



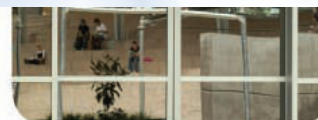
KIFT ALTC SENIOR FELLOWSHIP: ARTICULATING A TRANSITION PEDAGOGY

COMMENTARY ON FIRST YEAR
CURRICULUM CASE STUDIES:
ACADEMIC SKILLS PERSPECTIVE

JANET A. TAYLOR

AUTHOR:

Research and scholarship are an integral part of my practice. My current research involves investigating students' learning experiences within first year of study and the application of new technologies to learning. ... Over the past 12 years I have been the recipient of three national teaching development grants and have received a Carrick (now Australian Learning and Teaching Council (ALTC)) Citation for outstanding contribution to student learning



AUTHOR

01. Janet Taylor, Associate Professor and Coordinator of Academic Learning Skills within the Learning and Teaching Support Unit (LTSU)¹ at the University of Southern Queensland.

02. I have Masters and PhD degrees in zoology with a strong link with mathematical applications and a teaching qualification in mathematics education. I have worked in higher education for over 25 years and am currently a Fellow of Higher Education Research and Development Society of Australasia (HERDSA). In my 25 years in higher education I have enjoyed teaching and writing curriculum for mathematics and biology at four Australian universities; primarily at first year. Since joining the University of Southern Queensland, I have also been involved in designing and delivering curricula for distance education programs. Over the past 12 years I have been the recipient of three national teaching development grants and have received a Carrick (now Australian Learning and Teaching Council (ALTC)) Citation for outstanding contribution to student learning. My current position within LTSU means that I lead the team of LTSU staff who support students' academic skills development; my personal expertise lies in development of mathematical skills.

03. Research and scholarship are an integral part of my practice. My current research involves investigating students' learning

Academic skills are those skills that students require to be successful as students.

Many of these sit on a continuum with graduate skills, which will generally allow students to be successful employees and citizens.

experiences within first year of study and the application of new technologies to learning. My two most recent publications include:

Taylor, J. A. (2008). Assessment in first year university: A model to manage transition. *Journal of University Teaching and Learning Practice*, 5(1), 19–33. Accessed September 30, 2008, from <http://ro.uow.edu.au/jutlp/vol5/iss1/>

Galligan, L. & Taylor, J. A. (2008). Adults returning to study mathematics. In H. Forgasz, A. Barkatsas, A. Bishop, B. Clarke, S. Keast, W. Seah, et al. (Eds.), *Research in mathematics education in Australasia 2004–2007* (pp. 99–118). Rotterdam: Sense Publishers.

04. Other publications can be accessed at <http://www.usq.edu.au/users/taylorja/research.htm>

THE FIRST YEAR CURRICULUM PERSPECTIVE

05. Academic skills are those skills that students require to be successful as students. Many of these sit on a continuum with graduate skills, which will generally allow students to be successful employees and citizens. In these cases academic skills can be the stepping stones to the final achievement of the graduate skill. If you take a Google trip through the internet using the term 'academic skills', you will instantly see a list of universities across Australia and overseas listing academic skill support services for students.

06. Most of these services are directed towards the needs of beginning undergraduate students and list similar academic skill development resources. Academic skills often fall into the following categories:

¹ www.usq.edu.au/learn/teach

- communication skills
- working with others
- assessment skills
- academic numeracy
- critical analysis/ problem solving
- reflective/ self-monitoring skills
- managing university
- study management.

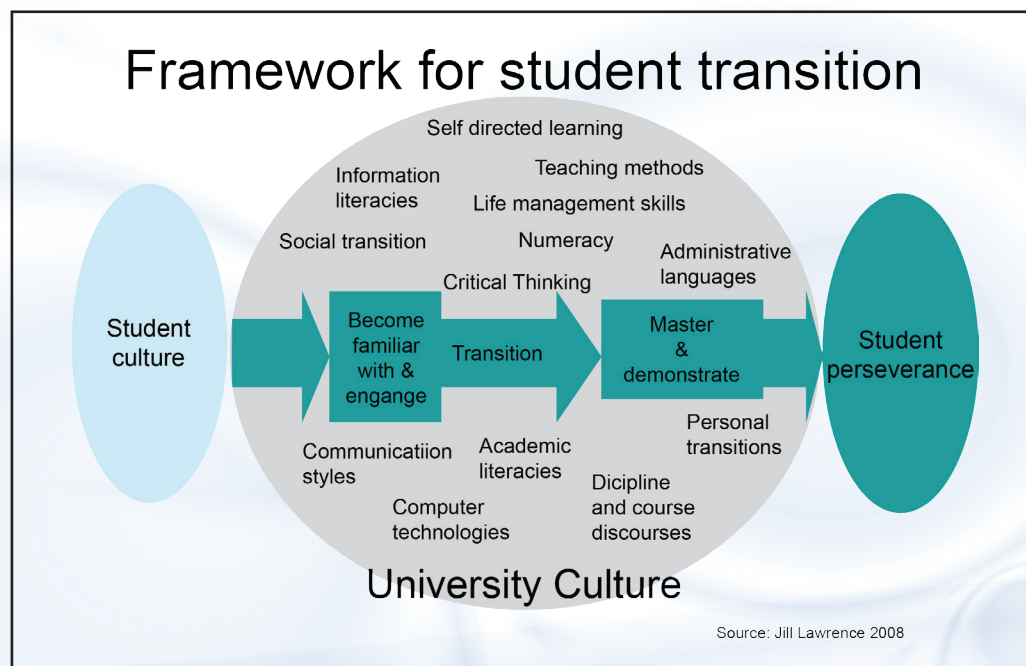
07. Information Literacy² is another important skill that can be grouped with academic skills. In some interpretations there can be significant overlap between communication and communication-related skills and information literacy skills. For more information on practice of academic skills embedding at USQ see: <http://www.usq.edu.au/learnteach/topics/embedacad.htm>.

08. The above are the most commonly accessed academic skills, but academic skills can extend more widely than those listed. Lawrence (2005, p. 19) contends that:

... the processes of transition and retention can be encapsulated in a theoretical shift: the deficit-discourse shift (Lawrence, 2004). It characterises the university as a dynamic culture embodying a multiplicity of subcultures, each with its own discourse/literacy. Students' transition and retention at university can be depicted as one of gaining familiarity, and ultimately mastery, of these discourses and literacies.

09. The model (below) presented by Lawrence reiterates the complexity of transition and the accompanying skills necessary for success. Lawrence (2002; 2005) believes that three major groups of factors are pivotal to success in the first year of undergraduate studies:

- socio-cultural competencies, such as seeking help, participating in a team, making social contact, seeking and giving feedback
- university based literacies such as academic literacy and numeracy, information literacies, administrative, library and research literacies
- self-management literacies including time and stress management.



2 See <http://www.usq.edu.au/library/services/staffresearch/infolit/firstyearsills.htm>

10. When considering Jill Lawrence’s framework, academic skills can become quite extensive.

Communication skills	Reflective and self-monitoring skills
Identifying main points in lectures/audio/visual mediums	Assessing when you are right
Identifying main point in text-based materials	Assess the effectiveness of your style of learning
Critical reading	Critically reflect on your learning
Efficient reading	Managing university
Critical listening	Adjusting to student role
Note making from text	Understanding university language
Note taking in lectures or other audio/visual medium	Asking for help
Memorising information	Study management
Writing sentences	Manage your study program effectively
Writing paragraphs	Develop a comprehensive career plan
Writing in specific forms (for example, essay, report)	Develop a study plan
Writing summaries	Action-plan your study program
Including authorities in writing	Managing time
Preparing oral presentation	Dealing with excessive stress
Presenting oral presentations	Academic numeracy
Preparing audio/visual submissions	Situate mathematics in different contexts
Writing materials for the web	Interpret mathematics
Critical analysis/problem solving	Critique mathematics
Asking questions	Use mathematics
Explaining ideas	Create mathematics
Organising ideas and concepts	Communicate mathematics
Analysing questions	Working with others
Problem solving from text	Leader of a group
Problem solving in quantitative situation	Giving and receiving feedback
Critical analysis	Assessment skills
Critically assessing visual and web materials	Utilising feedback
	Preparing for exams
	Managing exam stress
	Doing exams
	Working with others
	Leader of a group
	Giving and receiving feedback

11. **Information Literacy** skills can be defined, so that by the end of the first year of studies the information literate person:

- recognises the need for information and determines the nature and extent of the information needed
- finds needed information effectively and efficiently
- critically evaluates information and the information seeking process
- manages information collected or generated

- applies prior and new information to construct new concepts or create new understandings
- uses information with understanding and acknowledges cultural, ethical, economic, legal, and social issues surrounding the use of information.

From <http://www.usq.edu.au/library/services/staffresearch/infolit/firstyearsills.htm>

12. Universities address development of academic skills in various ways. In a seminal piece of work in 1983, Ruth Keimig produced a decision guide for effective learning improvement programs for under-prepared students. This guide included a hierarchy of effective programs from which educators could choose. Keimig concludes that comprehensive experiences are best evolved out of experiences derived from lower level programs.

LEVEL 1: REMEDIAL COURSES (SKILL FOCUSED COURSES)

13. Separate remedial, basic skills courses including critical thinking, reading, problem solving and quantitative reasoning are taught in isolation. Based on the assumption that the student has a deficit in these skills and that once taught in this fashion they will be transferable to other areas.

LEVEL 2: LEARNING ASSISTANCE FOR INDIVIDUAL STUDENTS

14. Typically offered through walk-in sessions in learning centres. Developed under the assumptions that:

- students have the problem, and therefore must seek the solution
- students can overcome deficiencies through independent study and tutorial assistance
- personal attention helps counter academic failure.

LEVEL 3: COURSE RELATED LEARNING SERVICES

15. This level has systematic coordination of developmental objectives and activities into academic programs. This level is based on the assumption that the institution must provide whatever extra instruction is necessary to bridge the gap between students' skills and knowledge at entry and those required in the program.

LEVEL 4: COMPREHENSIVE LEARNING SYSTEMS

16. Comprehensive learning systems provide for the total learning needs of all students through sophisticated and complex methods, often curriculum change.

17. In reinforcement of this, Hattie, Briggs and Purdie (1996) assert that the evidence suggests that learning skills are most effectively developed within a specific context rather than as generic initiatives. In 1996, Chalmers and Fuller (1996, p. 13) wrote: '[e]ducators have tended to assume that students will develop effective learning and study strategies as they grow older and have more experience with learning situations. This assumption is clearly not supported by research and anecdotal evidence'. Their book goes on to detail effective strategies for university teachers to explicitly develop academic skills. Wingate (2006) further argues that 'bolt-on' practices for study skills are 'remedial, not inclusive and divorced from subject knowledge'. In response to this research, many universities are now turning to embedding transition skills in curriculum design (Cluett & Skene, 2006).

18. This discussion is not meant to be an extensive literature review; for snapshots of academic skills development issues visit the Association of Academic Language and Learning website.³

... Hattie, Briggs and Purdie (1996) assert that the evidence suggests that learning skills are most effectively developed within a specific context rather than as generic initiatives.

³ www.aall.org.au

THE CASE STUDIES

EDUCATION CASE STUDY (HEALY, QUEENSLAND UNIVERSITY OF TECHNOLOGY)

19. This case study is located in the first year of an education degree of a large metropolitan university. The model used is committed to developmental curriculum framework with intensive academic support. This developmental framework is strongly linked with the growth of academic skills, and aims (in relation to academic skills) to:

- build student agency; team-work skills
- introduce the concept of self as learner and curriculum designer
- scaffold analytic and reflective practices
- model and support tertiary, professional and personal English language literacies.

20. The curriculum acknowledges the presence of orientation workshops and bridging programs, and attempts to build on these. Academic skills development is enhanced by a peer mentor program. For example, in orientation, students are introduced to a potential mentor who offers support (not including academic support) in a variety of ways.

21. The strength of academic skills development in this program is the explicit embedded development of skills within the subjects themselves. The case study cites numerous examples where specific skills are acknowledged, catalogued (by the student), and then developed within the education context. Numerous examples of these strategies are provided. Assessment is used as a foundational tool to establish habits and develop skills. As such the focus is on assessment for learning, rather than assessment of learning.

22. The case study clearly acknowledges that students need to be supported by the provision of:

- low stake assessment items in the first instance that are manageable and able to be supported by teaching staff
- greater emphasis on formative assessment in the first half of the first semester
- a well-communicated feedback strategy
- early diagnostic feedback on elements most likely to affect progress (for example, personal and other areas of academic literacies)
- feedback timetabled into tutorials
- assignments that have developmental comments but no marks.

APPLIED SCIENCES (TECHONE) CASE STUDY (FEE AND MCCrackEN, SIMON FRASER UNIVERSITY)

23. This case study is situated on a Canadian campus which is populated by students who are traditionally under-represented in higher education. The program is for interactive arts, technology, business administration, computing science, communications and mechatronics systems engineering students and resembles a number of preparatory programs offered in Australia.

24. It has four core subjects that focus on a range of academic skills:

- Technology in Everyday Contexts
- Spatial Thinking and Communicating
- Design Thinking
- Communication, Teamwork and Collaborative Process (writing-intensive).

25. Although not explicitly discussed, I suspect that self-management literacies are included in the program design and delivery. The program has a strong pastoral component that is focused initially on administrative literacies. It has explicit linkages with other academic skills providers; for example, library and learning commons staff.

ARTS AND SOCIAL SCIENCES (EXPLORATIONS) CASE STUDY (MARCHBANK AND FEE, SIMON FRASER UNIVERSITY)

26. This case study is situated on a Canadian campus populated by students who are traditionally under-represented in higher education. The program is for arts and social science students and is modeled on *TechOne* (above). It resembles a number of preparatory programs offered in Australia. The program aims principally to develop academic skills, especially team work and communication skills, within the context of the arts/social sciences disciplines. Strategies for problem solving appear to be explicitly included within the program's aims. The program again focuses on formative assessment and feedback, which begs the question of whether skills are explicitly developed on how to give and receive feedback.

27. The program is set within an extensive pastoral care framework. This is essential in such an enabling environment, but raises issues related to whether students leave the program with independent learning skills. The program links students with non-faculty academic skills staff, presumably to encourage that relationship when students move on to the next level of subjects.

28. One of the interesting things about this program is that it has made a specific decision not to seek identification of academic literacy and numeracy standards prior to entry. This can be a double edged sword in that if entry is restricted then 'disadvantaged' students could continue to be 'disadvantaged', while if entry is open then students could be considerably unprepared even for this program. It will be interesting to see what the completion rates are for the subjects and how this is linked to perceived entry requirements.

WRITING AND COMMUNICATION (BILBY) CASE STUDY (RADBOURNE AND LEROSSIGNOL, DEAKIN UNIVERSITY)

29. The delivery of a subject focusing on one of the most important academic skills, communication, is the focus of this case study. The subject described is designed for Arts and Education programs, with a special focus on international students. It is a very effective way to develop the designated academic skill (communication), when students appear to have no core subjects in this domain. The advantage is that it avoids duplication both from the curriculum and staff workload perspective. The risk is that students may see the writing skills developed in this subject as very separate from those needed in follow-up subjects. However, the pedagogy developed for this subject is powerful and may encourage the transfer of these skills to following subjects.

30. The pedagogy, which incorporates a multidisciplinary case study approach, engages the students quickly in the subject without giving them too many early choices, or forcing them into decisions about relevant literature. The subject is offered in a resource-controlled environment so that particular skills are developed (critical communication); other skills (for example, components of information literacy) may be left to later subjects. This case study represents one way to address academic skills development in first year students, but does not preclude an embedded approach in other related or follow-up subjects.

31. The subject appears to explicitly link academic skills with graduate skills and explicitly develops those associated with communication. It is not apparent in the case study whether more tacit academic skills, especially the socio-cultural competencies (for example, help seeking behaviour; question-asking protocols) are also developed. As a mathematics support specialist, I suspect that the material

includes aspects that require an amount of quantitative literacy, but this is also not listed in the subject objectives.

INFORMATION TECHNOLOGY CASE STUDY (NELSON, QUEENSLAND UNIVERSITY OF TECHNOLOGY)

32. This case study describes the first year of a completely new undergraduate program within the Faculty of Information Technology — the *Bachelor of Corporate Systems Management (BCSM)*; an 'IT degree for business thinkers'. The development has included explicit mapping of generic skills into the subjects. There is significant overlap between the development of the nominated generic skills and academic skills. The case study described a number of ways academic skills are embedded within the discipline curriculum, including:

- **To address academic literacy and teamwork:** Two subjects integrated material that explicitly focused on developing information literacy. The first introduced the notion of academic writing incorporating the use of reliable sources and acknowledging these sources. The second included a series of virtual and physical 'library' workshops and were designed collaboratively by the subject coordinator and IT reference librarian.
- **To address interview techniques:** Students were introduced to interviewing techniques in a workshop and work through a process to plan and conduct an analytical interview with personnel from the organisations represented in the *BCSM* program case studies.

SCIENCE (BIOLOGY) CASE STUDY (GLEESON, UNIVERSITY OF MELBOURNE)

33. This case study is from a first year biology program within a large metropolitan university. Biology is described as being traditionally 'content rich' although there has been a gradual move away from this focus. The current program includes the explicit development of some academic skills:

- plan effective work schedules to be prepared for tutorials, practical classes and examinations
- be familiar with electronic forms of communication and be discerning in the use of the web for seeking information
- integrate the computer software packages into the program to assist learning
- be able to complete basic manipulations with laboratory equipment, in particular use of microscopes
- develop skills in recording observations, analysis and interpretation of data
- develop skills in dissection techniques
- develop skills in preparing slides of fresh material
- develop skills in completing biological drawings.

34. The case study includes some descriptions of ways in which students are engaged in the achievement of these skills. One includes the use of the Biology Learning Centre where students can seek advice for an 'on duty' tutor. This advice can include referral to support such as the Language and Learning Skills Unit. Principal methods of academic skill development include provision of:

- online Independent Learning Tasks (ILTS) to assist in content development

- pre-labs on Compound Microscope Training, Biological Drawing, Biological Terminology, and Pipetting
- an online support program called Academic Interactive Portal (AirPort). This has been developed along with staff from the Learning and Language Skills Unit and includes sections on essay writing in Biology (for example, how to ‘pull apart the question’).

LAW CASE STUDY (WESTCOTT, JAMES COOK UNIVERSITY)

35. This program is offered at a small regional university in northern Queensland where it is indicated that commencing students may be less academically prepared than their counterparts studying law at other Australian universities. The program includes a wide range of strategies to support the development of students’ academic skills that are explicitly enunciated in the program objectives:

- enhancing the development of first year students’ skills and capacities to reverse unacceptable rates of attrition in first year and later years
- encouraging the development of broadly based legal, technological, critical and emotional literacy of students.

36. The Law teaching team plays a continuous role in the development of academic skills, commencing with participation in pre-orientation week and orientation week activities and extending into the first few weeks of study. Strong linkages are made between Law team members and academic skills developers; for instance, writing workshops are provided by learning advisors, while Law team members contribute to university-wide preparatory programs offered by Student Equity and the Learning Centre.

An enthusiasm to include information literacy in recent years has seen a further drop in the explicit development of reading skills prior to the resource gathering and writing process.

37. An environment of support and ongoing skills development is provided by peer mentors; for example, students introduce themselves online (via blawg entries for *Legal Institutions and Processes*) and encouraging email dialogue to complete negotiation tasks for *Contract Law 1*.

38. Two subjects within first year law curriculum explicitly seek to develop academic skills:

- *Legal Research, Writing and Analysis* — this subject focuses on the development of a range of skills including legal writing, legal research and analysis. These skills are

developed in the context of content material dealing with sources of law, court hierarchy, doctrine of precedent and statutory interpretation.

- *Contract Law 1* — this subject explores the law relating to the formation of a contract and the terms of a contract. In this subject there is a particular emphasis on aiding students with their problem solving skills.

39. Academic skills are further reinforced and further developed through strong linkages throughout the program curriculum. For instance, in *Legal Research, Writing and Analysis*, students learn basic research skills for both hard copy library resources and electronic sources. In the other subjects that make up the program, this basic core skill is further developed and built upon. For example, in the module ‘Governance through legislative law’ students consider the legislative process in *Legal Institutions and Processes*, they consider how to interpret and apply legislation in *Legal Research, Writing and Analysis*, and in *Contract Law 1* students consider and question the intervention of legislation in contract law.⁴

⁴ For further examples see Westcott, L., & Shircore, M. (2006). The experience of a small regional law school in preparing students for a journey through law. *James Cook University Law Review*, 13, 81.

40. The Law program described here is an example of the comprehensive learning skills development program referred to by Keimig; it incorporates academic skills development in a range of forms.

43. In only one instance did I note that self-management and planning — as a specific objective — was included within a first year program, yet this skill is the one the students most often identify as missing from their battery of skills.

CONCLUSIONS

41. The case studies considered reflect both a full range of academic skills and a full range of strategies to develop those academic skills.

44. The following table represents a map of the case studies to Keimig’s ‘Hierarchy of effective learning skills development programs’. In the case studies depicted here we see all levels of Ruth Keimig’s hierarchy of skill development: we see examples of skill-focused subjects; and of subjects that are often stand-alone with the objective of specifically developing certain academic skills, most often writing skills (bridging-like subjects).

42. In most instances the academic skill that is always included is communication skills, sometimes called academic literacy. The concern here is the tendency to focus on the outcome of academic communication (the writing), rather than the development of that skill (which is underpinned by critical reading and analysis strategies). An enthusiasm to include information literacy in recent years has seen a further drop in the explicit development of reading skills prior to the resource gathering and writing process.

45. We also see examples of subjects that utilised stand-alone support, where students are referred to a learning centre or generic workshops. But it is more likely that the case studies present a comprehensive suite of strategies to support academic skills development.

... self-management and planning – as a specific objective ... is ... one the students most often identify as missing from their battery of skills.

Keimig's Hierarchy of effective programs	Case study example	
Level 1: (Skill focused courses) Separate basic skills courses, including critical thinking, reading, problem solving and quantitative reasoning are taught in isolation.	<ul style="list-style-type: none"> • <i>TechOne</i> • Explorations in Arts and Social Sciences • Writing and Communication (Bilby) 	
Level 2: Learning assistance for individual students Typically offered through walk-in sessions in learning centres.	<ul style="list-style-type: none"> • Science • Law 	
Level 3: Course related learning services This level has systematic coordination of developmental objectives and activities into academic courses.	<ul style="list-style-type: none"> • Education • Information Technology • Science • Law 	
Level 4: Comprehensive learning systems Comprehensive learning systems through sophisticated and complex methods, often curriculum change.	<ul style="list-style-type: none"> • Education • Information Technology • Science • Law 	<ul style="list-style-type: none"> • (bridging like) • <i>TechOne</i> • Explorations in Arts and Social Sciences • Writing and Communication (Bilby)

46. So the questions to ask in the development of a first year model are:

Are all levels and aspects of academic skills considered and included in the first year of study? For example:

- socio-cultural competencies, such as seeking help, participating in a team, making social contact, seeking and giving feedback
- university based literacies such as academic literacy and numeracy, information literacies, administrative, library and research literacies
- self-management literacies, including time and stress management.

What is the most effective way to develop student academic skills in the first year? For example:

- skill focused subjects
- learning assistance for individual students
- subject/program related learning services
- comprehensive learning systems.

When is enough enough? For example:

- striking a balance between discipline knowledge, content and process, and the development of academic skills and graduate skills can be difficult.

REFERENCES

- Chalmers, D., & Fuller, R. (1996). *Teaching for learning at university*. London: RoutledgeFalmer.
- Clegg, S., Bradley, S., & Smith, K. (2006). "I've had to swallow my pride": Help seeking and self esteem. *Higher Education Research & Development*, 25(2), 101–113.
- Cluett, L., & Skene, J. (2006). *More than the sum of its parts: Provision of learning and academic skills services through a centralised model*. University of Western Australia Teaching and Learning Forum. Accessed January 14, 2008, at <http://www.lsn.curtin.edu.au/tlf/tlf2006/refereed/cluett.html>
- Hattie, J., Biggs, J., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research*, 66(2), 99–136.
- Keimig, R. T. (1983). *Raising academic standards: A guide to learning improvement*. ASHE-ERIC Higher Education Report No. 4. Washington, DC: Association for the Study of Higher Education.
- Lawrence, J. (2002). *The "deficit-discourse" shift: University teachers and their role in helping first year students persevere and succeed in the new university culture*. 6th Pacific Rim, First Year in Higher Education Conference 2002: Changing agendas — Te Ao Hurihuri, Accessed May 24, 2008, at http://www.fyhe.qut.edu.au/past_papers/abstracts02/LawrenceAbstract.htm
- Lawrence, J. (2004). *University journeys: Alternative entry students and their construction of a means of succeeding an unfamiliar university culture*. PhD thesis, University of Southern Queensland. Accessed June 6, 2008, at <http://eprints.usq.edu.au/1456/>
- Lawrence, J. (2005). Re-conceptualising attrition and retention: Integrating theoretical, research and student perspectives. *Studies in Learning, Evaluation, Innovation and Development*, 2(3), 16–33. Accessed May 24, 2008, at <http://sleid.cqu.edu.au/include/getdoc.php?id=339&article=85&mode=pdf>
- Wingate, U. (2006). Doing away with "study skills". *Teaching in Higher Education*, 11(4), 457–469.

Support for this publication has been provided by the Australian Learning and Teaching Council Ltd, an initiative of the Australian Government Department of Education, Employment and Workplace Relations. The views expressed in this publication do not necessarily reflect the views of the Australian Learning and Teaching Council.

Further resources developed under this ALTC Senior Fellowship, *Articulating a Transition Pedagogy*, are available at <http://www.altcexchange.edu.au/first-year-experience-and-curriculum-design>