

Geography at QUT: Evolution of a Discipline

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The paper focuses on the constraints encountered in developing and introducing a geography discipline programme, with a distinctive regional focus, within a university of technology. Through a case study approach, the analysis relates the development of geography at Queensland University of Technology (QUT) to changes in geographical education in Australia. Major obstacles to the evolution of geography within QUT are outlined: practical aspects of working in a multi-campus setting; limited staffing resources; policy obstacles to discipline identification and the downgrading of discipline-based approaches in favour of 'trans-disciplinary' majors. Strategies used to overcome these constraints have included: cross-faculty linkages; establishing co-majors in several degree programmes; team-teaching; flexible delivery and the use of online resources. While the establishment and development of the current QUT Geography programme has been difficult at times, the institutional context has provided opportunities to create a distinctive and innovative geography programme.

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Introduction

This paper focuses on the constraints encountered while introducing and developing a geography discipline programme with a distinctive regional focus, within the Queensland University of Technology (QUT). This development occurred within broad changes to Australian higher education and to geographical education, in particular. As a case study, the paper aims to describe and explore a geography programme and the process of its development and operation within a specific institutional setting. Some issues raised may be generalised outside of the case study boundary to other institutions of higher education. The approach is in the mode of an '*intrinsic case study*', as described by Stake (1995) and discussed by Creswell (2002) and Cousin (2005). The present researchers have been reflective about their own positions as participant observers, and have sought to strengthen their assertions wherever possible through diverse evidence sources, including feedback from student stakeholders.

The Context: Changes in Geographical Education in Australia

Changes in Australia's national higher-education policy over the past three decades have had far-reaching effects on the role and status of traditional

disciplines such as geography. Foremost among these changes was the decreasing level of government funding and consequent structural and curricular changes. Competition for public funding is intense, and universities have been pressed to become more innovative and entrepreneurial, competing with each other locally and internationally for students (Coaldrake, 2001a). Notably, the government has moved to increase private contributions to university financing, including provisions for substantial student contributions. This has been associated with a shift in student attitudes away from acquiring an education to a stronger emphasis on 'getting a job' after graduation, and a growing trend towards promoting university courses that are seen as relevant to the job market. In this situation, geographers in Australia have perhaps not promoted the benefits of their discipline, in terms of offering valuable career and life skills, as well as they might.

Government reforms in higher education have increasingly focused on outcomes and efficiency (Coaldrake, 2001a) and this has directly affected the fortunes of geography in Australian universities. With the expectation that universities should justify their relevance to society, more emphasis in curriculum is now placed on tackling real-world problems (Coaldrake, 2001a). To address such expectations, university administrators have promoted problem-based approaches as a means to emphasise new levels of interconnectivity in scholarship and teaching (Coaldrake, 2001b). This has translated into new, so-called 'trans-disciplinary' courses that attempt to cross traditional discipline boundaries, and are justified in that they address the changing requirements for graduate capabilities. Of particular relevance here is the requirement to acquire useful technological skills. This has not been utilised to the best advantage by geographers by way of 'owning' and badging the now ubiquitous GIS (Geographic Information System) tools as a key element of geography. Once graduated from university, many geographers identify themselves with other professions that use GIS, rather than as geographers.

These developments have challenged the dominance and, in some instances, the very existence of disciplinary perspectives in university courses. For example, Gibbons (1998) argued that organisation into academic departments along disciplinary lines downplayed cross-disciplinary teamwork and emphasised specialisation and fragmentation. Edwards (1999) claimed that there was a mismatch between discipline-based structures and cultures, and the need for research and teaching activity that crosses disciplinary boundaries. While it is acknowledged that the real world is multi-disciplinary, it is, however, also recognised within QUT that academic work operates naturally and firstly at a disciplinary level, and that academic staff strongly identify with their disciplines (Coaldrake, 1998). Tensions have inevitably arisen between institutional strategic agendas and local academic culture where departments and staff have resisted change in order to preserve disciplinary values. In many instances, the university administrative response to these tensions has been to amalgamate discipline-based departments within 'Schools' based around groupings of related disciplines, with a view to more effective use of budget and management resources. This has, however, often created bigger 'academic silos' with even less flexibility (Coaldrake, 2001a). Such a situation has stymied efforts to grow geography at QUT.

Further erosion of the status of geography as a separate discipline has paralleled the rise, in both Australia and internationally, of integrated studies in secondary schools. In the 1970s and 1980s, support for the traditional disciplines was cast as conservative, reflecting old-fashioned rather than progressive socio-political thought and educational practice (Robertson, 2006). In the United Kingdom, while geography has been somewhat marginalised in the secondary curriculum as a 'non-core' subject, the discipline seems to be holding its position relatively well at both secondary and university levels compared with other countries (Butt, 2006; Lidstone, 2006). In North America, where social studies is dominated by history and civics, there has been a loss of definition of geography (Lidstone, 2006). Australia and New Zealand have generally followed trends in the United States, embedding geography in the social studies area (Robertson, 2006). An Australian political climate that emphasised social justice and access to education for all led to redefinitions of school curricula into 'key learning areas'. Geography and history were subsumed under 'studies of society and environment', resulting in diminished status for the disciplines (Lidstone, 2006). Thus, geography has had to fight to maintain its place in the school curriculum. This has had flow-on effects of falling student interest in pursuing geography at the university level in Queensland.

The present geography programme at QUT has evolved within the context of these changes. As a result of the macro-level changes in secondary and tertiary education, there has been a decline in the number of Australian university graduates with geographical education. Geographers at QUT have tried to build a viable geography programme, but it has been necessary to employ survival strategies for the discipline, some unique to the QUT milieu, some which may be recognisable to geographers working in institutions of higher education elsewhere. Meanwhile, the particular institutional environment has provided opportunities to create a distinctive and innovative geography programme.

Geography and the Predecessors of QUT

The scope and fortunes of geography at QUT have changed as the institution and its predecessors evolved over a 150-year history. For much of this time, these institutions were dominated by technical and vocational education (Kyle *et al.*, 1999). Within that context, geography has been shaped by the early requirements of a general studies programme, then as a core area for teacher-training, and most recently as a discipline based within a Faculty of Arts. The current geography programme aligns with an educational philosophy that seeks to equip students with knowledge and understanding of the earth, its processes and the spatial patterns of human populations and activities that depend upon it. In addition, the programme's links to allied disciplines at QUT in Planning, Surveying and Natural Resource Sciences follow in the QUT tradition of providing education for professional communities. In short, geography's place within QUT has evolved to suit the 'real world' aims of the institution.

Several sources (Clarke, 1992; Kyle *et al.*, 1999) provide detailed accounts of the history of QUT and its predecessor institutions. QUT's first ancestor was the Brisbane Technical College where geography was taught as a separate subject in 1882. In 1917, this became the Central Technical College (CTC) where, despite its primary focus on vocational and technical training, geography continued

within a General Studies programme (Kyle *et al.*, 1999). In 1965, the CTC evolved into the Queensland Institute of Technology (QIT), representing an elevation of institutional status, offering courses acceptable for professional recognition and accreditation. Geography continued to be offered at QIT in the General Studies and Earth Science programmes (QIT Handbook, 1968). In the late 1970s, in line with trends towards integrated studies, geography was incorporated within an 'Environmental Studies' programme at QIT (QIT Handbook, 1977). This situation continued through the 1980s.

In 1989, QIT became the Queensland University of Technology (QUT). Under the exigencies of the Dawkins' reforms to higher education,¹ QUT amalgamated with the Brisbane College of Advanced Education (BCAE) in 1990 to form one of the largest universities, in terms of student numbers, in Australia.² At the Brisbane College of Advanced Education (BCAE),³ geography was in a stronger position in the Department of Social Science where it was offered in its own right for teacher training within the Diploma of Teaching, Secondary (BCAE Handbooks, 1977, 1980, 1985, 1988, 1989; Kyle *et al.*, 1999). The merger with BCAE was an opportunity for the new university to break with its narrow technical past, and because geography had been a strong component in the BCAE, this provided a discipline base from which to develop and contribute to undergraduate programmes across all three campuses of the institution. The path to achieving this, however, has not been entirely smooth. Strategies to 'grow' geography had to be developed to overcome formidable administrative, policy and staffing constraints.

Constraints Overcome: Obstacles to Developing Geography at QUT

The present position of geography as a well-established social science discipline at QUT (see Figure 1) masks the difficult road it has travelled to this point.

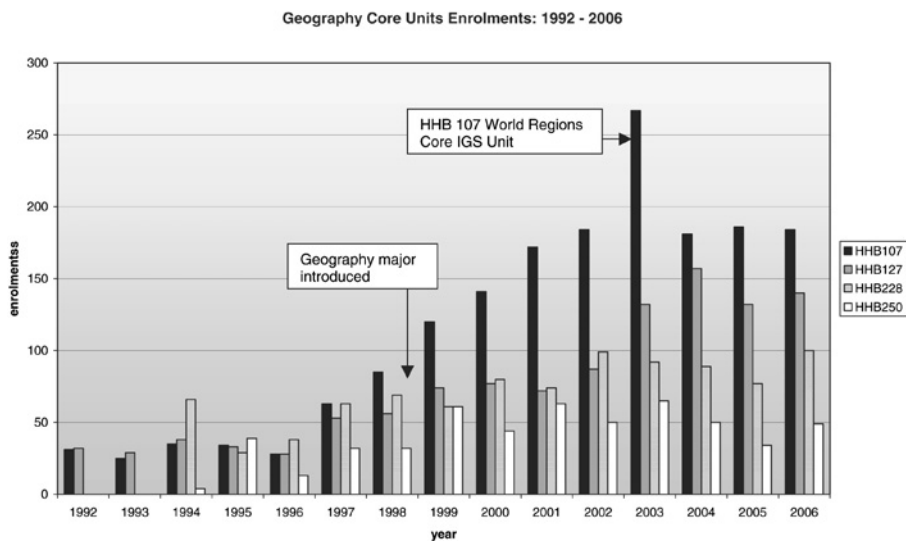


Figure 1 Geography core subjects: Student enrolments 1992–2006

Factors impeding the discipline's growth will be familiar to many colleagues in Australian universities, and perhaps some overseas institutions.

Finding a Home: Geography's Place in the QUT Faculty of Arts at Carseldine

The Carseldine 'bush campus' (see Figure 2) had become available to the BCAE in 1979 and, thus, was included as part of the territory of the new QUT in 1990.

Interesting from the perspective of contemporary problems of inter-campus travel by students and staff is the following quote from 1990:

Initially there was resistance by some Kedron Park staff to moving to Carseldine but soon the advantages of the idyllic environment ... vacant land, adjacent strawberry farms, cow, horse, dog and goat became clear. ... eventually, even the stories of the infamous Carseldine Ghost, a woman in 1920s clothing whose footsteps were apparently heard echoing around the campus at night or in the early hours of the morning did not deter staff from enjoying the spacious campus, with its ample parking and sporting facilities. (Kyle et al., 1999: 133)

The new Faculty of Arts,⁴ created soon after the establishment of QUT in 1990, was born with some inherent disadvantages. It had to stake a claim in a new university where the traditional dominant strengths had been vocational, technical and engineering education. Geography now had the dual functions of providing teacher education within the programmes of the former BCAE, and developing curriculum for Arts students. At the time of the QUT-BCAE merger, geographers on the academic staff located at Kelvin Grove⁵ elected to remain within the Faculty of Education because of their strong professional interests in geographical education. The existing range of geography subjects in the Bachelor of Arts (BA) was limited to four. Problems in expanding these offerings were soon encountered, not the least of which was the on-going debate surrounding the isolation and fate of the Arts Faculty home campus.⁶

By the mid-1990s, the future of the Carseldine campus was a topic of debate at all levels of QUT.⁷ The campus was still offering only a limited range of courses and had few facilities or opportunities for social interaction for staff and students. With government cuts to higher education, there were major concerns about funding for both Carseldine, and for the new QUT campus at Caboolture, further to the north of Brisbane.⁸ In 2001, as a QUT initiative towards integrated learning and marketing Arts courses, the Faculty of Creative Industries was established on the Kelvin Grove campus amalgamating some sections of the Faculty of Arts. Simultaneously, rumours circulated about dismantling the Schools of Humanities and Social Science and the fate of Carseldine campus was under a cloud. Probably as a result of an intensive marketing campaign of a re-modelled BA degree and also to a fortuitous upturn nationwide in enrolments in Arts in the late 1990s, student numbers at Carseldine increased. QUT administration re-affirmed that Carseldine would remain a part of QUT⁹ as a strategically important asset for QUT in the rapidly growing northern corridor of Brisbane. This resolve was evident in the 2004 construction of a new teaching and learning building and associated improvements to student facilities at

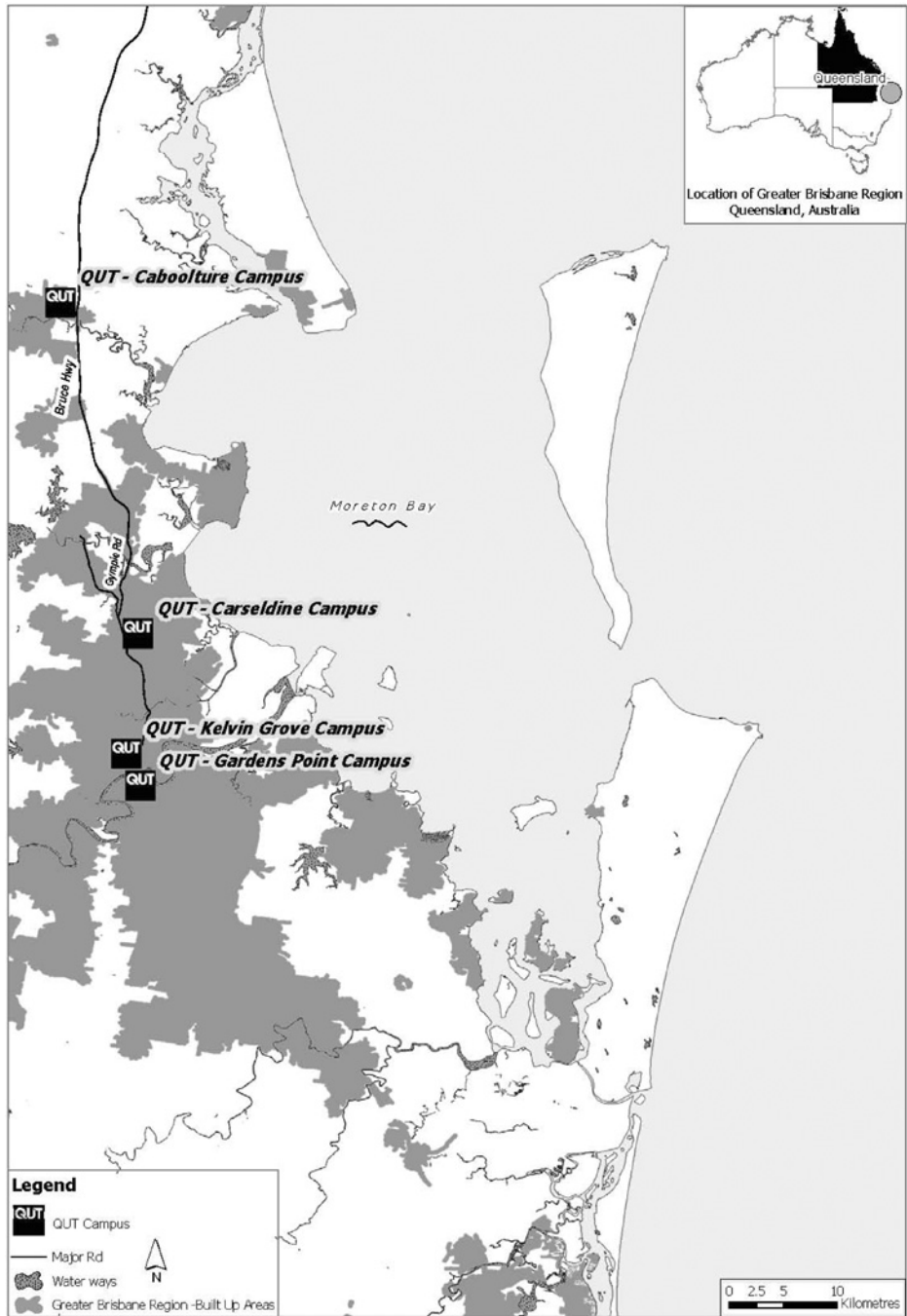


Figure 2 Locations of QUT campuses, Brisbane, Queensland

Table 1 Degrees within which Geography and Environmental Studies may be taken as a major

Bachelor of Arts
Bachelor of Social Science
Bachelor of Education
Bachelor of Arts/Bachelor of Applied Science
Bachelor of Arts/Bachelor of Business
Bachelor of Arts/Bachelor of Education (Early Childhood)
Bachelor of Arts/Bachelor of Education (Primary)
Bachelor of Arts/Bachelor of Education (Secondary)
Bachelor of Arts/Bachelor of Laws
Bachelor of Arts/Bachelor of Human Services
Bachelor of Arts/Bachelor of Behavioural Science (Psychology)
Bachelor of Arts/Bachelor of Justice Studies
Bachelor of Arts/Bachelor of Information Technology
Bachelor of Arts/Bachelor of Creative Industries

Carseldine that have contributed to its ambience as a real university campus. Geography now has a home base and is a key component of the two degree programmes offered at Carseldine—the Bachelor of Arts (BA) and the Bachelor of Social Science (B.Soc.Sci.) and 11 double-degree programmes linked to these (Table 1).

The Tyranny of Distance: The Multi-Campus Environment

While gaining a faculty home for geography was advantageous, being located on the smallest and most distant of QUT's three campuses has been a major obstacle. The physical isolation of the Carseldine campus from the rest of QUT (see Figure 2) posed significant difficulties. For BA students, Carseldine is the home-campus. For students based on other QUT campuses, however, gaining access to the geography programme has been problematic. For Education students based at Kelvin Grove who take geography or social science as a teaching area, travel and timetable constraints between Kelvin Grove and Carseldine can still cause problems.¹⁰ The situation is worse for students in Science, Planning and Engineering based at Gardens Point in central Brisbane city.

The solution of offering some Carseldine-based subjects on other campuses was tried, but with limited success. Staffing limitations (see the following text) have so far precluded offering any core geography subjects outside of the Carseldine campus. A regional geography subject, *Southeast Asia in Focus*, was offered in the evening on both Carseldine and Gardens Point campuses, but this attracted very few enrolments from non-Carseldine students. This was partly related to problems of limited elective spaces in other degree courses (see Policy as follows). Given the doubling of staff time and effort involved in running on two campuses in the same semester, few benefits accrued from this exercise. Inter-campus travel to Carseldine remains a strong impediment to 'marketing' geography to other parts of QUT, even though the introduction of computerised university-wide timetable has eliminated some of the clashes between large student cohorts.

**Two’s Company but it would be Nice to have a Crowd:
Limited Staff Resources**

When the Faculty of Arts was established in 1990, there were no geographers in the new School of Humanities, leaving the way open for academic staff appointments. A human-cultural geographer was appointed in 1993 with a brief to develop a viable geography programme for the Bachelor of Arts (BA) degree, while maintaining geography and social science service teaching for the Bachelor of Education (BEd) degrees. In 1995, a physical geographer joined the School. These two complementary appointments were specifically made with a view to the development of a well-rounded introductory geography programme (Table 2).¹¹ In the mid-1990s, prospects for expansion of the staff and range of geography subjects initially appeared excellent, but questions soon loomed over the future of the Faculty of Arts and the Carseldine campus, stymieing attempts to increase geography staff.¹² The increase in student numbers in geography eventually resulted in an additional 50% appointment in 2005, but this has provided only limited assistance. Staffing levels continued in a context of a six-fold increase over the past 10 years in student numbers in the first-year geography subjects.

Table 2 The QUT Geography and Environmental Studies major in 2006

Geography and Environmental Studies
<i>Introductory subject (compulsory)</i>
HHB107 World Regions or
HHB127 Environment and Society
<i>Regional studies</i>
HHB229 Windows on Japan
HHB244 Southeast Asia in Focus
HHB250 Australian Geographical Studies
<i>Advanced elective subjects</i>
HHB228 Environmental Hazards
HHB251 Australian Resource Management
HHB269 Ethics, Technology and the Environment
HHB312 Geographical Research Design
HHB232 Survey Methods
HHB324 Regional Field Studies
NRB100 Environmental Science
NRB501 Spatial Analysis of Environmental Systems
PSB443 Population and Urban Studies
PSB631 Geographic Information Systems
PSB655 Remote Sensing
<i>University of Queensland electives</i>
GEOM2000 Introduction to Remote Sensing
GEOM 2001 Geographical Information Systems
GEOM 3001 Advanced Remote Sensing of Environment
GEOM 3002 Spatial Analysis in a GIS Environment

There have been major problems associated with this staffing situation. First, while the embedding of geography as a major within several degrees across QUT (see Strategies as follows) was necessary for the discipline's survival, and has been lauded as a very positive outcome for the home school, this achievement comes with obligations. Core geography subjects must now be offered on a continual basis, otherwise students in Education and double degrees cannot complete the geography major within the constraints of rigid degree structures. Without extra lecturing staff to take responsibility for the large introductory subjects, existing staff have been running the core programme continuously for 11 years, limiting opportunities for professional development. Second, the range of advanced subject offerings has necessarily been limited to the areas of expertise of the two staff, viz. environmental hazards and Asian regional geography. It has not been possible to offer advanced-level subjects in other sub-fields such as geomorphology or climatology, population or economic geography. Third, concentration of effort in teaching has meant that staff research output, while creditable given the circumstances, has suffered. Ultimately, the lack of time for professional development is detrimental to both the staff and the programme.

Pride and Prejudice: The Disciplines versus 'Trans-Disciplinary' Majors

Throughout the changes of the 1990s, geography enrolments had continued to increase despite the fact that the discipline was still only afforded status as a *minor* area of study in the BA programme. The irony was that students taking geography as part of a Bachelor of Education (BEd) degree were already *majoring* in geography while BA students in geography's home school could only take the discipline as a *minor*. Administrative policy and internal resistance prevented raising of the status of geography to a *major*. Proposals to do this were twice rejected by the relevant Faculty committees.¹³ The view of the authors is that this was the result of location in an inter-disciplinary school and may reflect fundamental differences between geography, which tends to be more aligned with systematic social scientific approaches, and humanities disciplines that tend to follow more discursive and philosophical approaches. Logic and weight of student numbers finally prevailed and approval was gained in 1997 for a *Geography and Environmental studies* major, the name reflecting popular trends towards integrated studies.¹⁴ In 2003, the revised Bachelor of Social Science (BSocSci) degree also included Geography and Environmental Studies as one of its primary majors.

Further obstacles surfaced in the late 1990s when 'trans-disciplinary' studies made their way into university discourse, often introduced under the banner of 'integrated studies', following trends in secondary education. Re-structuring at QUT in 2000-2001 presented supporters of trans-disciplinary approaches with the opportunity to promote such curricula over the traditional disciplines (geography, history, sociology, political science) within the School of Humanities and Social Sciences. The rationale being touted was that the disciplines were old-fashioned and would not continue to attract students to the BA at QUT.¹⁵ The pattern of increasing enrolments in geography, history and sociology, in fact, contradicted this argument. Nevertheless, in the climate of managerial requests

to revamp courses, inter-disciplinary majors were introduced and a revised BA was offered in 2002. This move was not supported by many academic staff in the School, and was viewed as a change imposed from higher management.¹⁶ The new BA majors were labelled 'professional majors' (QUT Handbook, 2002) with the intention that they be more readily perceived as linking to specific professional outcomes for graduates. In reality, these were simply packages of subjects collated under broad headings deemed to be 'attractive'. These majors had little internal structural progression from introductory material to advanced-level work, bore labels and content less familiar to the general public and, most importantly, did not lead to real 'professional' outcomes as the term is applied elsewhere within QUT and in the wider world.¹⁷

Meanwhile, the social science disciplines were relegated to 'discipline sequences' rather than majors (QUT Handbook, 2002). Under pressure from staff and students,¹⁸ this situation was later modified and the disciplines are now again labelled 'discipline majors' in the BA. Clear disciplinary identification within geography offerings has been maintained as a counter-balance to these moves towards downgrading the discipline's profile.

Opportunities Taken: Strategies to Grow Geography at QUT

Geography staff took a proactive, rather than a passive approach, towards overcoming the obstacles outlined earlier. Had they not done so, there is a strong possibility that the role of geography at QUT would be much reduced today. Deliberate strategies to counteract threats to the discipline, and to actively secure and build geography's base, had to be employed.

Geography is Where it is at: Creating Distinctiveness and Acquiring Standing

Establishing QUT geography as a recognised force in undergraduate and post-graduate geographical education in Queensland necessitated making the programme distinctive. Achieving this aim has enhanced QUT's standing as a base for academic research in geography.¹⁹ In creating the geography major, care was taken to complement, rather than overlap, curriculum with Science and Urban Planning within QUT, and to distinguish the programme from those available at other universities in Queensland. This strategy provided opportunities for mutual cross-listing of subjects.

A key distinctive aspect of the QUT geography programme is an emphasis on regional geography. The World Regions foundation subject has been most successful, its equivalent not taught elsewhere in Queensland. Despite the problems of scale differentiation (global to local) and the immense complexity of biophysical and human systems to be potentially covered in a world regional subject, it introduces students to a rich array of basic themes and concepts that geographers use to analyse the world's spaces and places (Birdsall, 2004). The regional focus has appealed to a variety of students with wide-ranging interests and capabilities across many degree programmes, resulting in the growth of the programme, and wide cross-university exposure. The advanced Asia-Pacific regional subjects (Australia, Japan and Southeast Asia) offer more in-depth study of key areas of

interest to Australian students, and complement Asia-Pacific history and politics subjects offered in the School of Humanities and Human Services.

Another distinctive focus of QUT's geography programme is environmental hazards, which aligns with the research expertise of staff, and again, is not taught as a specific subject elsewhere in Southeast Queensland at university level. At present, the hazards subject is tightly packed with both theoretical and case-study material. Expansion into introductory and advanced-level subjects in this field would be desirable if staff resources permitted. Constantly being revised to analyse new hazard and disaster events, this subject is dynamic in content and has great contemporary²⁰ and practical appeal that has proven to be attractive to students, and has provided a strong marketing angle linked to vocational outcomes. The mandatory legal requirement for all local government authorities in Queensland to have disaster management plans gives QUT geography graduates who have taken the hazards subject a special employment relevance with local government agencies.

In line with QUT's 'real world' approach, the geography programme places a strong emphasis on the development of sound, marketable skills for students. This includes the generic Social Science/Arts skills of academic literacy, oral and written communication competencies and critical analysis via assignment tasks and research projects. In addition, geography aims to give graduates a potential 'edge' in the employment markets via the acquisition of geographical skills such as spatial and statistical data collection and interpretation, map interpretation, fieldwork skills (although limited so far), GIS, and remote sensing capabilities. This also provides a means to reclaim the territory of spatial technologies for geography.

The geography programme successfully addresses several of the required QUT 'graduate outcomes' that involve attaining analytical, critical and problem-solving skills; global knowledge and perspectives; and communication skills and capacities for life-long learning. In terms of benchmarking with geographic education programmes and practices overseas, the QUT geography programme covers basic curricula recommended by the National Geography Standard in the subjected states (as outlined by Zam and Howard, 2005),²¹ i.e. physical and human systematic geography, map skills and regional geography and aligns with the United States focus on standards-based education and assessment. The QUT programme comprises six core subjects, and a selection of additional electives from within the home School and other faculties plus a package of spatial technologies options from the University of Queensland (Table 2). This geography major is now available to students in several single and double degrees across QUT (Table 1). From 2006, it is possible for students in most QUT degrees to take a 4-subject package of geography through the 'University Minors' system.²² This should be attractive particularly to students in programmes such as Regional and Town Planning and the Faculty of Engineering, which has already had links with geography for several years.

The Octopus Strategy: Cross-Faculty Linkages

'If you're linked into several programmes it's simply harder to knock you off'

By the year 2000, degree structures and mechanisms were in place at QUT that facilitated cross-faculty interaction, reflecting national trends towards interconnectivity between academic areas. This included a new policy on inter-faculty cooperation that sought to break the 'silos mentality' which had led to Faculties guarding their student enrolment, and restricted students from taking electives outside of their home Schools. For the geography programme, cross-linkage was driven by two equally important imperatives. First, there was a need to develop curriculum breadth for a viable major with limited staff and teaching resources. Cross-faculty and cross-institutional linkages gave geography students options to take electives in GIS, Remote Sensing, Planning and Science. Second, the 'octopus model' provided a key strategy for survival. The fact that geography had the dual purpose at QUT of being a discipline for both teacher education and the Arts programme was a great advantage. Enrolments in geography from the Education Faculty have always been strong, on average 30–40%.

During the restructuring of the late 1990s, when the spotlight of viability was turned on Humanities and Social Science, it was the argument that geography and history were essential for the School's service-teaching in the Education Faculty that justified the survival of these disciplines. With this experience as a model, it was risky to rely solely on the Education Faculty for service teaching. A broader client-base within QUT was needed. Over the period 2000–2003, geography successfully established cross-faculty reciprocal co-majors and minors with the Schools of Mapping Sciences (Surveying), Regional and Town Planning and Natural Resource Sciences. In 2006, an agreement with the Department of Geographical Sciences, Planning and Architecture at the University of Queensland added a reciprocal cross-institutional link to the QUT geography programme. This initiative is particularly significant in that both QUT and the University of Queensland have taken a cooperative approach for the greater good of the discipline.

Making the Most of What We Have: Innovative Strategies Within Subjects

With the limited staffing resources, the geography programme had to be creative in the use of staff time and effort, particularly as class-sizes increased.

Team-teaching was used from the outset in the core geography subjects as the expertise and backgrounds of the two permanent staff were complementary. This enabled an expanded range of offerings that would not have been possible had staff been teaching classes alone. So, for example, both the introductory systematic Environment and Society and the World Regions subjects were designed to introduce students to the basics of both physical and human geography in equal proportions. Teaching commitments have similarly been shared in other core areas. Geography staff contribute one or two lecture sessions in large interdisciplinary BA subjects. Exposure in these classes has attracted students to geography in subsequent semesters. Several commented that 'they didn't realise that geography was like that. . .' and developed a stronger interest in the discipline.

In the late 1990s, improvements in computer capability and access for staff and students resulted in expanded use of *online* and *web-based teaching resources*. Taking advantage of these new systems required significant staff time to prepare materials suitable for online delivery. In the geography programme, students study guides and web-based data collection and analysis exercises have been developed to support tutorial sessions. Particularly successful in terms of facilitating communication with students has been the development of QUT's online teaching (OLT) websites for every subject.²³ This has streamlined house-keeping in running large classes and reduced staff–student consultation time.

In the climate of expanded online systems, 'flexible delivery' became a key platform of teaching and learning policy at QUT.²⁴ The meaning of this term has ranged from the delivery of subjects in a totally online mode without any face-to-face contact, to small adjustments in assessment options. Given limited staff resources, and increasing student enrolments, flexible delivery seemed to offer some advantages. Innovations in this direction were introduced experimentally into the Environmental Hazards subject. Here 'flexible mode' meant intensive, whole-day lecture meetings on two Saturdays replacing the once-a-week 3-hour lecture. In this flexible, self-paced learning mode, students work in their own time through a set of 'study modules' that contain exercises and tasks, many web-based, to be submitted for assessment. Student feedback on this delivery mode initially was very positive in terms of opportunity to attend weekend sessions and work to individual's schedules. Flexible mode, however, requires a high level of student commitment and motivation to work without much contact and direct guidance from staff. After three years of running the hazards class in this flexible mode, students increasingly requested more contact with staff. In response to this feedback, the subject has now gone to a modified flexible mode with six 3-hour lecture meetings/tutorials held during the semester and more class discussion, instead of the intensive Saturdays. This seems to be far more acceptable to students and a more satisfying outcome for staff who are better able to adapt content in response to hazard events and issues occurring during the semester. This seems to align with the view of QUT's Vice Chancellor who commented that 'it may well be that many younger students, in particular, prefer the traditional campus-based educational experience' (Coaldrake, 1998).

The mixed success with flexible-delivery underscored the value that students place on personal, face-to-face contact with staff, despite the new availability and 'wow' factor of online resources and 'virtual teaching'. In fact, this experiment in the geography programme has been pertinent to the on-going debate, driven by funding cuts to higher education in Australian universities, concerning the substitution of small-group discussion tutorials with online teaching. This is particularly significant within generic degree programmes in the Arts and Social Sciences that tend to be populated with large, loosely connected student groups where lack of classroom contact with other students is an obstacle to the formation of friendship and study groups.

Other, more practical strategies that have been employed to deal with growth in student numbers have been the concentration and streamlining of assessment, for example, an increase in multiple-choice exams for ease of computerised marking, replacing longer research assignments. This has also been in the context of avoiding web-based plagiarism in student essays. In addition, a

flexible regime of assessment was introduced into the Environmental Hazards subject, whereby a longer, written research assignment was a requirement for students wanting to potentially achieve higher grades (credit, distinction, high distinction). It did not have to be completed by students simply wanting a pass grade. This approach assisted in rationalising staff workload, but also provided students with choice related to desired levels of achievement. Some assessment items that are compulsory to all ensure that subject objectives were adequately assessed.

Conclusion

Geography has survived at QUT for almost a century. In the past 30 years, the academic environment has been a very dynamic one in terms of coping with major policy and funding changes to higher education, and structural and curricular changes. Problems brought about by the multi-campus setting of QUT, limited staff resources and trends towards non-discipline-based approaches have demanded a response to maintain the viability of the geography programme. The institutional context of QUT, despite its strong technological focus, has provided opportunities to create a distinctive and innovative geography programme. The strategies used by staff have involved: promoting the relevance of the discipline across the university, fostering cross-faculty linkages, team teaching, experimenting with online and web-based resources; and flexible delivery. Current programme success is demonstrated by stable enrolments from a wide range of degrees across the university. The broader external structural and funding constraints that currently affect all Australian universities and the impingement of trendy curricula in humanities and social science programmes continue to present risks to discipline approaches.

Lidstone (2006) notes that, while there has been a move towards integrated social studies in many parts of the world, there is also now a counter-trend developing of dissatisfaction with the lack of intellectual rigour of such courses. Roberston (2006) comments that returning to discipline-based learning is one of the 'tightening ropes that refuses to go away' in the discourse of Australian governments and secondary education systems. These comments provide some hope for a renaissance for the discipline of geography. Robertson also notes that the public profile of geography in the general community has been given a much-needed boost with the availability of global positioning systems (GPS) in cars, boats and other leisure activities such as orienteering, and the arrival into living rooms of Google Earth! In the past, geographers have been slow to promote their discipline through such spatial technologies. These, together with worldwide environmental management imperatives, now present Australian geographical educators with a 'lifeline for Australian geography in schools which can be spearheaded by appropriate teacher-training' (Roberston, 2006). At QUT, where teacher-training degree requirements contribute major enrolments to the geography programme, it could be expected that a similar boost in student interest in geography should be achievable. While growth prospects in the immediate future look positive, keeping geography afloat is an on-going watching brief.

This case study presents an invitation to readers to report findings in geography programmes in other tertiary institutions to compare assertions and strategies.

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Notes

1. The reforms to Australia's higher education system introduced by Federal Minister of Education, Dawkins, saw the consolidation of 19 universities and 46 Colleges of Advanced Education to become 35 universities in 1990 under the Unified National System.
2. The BCAE had four campuses: Kelvin Grove, Kedron Park and Carseldine, which amalgamated with QUT, and Mt. Gravatt, which amalgamated with Griffith University. In 1989, QUT had an enrollment of 10,409 (QUT Division of Finance and Resource Planning, QUT 9/12/2005) and in 2006 of 38,240 (QUT Callista, 18/9/2006).
3. The BCAE was established in 1982 (QUT Cyber Archive Holdings—Brisbane College of Advanced Education, p. 1).
4. The Faculty of Arts comprised three schools: Humanities, Social Science, both at Carseldine and the Academy of Arts, covering the performing and visual arts, based at Kelvin Grove (Figure 1).
5. The Geography staff of the former Department of Social Studies were Dr Rod Gerber, Dr John Lidstone, Dr Roy Ballantyne, Dr Peter Wilson, Dr John Fien and Ms Mary Maher (BCAE Handbook, 1989).
6. School of Humanities, Minutes of School meeting 27/7/2000, 'The Carseldine issue is being discussed at the university level. The feeling is that there is no sense in selling it off but how to make it work has yet to be decided'; also, similar comments in Minutes of School meetings 30/10/1997; 7/9/2000; 2/11/2000.
7. School of Humanities, Minutes of School meetings 27/7/2000; 30/10/1997; 7/9/2000; 2/11/2000.
8. School of Humanities, Minutes of School meeting, 2/11/2000 show that this was a period of tumultuous re-structuring, and stressful uncertainty for Carseldine staff. In 2001, the Faculty of Arts was split, with the establishment of the Faculty of Creative Industries going to Kelvin Grove campus and the Schools of Humanities, Social Sciences and Human Services remaining at Carseldine. These programmes were amalgamated in 2001 to form the School of Humanities and Human Services, incorporating the Social Sciences. The Caboolture campus, to the north of Carseldine, was established as a new small campus of QUT in 2002.
9. QUT Carseldine Coordination Group Report, 18/10/2000, indicated that a Carseldine Campus Master Plan had been set up and that Humanities and Human Services had been awarded \$75,000 for 'Growing Carseldine'.
10. Kelvin Grove to Carseldine is a journey of approximately 20 minutes by car. There are regularly scheduled train and bus services, and a QUT shuttle-bus for use by staff and students now operates between campuses on an hourly basis. From Gardens Point, the journey is longer, taking approximately 30 minutes by car.
11. For the most part, this goal has been achieved. See Table 2. The QUT Geography and Environmental Studies major.
12. School of Humanities, Minutes of School meetings 27/7/2000 and 7/9/2000.
13. School of Humanities, memorandum to all staff from Undergraduate Studies coordinator, 9/4/1999 'a SOSE major should include some of the existing geography subjects . . . students should be allowed to continue a geography minor within the

- School'; Memorandum from Head of School and undergraduate Studies coordinator, 9/4/1997, 'Despite strong cases for majors in . . . geography . . . budget and staff realities make this unrealisable at this stage'.
14. School of Humanities, Minutes of School meeting 30/10/1998, Report from Teaching and Learning Committee from 27/8/1998, 'The committee has endorsed the proposal for a Geography and Environmental Studies Major. . . '.
 15. School of Humanities, Minutes of School meeting, 27 March 1997, noted criticisms of the changes: 'The current process signals a fundamental shift away from interdisciplinary cooperation at the teaching interface and a decisive move towards single-discipline classes. We see this as a retrograde step'; however, managers endorsed the changes, 'The meeting endorsed the proposed new BA . . . the strength of the new degree would explicitly be its interdisciplinary international orientation'.
 16. School of Humanities, Minutes of School meeting 27/3/1997, recorded concerns as to what extent the curriculum changes were being dictated by the Chancellery'; staff expressed concerns that the sense of urgency currently being felt due to the need to meet QTAC Handbook and other deadlines was forcing changes . . . and that it was the university's way of dictating change without accepting responsibility'. Minutes of School meeting 7/4/1997, 'It appears on the evidence available that the move to introduce an; organizational and teaching structure based on five disciplines is driven by senior management of the Faculty. . . the teaching staff of the School of Humanities appear to have neither initiated nor participated in this move. . .'; Minutes of School meeting, 2/22/2000, 'Head of School believes that the Deputy Vice-Chancellor has taken over the Carseldine curriculum issue'.
 17. The new BA majors introduced at Carseldine labelled 'Professional BA majors' were: International and Global Studies, Society and Change, Ethics and Human Rights (the only new major that had previously existed as a bona fide applied field in the School) and Community Studies.
 18. From advisory sessions with students, the double degrees coordinator reports student confusion and dissatisfaction over the directionless nature of the 'professional majors'. Many express a preference for taking discipline majors in addition to their required one 'professional major' in the BA programme.
 19. Geography staff and postgraduate students now publish regularly in journals such as the Australian Journal of Emergency Management.
 20. For example, in 2005, the subject was substantially revised to include materials and analysis on both the December 2004 Indian Ocean tsunami, and the 2005 Hurricane Katrina in the United States, and in 2006 to include Cyclone Larry in North Queensland in March 2006.
 21. Zam and Howard (2005) outline several major projects aimed at benchmarking geographic education in the United States including: the Praxis Series for Geography educators; the National Council for Social Studies; Geography for life—National Geographic Standards; National Science Foundation's ARGUS project on Regional Geography.
 22. Refer to: QUT Academic Programmes and Policy Subject; <http://www.appu.qut.edu.au/coursedev/qutapprovedc/minors/>
 23. These enable subject outlines, lecture summaries, instructions for assessment items, results and 'house-keeping notices' to be posted onto the OLT site for each subject offered. Enrolled students can access these either from home or while on campus.
 24. School of Humanities and Social Science, Minutes of School meeting 26/8/1999 specifically states that the School has a commitment to following the QUT policy on promoting flexible delivery.

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