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Published paper
McEwen L., Monk J., Hay I., Kneale P., King H. (2008) *Strength in diversity: Enhancing learning in vocationally-orientated, master's level courses*. Journal of Geography in Higher Education 32 (1) 101-119

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Strength in Diversity: enhancing learning in vocationally-orientated, Master's level courses

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Abstract

Postgraduate education in geography, especially at the Master's level, is undergoing significant changes in the developed world. There is an expansion of vocationally-oriented degree programmes, increasing recruitment of international students, integration of work place skills, and the engagement of non-traditional postgraduate students as departments respond to policies for a more 'inclusive' higher education. This paper sets the context by outlining some programmatic changes in selected countries (Australia, the UK, and the USA). We briefly reflect on how postgraduate 'bars' or 'levels' are defined and explore in detail what 'diversity' or 'heterogeneity' means in these new postgraduate settings. The paper then explores some examples of practice drawn from our own experiences, whilst recognising that relevance will vary in other contexts. Finally we consider how diversity can be harnessed as a strength that has potential to enhance taught elements of contemporary postgraduate education in and beyond the discipline.

Keywords: postgraduate, Master's, diversity, co-learning, practice, geography

Strength in Diversity: enhancing learning in vocationally-orientated, Master's level courses

Postgraduate education in geography, especially at Master's level, is undergoing significant changes in the developed world. Among these are the expansion of vocationally-orientated degree programmes that go beyond the traditional research-orientated focus, increasing recruitment of international students, and the need to respond to policies for widening access in a more 'inclusive' higher education. The more academic 'research training' Master's course is equally expected to step up to these pedagogic challenges. While there is very little literature that provides reflective guidance on Master's teaching (Knight, 1997; Fejes *et al.*, 2005; Keller and Kros, 2000 are some valuable exceptions), geography colleagues have been striving to develop curricula that explicitly integrate more work place skills and deal with non-traditional postgraduates. Two contributions with an explicit focus on postgraduate diversity include Scheyvens *et al.*, (2003) who evaluated impediments to learning (e.g. language problems) for international postgraduate students in geography in Australia and Ridley (2004) who explored the experiences of international students on Masters'courses in business, finance and management at a UK university. However, much of the diversity literature that exists is focused on undergraduates (e.g, Hall *et al.*, 2002; Sanders, 2006). This paper aims to chip away at these lacunae, outlining some dimensions of change, evaluating and offering examples of guidance on ways to draw constructively on the diversity of students enrolled in such programmes, where this heterogeneity is seen as 'strength', not an 'obstacle', benefiting the co-learning of peers and staff.

We focus primarily on 'taught' postgraduate programmes (including nested Postgraduate Certificate, Postgraduate Diploma and full Master's awards with a research thesis), although our discussion is also relevant to research-focused postgraduate courses with more limited taught elements, but where students progress to careers outside academia. We first summarise some dimensions of the programmatic changes in Australia, UK, and the USA. Next, we briefly reflect on how postgraduate 'bars' are defined, as we evaluate how to capitalise on diversity in these contexts. We then explore in detail how we interpret 'diversity' or 'heterogeneity' in such programmes. Using these platforms, we offer examples of good practice drawn from our own experiences in geography from Australia, the UK, and the USA[1], recognising that issues will vary in other contexts. We consider these approaches have potential to enhance contemporary postgraduate education in and beyond the discipline.

Changing Directions in Postgraduate Education

The international profile of postgraduate education is one of different models, levels and learning outcomes with varying proportions of taught and research elements. In the USA, course work has traditionally been included in both Masters' and PhD curricula, with independent research having compulsory or optional status in Masters' awards. Recently taught postgraduate programmes, such as the Master's in Geographic Information Sciences (M.GIS/M.GInfS) and Certificates in GIS (Geographical Information Systems) have been introduced. Similarly in the UK, academic research- dominated Master's awards (Thorne, 1997), have been complemented by vocationally-orientated 'taught' courses (Eastwood, 2005; McEwen, 2005a). In Australia, Master's level education has shifted substantially from research-based degrees to programmes involving coursework that are often vocationally-oriented. There has also been vast growth in postgraduate certificates – non-existent in 1984 but reaching 11,703 enrolments in 2000 (DETYA, 2000). However, a Master's award without a substantial research component is unlikely to allow an Australian student to be admitted to an Australian PhD program.

Several currents are fostering these changes among them increasing demands for vocational preparation from employers, professional and funding agencies, and students. Student demand comes from the traditional post-Bachelors' or undergraduate pool but increasingly postgraduate students are also recruited from new constituencies. For instance, in the UK, 'money rich, time poor' workplace learners are a key target group, seeking to change or enhance their career prospects through taught postgraduate study, linking personal development planning to continuing professional development. To meet the needs of this professional development, various models of integrated postgraduate-workplace study are being promoted (see e.g. National Centre for Work Based Learning Partnerships, 2007 and Learndirect 'Learning through work', 2007). The ends of social justice and economic competitiveness are also being pursued by widening access in ways that attract and support more diverse student groups. The Higher Education Funding Council (HEFCE, UK, 2006) has the widening access and participation as a key priority in its five year strategic plan (2006-2011). New efforts and patterns of recruitment of international students add to the complexity. The UK Government's *Initiative for International Education* (launched April 2006) aims to attract an additional 100,000 overseas students to the UK, with numbers set to reach 870,000 by 2020 (BBC News 2004). In Australia, the number of overseas postgraduate students soared from 54,928 in 2001 to 90,231 in 2005 (DEST, 2006b). In the USA, the issue of international student enrolments is a subject of continuing discussion in higher education, and despite some slight downturns after 2001 again continues to grow, with more than half a million foreign students enrolled in 2004-2005. The greatest numbers come from South Korea, Japan, India, China, and Taiwan (Batalova, 2006).

The Postgraduate 'Bar' and Diversity

As the recruitment imperatives and target markets evolve, national and international debates are focusing on various areas:

- what does 'postgraduate' mean in terms of knowledge and skills levels and how does it differ from undergraduate education;

- what are the implications for research dominated Masters' (Thorne, 1997);
- what impact does the changing character of postgraduate education have on educational and academic standards (HEFCE/CVCP/SCOP, 1996; Thorne, 1997);
- what are the effective models of graduate education (Colker &Day, 2003; Golde & Dore, 2004; Tobias *et al*., 1995);
- how can the transition to Master's level be managed and supported so students make the most of their vocational, and cultural experiences;
- how can co-learning groups be created to capitalise on diversity and ensure engagement, while avoiding pitfalls such as learning ghettos and negative stereotyping of culturally and visibly different groups (Collins, 2006), negative aspects of 'disciplinary tribes' in interdisciplinary postgraduate courses (Lattuca, 2001), and issues such as how poor academic practice and plagiarism can be avoided (Leask, 2006)?

To begin to approach these questions, we first reflect on what 'postgraduateness' means then explore in more detail ways to define 'diversity'.

Defining 'Postgraduateness'

> '*Even within one university, taught Master's programmes serve many different clients, embody a diversity of purposes and reflect different notions of the 'masterness' of postgraduate study'*. (Thorne, 1997, p16).

Defining 'postgraduateness' involves establishing a shared understanding of the nature of such study, the associated level of the 'bar(s)' and how high these are raised vis-à-vis undergraduate study. These 'bars' may be established generically in University terms and then applied to geography. 'Postgraduateness' can be construed in terms of Master's level ('M-level'): knowledge and skills, distinctive approach to learning activities, and socialisation. Several attempts have been made in the UK and Europe to formalise and standardise the demands of postgraduate study through generic 'level descriptors' for Master's level (independent of the proportions of taught and research elements). These typically seek to determine what knowledge and skills

a student will have upon completion of the award. Regional, national and international agencies in the UK and Europe have set a proliferation of learning level descriptors focused on staged learning outcomes to which Higher Education Institutions (HEIs) are being asked to adhere (e.g. Quality Assurance Agency, (QAA, 2007), and Southern England Consortium for Credit Accumulation and Transfer, SEEC (2003), both UK; shared European 'Dublin' descriptors, *Joint Quality Initiative*, JQI, 2004). These outline the nature of 'postgraduateness' in relation to 'undergraduate' knowledge and skills. As a national/regional example, Table 1 illustrates the distinctions made between final year undergraduate and Master's level, with excerpts from the full set of SEEC level indicators[2]. These encompass knowledge and understanding, cognitive and intellectual skills (e.g. analysis and synthesis), key/ transferable skills (e.g. communication) and practical skills (e.g. technical expertise). At the same time, the Bologna Process with its focus on lifelong learning, employability, and graduate skills in the curriculum, has generated debates across Europe about the comparability of demands and duration of Master's programmes (or the 'second cycle'; Europe Unit, 2007). Table 2 shows JQI's (2004) draft differentiation from undergraduate to PhD level or 'cycles', which are broadly comparable to SEEC and QAA.

Calls for outcome-based assessments of degree programmes in the USA are creating similar pressures to generate level descriptors, although the approaches lack the central models described above as individual departments respond to their own university's policies. From our perspective, in relation to diversity, these 'level descriptor' models have a number of limitations. While they may recognise a diversity of qualifications, the overlap and differentiation is often confusing. Furthermore, their language is too restricted to traditional knowledge and skill domains, largely failing to elaborate on the affective/attitudinal domains and personal skills (see Fink, 2003)[3] which are important in all levels of higher education but especially so as the nature and aspirations of the student body become more diverse.

There is a general acceptance that several pedagogic characteristics in terms of scale and type distinguish postgraduate from undergraduate learning (e.g. McEwen *et al.*, 2005b). These include: the development of more self-reliance and autonomy; more critical evaluation and self-reflection; more opportunity for originality in developing

or applying ideas; and acknowledgement of students as producers of research on a scale not normally seen in undergraduate courses. Vocational postgraduate courses frequently have a more explicit skills focus. Employers recruiting such postgraduates over undergraduates normally expect specialist knowledge and skills development, and enhanced personal skills. This 'creative professionalism' (Kennedy, 2002) is the ability to self-direct learning and acquire new skills quickly, undertake advanced problem solving, work flexibly and lead teams. Professional organisations, departments, and students themselves are recognising that increasing learning activities and socio-political practices such as more collaborative activities, more autonomy and negotiated study, more experiential learning, and more engagement with cutting edge literature are appropriate in Master's level programmes.

The current research and resource development efforts of the Association of American Geographers, 'Enhancing Departments and Graduate Education' (EDGE, 2007), for example, incorporate attention to an array of issues in the culture and 'climate' of postgraduate education, in particular how students are being socialised and prepared for professional tasks (e.g. team work, networking, and communication with various audiences). At Flinders University in Australia, the School of Geography, Population and Environment has several approaches to integrating postgraduate students into professional activities in departmental research and practice, identified as 'pastoral care' (Flinders, 2007). In the USA, postgraduate students may organise themselves to foster professional advancement and lobby for their own interests (e.g. Triple G, the Geography Graduate Group at Michigan State University, MSU , 2007) and to address concerns about diversity, such as efforts to increase and support gender diversity in the profession through Supporting Women in Geography (e.g. SWIG, 2007) groups.

Defining 'Diversity'

Issues of diversity, especially in relation to undergraduate teaching and to the concerns of women geographers, have received sustained attention in *JGHE* (see Monk 2000 for a review). For example, there have been symposia on

multiculturalism (Vol 21, 2, 1997), sexuality (Vol 23, 1, 1999) and gender (Vol 28,1, 2004). Disability issues have also received significant attention (*Planet* Special Edition, 2003; Hall *et al.*, 2002; Healey *et al.*, 2006). Perhaps most relevant for postgraduate education are the papers by Hansen *et al.* (1995), and Moss *et al.* (1999) which focus on strategies that women students and staff might use to 'survive and thrive' and to mentor students at all levels and one another. It is important to maintain attention to these themes, and we do refer to them, but the focus is to embrace an understanding of 'diversity' as encountered in the new and emerging Master's level courses: those that are especially attracting vocationally orientated students, including mature and international students. In so doing, we recognise that ideas from the earlier literature are salient for our focus: strategies such as paying attention to communication issues, power relations, networking, and drawing on students' lived experiences.

Our definition of 'diversity' goes beyond considerations of cultural and bodily diversity to embrace diversity of:

- the students' background, prior knowledge and experience, course expectations and future goals;
- prior experience of different teaching models;
- teaching methods/ approaches/ learning environments experienced;
- the scale and imperatives of the institution of previous study; and
- the extent, character and demands of previous work experience (Table 3).

Some dimensions are enduring while others can be transient or changeable, developing either through the learning experience or independent of it. While there are some areas of possible commonality with undergraduate student groups, other factors (e.g. prior learning experiences in higher education, personal skill development) will normally differentiate postgraduate learners. We uphold the concept that an agenda for supporting postgraduate diversity needs to involve attention to access and success of all groups, to inter-group relations and campus climate, to education and to scholarship, and to institutional viability and vitality (Smith *et al.*, 2000).

Diversity and the Learning Environment

Student diversity brings opportunities and challenges as quotations from students and staff (Table 4) highlight. In the quotations students tend to focus on cultural diversity; the staff extend this to consider prior work experience and discipline background. International perspectives, student aspirations for careers within and beyond academia and variety in background are recurrent themes. It is important to focus on capitalising proactively on, *not just coping with*, diversity and to recognise not only what teachers bring but also the potential of peer support in facilitating learning. Graduate student participants in focus groups for the Association of American Geographers' EDGE project, for example, have discussed how they share skills and experiences, including those gained from internships (placements) beyond campus. They recognise and draw on these as opportunities for networking and subsequent employment. Advanced graduate students and early career faculty attending the U.S. Geography Faculty Development Alliance workshops repeatedly report that they learn from, and are supported by, the diversity of the group which brings together a mix of genders, ages, foreign- and US-born, and teachers from diverse types of institutions. The heterogeneity of the learning community is further extended by the disciplinary, vocational, research, cultural and personal experiences of staff. All can affect students' learning environments.

The location of institutions influences the mix of staff and students, which then affects important peer learning opportunities and practices. Contrasting cultures were very evident in the department visits conducted for the EDGE project. Those in metropolitan regions, for example, tend to attract mature age students who commute and may study part-time while holding down jobs. They spend less time in the department and so are less engaged with shared informal learning than students in departments in the 'campus town' environments of large universities in relatively small communities who often study and socialise together. The differences among institutions in the international student presence is also evident, partly a function of recruiting policies.

Drawing Strength From Diversity

We suggest that it is critical to bring diversity positively and explicitly into learning design to enable students to engage with and learn from each other through discussions, group work and peer support. If staff/faculty members are to succeed in supporting diverse students making different transitions and facing converging pathways to ultimate postgraduate success, they must take up the challenge of anticipating and planning to capitalise on that diversity as strength. In addition, there may be potential for staff themselves to learn from, encourage and adapt to student diversity.

In the ten practice examples below, drawing on our knowledge and experiences in geography and related discipline areas, we illustrate a variety of ways to improve students' and staff experiences of taught postgraduate learning by capitalising on diversity. We go beyond the traditional knowledge/skills domains that define 'postgraduateness' (see Tables 1/2) to include the affective domain and to draw on prior learning experiences. The examples are aspirational, raising the 'bar' or 'level of achievement' and pitching learning at the postgraduate level (i.e. a level above undergraduate study). We have not attempted to offer a comprehensive set of practices but to suggest ways in which the effectiveness of practice in postgraduate teaching can be increased. We have not explicitly linked the examples to level descriptors because their integrated learning objectives go beyond these to embrace, for example, the development of values and personal skills of judgement. There is no attempt to evaluate each example's effectiveness, rather we offer them to stimulate thinking about ways in which a diversified student body might be brought productively into co-learning communities (Table 5). We have grouped the examples into 'setting-up' for postgraduate learning; communication skills; and specialist skills and knowledge for the workplace. Further details of individual practice examples are provided elsewhere (see www.gees.ac.uk).

A – Setting up skills for effective postgraduate learning

Practice example 1: Being 'postgraduate'

New postgraduate students bring different experiences from their undergraduate programmes and backgrounds, and their expectations of postgraduate study vary widely. Good practice involves making the demands of postgraduate study explicit. Ideally this should start in the recruitment and induction processes; recognising diverse students' 'transitions' and support needs from the start of a programme (see Garner and Wallace, 1997; Kneale, 2005). Learning approaches and personal efficacy in skills such as time management, networking and presenting confidently, are likely to be assumed as the course progresses. Group engagement with learning outcomes should be thoroughly aired so that staff and student expectations are matched. Creating opportunities in the programme for personal reflection and action planning through journal or log records allows the individual to take ownership of their studies. (see Davis, 1997).

An essential precursor to setting up effective postgraduate learning environments is the development of effective student – teacher relations. While some universities make explicit their expectations of postgraduate students and teachers (see, for example, Flinders University, 2006), students also bring their own expectations to these relationships and to their relationships with other students. Encouraging small groups of students to discuss their various hopes and beliefs and presenting their consolidated view to academic staff can encourage early responsibility for their own learning and help to ensure a match between expectations and possibilities. In setting the agenda within individual modules, space can usefully be left for the student body to negotiate inputs into the curriculum – though willingness to participate in such negotiations will also be influenced by aspects of diversity within the student group. In this way, there is the prospect that students will learn from one another and the consolidated view will offer an opportunity for conversation about differences and misconceptions that might be addressed in curriculum design.

Practice example 2: Developing effective co-learning communities

In fostering respect for multiple forms of diversity among students it is important to recognise and capitalise on strengths within the group. Ice-breaker activities prepare new students for the demands of postgraduate studies and foster peer support and respect.

Activities include:

- Asking students to write a personal introduction to their peers in their 'second best language'. This task has been shown to sensitise US native speakers of English to their own limitations while demonstrating the diverse skills of international students (Daniels, 2002).

- Getting students to write a piece in the language and style of their disciplinary home, then unpicking the differences in the examples and writing collaboratively on an interdisciplinary theme (e.g. sustainable development principles and practice).

- Asking students in the first weeks to share an audit of their individual skills in a supportive way with a student partner, and then with a broader group of peers helps people to identify strengths to capitalise on within co-learning environments and areas of challenge that may benefit from peer support.

- Encouraging students to reflect on and share reasons for embarking on postgraduate study, why now, and how this venture fits into their personal development planning. Articulating individual formal and informal pathways for learning, paying attention to their goals and the means and resources they will need to attain them, can foster a shared understanding of opportunities and constraints on study (e.g. returning to study after a period of absence).

- Introducing the sharing of note-taking early in the course brings students with diverse academic, vocational, and cultural backgrounds more effectively into

class discussions. Posting notes on shared web space or bulletin boards allows students of different backgrounds to become more confident and prepared for class discussions, seeing and learning from others' practices. It is especially useful for students for whom the classroom language is not their first, offering access to materials and nuances they might otherwise have missed. Importantly, it offers an additional opportunity to develop an awareness of the diverse positionalities and perspectives of fellow students.

- Early in the course, having staff and students present their previous experiences of research and research-informed teaching and, if appropriate, to articulate their research aspirations. This encourages a shared understanding of the potential for enquiry-based learning and also establishes potential synergies in research interests in preparation for the Master's thesis.

Practice example 3: Engaging diverse postgraduates in career planning

Moving beyond the specifics of study for a module to students' futures in workplaces where colleagues have different strengths and limitations, students can be asked to initiate a longer term professional development plan beyond the degree program. A personal values, skills and resources audit can prepare students for the reality of the workplace. The concept of a road map as a metaphor for career planning can alert students to thinking about changing opportunities and obstacles and reflect on how to handle new situations. Some of the routes may be within the degree program, others outside it. In developing such a plan, students can be asked to articulate their personal and professional values and goals for sample time periods (e.g. the semester, the year, two years); to reflect on what they do well and what they need to improve; and to identify resources they need to accomplish specified goals for a selected timespan. Some of the desired routes may be through the formal curriculum, others outside it. As one student wrote:

'I realised that if I was to do research on refugees in the future I would need to learn Spanish, so I was prompted to take a local authority evening class while I was doing the masters. It was hard work but when I applied

for the research place, it made a difference because I could get into the field so much faster.' (UK postgraduate student)

Practice example 4: Enhancing personal practice: effective time-management.

For mature-aged students in particular, balancing the competing demands of work study, paid work, and personal commitments may vary widely depending on outside employment (part-time/full time), family responsibilities (care of children or older parents), and the demands of course work (group project orientated, individual research/ writing) (see Hansen *et al.*, 1995 for issues associated with female postgraduates). Interviews with postgraduates conducted in 2006/2007 for the AAG`s EDGE (2007) project indicated that time management is one of the most challenging aspects of completing their studies. Keeping and analysing a time log for 3-5 days, noting specific tasks, and discrepancies between actual and 'ideal' time can provide a useful, 'experience-based' backdrop to peer discussions. Sharing successful time management strategies within the group offers a supportive exercise[4]. Reflection on the experiences of those students who already have workplace experience where time 'is money' and is recorded can be an instructive experience for those developing time management skills for first-time employment. Used each week in a UK Master's module, most students admitted to totally changing their reading, thinking time and writing processes:

it never occurred to me that thinking needed planning, but when you wrote it on the sheet I could see I needed to read on Monday and then have time to think through and do the PowerPoint on Wednesday. And: *This seemed so stupid at first but having to hand it in each week* (the time sheet) *made me look at what I do properly. And I started planning my other modules. What I do in the library has totally changed.* (UK postgraduate student)

B: Capitalising on diversity to develop communication skills

Practice example 5: Capitalising on diverse communication skills through professional posters.

Postgraduate students are more likely to present posters than papers at professional meetings as part of their training, especially if they are studying environmental or physical geography or GIS. Peers who may be strong in oral presentation may value peer learning with those whose past academic and vocational experience and aptitudes are strong in visual representation. Introducing reviews of posters by diverse audiences (other students, staff, outside consultants) can enhance awareness of the importance of tailoring the style and message to the audiences. Displaying high quality student and staff posters with different academic, vocational and cultural experiences in departmental hallways also models and rewards those whose work is featured (for example, Howenstine *et al.* 1988).

Practice example 6: Communication skills fitted to purpose: drawing on prior experiences of writing for different audiences.

As the goals of postgraduate programs diversify, assignments need to match writing formats and style for professional and commercial clients, and community audiences. Students with vocational experience may have valuable insights into report writing and producing executive summaries that can be shared. Through role play, students can be asked to convey the same advanced scientific knowledge to different audiences or for different purposes. For example, they may be asked to play a government employee writing both environmental reports and a one page summary briefing statement, or an environmental consultant writing for the local and a trade paper in order to get the environmental message across to the local community and fellow professionals. Some of this writing might be taken beyond role play to the public domain. Students might be encouraged to write short 'Opinion-Editorial' commentaries for local newspapers or to write letters to politicians about contentious

issues. Professional practitioners, journalists and alumni can be invited to discuss with students the ways in which they write and assure the quality of their writing.

C. Capitalising on diversity to prepare specialist skills for the workplace

Practice example 7: Capitalising on diversity in dealing with ethical issues in an advanced professional context

Dealing with difficult value judgements and exploring complex ethical issues is a postgraduate level skill. Students may be presented with – or have to uncover – ethical dilemmas associated with their professional/research practice (see, for example, Israel and Hay 2006; Stuart *et al.* 2006). Small group discussion of these dilemmas can involve participants from diverse backgrounds in uncovering assumptions and values. Groups can be challenged to generate a group-consensus response to each dilemma and to reflect on the significance of, and complexities generated by, diversity in the learning community in that process. For example, students can be asked to comment on the 'dual-use' dilemma by reflecting on instances of the decimation of rare and endangered plant and animal species by commercial 'collectors' following publication of site locations in scientific journals (Stuart *et al.,* 2006). Should scholars withhold key location and other information in their publications? What does this imply for science as a free exchange of information?

Practice example 8: Working in an interdisciplinary context - designing innovative methodologies

Developing innovative approaches to research problems can be significantly helped through group work with students and staff with contrasting skills, subject expertise and learning styles from different disciplines. Interdisciplinary settings require a range of approaches, flexible and holistic thinking, and the exploration of contrasting

methodologies to investigate new and complex problems with the potential for 'enhanced creativity, original insights or unconventional thinking' (Ivanitskaya *et al.*, 2002 p. 100; Field, Lee and Field, 1994). The varied personal approaches to teaching quantitative and qualitative methods by staff/faculty members with natural and social sciences backgrounds can add additional interest to postgraduate research methods modules. Research simulations that draw together students and staff/faculty members with contrasting disciplinary perspectives can bring reflection about the value of different research approaches more explicitly into interdisciplinary learning. Tasks might include groups designing methodologies to evaluate: the impact of large-scale dam building in a physical and cultural context; barriers to geohazard management or sustainable tourism in a developing world context; and climate change impacts in a specific economic sector or domain. The groups peer review and critique each others methodologies with special attention to innovation and thinking 'outside the box'. Reflections by a group of postgraduate students in an urban ecology program (Graybill *et al.,* 2006) offer an indication of the value of interdisciplinary endeavours.

Practice example 9: Capitalising on diversity in the wider learning community - learning through professional service.

Promoting and encouraging informal learning and reflection through 'service,' in, for example, student and community organizations, departmental and professional committees and community outreach activities can contribute to students' personal and professional development while drawing on diverse strengths and aspirations. Such activities can be particularly valuable, for example, in assessing the challenges of team leadership or the benefits of networking in other communities beyond peers in the programme. These go beyond those included in course work, such as becoming diplomatic and assertive, widening knowledge of the discipline, and reaching out to publics and communities beyond academia (Monk, 1999).

Practice example 10: Capitalising on distilled experience - integrating alumni in the learning community

Arguably, academics whose careers have been entirely within academia offer students limited insights into the opportunities and nature of work in private and public national and international arenas. Students benefit from professional contacts who validate the specific and generic skills and knowledge that have longer term currency in the workplace (see McEwen *et al.*, 2003). To meet the needs of a diverse group of students, departments can draw on their alumni taking care to mirror the employment patterns and diversity of their graduates. Effective practices include: inviting alumni, as individuals or groups, to give guest presentations (see also Baker, 2007); establishing alumni advice and mentoring networks; and offering annual workshops or conferences integrating students and alumni. Contacts can also be made by including information on departmental and professional websites (see, for example, 'my graduates' websites, Baker 2007; the alumni 'business card' map model, Akron, 2007) and the interviews with geographers in the careers section of the Association of American Geographers' website). Course assignments can involve students researching alumni contacts and reflecting on ways to prepare further to help capitalise personally on similar vocational opportunities.

Capitalising on Diversity in Geography and Related Disciplines?

It is worth questioning the extent to which postgraduate teaching in geography is distinctive in its own right in the opportunities it provides to capitalise on diversity. Geographical training has traditionally valued a wide-ranging skills portfolio and a diversity of assessment patterns. Geographers engage in interdisciplinary and multidisciplinary debates and there is a major applied research focus foci around 'environment-society relations' within the sustainable development realm. Arguably, geographers continue to bring something distinctive to the intellectual table with the ability to engage and develop insights at different spatial and temporal scales. We propose that geography is well-placed in terms of both traditions in teaching and learning methods and in developing subject foci of global concern and engagement to

capitalise on diverse postgraduate cohorts. This can help ensure broad and inclusive perspectives, where identifying sustainable solutions requires holistic thinking, interdisciplinary expertise and cultural insights and sensitivity.

The potential to draw strength from diversity in geography and related disciplines is, however, also determined by whether independent or group work are the sub-disciplinary norms. Debates occur about the degree of independence in project creation and implementation at postgraduate level. For example, should postgraduate students be expected to develop an entirely independent piece of work comparable to a thesis or should they be involved in supervisor-'dictated' or -'directed' research? The question takes particular salience in contexts where research clusters and team-based research are being encouraged. Moreover, physical and human geography traditionally differ in their cultures. The science model is built on the notion that group research offers better training for the practice of collaboration in real research. Geographers taking a 'humanities' approach tend traditionally to work alone, practising and developing a different range of skills. For these groups, the shift to capitalise on diversity may be greater. In addition, in some Masters' programmes in geography and environment, students may have a first degree in another field. Thus these students bring the perspectives of those fields, but also have to work to develop their geography background.

Summary and conclusions

This paper highlights the potential of diversity to enhance learning and teaching in taught postgraduate programmes. This international, albeit Anglophone discussion has recognised student variations within countries. We identify six categories of diversity in terms of student background and experiences of different teaching models and methods, programme styles and institutional contexts and prior or concurrent workplace experience. Drawing from our practice examples, we argue that diversity of student peers and staff, beyond the more obvious discipline and cultural types and particularly in the affective and prior learning areas, can be capitalised in raising the 'bar' from undergraduate to postgraduate level in a variety of ways. These include:

- by developing high level affective learning skills and personal skills valued in leaders in the workplace;
- by developing the potential for advanced co-learning within groups; and
- by active learning in problem situations that require holistic thinking which takes in a range of perspectives and involves sophisticated and informed personal selection from different higher level knowledge and skills.

Our practice examples show how diversity can be capitalised upon to support and induct students into professional practice and develop 'creative professionalism' in a variety of ways.

Alumni, staff and the wider learning community of employers can also contribute a broad range of potential resources. Workplaces, employees and employment are characterised by diversity; learning how to capitalise on this diversity is an important generic skill worth developing. There is no 'standard' workplace for geography postgraduates but developing flexible and considerate approaches through study can be important in securing employment.

Principles for capitalising on diversity involve:

- Enabling individuals to recognise their own skills, expectations and aspirations, and to acknowledge responsibility for their own learning from day one. This 'self-efficacy' can also be supported through understanding others' perspectives and identifying similarities and differences from one's own.

- Integrating students from the workplace as role models for their student peers through face-to-face or virtual networking opportunities. Students with prior experiences of conference attendance in industry or higher education should be encouraged to cascade that experience within the group (Hay *et al.*, 2005).

- Fostering learning on how to capitalise on diversity by engaging with alumni, simulating work-type environments (e.g. mock conferences, writing for different

audiences) and offering students opportunities for workplace learning through internship placements.

- Encouraging teachers to learn with students and adapt flexibly to diversity in learning communities, for example by researching and learning together in collaborative, enquiry-based projects that allow different skills and insights to be brought to particular problems (e.g. Le Heron *et al.*, 2006).

Rather than taking a 'one size fits all' approach to learning-and-teaching, we advocate bringing diversity positively and explicitly into learning design to enable students to engage with and learn from each other. Thoughtful design of teaching and learning environments should draw from diversity to the benefit of both students and staff/faculty members. We identify three key areas for further research and awareness raising.

1) The vocationally-orientated Master's degree should be distinctive, but the paucity of generic and discipline-specific literature leaves staff/ faculty members relatively unsupported. Sharing examples of good practice on how to capitalise on student and staff diversity to enhance the richness of the postgraduate student learning experience, through conference discussion and an appropriate on-line repository, would be a useful staff development initiative. Moreover, we believe research must be undertaken into the changing character of the postgraduate student learning experience and the environments within which learning occurs.

2) The paucity of literature about learning and teaching at Masters' level provides an opportunity for Geography as a discipline to lead the way forward in this pedagogic research area.

3) Although debate on the currency of the postgraduate degree is heating up in Europe through the Bologna process (Europe Unit, 2007), perhaps we should also be seeking more commonality between continents. Inclusion of developing countries in the discussion of qualifications, titles, level descriptors and comparability between postgraduate programmes is also critical.

Master's level education needs to retain its traditional academic strengths – development of curiosity, independent learning, and critical thinking – while accepting responsibilities for contributing to society and enhancing the students' opportunities to pursue careers beyond academia.

Acknowledgements

This paper originated from discussions at the International Teaching and Learning Network in Geography in Higher Education (INLT) meeting in Brisbane, July 2006. The authors acknowledge the contributions of individuals working on other projects in the postgraduate area: EDGE project director Dr. Michael Solem and principal researcher, Dr. Beth Schlemper and the LTSN-GEES funded 'postgraduateness' project team (Professor Martin Haigh, Oxford Brookes University; Dr Steve Smith, Coventry University; Professor Rob Duck, Dundee University and Dr. Liz Wolfenden, Farnborough College of Technology, all UK).

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Table 1 Example learning descriptors (based on SEEC, 2003) that differentiate between HE Level 3 (final year undergraduate) and HE Level 4 (Master's level)

Learning Descriptor category	*Learning Descriptor sub-heading*	*Undergraduate final year (HE Level 3) The learner:*	*Master's level (HE Level 4) The learner:*
Development of Knowledge and Under-standing (subject specific)	*Knowledge base*	has a comprehensive/ detailed knowledge of a major discipline(s) with areas of specialisation in depth and an awareness of the provisional nature of knowledge	has depth and systematic understanding of knowledge in specialised/ applied areas and / across areas and can work with theoretical / research-based knowledge at the fore front of their academic discipline
	Ethical issues	is aware of personal responsibility and professional codes of conduct and can incorporate a critical ethical dimension into a major piece of work	has the awareness and ability to manage the implications of ethical dilemmas and work pro-actively with others to formulate solutions
Cognitive/ Intellectual skills (generic)	*Analysis*	can analyse new and/or abstract data and situations without guidance, using a range of techniques appropriate to the subject	with critical awareness can undertake analysis of complex, incomplete or contradictory areas of knowledge communicating the outcome effectively
Key /transferable skills (generic)	*Group Working*	can interact effectively within a team / learning / professional group, recognise, support or be proactive in leadership, negotiate in a professional context and manage conflict	can work effectively with a group as leader or member. Can clarify task and make appropriate use of the capacities of group members. Is able to negotiate and handle conflict with confidence

Learning Descriptor category	*Learning Descriptor sub-heading*	*Undergraduate final year (HE Level 3)* *The learner:*	*Master's level (HE Level 4)* *The learner:*
	Commun-ications	can engage effectively in debate in a professional manner and produce detailed and coherent project reports	can engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently
Practical skills (subject specific)	*Autonomy in skill use*	is able to act autonomously, with minimal supervision or direction, within agreed guidelines	is able to exercise initiative and personal responsibility in professional practice

Table 2. The 'Dublin' learning level descriptors: differentiating between cycles across Europe (source: JQI, 2004)

Cycle	**Knowledge and understanding:**
1 (Bachelor)	[Is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study ..
2 (Master)	provides a basis or opportunity for originality in developing or applying ideas often in a research* context ..
3 (Doctorate)	[includes] a systematic understanding of their field of study and mastery of the methods of research* associated with that field..

	Applying knowledge and understanding:
1 (Bachelor)	[through] devising and sustaining arguments
2 (Master)	[through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts ..
3 (Doctorate)	[is demonstrated by the] ability to conceive, design, implement and adapt a substantial process of research* with scholarly integrity .. [is in the context of] a contribution that extends the frontier of knowledge by developing a substantial body of work some of which merits national or international refereed publication ..

	Making judgements:
1 (Bachelor)	[involves] gathering and interpreting relevant data ..
2 (Master)	[demonstrates] the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete data ..
3 (Doctorate)	[requires being] capable of critical analysis, evaluation and synthesis of new and complex ideas..

	Communication
1 (Bachelor)	[of] information, ideas, problems and solutions ..
2 (Master)	[of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue) ..
3 (Doctorate)	with their peers, the larger scholarly community and with society in general (dialogue) about their areas of expertise (broad scope)..

	Learning skills ..
1 (Bachelor)	have developed those skills needed to study further with a high level of autonomy ..
2 (Master)	study in a manner that may be largely self-directed or autonomous..
3 (Doctorate)	expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement ..

Table 3. Dimensions of diversity within postgraduate education

Form of Diversity	*Characteristics*
Student body	Personal characteristics (e.g. age, gender, race, culture, linguistic skills); personal commitments (part-time/ full-time; with dependants), vocational experience (career stage, workplace and professional development aspirations); discipline-base and nature and extent of prior academic experience of geography; natural learning style; expectations and aspirations
Teaching models	Teachers encountered (diversity in background and experience, roles and status, gender, ethnic, class, national backgrounds) Class sizes (a small number of students writing a thesis on a self-selected topic to large classes on a vocational programme with limited curriculum options) Varying roles and conceptions of research (e.g. research led, research-informed, scholarship-based teaching, memorization of prescribed knowledge); level of research activity Higher education framework; international variants
Teaching methods	Range of approaches from independent research and peer-supported group learning, or from emphasis on critical thinking to memorisation and application of prescribed knowledge and approaches (predominance of deep or surface learning); learning environments (staff-led versus student-led) ; class size Experience of different models of workplace learning including internships/placements Development of student designed methodologies in research beyond methodologies prescribed by staff.

	Experience of formative individual constructive feedback and critique of scholarship
Programme styles	Differences in qualification titles, course length and potential duration; flexibility in time for completion; mode of delivery (part time/ full-time; face to face, open, blended and distance learning); balance of research to teaching, vocational or theoretical emphases. Differences within the discipline (e.g. practice-based programmes such as Geographical Information Science (GIS), theoretically-focused research-based Master's courses)
Institutional context	Differences in type/ scale of institution and associated character of the student body (e.g. PhD or Master's as highest degree offered). Status research and knowledge exchange at institutional level: research-led, research informed or teaching college? Large institutions with benefits from a graduate school across campus Significant presence of cultural diversity in institution, staff, study body, and surrounding community Effects of geographic location on curriculum (e.g. focus on urban studies in large metropolitan institutions, on GIS in those located near concentrations of information technology industries)
Work experience	Presence or absence of work experience Subject-relevance of work experience Nature, duration and demands of previous work experience Work experience during course (including work-based learning; WBL)

Table 4. Perspectives on diversity and postgraduate learning environments

Student quotes
'The topic encouraged me to consider the world – not just Australia – due to its multicultural outlook and students.' (Australian postgraduate student 2003)
'On the whole our university is located in an area that is very open, very diverse, and very progressive. That is the strength of the department. The student body and the faculty are diverse as well. As a result, it's an open atmosphere.' (USA EDGE project preliminary focus group participant, 2006)
'Much more personal with smaller classes. High proportion of international students give [study] a different, positive emphasis with other views. (UK postgraduate student)
Problems In classes with people of diverse language experience and national backgrounds: *'There was a tendency for [a small group] of people to dominate class discussion and make it hard for other people to speak.* (Australian postgraduate student 2006)
'GIS students tend to be international students and they tend to socialize and collaborate on their own, separate from the rest of the graduate students.' (USA EDGE project preliminary focus group participant, 2006)
Students express disappointment when teachers provide a great deal of support for those considering academic careers but not for those with other aspirations: *'My degree program is not providing many professional opportunities outside of academia. Within the school in which the department is situated there are more opportunities for those considering careers outside academia. The department doesn't seem to be open to offering possibilities for students who aren't considering academia.* (USA EDGE project preliminary focus group participant, 2006)

Lack of congruence between staff/faculty expertise and students' aspirations can make students feel their work is not legitimate:

'*That is the thing I am struggling with most—proving I have a place in geography.'* (USA EDGE project preliminary focus group participant, 2006)

Staff quotes

'The students who join our classes bring many new challenges. Often they do not have academic backgrounds in the areas in which they undertake postgraduate study (e.g. mechanical engineers and lawyers studying environmental management); some do not have well-developed English language skills; and huge diversity within a class adds great value to conversation and discussion but also presents interesting teaching-and-learning challenges. For example, one postgraduate class of eighteen, I had two years ago included 15 students all from different countries including Norway, Mongolia, Papua New Guinea, Hong Kong, Sudan.' (Faculty/staff member, Australia)

'I am teaching a comparative planning course where I am trying to compare and contrast US approaches to planning with selective other countries....I would normally be hamstrung if the class makeup was only US students. I was talking one day about economic development and there was a South Korean student who used to be a city planner. He was saying 'in my country we are losing all our factories along the coast to China.' .... And I said, 'See, American students, it not just here.' So it's a good two-way learning experience for me.' (County Planner/Part-time faculty/staff interviewed for EDGE project, USA)

'One of the greatest challenges that I face is to engage new postgraduate students direct from undergraduate study, work-based learners and international students in the same learning environment. When this diversity actually works for co-learning, the knowledge and skill development goes far beyond the traditional postgraduate norms into the realms of attitude and advanced personal skill development.' (Faculty/staff member, UK)

Table 5. Practice examples and the dimensions of diversity on which they explicitly capitalise.

Dimensions of diversity / *Practice examples*	1: Being 'postgraduate'	2: Fostering respect for diversity: acknowledging the strengths of peers	3: Engaging diverse postgraduates in career planning	4: Enhancing personal practice: effective time-management.	5: Capitalising on diverse communication skills through professional posters	6: Communication skills fitted to purpose: drawing on prior experiences of writing for different audiences.	7: Capitalising on diversity in dealing with ethical issues in an advanced professional context	8: Working in an interdisciplinary context - designing innovative methodologies	9: Capitalising on diversity in the wider learning community - learning through professional service.	10: Capitalizing on distilled experience - integrating alumni in the learning community
Student body: (a) Personal characteristics	X	X	X	X			X			X
(b) Personal commitments	X	X	X	X						X
(c) Vocational experience	X	X	X	X	X	X	X		X	X
(d) Prior academic experience of geography	X	X	X	X	X			X		X
Teaching models: (a) Teachers encountered	X	X	X	X		X	X	X		X
(b) Class sizes experienced	X	X	X							X
(c) Varying roles and conceptions of research	X	X	X		X			X		X
Teaching methods: (a) Range of learning approaches experienced	X	X	X			X		X		X
(b) Different models of WPL experienced	X	X	X			X			X	X

Dimensions of diversity / *Practice examples*	1: Being 'postgraduate'	2: Fostering respect for diversity: acknowledging the strengths of peers	3: Engaging diverse postgraduates in career planning	4: Enhancing personal practice: effective time-management.	5: Capitalising on diverse communication skills through professional posters	6: Communication skills fitted to purpose: drawing on prior experiences of writing for different audiences.	7: Capitalising on diversity in dealing with ethical issues in an advanced professional context	8: Working in an interdisciplinary context - designing innovative methodologies	9: Capitalising on diversity in the wider learning community - learning through professional service.	10: Capitalizing on distilled experience - integrating alumni in the learning community
(c) Previous involvement in methodological design	X	X	X					X		X
(d) Experience of formative feedback/ scholarship critique	X	X	X							X
Programme styles: (a) Differences in course length and potential duration	X	X								X
(b) Differences experienced within the discipline	X	X				X		X		X
Institutional context: (a)Differences in type/ scale of institution and associated character of the student body	X	X								X
(b) Institutional size	X	X								X
(c) Experience of cultural diversity	X	X								X
(d) Effects of geographic location on curriculum	X	X								X

[1] The authoring team draws on the following experience:

- Lindsey McEwen, a physical geographer, is currently heading up the Pedagogic Research and Scholarship Institute in her institution. She has pedagogic research and practice interests in postgraduate education. Most recently she has been involved in two multi-institutional projects funded through the UK Higher Education Academy Subject Centre for Geography, Earth and Environmental Sciences (GEES). The first reflected on different stakeholder perspectives on practitioner inputs to postgraduate taught courses; the second evaluated student, staff, external evaluator and employer expectations of taught postgraduate study in courses that combine academic and vocational objectives.

- Janice Monk became involved with issues in graduate education over 30 years ago through the Association of American Geographers' (AAG) project 'Teaching and Learning in Graduate Geography' (see Monk, 1978). She currently teaches a course on 'Professional Development,' for postgraduate students at the University of Arizona and is Co-Principal Investigator on the AAG's "Enhancing Departments and Graduate Education" (EDGE project).

- Iain Hay currently heads a School of Geography, Population and Environmental Management, which has over 60 students in taught postgraduate programs, roughly half of whom are international students. He has extensive research and advisory work on issues in higher education, focussing largely on transferable skills development. He frequently leads classes on professional development issues including research and professional ethics, article and book publishing, securing employment, and dealing with media as part of formal School postgraduate Pastoral Care Plans.

- Pauline Kneale is Chair in Applied Hydrology with Learning & Teaching in Geography and ProDean Learning and Teaching for her faculty. She directs the White Rose Centre Excellence in Learning and Teaching Enterprise and has interests in enterprise, employability, personal development planning and managing of teaching delivery including staff development teaching new staff about managing M level teaching.

- Helen King is Assistant Director of the Higher Education Academy Subject Centre for Geography, Earth and Environmental Sciences (GEES) where she works as a learning and teaching project manager. Her particular areas of interest are student employability and staff continuing professional development (CPD) and developing training agendas for GEES disciplines from the UK Subject Centre.

[2] The full set of SEEC level descriptors involves 17 categories under these four overarching headings.

[3] Fink (2003) offers a complementary taxonomy which includes cognitive and other important domains of learning (e.g. social significance, caring, new feelings, values, making connections) and illustrates how these are interconnected in creating significant learning experience.

[4] Ken Foote has introduced such an activity into Geography Faculty Development Alliance sessions.