, Information Technology, Free4U Computing, Workplace Communication, Drainlaying, and Automotive Engineering. Most are during normal working hours, but some are night classes to accommodate those students who are also employed either part or full time.

Although the majority of our 384 students classify themselves as NZ European, with Chinese the next largest group, followed closely by Korean and British/Irish, there is a rich multicultural mix of 26 nations:

NZ European	168	Australian	9
Not declared	33	African, Middle Eastern	8
Chinese	27	Other European	8
Korean	20	Samoan	5
British/Irish	19	Cook Island	4
NZ Maori	16	SE Asian, Sri Lankan, Fijian	3
Other	16	Tongan, Niue, Filipino	2
Indian	12	Cambodian, Dutch, Italian	1
Other Asian	11	Turkish, Japanese	1

While the average age of 45 is higher than that desired by TEC, this is probably because a number of mature students are retraining and transforming their careers, particularly in the Interior Décor and Business Admin & Computing courses … and the average is also pushed up by the Free4U demographic – the oldest of whom is 87! The institution is indeed attracting students from the local area, which is another aim of the community-focused vocational funding (see Figure 1).

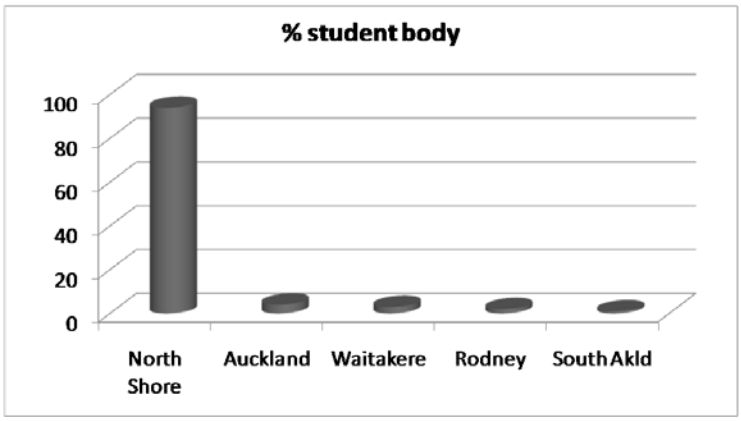


Figure 1. Geographical spread of the student body

One of the four male students who are the subjects of this paper initially visited the learning development lecturer (LDL) after being advised by his course lecturer who had had previous experience with the LDL at the Main Campus. What began as a one-off consultation transformed into regular 1 – 1½ hour drop-in sessions preceding the night-class. Although the groups mainly comprised 3 students, numbers fluctuated from 1-4 on any given day.

The students' ethnicities were: Niue (1), NZ (2), English/Irish-NZ (1). Three of them lived locally, while one came from the extreme south of Auckland. They were 21, 23, 35, and 37 years of age and, although they had all attended secondary school, only one had a formal educational qualification (from overseas). Three of them had previously done tertiary level courses - Construction Site Safety (2 students) and Construction Passport (1 student) – and passed on the second attempt. One was also repeating the drainlaying course. This student also had a NZ Certificate for the Motor industry. They all had access to a PC with broadband at home, but overall their interaction with computer technology was basic.

In common with all mature students, there were many competing demands on their time. During a one week period the students were involved in the following scenarios:

Student 1 had four hours' sleep then completed a day's work starting at 7 am. Then he drove for about 45 minutes to attend a 1 ½ hour maths calculations tutorial followed by a two hour lesson, after which he returned to site to work on an urgent drain repair. When the job was finished, he was given the rest of week off, plus two weeks of paid holiday. Unfortunately he never returned to class or tutorials.

Student 2 was on holiday in Fiji with his family for two weeks. He was the main caregiver for three children before and after school. His only night off was night-class night, and he was a distance cycling enthusiast in any spare time.

Student 3 was renovating a house in preparation for sale and was off work recuperating from a back operation.

Students 3 & 4 were both considering leaving drainlaying and seeking better paying work in Australia next year.

The exam and mathematics knowledge expected of students

The Registration exam is three hours long and has no formative assessment component, although the course has three class assessments throughout the year. These students are not used to exams, sitting and thinking indoors for long periods, or reading and writing for extended periods. Instead, most of their days are involved with very physical, concrete and kinaesthetic pursuits. It is to be expected that they will have gaps in their meta-knowledge and practice of learning styles and strategies as regards both study and examination techniques such as:

- taking notes
- methods of memorising
- organising notes
- effective revision
- analysing and answering questions
- time management for study and during an exam

However, one of the students did develop a technique through the semester of attending a maths tutorial just before a formal assessment or exam and then doing the maths calculations first in the exam, before focusing on the other parts. All the students were encouraged by the LDL to learn the few critical formulae by heart using a picture and mnemonic, and then to write the formulae as soon as they could in the exam room, for later reference.

The students must gain 60% overall to pass the Registration exam and over the last three years, 8-9% of the paper has been calculations. The following is an example of what students are asked to perform under exam conditions: "Q8 (ii). A drain is 31 metres long and is laid to a grade of 2.5%. Calculate to three decimal places the fall between the access chamber and sewer connection. Show all working (1 mark)" (Plumbers, Gasfitters and Drainlayers Board, 2007).

Consider how this might be approached, given that all the students in this study left school with no formal qualification in maths. Here is another example of an assessment question: "(Q7). Calculate the amount of bedding side support and overlay material required to lay a DN100 drain in a trench 147m long and 0.450m wide to AS/NZS 3500 2.2 2003 Standard. Allow 20% extra for compaction and trench variation (4.5 marks)" (Plumbers, Gasfitters and Drainlayers Board, 2008).

Often there are follow-up questions, such as finding the cost of spoil removal and delivery of base material. These calculations are based on information about: $/m for raw materials and cartage; a % allowance for bulking &/or compaction and/or voids if required; retaining appropriate backfill; truck size, and tip fees.

Now, subject lecturers do work on equipping the students to respond to such tasks by going through similar problems and examples in class – and, in the case of this study, referring struggling students to the LDL! The subject lecturer was also supportive and passed on copies of the formative assessments and the model answers to the LDL for later follow-up work with students as necessary.

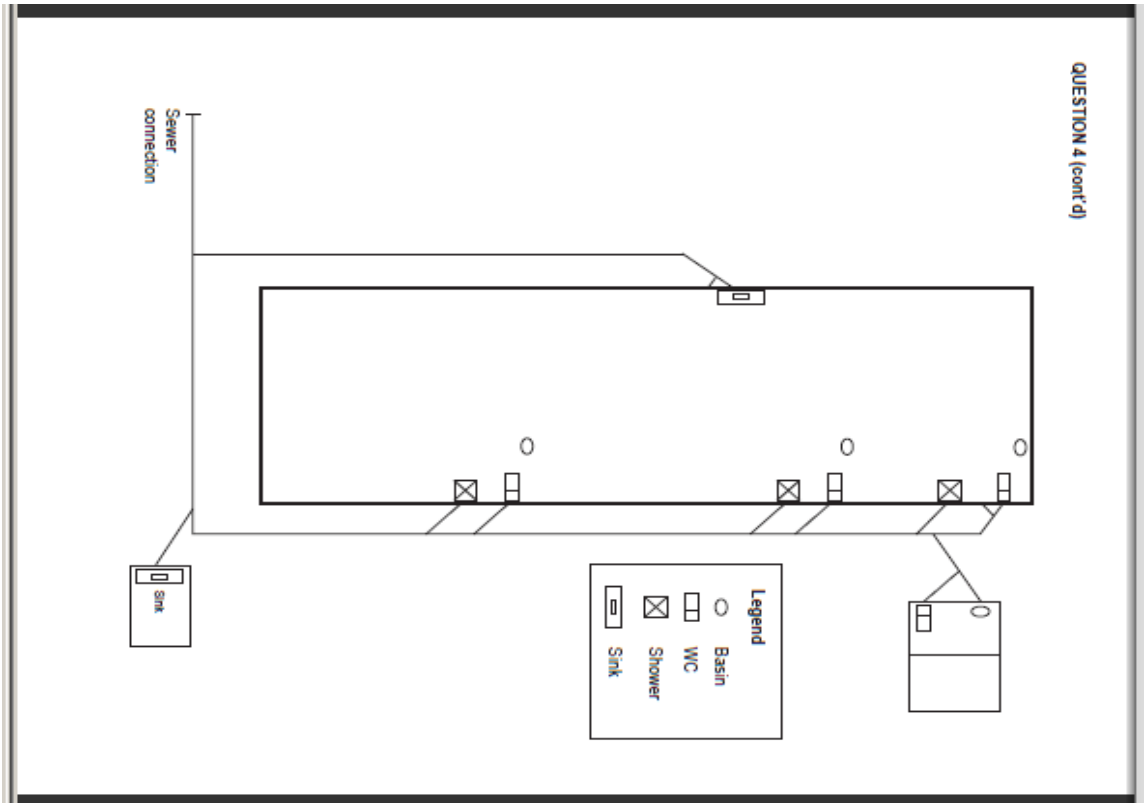
As learning development lecturers, when we unpack the question(s), we must also consider all the metacognitive and cognitive areas of knowledge, skills and strategies which need to be brought to this task, such as:

- Some of the maths and numeracy skills required e.g. multiplication, addition & subtraction, decimals, circle area, trapezoid and cylindrical volumes,

percentages and fractions, gradients, ratios & proportions, formulae, powers, estimating

- Some of the non-mathematical skills required e.g. reading, legal standards, writing, logic, spatial awareness, sketching, transforming 2D – 3D, the concept of balancing an equation, linear layout, jargon
- (Scientific) calculator skills needed. Only two of the students had a proper scientific calculator. One preferred to use the calculator on his cell phone and the other had a very small very basic calculator with no extra functions (not even π).

This year a new level of difficulty was introduced, which involves reading plans and taking off material to scale with a scale rule based on certain industry standards and in a new type of question format in Figure 2:
"The diagram (below) shows an as-built plan of a foul water drainage system. The drainage system complies with AS/NZS 3500 Part 2: Sanitary plumbing and drainage. The scale used is 1 to 200"



Then they must manipulate a table format to calculate the costs:
"(a) In the table below, compile a list of all pipe work, bends, inspections, junctions and gullies to meet the minimum requirements of AS/NZS 3500 Part 2: Sanitary plumbing and drainage. Do not include inspections or fittings at the sewer connection.
(b) Using the costs per item given, calculate the total cost of materials."

Item	Number	Cost per item	Cost
Pipe length 74.5m	74.5	$16.50 per m	
Plain junctions		$22.60 each	
Inspection junctions		$33.50 each	
Plain bends		$19.60 each	
Inspection bends		$29.30 each	
Overflow relief gully (ORG)		$56.50 complete	
Sub total			
GST (12.5%)			
Total cost			

(Total 9 marks)

Figure 2. Registration exam June 2008, Q4
(Plumbers, Gasfitters and Drainlayers Board, 2008)

Although this table may look fairly straightforward, in numeracy terms, it is an extra level of difficulty in understanding mathematical principles. So, it is apparent that this certificate level course has mathematics that is not as easy as it might at first appear. There are still some serious difficulties for our students and apprentices. This was recognised by researchers in Melbourne who investigated building literacy and numeracy into training: "Implicit numeracy competencies in industry standards require a high degree of analytical sophistication and educational expertise … not all Enterprise-Based trainers nor workplace trainers have such expertise" (Sanguinetti & Hartley, as cited in Fitzsimons, 2002, p. 2).

It has also been noted that understanding maths concepts has maturity and developmental implications: "… the ability to firmly understand proportionality is a turning point in mental development" (Hoffer, 1988, p. 293) and an unfortunate phobia with this area of endeavour is also recognised: "Math anxiety is a bona fide anxiety reaction, a phobia with both immediate cognitive and long-term educational implications" (Ashcraft, 2002, p. 184), so we learning development lecturers/advisors need to be aware that some of our students could have difficulties in these cognitive and affective areas to some degree as well.

The Chief Examiner's Report in March 2008 tabled a 54% rate for the 74 candidates in the 2007 exam, and some bleak mathematical feedback:

> The lack of basic mathematical skills continues to disappoint…far too many cannot calculate the area of a circle and the volume of circular objects. Mathematics needs to improve as virtually all plumbing, gasfitting and drainlaying designs involve calculations in some form or other … (Daniel, 2008, p. 2).

Indeed, the group in this study also struggled to remember the formula for the area of a circle and even before the final exam were confused about nomenclature for squared and cubed calculations (^{2} and/or ^{3}). Daniel (2008) continued "… In many cases persons entering this industry could benefit from some additional tuition in

comprehension, linguistic and numerical skills to help their advancement in an industry becoming exponentially more technical and complex" (p. 2).

So there were the following last-ditch challenges for an LDL to enable appropriate support for the students through the examination process:

- Students came with minimal mathematical conceptual understanding and equipment
- They exhibited low linear note-taking and calculations skills
- Tutorial times had to be continually re-negotiated and flexible to coordinate with evening classes, students being delayed on site, and extra day sessions as requested
- The students had basic scientific calculator skills – and even for the final assessment one person didn't have a recommended calculator
- Continual reminders were necessary to get working-out shown in a logical, rational progression (as required in the assessment questions)
- Lack of time was a difficulty for all except the student off on ACC. There was minimal time during tutorials for anything more than techniques for Doing rather than Understanding, so in practice some of the support had to be on a 'do it this way and trust me' basis rather than initiating a deeper understanding of the underlying principles.

However there was some comfort in past research "Although it can be effectively argued that students need to automatize commonly used processes, it can be likewise argued that the most efficient methods are often those that are the least meaningful" (Lesh, Post & Behr, 1988, p. 1). In this regard academic learning development lecturers may be seen more as ambulances at the bottom of the cliff than is ideal as there is no time to satisfactorily teach the theory – just the ways to make it work! Added to this could be the conundrum "You can hide a deficit in literacy but you can be proud of a deficit in maths" (M. Smith, personal communication, September 26, 2008). While the students may openly and readily admit their numeracy weaknesses, there is not the same motivation driving them to overcome these, so this is an area where the LDL can work together with the student to bridge this gap with whatever resources may be available, or developed by the lecturer.

Resources for an academic learning development lecturer

The following resources were found to be invaluable during the year:

- Building up good rapport with the content lecturer - The lecturer invited the LDL to the Orientation for the new student cohort to talk about services and assistance which they could access and expect. By the end of semester the drainlaying lecturer was popping in for a chat during most sessions and was in fairly frequent e-mail contact, e.g. "I will encourage all again tonight and with luck we may get a few more" (Lecturer, personal communication, July 23, 2008) and "Oh great - together we may be able to get them through" (Lecturer, personal communication, September 23, 2008).

- Looking at old exam papers – While this may seem obvious to experienced LDLs and learners, the students being discussed in this paper had not considered this, and even when given the web details by the LDL for sourcing this information, none of them made reference to them again either verbally or in writing
- Joining a Numeracy Community of Practice Group – This group facilitated monthly presentations and 'workshops', including examples of 'successful practice' relating to teaching certain maths concepts, and generally promoted shared thinking about numeracy and the learning progressions. Especially memorable was the DEANZ webinar as part of a current Ministry of Education project, presented by Harvey Mellar and Niki Davis, "Can adults use E-Learning to increase their literacy and numeracy?" accessed through Elluminate software (personal communication, September 26, 2008). The group gathered to share the experience and following 'in-house' panel discussion
- Networking with others doing similar LDL work – There was very supportive collegial support from fellow maths lecturers in learning development
- Consulting Foundation Studies lecturers – similarly, a wonderful crossover of information especially with respect to resources.

It became evident after the second session that there were no support texts, exercises or sample problems for the students, so it was necessary to develop a set of stepped and guided practice worksheets, leading up to the total calculation package which directly reflected the examination requirements and the site situations they will be expected to cope with.

It was important for LDLs to be proactive, autonomous and creative. While being thrown in the deep end in terms of a new content area, the basic concepts of studying and learning styles and strategies remained the same. However, having to accommodate a new context also had its benefits, as there was an authentic need to negotiate a shared understanding of drainlaying and learning. So all participants and the LDL could recognise skills and deficits in each other and help each other to learn together. As in finding a new job, 65% of the success is from networking, both from other lecturers and students - share ideas and share the load!

Computer use and elearning

The use of technology in learning is somewhat taken for granted in the 21st century, but this may not always be appropriate. Even though there does not seem to be much elearning for vocational students developed as yet, we still need to consider the students' access to the technology and programmes and their computer literacy.

Figure 3. Plumbing e-book home page (Mardle, 2007)

In an attempt to fill this gap, an ebook programme with multimedia throughout is being developed by colleagues at this institution (see Figure 3). All students receive an orientation, and some contractors have uploaded parts of it for trialling in their workplace. A project to develop electronic resources for numeracy support for plumbing, gasfitting and drainlaying apprentices has been scoped and is now awaiting a programmer.

The three of the students in the tutorial group who had access to a PC with broadband (one also had a laptop) used them for the following applications:

- 2 used internet baking
- 1 used it for purchasing car parts on TradeMe and viewing Youtube sites
- 1 used it to search for cycling events
- all used for email to some degree

While elearning and distance learning may seem attractive options, whether students have the metacognitive capacity and commitment to study independently is also worth consideration. One of the students and his boss had previously tried to do a drainlaying course by correspondence, but each week got more difficult and they couldn't manage to make the Saturday morning times to study, so both gave up.

Another source of inquiry into online learning that has useful suggestions for these students is that undertaken by a neuroscience researcher, Slavkin (as cited in Clemons, 2005) who focuses on Brain-Based Learning, i.e. "... any teaching technique or strategy that utilizes information about the human brain to organize how lessons are constructed and facilitated with emphasis placed on how the brain learns naturally" (p. 5).

Many of the techniques described include practices to promote opportunities to maximize understanding and then retention of information to enhance student learning, and for the students in this study the following suggestions were directly applicable:

- *learning styles* - as 85% brain is wired for visual processing, it is important to include all styles or modalities
- *increase attentiveness* – as the average attention span is 15-20 min, it is beneficial to plan for this, e.g. crossword tests, interaction
- *role of emotion* - a strong emotional connection means chemicals in the brain send messages that the activity is important and should be remembered (but if the emotion is too strong the opposite can happen e.g. threat or stress decreases the efficiency of the rational thinking cortex and learning stops)
- *stimulate the brain* with exiting, fun tasks to increase curiosity, anticipation and surprise
- *ensure students feel safe* i.e. they feel encouraged and comfortable with challenging, questioning, having opinions, having control, and receiving positive feedback.

Strategies for a learning development lecturer

Basic techniques found to be most useful over the past year included using concrete examples, visual techniques and few but simple memory techniques. It was also important to be aware (and make the students more metacognitively aware) of different learning styles, and to scaffold students carefully through stages of difficulty while relating this to what happens on site. One illustration of this was the use of physical examples, from simple area and volumes through to complex calculations, while trying to create a visual image with sketches and describing concepts via body language (e.g. Fall and Invert Levels) so students had a 'feel' for what the question was asking. It was also important to incorporate opportunities to engage both sides of the brain e.g. using mnemonics, patterns and mind maps. Much of the work centred around:

- Repetition and practice (elaborate rehearsal to move short term memory into long term memory)
- Making model questions based on class work, exams and external national certificate exams (now Australasian)
- Building up ability and confidence
- Helping students find time to do more study e.g. discussing study timetable options and having tutorials just before night class
- Always being positive – this group of students often talked of repeating the course, or said they didn't think they would pass. Because of their backgrounds these students may not have the self-belief that they can be academic achievers. Evidence of this is found in the following comments recorded over a one week period:
  "I should have paid more attention at school"
  "I should have sat up the front of the class"

"You'll see me again next semester"
"shit" in answer to *How was your exam?*

The need for all these above-mentioned strategies and techniques poses the question, given the mathematical background of this study group: Are the students, the industry and the institutions expecting too much? ... which then leads to the very important considerations of; what is numeracy; the issues around diagnostic testing; should numeracy be embedded; and if so how much, and how best can this be done?

What is numeracy?

The definition of numeracy has been the topic of debate for several years now, and there does not seem to be any unequivocal answer. Gail FitzSimons (2002) from Monash traces the definition of numeracy from being a subset of literacy, to a mathematical need in the workplace, to an appendix to literacy, to a much broader concept than just facility with numbers or basic arithmetic (i.e. to include spatial and quantitative & statistical literacies), then to a political definition describing it as a capacity for action:

> Klein (as cited by FitzSimons, 2002) considers numeracy not as a thing to be possessed, but as a capacity for action. Thus in relation to numeracy, democratic power depends upon access to mathematical knowledge — information selectively derived from a range of possibilities and which is capable of being interpreted and understood – access to which is also unequally distributed (p. 2).

FitzSimons continues:

> According to Engestrom's framework (as cited in FitzSimons, 2002), transformative learning requires qualitative transformations, questioning and deviation from established norms, a collaborative journey through the Zones of Proximal Development of Activity groups, and expansion from isolation to collaboration, through dialogue and debate. Or, as Brennan expresses it: learning from conversations and research partnerships (as cited in FitzSimons, 2002, p. 6).

It is this definition that most approximates what is being achieved by the participants described in this paper – students and LDL working together, helping to transform each other and themselves through discussion and (dis)agreements, pushing towards the next level of understanding and ability. The Ministry of Education's Curriculum update 45 offers this less philosophical definition: "To be numerate is to have the ability and inclination to use mathematics effectively – at home, at work and in the community" (Ministry of Education, 2001, p. i).

This "positions numeracy as an adult concept and also acknowledges the impact of disposition on numeric behaviour" (Thomas, 2008, p. 137). It is not just a problem of

childhood, and people make choices about using it or not. Thomas further claims that a 1996 survey had shown "that numeracy could be a barrier to effective participation in society for up to 50 per cent of the New Zealand adult population" (p. 137).

The latest definition from the "Embedding Literacy and Numeracy: Theoretical Framework and guidelines" (TEC, 2008a) gives a more down to earth and practical explanation of numeracy: "The bridge between mathematics and real life" (p. 38). A person's numeracy refers to their knowledge and understanding of mathematical concepts and to their ability to use their mathematical knowledge to meet the varied demands of their personal, study and work lives.

Another of the reasons that TEC became concerned about numeracy and literacy is that workplaces are demanding higher numeracy and knowledge skills as the economy seeks to improve in both efficiency and quality. Parsons & Brynner (2005) describe how numeracy and literacy are major factors aiding workplace success today for several reasons, including:

- a decreasing number of unskilled jobs in manufacturing
- growth in the service industry
- more financial accountability expected of employees
- stronger OSH regulations
- work places have become a lot more technology-based
- and that this is a greater problem for women because they tend to opt for accounting jobs or jobs that use information and communication technology.

Our institution has distilled the definition to read: "Numeracy is the use of a combination of both mathematical knowledge and strategies to solve everyday problems" (Unitec, 2008, p. 3). But whatever definition we use, there is a challenge for the development lecturers, the students, the institutions and the country: to work together to transform more of our students into numerately capable members of the workforce and wider community.

Diagnostic testing

There is ongoing discussion about the need for screening and/or pre-course and post-course diagnostic testing … and the ensuing debate whether diagnostic testing should be summative or formative (i.e. with the aim of monitoring progress and understanding, and identifying learning needs so teachers can adjust their programme accordingly, and so that students may better appreciate where their current knowledge base is and where they need to move to). Because of course and student time constraints, this comment about a new computer programme (not currently available at this institution) is also relevant: "Re-teaching two or three years of math is impractical, if not impossible, so Math Prep software will assess each student's weakest areas and focus learning where it is needed" (Ciccone, 2007, p. 2).

However, Benseman, Lander and Smith (2008) believe there is also still a need for further exploration of the relationship between the length and intensity of courses e.g. short & sharp or of a longer duration. The Adult Numeracy Initiative (2004) has a Diagnostic Assessment Tool as a key feature which involves a procedure of guided interview questions about attitudes, strategies and knowledge related to steps within the Numeracy progressions. It is designed to provide tutors with useful information about a learner's number knowledge and number strategies by developing a number profile of the learner which also highlights knowledge gaps, which can then be matched with goals and a map of relevant tasks.

Students at the writer's institution are currently assessed by the literacy advisor/lecturer at the beginning of the course and then again after 10-15 weeks, using a 30-minute Numeracy Skills Analysis developed in-house. The test is often at the entry point, although is probably most useful if used informally as formative assessment embedded throughout the course rather than as a discrete assessment item at each end of a course.

Research so far shows that raising the quality of numeracy teaching can lead to improved outcomes for learners, particularly through the use of Foundation Learning Progressions and associated assessment items with one of the next steps being "to investigate how this can be scaled up to efficiently and effectively support the varied professional learning needs of tutors working across a wide range of contexts" (Thomas, 2008, p.141). It would certainly be worthwhile for this to include up-skilling and resourcing the learning development lecturers, who may be neither discipline expert nor numeracy expert, but advisors with interests in both areas, and with a desire to assist student development with teaching and learning awareness and strategies.

In this regard, two of the three TEC Numeracy documents that most relate to the drainlaying students and could be of use to them are:

- Measure and Interpret Shape and Space
- Make Sense of Number to Solve Problems, (i.e. all but Strand 3 Reason Statistically)

While advisors may welcome conversations around the need and appropriateness of screening/gatekeeping vs. diagnosis/mapping for students, the hands-on day to day work involves responding to the needs and requests that are presented and what we can do to enable students to be successful and keep studying.

Autonomy

Of course advisors may also have another driver, i.e. wanting to nurture a sense of autonomy so the students can keep on learning and developing for the remainder of their lives if they wish. This means allowing students to maintain appropriate responsibility for all the decisions concerning all the aspects of their learning – the objectives, content and progression, methods & techniques, monitoring and evaluating.

Autonomy has been defined by Holec (as cited in Nunan, 1996, p. 13) as "the ability to take charge of one's own learning". The importance of this facility is also recognised by TEC: "Adults need to be involved in setting learning goals and monitoring their progress towards these ... Motivation is a key factor in engagement and achievement" (TEC, 2008a, p. 9) and of course everyone in the tertiary sector is currently aware of the need to ensure positive outcomes for the students in terms of success and retention for research, status, and financial reasons.

Embedding numeracy within the course content

The theoretical background leading to the operational implications distributed by TEC state:

> Embedding literacy and numeracy in provision such as vocational training is considered to be the most effective and efficient way to provide direct, purposeful instruction in contexts (setting) that allow both the initial opportunity to learn new literacy and numeracy knowledge and skills, and plenty of scope for practicing them (TEC, 2008a, p. 4).

This raises the question: ideally, who should teach the numeracy – the discipline or Trades content teacher, a numeracy expert, a learning development lecturer, or a specialist Foundation maths teacher? Research findings show that:

> Learners are motivated when they see the value of learning for their own goals. Adults are more likely to be motivated to engage with literacy and numeracy learning when it is embedded within a vocational or leisure course which is their primary motivation (TEC, 2008a, p. 13).

A Learning for Living Strategy was released by the Government in 2004 with an overall goal of ensuring improved literacy, language and numeracy in NZ. This built on the first TEC 2002-7 strategy, the NZ Adult Literacy and the Adult ESOL Strategy. The Adult Numeracy Initiative is part of the first phase of this Learning for Living Strategy (2004) and it is the first time numeracy has been given the specific focus in a foundation learning initiative in New Zealand. This initiative is mainly about upskilling and training tutors with the aim of improving the quality of the teaching. This could be done individually or as team teaching with a combination of experts working together (Thomas as cited in Benseman, 2008, p. 138). Other research supports a form of team teaching:

A joined-up approach between two sets of tutors is more effective than expecting individual lecturers to provide both key skills and vocational training. It's asking too much. Vocational teachers prefer, understandably, to teach in their areas of expertise. Literacy and numeracy teachers would be equally out of their depth if they were to try to teach an unfamiliar vocational skill (Casey as cited in Marsden and Shackleton, personal communication, September 30, 2008).

Full embedding (one teacher being responsible for both the vocational subject and the Learning Literacy and Numeracy [LLN]) is the option being promoted by TEC in preference to separate content and numeracy tuition with another teacher, as this would reduce the amount of uncontextualised provision (away from regular class). However, there is an argument for a combination of the two i.e. team teaching, even though this is labour intensive and therefore more expensive. It is already recognised that "Embedding should not be seen as a cheap option" (Casey, Cara, Eldred, Grief, Hodge, Ivanič, Jupp, Lopez and McNeil, 2007, p. 32), and I believe we need a shared vision of merging vocational and LLN lecturers into a shared responsibility for teaching and learning.

This paper finishes with a visual depiction (Figure 4) of a great feat of engineering and advanced drainlaying that has survived the tests of time for centuries. It would be wonderful if those of us involved in academic support for our vocational students could also help to build a similar 'Maths LDL Bridge', a pathway over shallow, deep and sometimes unfathomable learning gaps, which is supported by arches of metacognitive awareness, study skills, numeracy, knowledge, and experience. As students walk this bridge, they collect their tool kit of learning and practice to transform themselves from a student to a practitioner. Learning development lecturers can also help provide the scaffolding for students to build their own bridge brick by brick, step by step, a bridge from theory to practice, from institution to site, from apprentice to expert.

Figure 4. Pont du Gard bridge and aqueduct

References

Ashcraft, M. H. (2002). Math Anxiety: Personal, Educational, and Cognitive Consequences. Current directions in psychological science: a journal of the American Psychological Society, 184.

Benseman, J. & Sutton, A. (2008a). Facing the Challenge: Foundation Learning for Adults in Aotearoa New Zealand. Wellington: Dunmore.

Benseman, J. & Sutton, A. (2008b). Foundation learning in New Zealand: An overview. In Benseman, J. & Sutton, A (Eds.), *Facing the Challenge: Foundation Learning for Adults in Aotearoa New Zealand* (pp. 11-28). Wellington: Dunmore.

Benseman, J., Lander, J., & Sutton, A. (2008). How we teach: A study of literacy and numeracy teachers' teaching. In B. Sutton (Ed.), *Facing the Challenge. Foundation learning for Adults in Aotearoa New Zealand* (pp. 155-164). Wellington: Dunmore.

Casey, H., Cara, O., Eldred, J., Grief, S., Hodge, R., Ivanič, R., Jupp, T., Lopez, D., &McNeil, B. (2007). National Research and Development Centre for adult literacy and numeracy. SUMMARY REPORT. "You wouldn't expect a maths teacher to teach plastering…": Embedding literacy, language and numeracy in post-16 vocational programmes – the impact on learning and achievement. Retrieved November 5, 2008, from http://www.nrdc.org.uk/download.asp?f=3550&e=pdf

Ciccone, D. (2007). Carnegie Launches First Math Programme for Exit Exam Remediation. *Electronic Education Report,* Sep. Retrieved October 6, 2008 from the Ebsco database.

Clemons, S. A. (2005). *Brain-Based Learning: Possible Implications for Online Instruction.* Retrieved June 5, 2008 from http://www.itdl.org/Journal/Sep_05/article03.htm

Coxford, A. F., & Shulte, A.P. (Eds.). (1988). *The ideas of algebra, K-12. 1988 yearbook.* Reston, VA: National Council of Teachers of Mathematics.

Daniel, R. (2008). *Plumbers, Gasfitter and Drainlayers Board Examiners Report November 2007 Examinations.* Retrieved November 5, 2008, from http://www.pgdb.co.nz/index.php?sh=04&h2=08&pic=04&screen=01-chief-examiners-report

FitzSimons, G. (2002). Adult Numeracy and New Technologies of Learning, 1-6. Retrieved October 21, 2008 from http://www.avetra.org.au/abstractsandpapers2002/fitzsimons.pdf

Hoffer, A. (1988). Ratios and proportional thinking. In T. Post (Ed.), *Teaching mathematics in grades K-8: Research based methods* (pp. 285-313). Boston: Allyn & Bacon.

Lesh, R., Post, T., & Behr, M. (1988). Proportional Reasoning. In J. Hiebert & M. Behr (Eds.) *Number Concepts and Operations in the Middle Grades* (pp. 93-118). Reston, VA: Lawrence Erlbaum & National Council of Teachers of Mathematics. Retrieved August 17, 2008 from http://www.cehd.umn.edu/rationalnumberproject/88_10.html

Mardle, D. (2007). Plumbing online. Retrieved September 24, 2008 from http://plumbingonline.unitec.ac.nz

Ministry of Education. (2001). *Curriculum update 45: The numeracy story.* Wellington, New Zealand: Author

Ministry of Education. (2007). Tertiary education strategy 2007-12 Incorporating Statement of Tertiary Education Priorities, 2008-10. Wellington, New Zealand: Author

Nunan, D. (1996). Towards Autonomous Learning. In R. Pemberton, E.S.L. Li, W.W.F. Or & H.D. Pierson (Eds.), *Taking control: Autonomy in language learning* (pp. 13-26). Hong Kong: HKUP.

Parsons, S., & Brynner, J. (2005). Do*es numeracy matter more?* London: NRDC.

Pemberton, R., Li, E. S. L., Or, W. W. F., & Pierson, H.D. (Eds.). (1996). *Taking Control: Autonomy in Language Learning.* Hong Kong: HKUP.

Plumbers, Gasfitters and Drainlayers Board. (2007). *Registration examination November 2007: Drainlaying* . Retrieved November 5, 2008, from http://www.pgdb.co.nz/download/forms/exams/2007/november/9197.pdf

Plumbers, Gasfitters and Drainlayers Board. (2008). Registration *examination June 2008: Drainlaying.* Retrieved November 5, 2008, from http://www.pgdb.co.nz/download/forms/exams/2008/june/9197-questions-june-2008.pdf

Tertiary Education Commission. (2008a). Embedding literacy and numeracy: Theoretical framework and guidelines. Version1: Sept 2008. Wellington: Author

Tertiary Education Commission. (2008b). Teaching Adults to Make Sense of Number to Solve Problems: Supporting the Learning Progressions. Wellington: Author.

Thomas, G. (2008). The Adult Numeracy Initiative: Its place and value in foundation learning. In J. Benseman, & A. Sutton, *Facing the Challenge: Foundation Learning for Adults in Aotearoa New Zealand* (pp. 136-142). Wellington: Dunmore.

Unitec. (2008). Unitec Academic Policy 02c Academic Literacies. Retrieved September 25, 2008 from https://docushare.unitec.ac.nz/dsweb/Get/Document-289/Acad+02c_Academic+Literacies_policy+v.15Dec08.

Developing student leaders' graduate attributes: How student learning support can play a part

Deborah Laurs[6]
Victoria University of Wellington
Te Whare Wānanga o te Upoku o te Ika a Māui
New Zealand

Abstract

Victoria University of Wellington's *Pathways to Success* (2006) document stresses commitment to "social engagement in teaching and learning" (p. 8), as a means of preparing graduates to succeed in a complex society. To this end, the Student Learning Support Service established the PASS (Peer Assisted Study Support) and Campus Coaches programmes. These leadership training schemes not only enhance the First-Year Experience, but senior students' involvement in the programmes as a whole, help develop 'communication, creative and critical thinking, and leadership skills': the graduate attributes outlined in the Victoria University of Wellington *Strategic Plan* (2005-2015). Supported by qualitative and quantitative evidence, this paper details how such programmes can contribute to the holistic success of university graduates.

Introduction

Twenty-first century demands for global citizenry have led to a marked rethinking of "the qualities, skills and understandings a university community agrees its students should develop during their time with the institution" (Bowden, Hart, King, Trigwell & Wells, 2000, p. 2). Alongside traditional mastery of subject-specific knowledge and skills, graduates are now required to exhibit "qualities that also prepare [them] as agents for social good in an unknown future" (Bowden et al, p. 2).

To this end, as outlined in the 'Bologna Agreement' (1999), universities worldwide have sought to define their desired 'graduate attributes'. These come in a wide variety, as revealed by a web search of Australian and New Zealand institutions, from Sydney's all-encompassing 'Scholarship, Lifelong Learning and Global Citizenship' (University of Sydney, 2008) to Waikato's qualities customised to each degree programme (University of Waikato, 2008a, b, c).

[6] Laurs, D. (2009). Developing student leaders' graduate attributes: How student learning support can play a part. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 68-88). Auckland, New Zealand: ATLAANZ.

Effectively offering a midpoint between these extremes, Victoria University of Wellington's 2005-2015 *Strategic Plan* (2004) aims to produce graduates who:

> Will be distinguished by their capacity for independent, creative and critical thought, their excellent communication skills and their ability to take a leadership role in an increasingly diverse, technologically sophisticated and complex global society (p. 3).

These goals inform the university's *Pathways to Success* (2006) document, which advocates that all programmes clearly articulate expected student outcomes and, where necessary, revise and realign academic courses to establish a clear sense of "connection and progression" (Victoria University of Wellington, 2006, p. 10) between core elements at each successive level, as a means of developing students' expertise.

The imperative for graduates to develop such qualities was further endorsed by a 2006 survey conducted by Vic Careers, which identified the 'top 10 skills and attributes' valued by employers:

1) strong interpersonal skills
2) strong verbal communication skills
3) strong written communication skills
4) a flexible & adaptable 'can do' attitude
5) sound academic achievement
6) being self-motivated
7) being a team player
8) energy and enthusiasm
9) problem-solving skills, and
10) analytical & conceptual skills

(Vic Careers, 2006a, p. 2).

Such emphasis represents a significant shift in direction for institutions that have traditionally concentrated solely on disseminating knowledge. Moreover, it is one thing to stipulate that graduates should achieve these requisite attributes; quite another for tertiary providers to impart them.

Certainly, it can be argued that the skills acquired during one's university career depend largely on the individual. Nevertheless, a significant number of institutions are now imbedding the teaching and assessment of 'graduate attributes' within their academic programmes, as exemplified by the Australian national GAP (Graduate Attributes Project) programme (Barrie, 2008; Institute for Teaching and Learning, University of Sydney, 2008). Moreover, studies such as those by Clanchy and Ballard (1995), Robinson and Kabanoff (2003) and Bath, Smith, Stein and Swann (2004) have begun evaluating universities' contribution to graduates' workplace competencies.

A similar process is underway at Victoria University of Wellington (VUW). As part of its accreditation by the Association to Advance Collegiate Schools of Business (AACSB), the Faulty of Commerce & Administration (FCA) is currently determining its students' desired graduate attributes, and considering how and where they can be embedded into the curriculum. For example, according to the director of the FCA's Academic Accreditation Programme, 'communication skills' could be taught and assessed through discipline-specific writing tasks (reports, case studies, etc), oral presentations, and teamwork. This year (2008), FCA is conducting a pilot assessment of the academic writing skills, such as grammar, style, and vocabulary, of a sample of 100-level (first-year) to 500-level (Masters) students (Personal communication, Martin Boswell, 13/11/08). The second stage in implementing this pathway will be to embed subject-specific attributes into the curriculum for each discipline, a process all Schools and faculties at Victoria look to follow.

While tertiary institutions may seek to impart communication and critical thinking skills, it is less easy to foster intangible attributes such as 'interpersonal skills and leadership' within formal teaching programmes. Therefore, at Victoria University of Wellington, the Student Learning Support Service offers a range of targeted student leadership opportunities, both paid and voluntary. For example, SLSS employs Peer Writers, graduates who work 1-on-1 with ESOL students to improve their written expression., while volunteers lead Conversation sessions (weekly social gatherings of Kiwi and International students) and participate in ExcelL workshops, designed to promote intercultural competencies (Student Learning Support Service, 2008). The two most significant programmes, producing the greatest number of student leaders, are PASS (Peer Assisted Study Support) and Campus Coaches. Although primarily directed at enhancing the First-Year Experience, both schemes offer training and provision for on-going reflection, thereby empowering the student leaders as well.

This paper outlines these two leadership programmes and the underlying training philosophy of 'active learning', reports on the findings of a preliminary 'Graduate Attributes and Employment Skills' survey of former and current PASS Leaders and Campus Coaches, and describes how involvement in such schemes contributes towards VUW's new Victoria Plus Award, which has been specifically designed to acknowledge students' achievement of transferable skills.

PASS Leadership programme

The PASS (Peer Assisted Study Support) programme offers voluntary study groups in core 100-level courses[7], providing a relaxed and supportive environment in which students can meet regularly to work together at their own pace, engage in active learning, make friends, and develop study skills. PASS's philosophy of 'active

[7] In 2008, participating courses at VUW included Accounting, Law, Psychology, Politics, International Relations, English literature, German, French, Spanish, Italian, Japanese, Chinese, Management, Sociology, Social Policy, Media Studies, Art History, Religious Studies, and Theatre Studies.

learning' is based on the concept of Supplemental Instruction (Blanc, De Buhr & Martin, 1983) developed by Deanna Martin at the University of Missouri, Kansas in the 1980s to support students in 'at risk' courses, and further adapted for a New Zealand context in accordance with the University of Queensland's PASS programme (Laurs, 2002). Traditionally, university teaching involves "teacher-centered, transmission-of-information" (Smith & MacGregor, 1992, p. 2) modes such as lectures and tutorials, in which students remain passive and often disengaged. In contrast, active learning demands equal participation from all concerned, involving discussion and problem-solving, application of skills and knowledge, and reflection on experiences (Meyers & Jones, 1993; Silberman, 1996; Sivra, Leung, Woon & Kember, 2000,). In this way, PASS seeks to foster meaningful learning environment, developing participants' communication and thinking skills in the process.

PASS has been operating at Victoria University of Wellington since 1999. Initially funded by Victoria International, it was introduced in the Faculty of Commerce & Administration as a way of familiarising students from other cultures with expectations within the New Zealand context, such as tutorial participation and expression of individual ideas (Ballard & Clanchy, 1991; Laurs, 2002). Building on this introductory programme (5 study groups attended by 60 international students), the Trinity Newman Foundation generously funded a pilot scheme (2001-2005), enabling the programme to be opened up to all first-year students in the Faculties of Commerce, Law, and Humanities and Social Sciences, and the School of Psychology, as outlined below:

2001: 6 courses, 100 students, 10 leaders
2002: 8 courses, 180 students, 20 leaders
2003: 17 courses, 500 students, 39 leaders
2004: 19 courses, 700+ students, 36 leaders

As a result of this successful pilot, PASS is now funded[8] by the respective academic units, while still administered by SLSS. Over time, the scale of the programme has stabilised, but student participation continues to grow:

2005: 31 courses, 950 students, 41 leaders
2006: 33 courses, 1000+ students, 58 leaders, 3 supervisors
2007: 34 courses, 1200 students, 60 leaders, 3 supervisors
2008: 34 courses, 1300 students, 66 leaders, 4 supervisors.

[8] On average, PASS costs $190 per leader ($13 per hour. for one study session per week, and up to four hours' training). A further leadership dimension exists in large courses such as LAWS and ACCY (which may have up to 10 study groups apiece), where a PASS supervisor, ideally a former leader and current tutor, is appointed to liaise between leaders and course coordinators. PASS supervisors are paid $18 per hour. to a maximum of 20 hours per trimester. Campus Coaches are also paid $13 per hour. (or may opt to undertake the role in a voluntary capacity)

PASS's role in enhancing the First-Year Experience was acknowledged as one of the factors contributing to SLSS receiving the university's General Staff Excellence Award for 2007.

PASS groups meet for one hour each week, led by a 'peer': a fellow student who has achieved success in the course in the previous year (Arendale, 1994). Leaders undergo a rigorous selection process, beginning with recommendations by academic staff and culminating in an interview with the SLSS PASS coordinator. The main role of leaders is to be "an appropriate model of thinking and languaging behavior in the field" (Blanc, et al. 1983, p. 3). The role of PASS leaders, then, is not to teach, but to reinforce effective learning behaviours, motivate group members to meet their own learning needs, and foster a community in which students feel comfortable to ask questions they may feel too shy to ask a lecturer or tutor. Accordingly, a number of international studies (Arendale, 1994; Blanc et al, 1983; Longfellow, May, Burke & Marks-Marans, 2008; Peterfreund, Rath, Xenos & Bayliss, 2008; Smith & MacGregor, 1992) highlight PASS's potential to develop participants' graduate attributes. Only latterly have commentators such as Stout and McDaniel (2006) and Skalicky (2008) begun to recognise the benefits for leaders as well.

Leader candidates already possess sound academic ability and good people skills, as attested by the selection process. Nevertheless, the fluid nature of the study sessions, whose weekly agenda is determined by participants' immediate needs, requires leaders to demonstrate particular adaptability and flexibility. As pointed out by Smith and McGregor,

> In collaborative endeavors, students inevitably encounter difference, and must grapple with recognizing and working with it. Building the capacities for tolerating or resolving differences, for building agreement that honors all the voices in a group, for caring how others are doing -- these abilities are crucial aspects of living in a community (Smith & MacGregor, 1992, p. 3).

This achievement is all the more remarkable given that PASS leaders are 'peers', generally only one exam removed from members of the group themselves. In order to equip PASS leaders to undertake this role, the SLSS PASS coordinator oversees and trains a team of some 40 leaders per trimester, with subject-specific support provided by the academic staff and/or PASS supervisors. The training comprises an initial two-hour workshop the week before PASS commences, a one-hour session in the mid-trimester break, and a final one-hour debrief at the end of the teaching term. During these training workshops, leaders are encouraged to reflect on their own learning needs and personal strengths and clarify expectations, in preparation for the upcoming first session. Activities also include role-plays and multi-choice quizzes covering scenarios that might arise, as illustrated in Figure 1:

During a session, it becomes obvious students have been given contradictory information about the upcoming assignment by their different tutors: *How do you handle their concerns about the assignment right now?* *How do you deal with their concerns about the way the course is being run?*
A couple of new students raise something that was covered last week, when they weren't there. You say, "We went over that last time… *(a) …Let's go quickly round the room —everyone say one thing they remember about what we discovered."* *(b) …That's why it's really important to come each time."* *(c)…Make arrangements to talk about it with some of the others later."* *(d) …Wait after the session, and I'll explain it to you then."*

Figure 1. Sample PASS leader training scenarios

The use of open-ended questions and active learning techniques such as 'think-pair-share' (McTighe & Lyman, 1988, p. 19) within the training sessions encourages leaders to employ critical and creative thinking and exercise communication skills in determining their responses. At the same time, the training workshops introduce and model communication and thinking strategies that leaders can apply within their own study groups.

Once PASS begins, individual leaders have a great deal of autonomy, planning and preparing materials for weekly sessions as they see fit. Subject support is provided by the course coordinator, the PASS Supervisor (where applicable) and fellow leaders. There is also a comprehensive series of PASS resource kits (worksheets, previous exam papers, flash cards, etc), which has been compiled over the years. The SLSS PASS coordinator remains in regular contact, with daily office hours, weekly emails, and visits to observe PASS groups in action at least twice a trimester. Leaders also submit a weekly report reflecting on performance and outlining future direction, which contributes to both the PASS coordinator's overview and leaders' personal development, as shown by the following example (see figure 2).

While the leader displays considerable self-awareness in terms of both subject knowledge and people skills, others are less insightful, limiting their observations to comments such as 'covered assignment topics' and 'Next week: prepare for terms test'. Certainly, the potential offered by PASS programme for leaders to develop facilitation and interpersonal skills varies considerably, depending on groups' size and composition, the personalities involved, and the topic under discussion.

Name: Sam	What we did and what went well…
Course: ACCY111 Date: 12/08/08 Attendance: 7 (regulars: 4 newcomers: 3)	*Firstly I had more new people! This mandated an ice breaker, unfortunately I couldn't think of any interesting ones so ended up doing the old "which 3 people would you have to dinner" – modified this a bit by getting people to explain some of their choices, so it worked ok in the end. Moved onto looking at the theory, as I had 7 people I could (just) keep them all in one big group and still keep everyone reasonably engaged (although they probably could have done things in separate groups). Went round like last week getting people to teach the class. Unfortunately (as I know some of the other leaders have also found) no one seems to know much about this topic. However there was usually 1 person that could explain.* *As we went along I purposely made a couple of semi-ridiculous statements (for example "a company with no debt is perfect"), and got them to identify what was wrong with these. This seemed to be quite a good way of getting students involved (perhaps it's because people like to argue with people who are saying silly things?) in the discussion. Finally we worked through q5 from the 2007exam – FYI (other leaders) I think this a good question (if you want to use one) as it covers more aspects of the topic than most exam questions.*
	Aspects to work on…
	As noted above, students don't seem to know a lot about this topic so I ended up having to fill in gaps (cash flow ratio's and accounts receivable turnover measures, despite being in class slides, couldn't be explained by anyone in my group), although overall I didn't do too much lecturing. *I'm still yet to think of a sure-fire way to get students competing/arguing – although the silly statements sort of got this happening. It just works (i.e. really helps people learn/remember) so well in Law tutorials that I would love to get it happening in my group (although I suspect Law just lends itself somewhat better to this type of thing than Accounting does).*

Figure 2. Sample PASS leader's weekly report

Despite this, whether leaders work with one or 15 students, feedback from the final training session indicate that the majority rise to the challenge, experiencing personal growth in the process, as shown by the following responses to the informal 'end-of-trimester' survey question, "What have you learned about yourself from being a PASS leader?"

- Feeling of achievement and having made a difference for others
- Seeing people suddenly 'get' something. It's great when you have that breakthrough and people's faces go from blank to understanding
- Gaining confidence to lead a group of students
- Learning skills about planning, creativity, relating to very different people, teamwork (PASS Leader Survey, 2007).

Anecdotally, then, it seems that involvement in PASS has a part to play towards leaders' attainment of graduate attributes and employment skills, which the research findings presented later in this paper will confirm.

Campus Coaches programme

Similar to PASS, the prime driver for setting up the Campus Coaches scheme was to enhance the First-Year Experience and improve student retention (Glaser, Hall & Halperin, 2005; McInnis, James & McNaught, 1995), in accordance with Beatty-Guenter's (1994) Transition Strategy. Based on Auckland University's Uniguides (Clark & Crome, 2004), the Campus Coaches programme was introduced at VUW in 2007 to provide relevant and timely mentoring in the first weeks of term:

> personalising the campus experience by putting a friendly, informed and interactive interface in place [which] extends academic integration to the social as well as personal aspects of campus life (Clark & Crome, 2004, p. 9).

To this end, Campus Coaches are selected through a process of group interviewing intended to gauge candidates' people skills and suitability as role models. Some 70 coaches are recruited each year, to support students across all degree programmes:

> 2007: 440 students, 47 groups, 68 coaches
> 2008: 550 students, 49 groups, 70 coaches
> 2009: 700 students, 61 groups, 71 coaches

The Campus Coaches scheme offers a leadership opportunity for students who may be less academically able than those involved in PASS (although, in 2007-2008, 15 students performed in both roles). The programme is funded and administered by VUW's Student Services Group, overseen by the Campus Coaches' coordinator (ideally a former Campus Coach, appointed for 20 hours per week, October-April), with training again provided by SLSS.

Training takes place the week before Orientation, over two half days. During these sessions, Campus Coaches get together with others within their School or Faculty, hear from 'first-year students' and former Campus Coach panel members, and meet representatives of the services on campus (Students' Association, Library, Student Services Group [Counselling, Health, Finances, Accommodation, Learning Support, Kaiwawao, Disability Support, Crèche, Careers and Manaaki Pihipihinga mentoring scheme]). They also engage in group activities designed to develop their understanding of communication theory (Thompson, 2002), and the First-Year Experience (McInnis, et al. 1995), comprising self-reflection and role-plays similar to the PASS training:

(i)	*Think back to your first day at uni:* *What did you know? What didn't you know? How did you find out?*
(ii)	*How do you see yourself? Rank the following, and be prepared to explain your choices:* Senior Student/Expert/Fellow Student/guide/Friend/Counsellor/Other…..
(ii)	*What's the main thing you'd like students to get from working with you?*

Figure 3. Sample Campus Coaches training activities

Campus Coaches' parent programme, Auckland Uniguides, operates for the first 6 weeks of term. However, evidence suggests that the first sessions are the most crucial, with the Auckland 2004 survey reporting 82% attendance at the first meeting, falling away to 35% in subsequent weeks (Clark & Crome, 2004, p. 13). The Campus Coaches programme has not captured comparable data, but a similar pattern emerges, in that, out of "729 'pre-registrations', 550 [VUW] students were coached at least once, with 50% returning for the second session" (Brain, 2008, p. 6). Rather than representing a failure of the mentoring programme, this lessening involvement suggests the majority of participants rapidly develop the strategies necessary to establish their own support networks.

For this reason, VUW's programme is offered for only three weeks. An invitation to join the scheme is included in first-year Enrolment Packs, and interested students are matched with a coach in groups of 10-15 (occasionally further sorted into Mature, International or postgraduate groups) during respective Faculty Orientation sessions. On this day, groups take part in a campus tour and a range of games and activities, designed to foster interaction and build confidence. Once the group is underway, subsequent meetings and activities are arranged according to members' needs, with coaches maintaining contact through email and text messages. Activities vary, with some groups opting for weekend visits to the zoo or other local attractions, while others simply meet on campus between classes. The programme culminates in early March with a Quiz and Pizza evening, attended in 2007 by 200 students and their coaches (Brain, 2008, p. 26), and the presentation of Campus Coach Certificates in early April.

Although first-years' participation fluctuates, the majority of coaches reported a high level of enjoyment at being involved in the scheme (a mean of 4.73 on a 1-5 scale, with '5' being 'very much') (Brain, 2008, p. 30). However, involvement varies markedly, with timetabling issues often making it difficult to organise meetings, and the reporting system focuses more on administrative details rather than on coaches' personal reflection. Also, as the prime purpose of the scheme is to empower first-years, the more skilled the coach, the less time he or she may actually spend in the role.

Graduate attributes and employment skills survey

As already noted, the majority of research on student mentoring schemes tends to stress the benefits for participants (Blanc, et al., 1983; Glaser, et al., 2005; Longfellow, et al., 2008; McInnis, et al., 1995; Peterfreund, et al., 2008; Smith & McGregor, 1992), rather than for the senior students involved (Skalicky, 2008; Stout & McDaniels, 2006). Similarly, informal end-of-season surveys at VUW have previously touched on this aspect, but generally only in terms of leaders' and coaches' personal satisfaction.

To this end, the SLSS PASS coordinator recently conducted an email survey of 2007-2008 PASS Leaders and Campus Coaches. The survey (customised according to audience) had two parts: VUW's Graduate Attributes, and the Employment Skills identified by the 2006 Vic Careers Survey. The first section of Part One, Graduate Attributes, asked respondents to indicate on a Likert scale, ranging from 1: 'strongly disagree' to 5: 'strongly agree', whether 'Being a PASS Leader [Campus Coach] has helped develop my creative thinking/critical thinking…skills', with a second section requesting respondents to give supporting examples. Part Two followed the same pattern, calling for Likert scale responses in terms of Employment Skills, together with examples of how 'Being a PASS Leader [Campus Coach] has contributed to my ability to demonstrate to an employer that I have strong interpersonal skills/ am a team player…'.

Approval was granted by VUW's Human Ethics Committee, with replying to the email taken to signify respondents' consent. Sent as blind copy from 'student-learning@vuw.ac.nz' to ensure confidentiality, the questionnaire was emailed to current and former student leaders: 105 Pass Leaders, of whom 19 replied (18% response rate) and 140 Campus Coaches, of whom 14 (10%) responded. Given that the survey was conducted during the October exam period, the low response rate was understandable, but clearly indicates a need for further research. Results have been aggregated to highlight the main findings, as discussed below.

Graduate attributes

Common to all tertiary institutions, communication, thinking and leadership skills are now seen as a vital complement to graduates' academic achievement, with survey results indicating that involvement in student leadership programmes can play a role in their development (see figure 4).

Pleasingly, all the PASS leaders who responded agreed that involvement in the programme had played a significant role in developing their leadership skills (with 9 of the 19 'agreeing' and 10 'strongly agreeing').

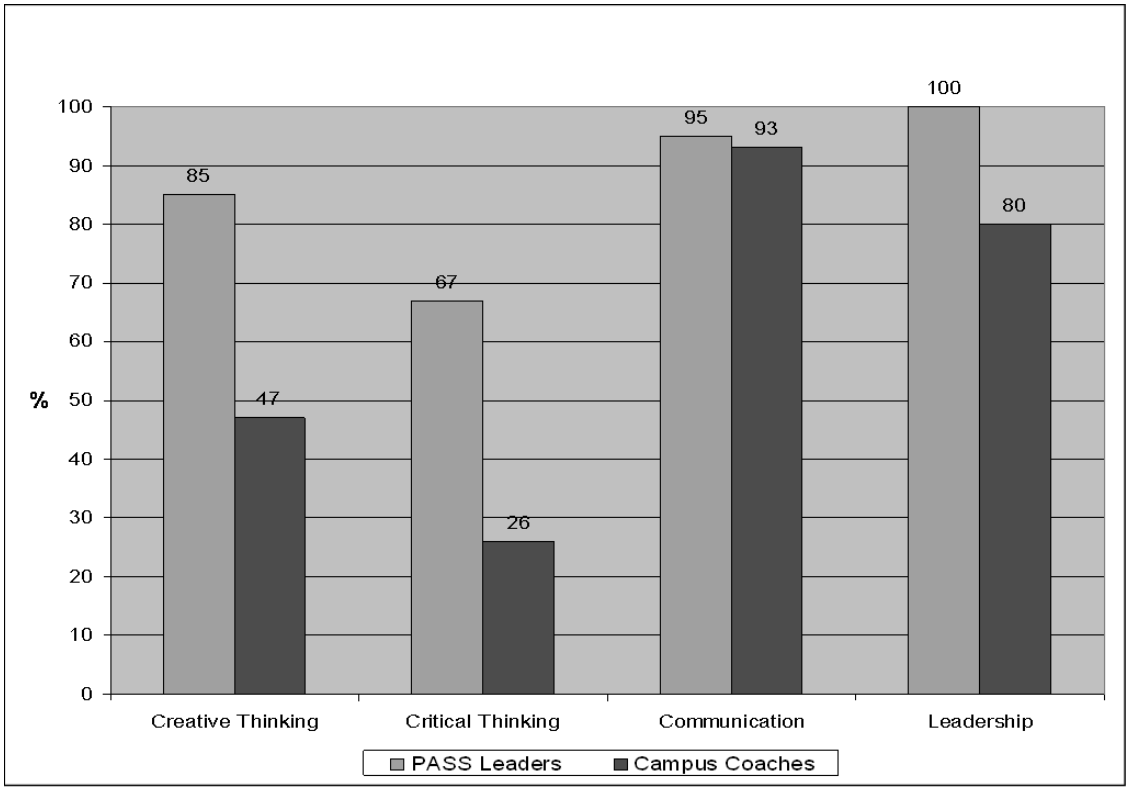


Figure 4. Graduate attributes *(% of respondents who agreed or 'strongly agreed' that "being a PASS Leader/Campus Coach has helped develop my xxx")*

As previously mentioned, PASS leader candidates are recruited based on already existing leadership qualities. Nevertheless, leaders actively sought opportunities to enhance their repertoire, as indicated by the following representative feedback:

> Being a PASS leader has helped develop my leadership skills, by the training provided, and by the preparation, coordination, and actual study group leading. It has challenged me to lead by drawing others out, rather than simply taking charge.

PASS leaders also considered the programme made a strong contribution towards their overall Communication skills (8 'agreed', 10 'strongly agreed' and only 1 remained neutral), with comments noting how the role challenged them in new directions:

- By giving me further experience in facilitating group discussion and interaction. I also found it rewarding trying to lead students to find answers themselves, which meant communicating in different way to simply answering their questions

- Communication to a group in a learning/teaching environment (or facilitating as should be ideally) was a new experience for me so this helped me develop communication skills for a whole new situation.

Thinking skills were the attributes regarded as least developed through involvement in the PASS programme. Even so, both creative and critical thinking categories ranked highly, with differences often relating to how leaders interpreted the question. For example, most clearly acknowledged an impact on their creative thinking: only two remained neutral ('3' on the Likert scale), while14 of the 19 responses 'agreed' and three 'strongly agreed', appending comments such as:

> Having to devise (often on the spot) activities that would engage a group of often tired and slightly disinterested students in the study of accounting — a topic very few find gripping, to say the least!

In terms of critical thinking, however, responses were less clear (one leader 'disagreed', 7 were neutral, 8 'agreed' and only one 'strongly agreed'). Despite this, all provided supporting examples, although some comments related to content knowledge rather than personal thinking skills. Often, respondents regarded creative and critical thinking skills as interlinked, with variations on comments such as needing 'to critically assess the likely learning outcomes of any given activity, in order to determine whether to proceed with it'. Even the leader who 'disagreed' (2 on the Likert Scale*)* conceded that PASS contributed to 'my critical thinking skills by getting me to look at all sides of a debate'.

Although the survey data reveals that PASS has less impact on the development of leaders' thinking skills, this area is already covered by the university's academic endeavours. That PASS can augment this, while making a significant contribution to able second-year students' leadership and communication skills in the process, speaks to the value of the scheme in preparing student leaders for the wider socio-economic context in which they will find themselves as graduates.

Such conclusions are endorsed, albeit to a lesser extent, by the Campus Coaches' findings (see figure 4). The difference in relative weightings between responses reflects not only the differing roles, but also the emphasis within the programmes themselves. The Campus Coach has a limited frame of reference, required to provide practical advice to new students in the first few weeks of trimester only, in contrast to the PASS leader's more intense commitment over ten weeks. Moreover, thus far, Campus Coaches training and reporting requirements have focused primarily on the necessary leadership and communication skills to enable coaches (often already in their final year of study) to address to first-years' immediate needs, whereas the four-part PASS training programme and ongoing peer engagement (over a whole trimester) allow for a broader spectrum of personal growth.

Therefore, while acknowledging the contribution of the experience in terms of communication and leadership skills, the majority of Campus Coaches who responded considered that the role had made little impact on thinking skills, because, as mentioned earlier, their duties were relatively clear-cut. While ensuring group members remained motivated required creative thinking to a certain degree, few

Campus Coaches felt they developed critical thinking skills in the process. Five of the 14 respondents left this section blank, while others maintained, 'it didn't really', 'I'm neutral on this', or 'Not much of critical thinking was involved because the tasks were very guided & we were advised on how to deal with different situations & which department to point students to for additional help'. Nevertheless, this last respondent went on to concede, 'Then again, I had to employ critical thinking when adapting the material to different situations and personalities'. Therefore, both Campus Coaches and PASS programmes seem to offer a useful vehicle for students to refine their leadership and communication skills, in conjunction with the cognitive development already provided by academic programmes as part of the university's Pathways (2006) project.

Employment skills

Sound communication, thinking and leadership skills are vital in the workforce, as shown by the Vic Careers (2006a) survey of the 'Top 10 Employment Skills and Attributes', which categorised the 'Graduate Attributes' into more applied aspects. For this reason, the survey findings are similar to those in the Graduate Attributes' section, albeit with notable differences, as shown in figure 5 below:

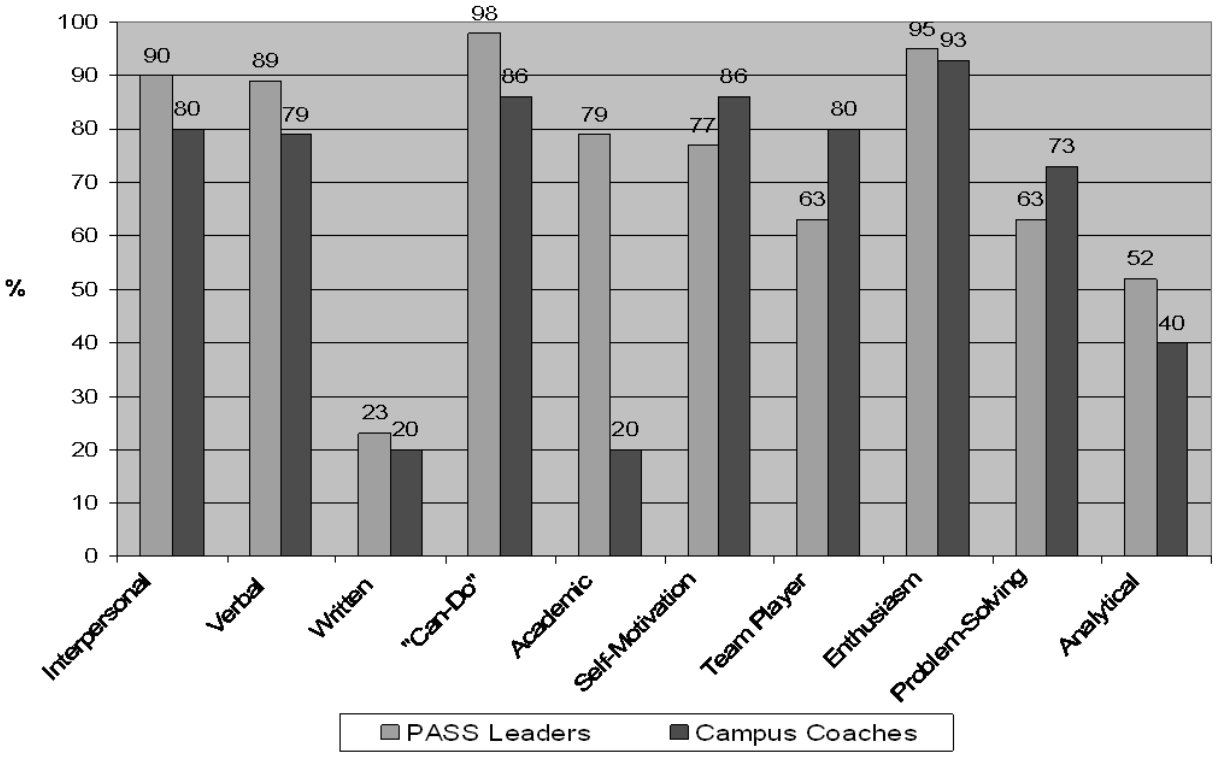


Figure 5. Employment skills and attributes *(% of respondents who agreed or 'strongly agreed' that "being a PASS Leader/Campus Coach has contributed towards my ability to show an employer that I am/have xxx…"*

The survey focused on transferability of skills, by asking respondents to consider how they might draw on their leadership experience in a job interview or workplace situation. Again, the graph illustrates that the main strength of PASS in particular is in

providing a vehicle for leaders to further their interactive skills ('interpersonal' and 'verbal' communication), and personal qualities ('academic achievement', 'flexible and can-do: attitude', 'self-motivation' and 'enthusiasm'), with respondents providing strong evidence in support of each:

Interpersonal skills:

> Because much of our role as a PASS leader was to develop a learning environment in which students would feel comfortable sharing with the group course material that they were having trouble with. Furthermore the role of PASS leader is more akin to that of an older friend than a teacher. Thus in order to facilitate such an environment and such a relationship between leader and student, good people skills, particularly an understanding attitude, are crucial.

Verbal Communication:

> Much of the role involved talking to people and verbally explaining things. I gained a lot of confidence in verbal communication; this was one of my goals.

'Can-do' attitude:

- Being able to balance responsibility between my own learning and that of others
- Often we would have to improvise as we had little idea of exactly what was being covered in their classes, how many would turn up, what stage they'd be at, or what they would be finding difficult. Thus flexibility was key.

Academic Achievement:

- PASS leaders are chosen from successful students of the previous year, and being able to say on a CV that teaching staff recommended you for the position is a great advantage!
- The motivation I had being a PASS leader flowed through into my studies.

Self-motivation:

> Being a PASS leader is a largely undirected role. Thus a high degree of self motivation is obviously needed.

Enthusiasm:

- My group could definitely attribute to the fact that I tried to be enthusiastic every week... especially as I tried to motivate them all. It wasn't too hard for me tho as it is a subject that I am very passionate about so I wanted them to see how interesting and enjoyable it can be.
- It's helped me learn to fake energy and enthusiasm when things are rough!

Despite the fact that most felt PASS made little impact on written communication skills (because their only requirement was a weekly email to the coordinator), the comments above are eloquently expressed. Moreover, as well as endorsing how being a study group leader can contribute to the development of such skills and attributes, these observations pay testament to the perceptiveness of respondents' self-awareness. As shown by the data in figure 5, 'being a team player' and the higher-level cognitive skills were adjudged to be less well-developed through involvement in PASS than other skills. Although responses were confidential, the range of responses for

'teamwork' (five 'strongly agreed', six 'agreed', seven 'neither agreed nor disagreed' and one 'disagreed') possibly reflect differences in individual Leaders' experience. In large, compulsory courses such as law and accounting, high demand for study groups means a 'team' of 8-10 leaders per course, whereas language and literature courses may have only one leader, working in relative isolation. Even so, the qualitative comments reveal a greater appreciation than suggested by the quantitative data alone, with most leaders (as befitting the programme's 'peer-support' nature) locating themselves firmly within the study group:

- Pass really develops the skill of delegation. If you are just facilitating people's study rather than teaching them you are effectively delegating the work to them. I think this is a very important skill in a team working environment
- As I wasn't a 'tutor', but rather a 'peer leader', I was like part of the class and basically on the same level as the students. We all came up with ideas about the texts together

Likewise, the lower ratings for 'analytical and conceptual skills' and 'problem-solving' represent the high number of neutral responses ('neither agree nor disagree'), with comments frequently noting the difficulty of distinguishing these skills from the 'flexibility' and 'creative thinking' required to accommodate the needs of different students and present materials appropriately. Moreover, as indicated earlier, the main responsibility for developing graduates' cognitive skills rests with the academic programme.

In terms of employment skills, Campus Coaches rated their overall experience somewhat less highly than PASS leaders, with a larger number of neutral ('neither agree nor disagree') responses in Part One, and more than 50% unwilling or unable to provide evidence in Part Two under 'written communication', 'academic achievement' and 'analytical skills'. Moreover, one respondent 'strongly disagreed', offering the same comment for each statement, 'While I may have gain skills in this area, I do not believe this has effected [sic] my position within the current company I work for', apparently misunderstanding the questionnaire's purpose.

That 'analytical skills', 'written communication', and 'academic achievement' received low rankings is unsurprising. The Campus Coaches' scheme is not designed to develop cognitive skills, nor, during its brief run, are coaches expected 'to write much', other than an occasional email to clarify group members' contact details or organise a meeting. Although one respondent did observe that having 'to email and text members of my group [meant I] learnt to say what was important first', the bulk of the role entails face-to-face and verbal interaction rather than written communication.

Furthermore, in terms of 'academic achievement', as already noted, the Campus Coaches' programme provides a leadership opportunity for less academic students. Having learnt what it takes to succeed at university the 'hard way' and the desire to share this knowledge with others are commonly cited in interviews as applicants'

motivation for participating in the scheme. Moreover, the coach's role is to provide social and pastoral rather than academic support. Again, a significant number of respondents remained neutral, made no comment or were unsure of how Campus Coaches could be construed as contributing to their academic achievement, possibly because many undertook the role in their final year of study. Nevertheless, of those who did respond, the following observation is representative: "Although we were not coaching them academically, our attitudes towards learning and grades will reflect on our students. I think I managed to show a good example".

Conversely, the more personal, less-structured nature of the Campus Coaches' role (requiring often 'on-the-spot' responses to the needs of a group of first-years united only by their subject major) allows for greater development in terms of 'self-motivation' and 'problem-solving' than leading a PASS group, as illustrated by the following comments:

- While we were given ample resources, each group is so different that it fell to the coach to keep things going.
- Each meeting varied, and I had to be able to adapt to the needs of the people who turned up. The programme is really for the students, so I had to be ready to do whatever they needed.

Similarly, as Campus Coaches wore bright red t-shirts with the slogan 'been there, done that', their high visibility around campus and the intensity of involvement over a short timeframe fostered a strong sense of being part of a team. As already noted, PASS leaders operate with a great deal of autonomy, which – for some – meant initiating little contact with their fellows in other courses.

Clearly, the majority of students selected to participate in the PASS and Campus Coaches programmes demonstrate considerable maturity in terms of interpersonal and communication skills in the first instance. Moreover, this survey only measured respondents' perceptions, without factoring in feedback from the students in their groups. Nevertheless, the comparative graphs (Figures 4 and 5 above) suggest that SLSS's provision of leadership training, oversight and opportunities for reflection play a useful role in complementing the more formal skills development imbedded within academic programmes.

As a natural corollary to these leadership schemes, VUW has sought to formally recognise the achievement of graduate attributes and employment skills, by instituting a dedicated award for service and leadership, which is acknowledged on students' academic transcript.

Victoria Plus Award

Directly targeting the goals identified in the 2005-2015 *Strategic Plan* (2004) and *Pathways to Success* (2006), the *Victoria Plus Award* (Te Tohu Rauhi), first offered in 2008, has three components: Activities, Professional and Personal Development, and

Reflection. Administered by Vic Careers (within the Student Services Group), the award offers students the opportunity to:

- Raise your awareness and understanding of social responsibility, leadership and employability
- Develop skills to help you in future life and work
- Gain recognition from the University for your contribution (Vic Careers, 2006b).

Students who enrol in the scheme need to amass a total of 300 points during their time at university through participating in a variety of extra-curricular pursuits on campus and in the community. The range of university-based activities includes the SLSS leadership schemes (PASS and Campus Coaches, Conversation, ExcelL and Peer Writers), mentoring Maori and Pasifika students within Manaaki Pihipihinga, acting as a Residential Assistant, class representative, office-bearer in a club or society, or note-taker or driver for Disability Support Services. Likewise, participation in church groups, sports clubs, cultural societies or organisations like Volunteer Wellington, Youthline, or Age Concern also qualifies. Points are awarded based on the level of commitment and whether the role is paid or voluntary. Being a Campus Coach for example is worth 40-60 points, a PASS Leader between 60-100 points, and a voluntary note-taker between 60-120 points.

Complementing the activities, the Professional and Personal Development component requires candidates to attend a minimum of six lectures, two each from the categories of 'leadership and social responsibility', 'skills development' and 'career development' (Vic Careers, 2006). Presentations include guest speakers from the business world, and seminars on the Myers-Briggs Personality Indicator, IT skills (including the 'E-portfolio' requirement for the Reflection component) preparation for interviews and psychometric tests, and effective CV writing (Vic Careers, 2006b).

Successful completion of the Award relies on the third element, Reflection, in the form of an 'eportfolio', created with a software programme that enables users to generate a CV online, by uploading documents, and evaluating each entry in terms of personal growth. As noted by McAlister, Hallam and Harper (2008), eportfolios are increasingly being employed at all levels of education to actively engage learners in the developmental process. In this way, the Victoria Plus Award provides the ideal vehicle for student leaders to identify and reflect upon the graduate skills and attributes they have developed during their time at university, as well as giving them the tools and language to best present themselves to a wider audience.

Already, 16 students have successfully completed the requirements, and will be the first to receive the Victoria Plus Award, presented by the Vice Chancellor at a ceremony in December. Figure 6 is an excerpt from the 'Reflection' of one of the recipients, for whom leading a 2007 PASS group for French literature comprised one aspect of the Award. This evaluation reveals not only an insightful appreciation of what 'leadership' truly entails, but also the way in which the opportunities provided by

SLSS have complemented the student's development in terms of people skills and self-awareness.

PASS FREN124 -Graduate Attribute - Leadership

Institution: Victoria University of Wellington (Student Learning Support Service)

Description: As I had a group of approximately 5 students to lead, I had to make sure that they stayed on task (especially as they got to know each other quite well during the year, and tended to enjoy having a chat!), include everyone in the activities and, to an extent, negotiate with the students what they wanted to cover during the 'class'.

Reflection: It was interesting to be the 'leader' of a group of students who were not much younger than me, and some were older, but, as attendance was voluntary, they were a good group. Maintaining a good group dynamic was probably the hardest challenge, because some people seemed to enjoy contributing a lot more than others but I felt that it was important not to have one person dominating. This also developed my 'passive leadership' skills because I was supposed to be facilitating, not 'teaching'.

Figure 6. Sample VicPlus eportfolio entry

Granted, the participants in such schemes often possess strong interpersonal attributes from the outset. Nevertheless, as evidenced by the personal observations of the SLSS PASS coordinator and Campus Coaches' trainer and findings from a pilot survey of current and former student leaders, Victoria University of Wellington's Peer Assisted Study Support and Campus Coaches' schemes appear to offer an effective platform for developing the graduate attributes and employment skills required for success in the twenty-first century.

References

Arendale, D. (1994). Understanding the supplemental instruction model. In D. Arendale & D. C. Martin (Eds.), *Supplemental instruction: Increasing student achievement and retention*: *New directions in teaching and learning # 60* (pp. 11-21). San Francisco: Jossey-Bass.

Barrie, S. (2008). *Some ideas about graduate attributes, career development learning and WIL (Draft)*. Sydney: Australian Learning & Teaching Council.

Ballard, B., & Clanchy, J. (1991). *Teaching students from overseas: A brief guide for lecturers and supervisors.* Melbourne: Longman Cheshire.

Bath, D., Smith, C., Stein, S., & Swann, S. (2004). Beyond mapping and embedding graduate attributes: Bringing together quality assurance and action learning to

create a validated and living curriculum. *Higher Education Research and Development 23*(3), 313-328.

Beatty-Guenter, P. (1994). Sorting, supporting, connecting and transforming: Retention strategies at community colleges. *Community College Journal of Research and Practice 18* (2), 113-129.

Blanc, R.A., DeBuhr, L. E., & Martin, D.C. (1983). Breaking the attrition cycle: The effects of supplemental instruction on undergraduate performance and attrition. *The Journal of Higher Education, 54* (1), 80-90.

Bologna agreement. (1999). Retrieved May 6, 2008 from http://www.europaeum.org/content/view/58/65/

Bowden, J., Hart, G., King, B., Trigwell, K., & Watts, O. (2000). *Generic capabilities of ATN university graduates.* Retrieved November 12, 2008 from http://www.uts.edu.au/div/clt/ATN.grad.cap.project.index.html

Brain, C. (2008). *Campus Coaches programme report.* Wellington: Student Services Group, Victoria University of Wellington.

Clanchy, J., & Ballard, B. (1995). Generic skills in the context of higher education. *Higher Education Research and Development 14* (2), 155-166.

Clark, W.A., & Crome, W.W. (2004). *Personalising the transition experience: Induction, immersion or intrusion?* Retrieved November 13, 2008 from http://atem.edu.au/downloads/archive/2003NZ/ClarkW_CromeB_ATEMpaper.pdf.

Glaser, N., Hall, R., & Halperin, S. (2005). *Students supporting students: The effects of peer mentoring on transition, belonging and retention amongst first year university students.* Retrieved November 13, 2008 from http://www.ccc.newcastle.edu.au/student-support/2005conference/Natalie%20Glaser.pdf.

Institute for Teaching & Learning, University of Sydney. (2008). *Graduate attribute programme (GAP).* Retrieved November 12, 2008 from http://www.itl.usyd.edu.au/projects/nationalgap/introduction.htm

Laurs, D. (2002, November 12-14). PASS project at VUW: Active learning for students. In *Face it: The issues and initiatives redefining our course business: ATLAANZ conference proceedings* (pp. 3-15). Wellington: SLSS, Victoria University of Wellington.

Longfellow, E., May, S., Burke, L., & Marks-Maran, D. (2008). "They had a way of learning that actually helped": A case study of a peer-assisted learning scheme. *Teaching in Higher Education 13*(1), 93-105.

McAllister, L., Hallam, G., & Harper, W. (2008, June 16-19). The ePortfolio as a tool for lifelong learning: contextualising the Australian practice. *Proceedings of the Lifelong Learning Conference* (pp. 248-253). Retrieved October 28, 2008 from http://hdl.cqu.edu.au/10018/14824

McInnis, C., James, R., & McNaught, C. (1995). *First year on campus: Diversity in the initial experiences of Australian undergraduates.* Melbourne: Centre for the Study of Higher Education.

McTighe, J & Lyman, F.T. Jr. (1988). Cueing thinking in the classroom: The promise of theory-embedded tools. *Educational Leadership 45* (7), 18-24.

Meyers, C., & Jones, T.B. (1993). *Promoting active learning: Strategies for the college classroom.* San Francisco: Jossey Bass Higher and Adult Education Series.

Peterfreund, A.R., Rath, K.A., Xenos, S.P., & Bayliss, F. (2008). The impact of supplemental instruction in students in STEM courses: Results for San Francisco State University. *Journal of College Student Retention: Research, Theory & Practice 9*(4), 487-503.

Richardson, A., & Kabanoff, B. (2003, November). *Graduates' perceptions of university study and it's [sic] contribution toward the development of workplace competence.* Paper presented at the Joint NZARE/AARE (New Zealand/Australian Associations for Research in Education) Conference. Auckland.

Silberman, M. (1996). *Active learning: 101 strategies to teach any subject.* Boston, MA: Allyn and Bacon.

Sivra, A., Leung, R.W., Woon, C., & Kember, D. (2000). An implementation of active learning and its effect on the quality of student learning. *Innovations in Education and Teaching International 37* (4), 381-389.

Skalicky, J. (2008). Providing multiple opportunities for PASS leaders to reflect critically. *Australasian Journal of Peer Learning 1,* 91-97.

Student Learning Support Service. (2008). Retrieved November 14, 2008 from http://www.victoria.ac.nz/st_services/slss/

Smith, B. L., & MacGregor, J. T. (1992). *What is collaborative learning?* Washington, DC: Washington Center for Improving the Quality of Undergraduate Education.

Stout, M. L., & McDaniel, A.J. (2006). Benefits to supplemental instruction leaders. *New Directions for Teaching and Learning 2006, 106,* 55-62.

Thompson, N. (2002). *People skills.* New York: Palgrave McMillan.

University of Sydney. (2008). Statement *of graduate attributes*. Retrieved November 14, 2008 from http://www.itl.usyd.edu.au/graduateattributes/statement.htm

University of Waikato. (2008a). *Graduate profile for Bachelor in Communication Studies.* Retrieved November 14, 2008 from http://www.waikato.ac.nz/wfass/qualifications/bcs/profile.shtml

University of Waikato. (2008b). *Graduate profile for Bachelor in Science.* Retrieved November 14, 2008 from http://sci.waikato.ac.nz/student_info/graduateprofiles/BScprofile.shtml

University of Waikato. (2008c). Graduate *profile for Bachelor of Teaching.* Retrieved November 14, 2008 from http://edlinked.soe.waikato.ac.nz/departments/index.php?dept_id=21&page_id=4904

Vic Careers. (2006a). Employment *skills.* Wellington: Victoria University of Wellington.

Vic Careers. (2006b). Victoria *Plus award*. Retrieved November 10, 2008 from http://www.victoria.ac.nz/st_services/careers/career_development/VictoriaPlus/

Victoria University of Wellington. (2004). Strategic *plan 2005-2015.* Wellington: Victoria University of Wellington.

Victoria University of Wellington. (2006). Pathways *to success: Report of the 2006 working group on undergraduate and Honours degrees at Victoria University of Wellington.* Wellington: Victoria University of Wellington.

Students' cognitive and non-cognitive beliefs about learning as a factor in learning skills acquisition: Suggestions from cognitive counselling

Yuri Uesaka[9]
Tokyo Institute of Technology
Japan

Mikiko Seo
Sagami Women's University
Japan

Shin'ichi Ichikawa
The University of Tokyo
Japan

Abstract

Cognitive counselling, which is a practical research activity in which counsellors provide personal consultations for clients who have cognitive problems, has identified some problems that many students possess. One of these problems concerns inappropriate beliefs about learning (e.g., trying to memorize without understanding, emphasizing the outcomes of problem solving and neglecting the processes). Psychological research findings about these beliefs have shown that they are linked to use of ineffective learning strategies and low achievement. This paper discusses the importance of considering students' beliefs about learning when assessing the reason of their study difficulties and supporting them in solving their problems. Three case examples are provided to illustrate how this approach can effectively be used.

Instruction

Cognitive counselling is a research activity that originated in Japan (see Ichikawa, 2005, who described the motivation behind, and the history of, this activity). Cognitive counselling is distinct from psychological counselling in that it targets cognitive problems such as those associated with memorizing, problem solving, and motivation, instead of problems involving psychological or emotional difficulties. Examples of manifestations of problems in cognitive counselling are: 'I cannot memorize well', 'I

[9] Uesaka, Y., Seo, M., & Ichikawa, S. (2009). Students' cognitive and non-cognitive beliefs about learning as a factor in learning skills acquisition: Suggestions from cognitive counselling. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 89-100). Auckland, New Zealand: ATLAANZ.

do not know how to solve complex math word problems', and 'Although I have been studying so hard, I cannot achieve good results. I don't want to study anymore'. One important feature of cognitive counselling is the use of findings from cognitive psychological research when counsellors assess the source of students' difficulties and support them in overcoming these difficulties. The findings from psychological research (e.g., from topics such as learning strategies, self-regulated learning, and memory) are useful for assessment and support purposes. The goal of this activity is to develop autonomous learners.

Each client in cognitive counselling receives about 10 counselling sessions, with each session lasting 90 to 120 minutes. Three steps are taken. The first step is assessing what might be the fundamental reason behind the student's difficulties. The second step is supporting the student in working out ways to solve the problems. The final step is compiling a report about the process of counselling the student. This report is for sharing with other counsellors and discussing how the experience of working with the student could contribute to enhancing their skills in supporting students. The case sharing aspect is referred to as the 'case conference'.

Discussions in case conferences of cognitive counselling have drawn attention to a number of problems that students commonly share. Among the problems found in cognitive counselling sessions, one of the most serious concerns the inclinations of students' beliefs about learning. Findings from case studies in cognitive counselling suggest that weaknesses in student's approaches to learning are often accompanied by particular beliefs about learning. For example, a client's problem of relying only on rote memorization and neglecting meaning often appears with the belief that 'rote memorizing is important and sufficient'. Likewise, a problem that involves solving many problems without any reflection and repeatedly making the same mistakes is often caused by the belief that 'Practicing a lot is most important, and we do not have to consider the effectiveness of the method'.

Although various aspects of students beliefs about and motivations for learning have previously been investigated (e.g. Pint rich, 2003; White, 1959), aspects relating to what they believe as effective learning methods have not been adequately examined until recently. The kinds of beliefs about learning and their influences on study behaviour, which have been identified and examined in case studies of cognitive counselling had not been sufficiently examined in the previous research. Thus, the purpose of this paper is to highlight the importance of paying attention to students' beliefs about learning when assessing the reason behind their study-related difficulties. Three examples are provided to show how gaining this kind of understanding can be used to facilitate transformations in students' learning behaviour.

Psychological research findings about students' beliefs about learning

Although various aspects of students beliefs about and motivations for learning have previously been investigated (e.g., Pintrich, 2003; White, 1959), aspects relating to what they believe as effective learning methods have not been adequately examined. In particular, the inter-relationships of their beliefs about effective ways of memorizing, problem solving, managing failure, and so on have not been examined in previous psychological research. Recent studies concerning students' beliefs about learning have used correlational analyses to better understand the structure of these beliefs. Uesaka, Seo, and Ichikawa (2006), for example, developed a new questionnaire by integrating useful aspects of previous exploratory questionnaires that assessed students' beliefs about learning (Ichikawa, Horino & Kubo, 1998; Ueki, 2002). Uesaka et al. (2006) identified eight subscales and two subordinate categories. The structure of this questionnaire is shown in Figure 1. (The items of this questionnaire were asked in the context of mathematics because it was developed as part of an assessment of basic competencies in mathematics called COMPASS (Componential Assessment Test; Ichikawa, Seo, Murayama, & Uesaka, 2005), but it is conceptually applicable to learning in other subjects.)

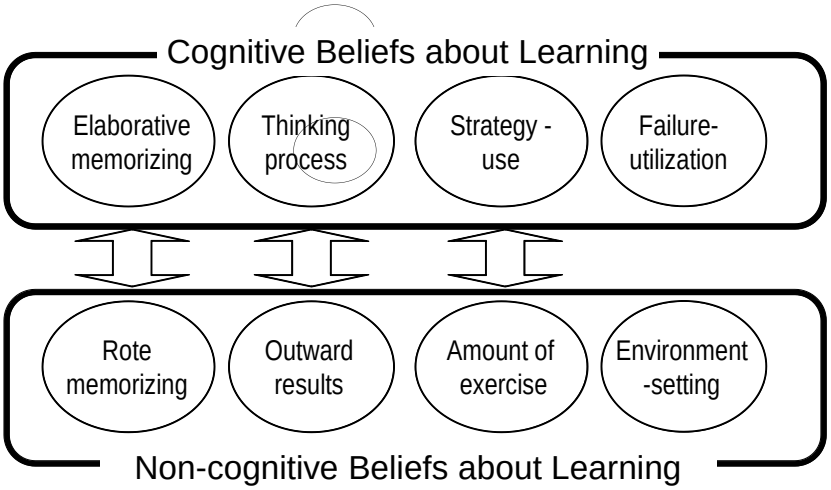


Figure 1. Structure of students' beliefs about learning (Uesaka, Seo, & Ichikawa, 2006)

Some of the subcategories of the questionnaire are paired: 'elaborative memorizing orientation' and 'rote memorizing orientation' comprise a pair involving beliefs about ways of memorizing, 'outward process orientation' and 'thinking process orientation' comprise another pair involving beliefs about ways of problem solving, and 'amount of exercise orientation' and 'strategy-use orientation' is a final pair concerning general approaches to learning. Examples of items in this questionnaire are shown in Table 1.

Table 1. *Examples of Items Assessing Students' Beliefs about Learning (From Uesaka, Seo, & Ichikawa, 2006)*

Cognitive Beliefs about Learning:	
Elaborate Memorizing:	I try to figure out relationships among different areas of knowledge
Thinking Process:	I try to find another way to solve the problem even after finding the answer
Strategy-use:	The process does not matter to me as long as my answer is correct
Failure utilization:	It is good opportunity to perceive my weakness when I fail in learning
Non-cognitive Beliefs about Learning	
Rote Memorizing:	If I remember perfectly, I can say that I understand
Outward:	The process does not matter to me as long as my answer is correct
Amount of Exercise:	The process does not matter to me as long as my answer is correct
Environmental:	If I learn in an upper level class, I can improve my grade

A student's belief is categorized under 'rote memorizing orientation' when it attaches importance only to rote memorizing, but categorized under 'elaborative memorizing orientation' when it not only attaches importance to rote memorizing but also to understanding the meaning of learning materials. A belief is categorized as belonging to 'outward process orientation' when it values only getting the correct answer and neglects the process, but classified under 'thinking process orientation' when it considers the thinking process as being just as important as getting the right answer. A belief is categorized under 'amount of exercise orientation' when it emphasizes only the amount of practice and neglects the method of learning, but classified into 'strategy-use orientation' when it attaches importance not only to the amount of studying but also to the efficiency of methods that are used. The last two categories in the questionnaire are not paired. 'Failure utilization orientation' pertains to beliefs that consider failure as providing a good chance to learn about and address one's own weakness and 'the environmental-setting orientation' pertains to beliefs that consider exam scores as depending mainly on the quality of one's teachers and text books – rather than one's effort.

As shown in Figure 1, elaborative memorizing orientation, thinking process orientation, strategy-use orientation, and failure utilization orientation are classified under the same category, while the other four subscales – rote memorizing orientation, outward orientation, amount of exercise orientation, and environmental orientation – are classified together under another category. The former group was labelled as 'cognitive beliefs about learning' and latter group was labelled as 'non-cognitive beliefs about learning' because the former beliefs are congruent with positive concepts

from cognitive psychology while the other beliefs are congruent with negative concepts.

Uesaka et al. (2006) not only proposed a structural model of students' belief about learning but also showed the relationship between students' achievements and their beliefs about learning: they demonstrated that math achievement positively correlated with 'cognitive beliefs about learning', which was calculated as the total of scores in elaborate memorizing, thinking process, strategy-use, and failure utilization orientation; but negatively correlated with 'non-cognitive beliefs about learning', which was calculated as the total of scores in rote memorizing, outward orientation, and environmental orientation.

This finding about the relationship between students' beliefs about learning and school achievement suggests that students' beliefs influence their achievement. Moreover, Ueki (2002) had earlier shown that such beliefs affect students' learning behaviours. Thus, the inclinations of students' beliefs about learning could result in a negative cycle of learning as shown in Figure 2: if students have inappropriate beliefs about learning, they tend to employ ineffective learning methods or strategies in many study areas. These ineffective methods can result in low achievement, and if students remain in a 'low achievement condition' for a long period of time, they would find it hard to keep up their motivation.

The findings of recent research studies about student learning beliefs suggest that these beliefs also influence the effects of interventions for the development of desired learning skills and strategies. For example, Shinogaya (2008) demonstrated that teacher's encouragement of reading a textbook before class as a form of preparation had positive effects only for students who valued understanding the meaning of what they read as well as rote memorizing, but not for students who considered rote memorizing as the only thing that is important.

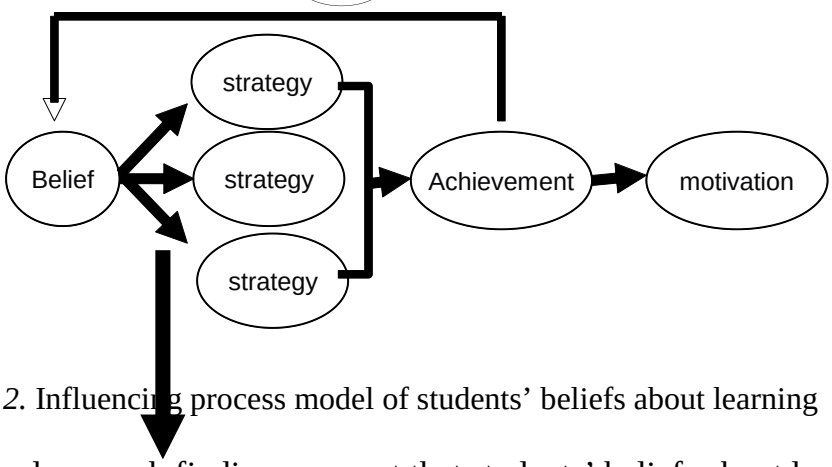


Figure 2. Influencing process model of students' beliefs about learning

These psychological research findings suggest that students' beliefs about learning impact on the learning outcomes for the students, including their use of learning strategies, the benefits they get from teachers' instruction, and their achievement in class. Thus, it can be said, when supporting students to promote more effective

learning, that it is important not only to focus on students' domain knowledge and their learning skills but also on the students' actual beliefs about learning.

Educational practices involving students' beliefs about learning

Some recent research studies have also put forward examples of how students can be supported in their learning with the use of research findings about these learning beliefs. In this section, three such methods are described.

Providing feedback to students about the results of questionnaires they complete

The first method is to provide feedback to students based on their responses to the questioner developed by Uesaka et al. (2006). The important point here is to encourage students to consciously understand their beliefs orientation. In many cases, students do not consciously recognize their tendencies, and they tend to think that 'other students also think the same as me'. So, it is necessary for students to develop some form of 'meta-cognition' about their orientation. Recognizing their own orientations would be the first step in an intervention from this perspective.

When this approach was used at a public junior high school in Japan, each student was provided with a visual representation of their orientation. Figure 3 shows examples of spider charts that visually convey students' beliefs about learning. After researchers have briefly explained each subscale, students were encouraged to share the results with other students. Many students then realized that the patterns of the spider chart are highly individual. It helped them to more consciously recognize and consider their own orientation, and to get a more objective perspective on this orientation. After that, students were asked to answer questions on a worksheet: 1) firstly, they were asked to answer which orientation was highest (or lowest) among the eight subcategories; 2) secondly, they were asked to consider any orientations that they wanted to promote; and 3) thirdly, they were asked to think about how to enhance those orientations.

This type of support started in 2004 with 9th grade students, but it has since been used with students from a broader age range. Now it is used from 5th grade to university levels. Recently, for the provision of feedback, spider charts have been made by using percentile scores instead of students' raw scores from their responses to the questionnaire. This is because the average scores in the 'cognitive beliefs about learning' tend to be higher and the 'non-cognitive beliefs about learning' tend to be lower, so comparative information instead of an absolute score is considered as providing a more meaningful representation of the students' learning orientations in the spider charts.

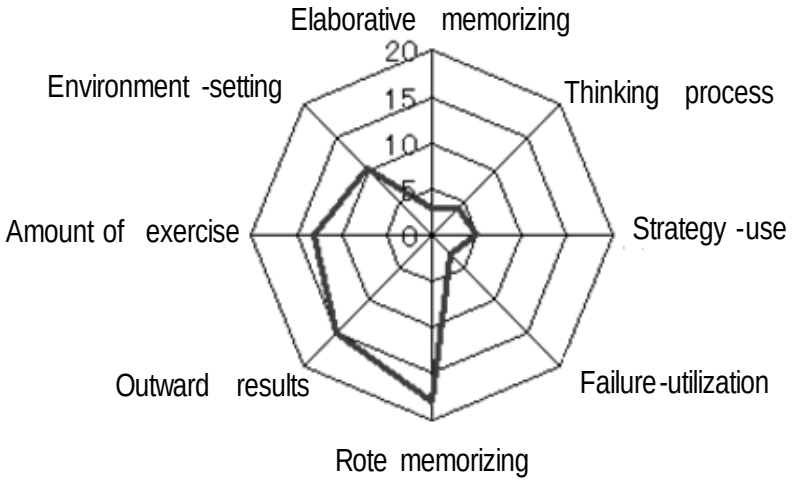


Figure 3. Example of spider chart of students' beliefs about learning

Combining feedback about learning beliefs and strategy skills training

The second method is best explained using an example of an educational intervention which was conducted with high school students (10th grade students; see Uesaka & Manalo, 2008). In this intervention, not only feedback but also effective learning skills were provided. This intervention was developed because there were obvious limitations in the previous support of providing only feedback to students. Although it is important for students to reflect on their belief tendencies facilitated through the provision of feedback, in most cases it is hard for students to change their ways of learning by themselves. Thus, if teachers or advisors hope to facilitate transformations in students' learning behaviours, it is necessary to teach effective learning strategies to students as well as making them conscious about their orientations.

In the educational intervention referred to, researchers involved in cognitive counselling and teachers in a high school collaborated and provided students with a course to improve their learning skills. The course was delivered over 6 days, and each day's session lasted about 2.5 hours (70 minutes x 2). The following topics and activities were dealt with in the course.

1st day:	Reflecting on overall learning (including asking students to reflect on their beliefs about learning).
2nd day:	How to memorize effectively.
3rd day:	How to solve problems effectively.
4th day:	How to utilize external resources effectively.
5th & 6th days:	How to write and present effectively.

On the first day, students were given a chance to consciously reflect on their beliefs about learning by using the questionnaire. Opportunities to experience effective learning methods were provided from the second to the sixth days. In here, participants experienced demonstrations relating to psychological research findings to facilitate

their understanding of some effective ways of leaning. For example, during the fourth day's session, which encouraged the use of external resources when solving problems, the students were given the opportunity to compare the relative ease/difficulty of problem solving with and without the use of diagrams. In addition, activities were prepared that provided participants with opportunities to use the strategies in their real school subjects. For example, using external resources such as diagrams for solving authentic math word problems was included as part of the course.

To validate the effectiveness of the course, personal interviews with participants were conducted about three months afterwards. The results demonstrated transformations in both the students' learning behaviours and their beliefs about learning. For example, although one general weakness among Japanese students is their lack of spontaneity in using external strategies like drawing of diagrams when problem solving (Uesaka, Manalo, & Ichikawa, 2007), spontaneity in the participants' use of diagrams was confirmed to have been enhanced based on data gathered from the notebooks they used in their course. Prior to the intervention provided, all of the participants copied the teachers' diagrams from the board onto their notebooks; they rarely constructed diagrams by themselves. In contrast, after the intervention, the participants not only copied the teachers' diagrams but also constructed their own diagrams in their notebooks. This result provides support for the effectiveness of combining the approaches of making students conscious of their learning beliefs orientations and providing opportunities for the students to develop effective learning strategies.

Facilitating change in students' beliefs and learning behaviours through personal tutoring

In the previous two examples given, the support provided to students was delivered in group settings. However, providing general instruction and support in group settings is not always effective for promoting the desired transformations in all students. Students with serious problems (e.g. lack of motivation) need personal tutoring, in which an appropriate prescription can be provided to each learner based on assessment. Personal tutoring like cognitive counselling is an effective method for this.

One example of a case study in cognitive counselling was conducted by the current author (Uesaka, in press). The client in this case was an 8th-grade girl (14 years of age) living in Japan. The reason why she visited the cognitive counselling service was as follows. Her achievement was comparatively high in primary school, but it dramatically decreased after she entered junior high school. She spent a lot of time attempting to solve problems given in class, but her achievement did not improve; rather it deteriorated further. As a result, she developed a serious lack of motivation. Her low achievement was especially serious in math, so she hoped to improve in this school subject.

The initial assessment indicated several problems in her learning behaviour and in her beliefs about learning. One of the problems was that she was practising a lot, but did not reflect at all about what she was doing, so she made the same mistakes repeatedly.

Moreover, the assessment results suggested possible reasons why she used such an ineffective learning approach. Firstly, she strongly valued the amount of time she spent on exercises but did not care much about the quality of methods she used. This orientation is congruent with the 'amount of exercise orientation', which is one of the subcategories in the questionnaire developed by Uesaka et al. (2006). Secondly, she considered experiences of failure in studying as embarrassing, so that she preferred not to reflect on her failure in solving problems. This suggested that she was weak in the 'failure utilization orientation'.

To address this client's difficulties, in addition to making her conscious of her own beliefs about learning, the counsellor taught her how to use a learning strategy called 'lesson induction'. This strategy involves considering the reasons for failure or success that follows attempts at solving problems. The counsellor also pointed out to her the problems associated with her beliefs about learning, and additionally encouraged her to write down the 'lessons learnt' (from the lesson induction strategy) in her notebook to make her think more about those lessons. By asking her to reflect on the reasons why she failed in problem solving through the use of lesson induction, the counsellor aimed at helping her develop understanding of the procedures and other aspects of problem solving she had not yet learnt.

As the counsellor guided the student in inducing lessons from many problem-solving exercises, the student gradually understood that she often repeated the same mistakes. After she realized this, she started to use lesson induction spontaneously in math, which means she induced lessons even in tasks where the counsellor did not provide encouragement for using lesson induction. After she had acquired lesson induction as part of her own repertoire of strategies in mathematics, her achievement started to improve. Her motivation also increased following the improvements in her achievement.

After the student realized the effectiveness of this strategy and the inappropriateness of previous methods of learning she had used, her beliefs were also transformed. One comment she made during counselling was, 'This [lesson induction] is really good! I thought solving as many problems as possible was most important. But if I correct my weaknesses, it is far more effective!' This comment shows clearly that her beliefs about learning were transformed from the 'amount of exercise orientation' towards the 'strategy-use orientation'.

Moreover, after she changed her beliefs about learning, her learning behaviours in other school subjects also changed. In particular, she started to use lesson induction even in science, in which she did not receive explicit encouragement for its use. The learning process that this student went through can be understood easier using the diagram shown in Figure 2. In mathematics, she was advised to use lesson induction as an effective strategy, and her achievement was enhanced. Enhancement of her achievement in mathematics led her to be better motivated. Moreover, the improvement of her achievements caused a change of her beliefs about learning, and it

affected the learning methods she used in other subjects like science. Although this is a description of a case study with only one client and thus generalizability would be limited, it clearly shows that improvement in class achievement through the use of effective learning strategies leads to positive changes in beliefs about learning (this is the feedback process shown in Figure 2).

Conclusion

The most important purpose of this paper was to explain the importance of focusing on students' beliefs about learning if improvements in their learning outcomes are desired. It has been observed in recent research that students' beliefs about learning affect their use of learning strategies, how much they benefit from the instructions provided by their teachers, and their achievement in class. Thus, paying attention to students' beliefs about learning is one crucial aspect in efforts to facilitate transformations in students learning behaviours.

Another important purpose of this paper was to introduce specific examples which describe provisions of support for students from the perspective of their beliefs about learning. Three examples, which include both class-based (group) and one-to-one approaches, were described. Strategies for supporting students from the perspective of their beliefs about learning are by no means limited to the approaches described in these three examples. It is expected that different types of interventions would be developed in response to findings about the beliefs that students hold about their learning.

The final point that needs to be considered in this paper is whether these perspectives and teaching approaches are really applicable when working with students at other levels of study, such as at the university level. Although the questionnaire that Uesaka et al. (2006) developed was based on knowledge gathered from case studies in which most of the clients were school students, the questionnaire itself should be applicable to students at other levels of study. One of the reasons it can be considered applicable comes from findings from an exploratory attempt to use this questionnaire in a university setting. During a class of educational psychology in one Japanese university where the first author is teaching, students were given feedback about their beliefs about learning based on their responses to the questionnaire. The students were provided with brief instructions and a feedback sheet; they were asked to share their profiles with other students and to fill in the worksheet that was basically similar to the one used with school students. The comments they wrote on the review sheet (e.g., 'I was surprised to find that friends around me had quite difference orientations", and "It is a good experience to know my own orientation … I had not consciously thought about these until today.') showed that this activity can provide insightful information even to university students. This observation suggests that this questionnaire can be useful in raising university students' awareness about their usually unconscious orientations towards learning. However, at the present time, insufficient investigations

in this area have been undertaken with university students; thus it is the present authors' intention to pursue such investigations as part of their future research plan.

References

Ichikawa, S. (2005). Cognitive counselling to improve students' metacognition and cognitive skills. In D. W. Shwalb, J. Nakazawa., & B. J. Shwalb (Eds.), *Applied developmental psychology: Theory, practice, and research from Japan* (pp. 67-87). Greenwich, CT: Information Age.

Ichikawa, S., Horino, M. & Kubo, N., (1998) Gakusyuuhouhouwo sasaeru gakusyuukanto gakusyuudouki [Students' beliefs and motivations about learning that support their strategy use]. In S. Ichikawa. (Ed.), *Ninchikaunseringukaramita gakusyuuhouhouno soudanto shidou [Counselling and teaching study skills: A cognitive counselling approach]* (pp. 186-203). Tokyo: Brain Press.

Pintrich, P.R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*, 667-686.

Shinogaya, K. (2008). Effects of preparation on learning: Interaction with beliefs about learning. *Japanese Journal of Educational Psychology, 56,* 256-267.

Ueki, R. (2002). Structure of high-school students' beliefs about learning. *Japanese Journal of Educational Psychology*, *50,* 301-310.

Uesaka, Y. (in press). How learning strategy use transfers across different school subjects: A case study on the promotion of the spontaneous use of "lesson induction". *Japanese Journal of Educational Psychology.*

Uesaka, Y., & Manalo, E. (2008). School curriculum development to promote students spontaneous diagram use in problem solving. In G. Stapleton, J. Howse, & J. Lee (Eds.), *Diagrammatic representation and inference (Lecture Notes in Artificial Intelligence 5223)* (pp. 437–439). Heidelberg, Germany: Springer-Verlag.

Uesaka, Y., Manalo, E., & Ichikawa, S. (2007). What kinds of perceptions and daily learning behaviors promote students' use of diagrams in mathematics problem solving? *Learning and Instruction, 17,* 322-335.

Uesaka, Y., Seo, M., & Ichikawa, S. (2006). Nintisyugiteki, Hinintisyugiteki gakusyuukansyakudono sakusei [Construction of a questionnaire to assess the cognitive and non-cognitive learning beliefs of students]. *Proceedings of the*

67th annual conference of the Japanese Educational Psychological Association (p. 501). Tokyo: The Japanese Association of Educational Psychology.

White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review. 66,* 297-333.

Acknowledgements

We appreciate the thoughtful contributions of Dr. Emmanuel Manalo (Student Learning Centre, the University of Auckland) in the preparation of this chapter. This work was supported by Grant-in-Aid for Scientific Research (70134335).

Demonstrating student transformations

Emmanuel Manalo[10]
The University of Auckland
New Zealand

Abstract

Being able to demonstrate tangible transformations or positive changes in students' academic performance is important for those in the tertiary learning advisor profession. This paper considers the various ways in which learning advisors may be able to provide evidence that such transformations do occur regularly via the teaching and support work they undertake with students. The kinds of data that need to be gathered are examined. Examples are provided and strategies that may enable better preparation to gather the necessary data are outlined. Finally, possible ways for effectively reporting the transformations effected are noted.

Introduction

Transformations in student academic performance are a regular feature of the day-to-day work of tertiary learning advisors (TLAs). In fact, promoting such transformations is the very purpose of their work: they are employed to teach and support tertiary students to develop their academic learning and performance skills so that these students will succeed in their courses of study and avoid or overcome potential difficulties. Thus, for example, many TLAs teach students various aspects of writing skills – from question analysis to revision and proofreading – and in the process often observe and 'experience' the transformations that students make from being 'uncertain about expectations and what-to-do' to being 'confident and skilled in producing the requisite pieces of work'. Likewise, TLAs teach and advise students who self-refer or are referred because they failed assignments or exams and, in the process, have the privilege of observing the transformations that such students make from being 'students who are struggling' to being 'students who are passing'. TLAs often cite this aspect of their work as the most satisfying (Manalo & Trafford, 2006).

Considering that the transformations that TLAs facilitate often directly link to improvements in students' academic performance, and that such improvements in turn directly link to factors such as retention and completion, demonstrating evidence for such transformations is vital in the current tertiary education environment. There is a strong emphasis worldwide on tangible performance outcomes for tertiary education providers. In New Zealand, for example, the Ministry of Education's Tertiary

[10] Manalo, E. (2009). Demonstrating student transformations. In M. A. F. Silvester (Ed.), *Transformations: Proceedings of the 2008 Annual International Conference of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ)*, (pp. 101-114). Auckland, New Zealand: ATLAANZ.

Education Strategy has implemented a new funding and management system which is aimed at promoting "a much stronger focus on quality and relevance of education and research *outcomes*" and a shift of focus from "participation and funding to *achievement* …" [italics added] (New Zealand Ministry of Education, 2007, p. 13). In most 'investment plans' drawn up and agreed by New Zealand tertiary institutions with the Ministry of Education's Tertiary Education Commission, figures relating to student retention and completion requirements are included. Thus, all stakeholders – from the students themselves to the Ministry of Education – are keen on 'seeing' positive academic performance transformations materialising.

Students who receive instruction, advice, and support from TLAs need little convincing about the transformative effects that these provisions facilitate. The consistently high student uptake of services provided by learning centres in tertiary institutions, both in New Zealand and overseas, is testament to students' perceptions about the added value that such services contribute to their academic performance. Unlike 'staff' professional developers who generally do not include uptake of services they provide as an indicator of the impact of the services they provide to their client group (Gray & Radloff, 2008; Kreber & Brook, 2001), TLAs consider student uptake of services they provide to be one of the crucial indicators and monitor of their work performance effectiveness. In other words, if they provide effective student instruction and support, students will come – and keep coming back for more (or its antipode: that no one will use services that are perceived and experienced as adding little or no value). Especially in the current tertiary education environment where the general view is that 'all' students can benefit from some learning development, the proportion of the student cohort that takes up the TLA services provided can be considered as one important measure of the appropriateness and usefulness of those services.

Beyond the students and the members of the TLA profession, however, there is still a considerable amount of convincing that needs to be undertaken. For example, other academic and management staff members in tertiary institutions do not necessarily understand the intricacies involved in, let alone the outcomes that result from, the services that TLAs provide for students. In fact, amongst a minority of institutional staff, there are lingering misconceptions about the work of TLAs – for example, that they 'proofread students' written work', and that they only provide support for 'international students' or those 'who are struggling in their studies'. Understanding of TLA work and the effects of this work is likewise limited outside of the institutions, for example amongst policy and decision makers in government agencies dealing with educational matters. Thus, there is a fair amount of work required if TLAs are to demonstrate more widely the value and centrality of their work in the tertiary education environment (Radloff, 2006).

It is no longer adequate for TLAs to 'know' only amongst themselves that they are effective facilitators of positive transformations in students' academic performance: they need to gather and widely disseminate tangible evidence to this effect. The

remainder of this paper will consider manageable ways by which this can be achieved, including strategies for dealing with potential obstacles.

How can student transformations be demonstrated?

There are three basic ways by which TLAs can demonstrate that work they have undertaken with students has resulted in positive transformations: (i) by making before and after comparisons, (ii) by comparing student groups who have used the services they provided with those who have not, and (iii) by examining student reports of their experiences and views relating to the use of the services provided. Each of these ways is discussed in the following subsections.

Before and after comparisons

When TLAs facilitate skills development in students, important question to ask are: What can the students do *now* that they could not do *before*? What can the students do *better* as a consequence of the skills development training provided?

The answers to such questions are many and, depending on the nature of the course or support programme provided, could range from the broad (e.g., they can achieve greater success in their courses) to the very specific (e.g., they can now write better introductions for their essays). It is important that TLAs know exactly what competencies and capabilities they are promoting with the instruction and support they are providing. Reflecting on, and clarifying these, could help not only in specifying the purposes of instruction and support programmes they provide but also in fine tuning the instructional elements that make up those programmes.

For example, a TLA teaching a reading skills workshop may want to think carefully about what exactly students ought to be able to do better as a consequence of attending that workshop. Should they, for instance, be able to skim read and identify key points from text materials more accurately, find relevant information for assignments more efficiently, or become better skilled in critically appraising important points from reading materials they study? As noted, careful consideration of such transformational outcomes could help in making sure that the workshop has the right elements (e.g., the appropriate structure, information coverage, handouts, points for discussion, practice exercises, etc.).

It is also crucial to ask how it may be possible to demonstrate that the resulting improvement in capability or competence actually occurs. This question is something that many TLAs may not be used to asking, let alone to actually taking the steps that may be required to answer it. But demonstrating improvements in student capability and competence is not that difficult, and taking before-and-after measurements of their performance and comparing these performance measurements would be one of the most practical ways to achieve this evaluation. For instance, if a TLA believes that the reading skills workshop he/she teaches improves students' ability to skim read and accurately identify key points from reading materials, the TLA could 'test' the

students at the start and at the end of the workshop. One way of doing this would be for the TLA to administer equivalent text materials for the students to skim read within a specified period of time, then ask them to answer questions to assess how well they have picked up on the key points from the reading materials. Comparing their scores in the questions given *before* and *after* participation in the workshop would provide a reasonable gauge of any gains they make in developing their skim reading skills.

To reduce the likelihood that detectable differences in students' performance could be due to the reading materials and associated questions not being equivalent, the materials could be swapped for some students. In other words, approximately half the students could be given reading material A at the start of the workshop and then reading material B at the end of the workshop, while the others could be given reading material B first and then A afterwards.

The reasonably close proximity of the before and after assessments in workshops like the example described means that the possible influence of other factors on the students' performance can be minimised. Thus, it can be claimed with reasonable confidence that any observable improvements in the students' skim reading outcomes are likely to have resulted from their participation in the workshop – and *not* because of other factors like information they might have acquired elsewhere, additional experience they might have gained from reading tasks associated with their regular courses of study, and so on.

A good example of where the before-and-after comparison was effectively used to demonstrate resulting improvements in student performance is in a study described by Marshall (2007). Marshall provided writing skills workshops in which the construction of good essay introductions was dealt with. She gave the students an exercise at the beginning and at the end of the workshop in which they were asked to write an introduction for an essay. She used a set of criteria to assess the quality of the introductions that the students produced, and found that the introductions written following the workshop were significantly improved in the writing elements (i.e., structure and content) taught during the workshop. To further validate her findings, Marshall also examined the introductions that the students subsequently wrote for their course essay and found indications that the quality and structure of the introductions that the students wrote were correlated with the overall grades they received.

Comparing student groups

Another useful way of assessing the benefits that students gain from making use of instruction and support programmes that TLAs provide is to ask questions like: What can these students do better compared to students who did not partake in the programmes provided? How does the progress of students who participate in the programmes provided compare with the progress of students who do not?

Answering questions such as these addresses a crucial core function of TLA work: TLAs are employed to teach and support students so that they will be able to perform

better in their studies; it follows therefore that, if TLAs are effective in their work, there should be discernible benefits to those students they work with compared to those they do not. Their effectiveness should not be left to speculation or trust. The *better* academic performance of students they work with should attest to the institutional value of the instruction and support they provide.

How then should TLAs demonstrate this discernible performance improvement in student groups they work with? The answer to this would depend on the performance issues that the specific programmes they provide attempt to address. For example, in a programme aimed at improving student retention and progression in a particular course of study, it would be imperative that retention and progression statistics of students who participate in the additional TLA-provided programme be analysed and reported. These retention and progression data could be compared with equivalent data from previous cohorts of students who have taken the same course of study, or from students who for one reason or another did not participate in the programme provided by the TLAs.

There are of course many factors that impact on student performance, including their decisions to stay or drop-out, and to continue or change their courses of study. Thus, where possible, TLAs need to (i) clearly link the programme or intervention being provided to the performance issue being addressed, and (ii) establish equivalence of groups being compared. For example, if student retention in a course of study is being addressed, and it has been found that many students drop-out soon after the first big assignment which they either fail to submit or obtain a poor mark in, an intervention aimed at upskilling the students in planning, managing, and writing the assignment would be appropriate. Thus, any subsequent improvement in student retention could be explained with a reasonable degree of confidence by the intervention used – because this intervention directly addresses identified probable contributors (i.e., failing to complete the first difficult assignment, or getting bad grades for it) to the problem (i.e., students dropping out of the course).

In the same example given, assuming that no other major changes are made to the course in question compared to previous years (especially to aspects like student selection and acceptance), a reasonable degree of equivalence can be assumed between the current and previous years' cohorts of students that have enrolled in the course. Thus student retention in the course, for the previous and current years, can be compared to evaluate whether the intervention has had any impact. For the purposes of demonstrating the impact of the intervention provided, an approach that integrates the intervention within the course itself would be preferable to making the intervention optional. Interventions that are optional for students to take up, and which involve comparison of subsequent performance of students who participate and those who do not, are open to criticisms about lack of equivalence in motivation and other such qualities between the groups of students being compared. If the intervention (say, in the form of workshops) is integrated into the regular class sessions so that students do

not have to choose whether or not to participate, criticisms associated with student self-selection can be avoided.

A good example of where the group comparison approach was used effectively to demonstrate the positive impact of a learning support intervention on student retention and success was described by Te Moana and Stewart (2006). Te Moana and Stewart used a team teaching approach to provide supplementary instruction and support in a course which had a high proportion of Maori students (41% in semester 1 of 2006) and also high attrition and low success rates for those Maori students. The supplementary instruction and support was delivered via one tutor taking responsibility for teaching the content of the course to students in group and one-to-one sessions, and the other tutor taking responsibility for providing follow-up instruction activities on related topics and study skills. They used a team teaching approach, which meant that the two tutors actively shared and worked with each other in providing supplementary instruction in content and skills to the students taking the course. Te Moana and Stewart reported that in 2005 the Maori students who took the course had a retention rate of 56% and a success rate of 44% for those who stayed in the course. In 2006, following the intervention they provided, the Maori students' retention rate rose to 70% and the success rate to 100%. For all the students taking the course, there was also an overall improvement in success rate from 48% in 2005 to 94% in 2006. Te Moana and Stewart also reported that 81% of the students who succeeded in the course in semester 1 of 2006 went onto further study.

Manalo's (2001) paper presentation provided an example of where improvements in student pass rates were reported based on comparisons between students who participated in a programme provided and students who did not. Manalo noted significantly better pass rates of special admission students who participated in a one-day intensive study skills workshop, which was offered at the start of semesters by TLAs working in a learning centre. Special admission students are individuals who do not possess formal qualifications to enter university but are permitted to enrol in non-restricted courses in New Zealand universities due to the fact that they are 20 years of age or over. As a group, they have one of the lowest pass rates at university, being only around 50% (this means they pass only around half of the courses they take). Manalo reported that special admission students who participated in the intensive workshop they provided between 1995 to 1999 obtained average pass rates of around 70% or better. This claim however was open to criticism that the students who participated may have been better motivated than those who did not, and that their higher levels of motivation could have predisposed them to higher likelihood of success in the first place. To address this likely criticism, Manalo pointed out that when measures of academic motivation of participating and non-participating students were taken (using the Academic Motivation Scale; Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992), no significant differences were found. In other words, the students who participated in the workshops were in fact not better motivated to succeed academically than those who did not attend. A comment (also reported by Manalo) from one of the students who participated in the workshop perhaps best sums

up why the intervention was effective in promoting success among special admission students: ‘Mature students have extra hurdles to confront but are very motivated – we just need the skill sets to succeed!’ The intensive course provided was aimed at highlighting, explaining, and practising those very same skill sets that are crucial to managing and succeeding in the various forms of assessment that student need to contend with in their university studies.

Reports of student experiences and views

Feedback from students about their experiences and views relating to instruction and support provided by TLAs is another important way by which student transformations can be demonstrated. This kind of data is usually obtained by directly asking students via surveys/questionnaires or interviews. Even though such data are subjective, they are nevertheless a valuable means of assessing the benefits that learning development programmes and interventions deliver. After all, these programmes and interventions are for the benefit of students, so the students’ experiences and views about the extent to which they actually help in the development of new skills and capabilities are an important gauge of the programmes’ and interventions’ success in meeting this purpose.

There are however a few issues that need to be considered when interpreting student feedback. First, as noted, they are subjective. This means, for example, that for two students who both learn new strategies for approaching study reading in a workshop, one could appraise the experience as being ‘Ok – although it would have been much better if the tutor also taught us how to speed read’, while the other could report that ‘It is the most useful skill I have ever learnt this semester!’ The skills development that occurs as a result of the workshop provided may very well be equivalent, but the student responses/feedback – whether in the free-reporting style given in this example, or on a Likert-type rating scale – could be vastly different. Because of this subjectivity, it is important to be quite specific when asking for feedback via questionnaires and interviews. For example, instead of simply asking how useful a workshop has been, it may be better to ask students about their confidence in carrying out specific skills that have been covered in the workshop. Thus questions like the following could be used:

1 = fully confident
2 = moderately confident
3 = barely confident
4 = not confident at all

Using the above scale, please rate your confidence in being able to effectively perform the following reading related tasks by circling the number you feel is most appropriate.

(a) Establishing a clear purpose for reading	1	2	3	4
(b) Obtaining the gist of a reading material	1	2	3	4
(c) Appraising the relevance of a reading material	1	2	3	4
etc.				

If students are asked the same questions prior to instructions being provided, then before-and-after comparisons of the students' perceived confidence in executing the skills covered could be made. Thus, it may be possible to demonstrate resulting transformations.

A second issue that TLAs need to be wary of when gathering student feedback, is the influence of students' expectations. Most students participating in a programme or intervention aimed at improving their study-related skills and competence would have expectations and desires aligned with the objectives of the programme or intervention. Thus, assuming that a workshop is conducted proficiently, the majority of students would provide positive evaluations when they are surveyed or interviewed immediately after the workshop. While such feedback could provide an accurate gauge of immediate post-instruction satisfaction, it would not be an appropriate or reliable gauge of the workshop's actual usefulness. To obtain a more appropriate gauge of the students' perceptions of the workshop's usefulness – based on their experiences of attempting to use what they have learnt – it would be better to survey or interview the students after a period of time has elapsed and they have had opportunities to apply the skills covered to relevant study tasks.

Bos' (2008) paper provides a good example of where feedback from students was used to demonstrate the usefulness of a course project aimed not only at developing students' cross-generational and cross-cultural knowledge and appreciation, but also their research skills and communication abilities (hence, learning skills development was a key objective of the project). For the project, students were required to interview someone in their community who was not a relative or family member, and was over the age of 45, about a significant historical event that the interviewee had personally experienced. A course survey was later administered to gauge students' perceptions of the usefulness of the project, the extent to which their knowledge increased, and their satisfaction with the course. Students were asked how much they knew about the historical event dealt with in the interview they conducted prior to and after the interview project. Significant gains of around 30% were shown in students' ratings, indicating that the interview project promoted students' historical knowledge acquisition. The data also revealed that students who interviewed a person from a culture different to their own reported double the rate of knowledge acquisition – pointing to the learning benefits of communicating with individuals from other cultures. Bos also reported that students rated the project high in terms of contributing to the development of learning skills that are helpful to their university studies.

Reports on student feedback about their experiences and views concerning the usefulness of learning instruction/support they have received from TLAs can effectively supplement before-and-after and student group comparisons that demonstrate the desired transformations. Being able to present both *quantitative evidence* for a programme's efficacy in promoting the desired student outcomes (e.g., numerical data showing improvements in students' skills acquisition, grades, persistence in a course or study, or course completion), and *qualitative evidence* that

confirm those findings from the participants' perspectives (e.g., survey or interview data from students showing that in their opinion the programme achieved its purpose) would make a claim for bringing about desirable student transformations far more convincing than presenting only one form of evidence.

Additional considerations

Because TLAs often hear that student academic performance is influenced by many different factors, some TLAs get discouraged from making any attempt to demonstrate the impact and/or benefits of instruction and support they provide for students. While it is true that there are many factors that can affect how students perform in their courses of study, this fact should not be taken as a disincentive to trying to show the influence of those factors that TLAs contribute to the promotion of desirable outcomes.

There are a number of ways to effectively manage this 'other factors' problem. One important way is to acknowledge the possible influence of other factors when writing or reporting about the impact of a programme or intervention. These other factors could, for example, be differences in the students' levels of motivation to succeed or their willingness to make use of support facilities/resources available to them. Note however that, as other authors have previously pointed out (e.g., Behrman, Dark, & Paul, 1984; Manalo, 2006; Manalo, Wong-Toi, & Henning, 1996), these other factors – like motivation – are inadequate on their own to produce success, particularly if students lack the skills necessary to effectively handle study tasks given. The development of these task-related skills is often the very 'factor' that TLAs contribute towards the promotion of successful outcomes.

Another useful way to manage the 'other factors' problem is to control for them when and where possible. The most common ways of doing this are to (i) reduce or limit their likely impact on the outcomes being examined, and (ii) demonstrate the equivalence of groups that are being compared. One effective way of reducing/limiting the impact of other factors is to take the necessary measurements before these other factors could occur. For example, if one is teaching essay planning and structuring skills to a group of students, taking some measurement of how well they can carry these out soon after instruction has been provided – before any 'other factors' can exert their influence on what the students can do – would be a good strategy. Another way to limit the influence of other factors is to make sure that participants get 'the same' where these other factors are concerned. For example, if a TLA is a teaching memory strategy for new vocabulary words and was concerned that in evaluating the efficacy of the strategy some students may have an advantage depending on the kinds of test words used, the TLA could use pseudo-words (e.g., *tords, une, pseuro*) instead of real words. Thus, the possible influence of participating students' knowledge about *real* vocabulary words could at least be reduced and the efficacy of the memory strategy could more accurately be evaluated.

Where demonstrating the equivalence of the groups being compared is concerned, obtaining some measure of the possible confounding factor would be a good strategy. This way, it would be known for certain whether the groups really do differ on that factor. The earlier mentioned workshop for students on special admission (Manalo, 2001) is one example where this was done: participating and non-participating students' motivation levels were assessed, and no significant differences were found. Thus, the possible criticism that the students who participated subsequently obtained higher rates of success 'because they were probably better motivated anyway' was addressed and shown to be without foundation.

There would of course be situations where considerable variance exists among the students concerned and the factors the students differ in could influence the extent to which they benefit from the programme or intervention being provided. For example, a TLA may suspect that the effectiveness of a workshop dealing with an aspect of written communication skills could depend on the students' subject discipline, year at university, and prior experience in completing written assignments at university. In such cases, it would be better for the TLA to include these other variables as part of the investigation. In other words, in the investigation that the TLA carries out, participation in the workshop *and* these other variables are examined to find out their influence on students' development of competence in the skill dealt with. It is outside of the scope of this paper to go into any more detail here, but the reader is advised to consult colleagues who possess expertise in research design and data analysis if he or she wants to find out more about how to carry out associated procedures.

Another important consideration for TLAs is how to ensure that activities leading to the monitoring and reporting of positive student transformations they facilitate are actually carried out. With the hectic teaching and administrative workloads that most TLAs have to contend with on a day-to-day basis, such research-related activities are often quickly relegated to the 'later' pile of things-to-do where, in many cases, they remain forever. However, TLAs need to keep in mind Chanock and Vardi's (2005, p. 2) comment that while most academics "have to find time outside of teaching hours to conduct research … [for TLAs] our teaching time is our research time, because students' learning is the object of our study". As they further pointed out, TLAs just need to ensure that they are sufficiently organised to have "time and opportunities to harvest the evidence … and to collect more as needed" (p. 6).

Planning and organising are therefore crucial to ensuring that the necessary monitoring and reporting of student transformations happen. As a starting point, the following questions may be helpful in facilitating this planning and organisation:

(1) What kinds of transformations do you facilitate and subsequently observe in your students?
(2) Which of these transformations do you think best demonstrates your effectiveness in your work?

(3) If you were to record evidence for such transformations, what kinds of data would you need to gather?

(4) Would it be possible to assess or record what students are capable of doing before and after the instructions you provide? If so, how?

(5) Would it be possible to compare the performance of students who 'participate', 'do not participate', and/or 'later participate' in programmes or interventions you provide? If so, what kinds of comparisons would be appropriate?

(6) What kinds of feedback can you obtain from students about the transformative benefits of instruction and support you provide?

After considering the answers to these questions, constructing a concrete step-by-step plan for what to do in the next semester would be advisable.

Effectively reporting transformations

There are a number of formats that TLAs can use to report the positive student transformations they facilitate. These formats include case studies, programme evaluations, and experimental studies. Case studies usually report work that has been undertaken with a student or a group of students, and the resulting outcomes of such work. The focus is usually on the specific characteristics and requirements of the student or group dealt with (e.g., students writing a research thesis, international students who have just begun their first year of university studies, a student who has a specific learning disability), and the specific nature of the work undertaken with them. The case study approach is particularly effective for showcasing the resourcefulness and innovativeness of TLAs, and their capabilities in providing for the learning development needs of students whose success may be of particular interest or concern in the current tertiary education environment.

Programme evaluations usually focus on specific instruction and support mechanisms that TLAs provide and the extent to which these address important student academic performance issues like retention and progression, and success and completion rates. This approach is particularly useful for demonstrating the value of key programmes that TLAs provide – such as preparatory and orientation courses, support programmes for targeted groups of students, individual consultations, various forms of courses and workshops, and collaborations with staff in subject departments and faculties. The focus is on the specific features of the programmes provided and the relationships of these to identified student learning needs, as well as the mechanisms by and extent to which the programmes facilitate the desired outcomes. Programme evaluation reports are particularly helpful in demonstrating the alignment of TLA work/activities with institutional and wider aims of improving tertiary student outcomes.

Experimental studies reports are meant to provide more precise rationale, aims, methods, and outcomes of learning development work that TLAs carry out with students. In reports of such studies, the focus is on clearly identifying what instructional/support methods work, what results can be expected, and why. Such reports aspire to being more objective and scientific – and as such they can be

particularly helpful in establishing academic credibility for TLAs and their roles in academia.

The reporting formats that have been described here are by no means exclusive of each other. Combinations or hybrids of these formats are possible. For example, a rigorous and systematic programme evaluation report could resemble or contain many of the features of a report utilising the experimental approach.

Concerning the question of where TLAs ought to report the positive student transformations they have been able to facilitate, the answer would largely depend on the purposes they want to achieve. Internal institutional reports draw to the attention of the institutional community – including key personnel who may have responsibility for matters such as funding and resources – the range and impact of work that TLAs undertake. Thus, these kinds of reports are helpful towards promoting greater recognition of the value and potential further applications of such work within each institutional setting.

On the other hand, writing papers for academic journal publication, or for inclusion in edited books or refereed conference proceedings, assist in the promotion of greater academic awareness about the tangible TLA contributions to student success. Chanock and Vardi (2005) discussed possible avenues for these kinds of publication, and included in their paper an appendix of selected journals that publish work in this area.

It is additionally useful for TLAs to present papers about their work at national and international conferences (where such participation may be possible and supported by their institution). Presentations at conferences not only provide TLAs with opportunities to share their work with others working in the same or related fields, they also provide excellent opportunities for learning, developing networks with others who share the same interests, and exploring possible avenues for collaboration. Note also that presenting at conferences where no refereed proceedings are published means that TLAs can still publish their paper in an appropriate academic journal or as part of an edited book.

Finally, TLAs ought to make a genuine effort to ensure that reference details and/or abstracts/summaries of their published papers are available through appropriate websites where other professionals in the field of education can find out about them. In New Zealand, such websites include those of *Ako Aotearoa* <http://akoaotearoa.ac.nz> and *ATLAANZ* <http://www.atlaanz.com>. Likewise, writing brief, simplified descriptions for a wider audience of professionals in the field of education via practitioner magazines like the *New Zealand Education Review* would help towards facilitating greater general understanding and appreciation of the nature and usefulness of the work that TLAs carry out in tertiary institution settings.

Conclusion

This paper has described methods by which TLAs may – in practical terms – be able to provide evidence about the positive transformations in students' academic performance they facilitate as part of their day-to-day work. Associated issues that need to be considered, as well as strategies for overcoming some potential obstacles, have also been discussed.

It is the author's view that demonstrating student transformations is a priority that TLAs need to action if, as a profession, they are to survive and thrive in the way the tertiary education environment is currently taking shape in New Zealand and internationally. This paper has presented some useful starting points, especially for TLAs who may not have had prior experience in publishing and/or disseminating in other significant ways their evidence about how they *personally* contribute to tertiary student retention and success. As noted earlier in this paper, the next step is to plan and organise how to it would be possible for them to do this – and then to take action at the earliest practicable opportunity.

References

Behrman, J. A., Dark, V. J., & Paul, S. C. (1984). The effects of a structured learning-skills intervention on long term academic performance. *Journal of College Student Personnel, 25,* 326–31.

Bos, M. M. (2008). Making a culture connection: Developing communication skills through research interviews. In J. van Rij-Heyligers (Ed.), *Intercultural communications across university settings – myths and realities: Refereed proceedings of the 6th Communication Skills in University Education Conference.* Auckland: Pearson Education.

Chanock, K., & Vardi, I. (2005). Data: We're standing in it! In: *The reflective practitioner: Proceedings of the 14th Annual Teaching and Learning Forum, 3–4 February 2005.* Perth: Murdoch University. Available online through: http://lsn.curtin.edu.au/tlf/tlf2005/refereed/chanock.html

Gray K., & Radloff, A. (2008). The idea of impact and its implications for academic development work. *The International Journal for Academic Development, 13*(2), 97–106.

Kreber, C., & Brook, P. (2001). Impact evaluation of educational development programmes. *The International Journal for Academic Development, 6*(2), 96–108.

Manalo, E. (2001, July). *Achieving higher pass rates for students on Special Admission.* Paper presented at the Fourteenth International Conference on the

First Year Experience in Conjunction with Fifth Pacific Rim First Year in Higher Education Conference, Honolulu, Hawaii, USA.

Manalo, E. (2006). The usefulness of an intensive preparatory course for EAL thesis writers. *Journal of Research in International Education, 5,* 215–230.

Manalo, E., & Trafford, J. (2006). Learning diversity and the multifaceted roles of tertiary learning advisors. *International Journal of Diversity in Organisations, Communities and Nations, 5*(3), 80–93.

Manalo, E., Wong-Toi, G., & Henning, M. (1996). Effectiveness of an intensive learning skills course for university students on restricted enrolment. *Higher Education Research and Development, 15*(2), 189–199.

Marshall, J. (2007, November). *Teach them and they will learn: The effect of genre-based essay writing instruction.* Paper presented at the Association of Tertiary Learning Advisors Aotearoa/New Zealand (ATLAANZ) Conference, AUT University, Auckland, New Zealand.

New Zealand Ministry of Education (2007). *Tertiary education strategy 2007-12*. Wellington: Author. [Available online from: http://www.minedu.govt.nz/~/media/MinEdu/Files/EducationSectors/TertiaryEducation/TertiaryEducationStrategy.pdf

Radloff, A. (2006). Supporting student learning in the 21st century: What's the job and whose job is it? In G. Grigg, & C. Bond (Eds.), *Supporting students in the 21st century: Proceedings of the 2005 Annual International Conference of the Association of Tertiary Learning Advisors Aotearoa/New Zealand (ATLAANZ)* (pp. 2–17). Auckland: ATLAANZ.

Te Moana, M., & Stewart, R. (2006, November). *Student engagement: Is it the strategies we use or the relationships we form that matter?* Paper presented at the Association of Tertiary Learning Advisors Aotearoa/New Zealand (ATLAANZ) Conference, Bay of Plenty Polytechnic, Tauranga, New Zealand.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement, 52,* 1003–1017.

Appendix 1: Statistics relating to the refereed proceedings

A total of 28 presentations were included in the 2008 ATLAANZ conference programme. Subsequently, a total of ten papers were submitted to be considered for the refereed proceedings of the conference. Table 1 shows the distribution of referees' recommendations across the categories available.

Table 1. *Distribution of Referees' Recommendations by Category*

Category	Number of recommendations
Accept for refereed publication as presented	1
Accept with minor revisions	11
Accept with major revisions	9
Reject for refereed publication but accept with revision for non-refereed publication	1
Reject	0
Total	22

Of the ten papers submitted for review, one was rejected for refereed publication but accepted with revision for non-refereed publication by one of the two referees, and all were subsequently accepted for publication subject to minor or significant revision. Eight of the authors were able to make the revisions required, but two papers were withdrawn due to other pressing time commitments.