

National Teaching Fellowship Scheme (Individual) 2008

Claim for Fellowship: Dr Peter G. Knight MA PhD FRGS CGeog,
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“Helping students to see the world (differently)”

MY PHILOSOPHY OF TEACHING: INSPIRE, INNOVATE, DISSEMINATE.

“A permanent and delightful enlargement of consciousness”.

(Blacksell, M., 2005. Progress in Human Geography 29, 95-96)

This description, originally applied in 1955 to the impact of “textbooks that moved a generation”, encapsulates what I aspire to help students to achieve in their learning. For me, teaching in Geography is about exploring the world together with the students, learning together about our ever-changing environment, and expanding each other’s outlooks. My goal is to inspire, motivate, and enthuse; to help students to recognise, aspire to and achieve their fullest potential; to help students to see the world differently, and to allow them to help me to see it differently too.

My approach has developed and evolved throughout 20 years of teaching during which I have sought continuous innovation in pursuit of new ways of helping new cohorts of students from different backgrounds with ever-changing needs. I experiment, import good practice from outside my discipline, discard my ideas if they fail, and put work into ideas that show promise. I am never willing to teach the same old course in the same old way if I know it isn’t working as well as it could.

I see my role as a teacher and motivator extending outwards from Keele into the national and international communities of practice and I share my teaching experiences through inter-institution contact, publications, conferences and online. I learn from the experiences of others locally and internationally, and my teaching has matured and gained energy from the feedback I have received from students, colleagues and educationalists. In this case for excellence, I offer evidence in the form of comments by students, colleagues and other professionals wherever appropriate, as I have found reflecting on how others see my teaching, as well as on how I see it myself, to be a good starting point for improvement!

I am especially enthusiastic about using novel approaches to engage new audiences, and to help people to look at the world in new ways. My philosophy is summed up in the words of one of my students: “you helped me to appreciate the world in a different light”. For me, that is what education is about. (*quotations from students and colleagues are anonymised but can be available for inspection.*)

This application is based on a career-long process of development and dissemination of innovation and good practice. As the initiator, designer and now Course Director of the Physical Geography Dual and Single Honours routes at Keele University, I take personal responsibility for, and pride in, the Physical Geography courses and teaching at Keele. Physical Geography in 2006 won Keele’s Team Award for Excellence, I previously won a Keele Teaching Innovation award, and in 2007 I won Keele’s Individual Award for Excellence in Learning and Teaching. My goal has always been to influence learners, colleagues and the wider community in a positive way on the basis of a reflective and imaginative approach to teaching. I combine a strong commitment to teaching with an internationally recognised research profile in glaciology, and my teaching is informed by the professional context of a research career as well as by subject knowledge based on research experience.

THE CASE FOR EXCELLENCE

1. Individual excellence: evidence of promoting and enhancing the student learning experience.

On the day that I started to compile this application, I received this e-mail from a 1st-year student: “Dear Peter, After Friday’s tutorial, I’ve decided that in my third year I think I am going to major in physical geography, and I was just wondering after graduating in the third year, what PhD and other further education opportunities are available...”. I have attempted throughout my career to inspire learners not only to achieve their immediate goals but also to expand their goals towards academic or professional profiles within the discipline. The most satisfying evidence of my success is in the former students who now occupy senior professional or academic positions in Geography. My former students include many Geography schoolteachers, several university lecturers, and the current Professor and Head of Geography a UK University! My ability to help and inspire students to success is demonstrated by statistical evidence of student satisfaction and

achievement. Student evaluation scores and comments on my modules are consistently overwhelmingly positive. Student numbers in my modules and in the Course that I designed and lead are buoyant, and significant numbers of students transfer into the course after experiencing one of its modules or talking to friends who take it. Student achievement in my modules is excellent and steadily improving. Students graduating from my course last year achieved the highest degree classes in their subject area at Keele, with a record number of 1st class degrees in Physical Geography. A high proportion of my students pursue higher degrees or follow careers related to the course.

In addition to statistical evidence, satisfying evidence of my success in influencing learners comes through letters from students, graduates and from the public who have used my teaching resources:

"Thanks for all your help this year. You are without doubt the best 'teacher' I have had. Instead of just telling me what I was doing wrong, you showed me how to fix it, and I'm a much better writer because of it" (Canadian exchange student)

"Thank you for all of your help, support and time over the last four years. Without it I could not have continued after my first year or been so motivated to do better from then on" (Keele graduate)

"Thanks to you I now appreciate and question the physical world in a different light. I hope you continue to teach as I have gained a lot from you and I think many future students could too." (Keele graduate)

"I will be 70 years old this June. Your textbook has been a sort-of-inspiration for me. Your style is what I can read, understand, and comprehend. After forty years it is a great and tremendous feeling" (US Student)

"I found your piece really inspiring... I personally would like to thank you for the ... exercises last semester. For me, they really have opened up my thoughts, and I've noticed I'm beginning to question things more." (Keele 1st-year student)

This student opinion is supported by comments by colleagues and external observers:

"(Peter) consistently challenges students to think for themselves and has now developed a series of successful techniques whereby the students' response to such challenge is one of enthusiasm and commitment" (Dean of Natural Sciences, Keele University)

"I hope you will be pleased to learn that you have been named as an outstanding and

inspirational member of the Keele academic community”(Letter from the Dean of Students, Keele)

*“I gave vivas to a number of candidates all of whom were very enthusiastic in relation to the Geography course and the assistance of staff. In particular Dr. Knight was complimented by a number of students for his very positive assistance and teaching.”
(External Examiner)*

Nevertheless, challenges remain. For example, while evidence suggests that most students benefit from my teaching, some students make negative comments about the same teaching techniques that other students and auditors applaud. My current “mission” is to explore ways of engaging all the students within a diverse class. I am currently experimenting with “virtual peer mentoring” and a tutorial class “buddy system” to increase the accessibility of difficult concepts to students who do not respond easily to traditional methods.

In 2004-6 I initiated and led the redesign of Physical Geography at Keele to help students from a range of educational backgrounds, with a range of goals and aspirations, to integrate employability skills, careers awareness and an appreciation of the research foundation of the discipline into their academic experience. The aim has been to help students to develop a professional attitude to their discipline and to be prepared for lifelong active engagement with Physical Geography either as professional practitioners or as environmentally responsible citizens. The background to my innovations was that Physical Geography training in the UK has traditionally focused on subject knowledge to the detriment of students’ appreciation of its professional context and their acquisition of career-relevant skills. Clark and Higgitt (1997, J.of Geog. in Higher Education) refer to “the unimportance in career terms of most of our subject knowledge” arguing that “Geography staff may need to introduce new courses which are more explicitly about the real world.” Similarly Haigh and Kilmartin (1999, J.of Geog in Higher Education) argue that “specialist subject skills offered by geography courses are not necessarily the same skills that will help their students become more effective learners and more readily employable.” Refocusing Keele’s Physical Geography as an example of good practice for other Keele disciplines, and for Geography courses nationally, involved new styles of learning and teaching, and new content and outcomes concerning employability and citizenship. The reorganisation of teaching involved a wide range of innovations in the organisation and presentation of material:

- *Focus on independent and reflective learning*: for example, I encourage and assess student reflection through assessed online peer-group discussions. This helps identify student expectations and monitor career-awareness.
- *Use of student peer assessment*: this fosters a professional and responsible attitude to learning.
- *Focus on professional and employment context*: involvement of an employer of Physical Geography graduates programme development and delivery; broadening reading recommendations beyond academic sources to include professional journals that expose students to the professional context of their discipline.
- *Embedding of web-based “deep learning”* (highly commended, 2004-5 Keele University Awards for Excellence in Learning and Teaching): now extended into the new Virtual Learning Environment through integration of VLE-based activities into students’ reflective practice and independent learning.
- *New and revised courses, modules and learning outcomes*: focus explicitly on students’ professional integration into the discipline. Career opportunities, student involvement with our professional body (The Royal Geographical Society), lifelong learning, and environmental citizenship are integrated throughout the programme rather than confined to specific “careers lectures”.

Student activity and feedback provide evidence that students benefit from, and appreciate, the changes that I have made:

- Improved student engagement with employment-relevant skills was evidenced by students enrolling as student members of professional bodies following our lecture about the Royal Geographical Society. That the integration of career case studies into teaching enhances students’ appreciation of the “relevance” of their subject is evidenced by students’ contributions to tutorials and VLE discussions.
- Improved student ability and willingness to reflect on their learning and take greater responsibility for their progress is indicated by rapid and enthusiastic take-up of reflective discussion-based on-line activities, student completion of reflective self-evaluations, and student feedback through tutorials and evaluation forms.
- Improved student performance is evidenced for example by better average coursework and exam scores for the new modules.
- Improved student satisfaction is indicated by mid-term and end-of-semester evaluations, and by improved first-year retention.

2. Raising the profile of excellence: evidence of supporting colleagues and influencing support for student learning in and beyond my institution, through demonstrating impact and engagement beyond my immediate academic and professional role.

One of my goals in learning and teaching is to influence and inspire colleagues in their teaching, learning and assessment practice, by example and/or through the dissemination of good practice. I try to lead Physical Geography at Keele by example, and take personal responsibility for ensuring the quality of the courses. I act as mentor to the other staff, encourage peer observation of my teaching, and ensure a framework of supportive cooperation for the teaching staff. After our Team Award last year one colleague wrote to me:

“I was really proud yesterday to be part of what has become such an effective teaching team within Physical Geography.” (Letter from colleague after presentation of Team Teaching Award)

I set examples of innovative good practice in my own modules and encourage colleagues to evaluate and adopt those throughout the subject area and beyond. New practices I have pioneered and then seen adopted more widely include undergraduate “profiling” (personal development planning), student peer assessment, student self-assessment, WebCT online assessments and WebCT virtual-tutorial discussion boards. I am especially enthusiastic about a new approach to assessment using a comprehensive introduction as a replacement for a full-length essay, which I pioneered last year and has this year been adopted by other staff in Geography.

“Peter continues to suggest new ideas and ways of improving the teaching of physical geography that are benefiting the whole of the physical geography programme.” (Academic Mentor’s report)

I won a Keele Teaching Innovation Award in 2001, and led the winning Team Award application in 2006 that involved two early-career staff. I have supported and encouraged junior colleagues in successful applications for from the HEA subject centre funding and Nuffield Undergraduate Bursaries. I have established a system of team-teaching and co-operative module design that integrates staff effort and facilitates cross-fertilisation of ideas. This has been expanded and enhanced with the appointment of a fourth staff

member this year. I am co-designing and co-teaching a new module with this new early-career staff member as a way of sharing my experience and also benefiting from the fresh teaching ideas of “new blood”.

“He maintains a constant critical eye on his own teaching and that of others.”
(Academic Mentor’s report)

I have played a major role in the development of Quality Assurance procedures in Geography, in Earth Sciences, and most recently in Physical and Geographical Sciences. I have mapped out a School framework of “good practice” in Quality Assurance that was praised in the Institutional Audit developmental engagement and in a Keele Internal Audit. The newly formed School of Physical and Geographical Sciences is adopting the concept of a QA Framework and Handbook that I previously developed in Geography and imported to Earth Sciences. My work to develop undergraduate profiling (PDP) in Geography was adopted initially by Geology and Applied Environmental Science, and then taken up by the University after I won a Keele Innovation Award for the work in 2001. The newly implemented Keele PDP system for students (2008) draws upon my earlier work, and I am presenting a workshop on the system to the current class in the “Teaching and Learning in Higher Education” Programme. This program is taken by new lecturers and provides a great opportunity for me to disseminate the results of my work in this area.

Challenges remain. In Physical Geography I am happy that my innovations are benefiting student learning (evidenced by the Team Award for Excellence in Learning and Teaching, and by student feedback). However, I see further opportunities for disseminating good practice into the other Geography routes (and beyond), and importing further good practice from outside Geography. To disseminate good practice by example and sharing across courses, I aim to co-ordinate a “Handbook of innovative good practice” as a framework for inter-subject discussion, and to establish a new cross-disciplinary module co-taught with a colleague from outside Physical Geography employing elements of good practice that I have developed.

Increasingly I am working to establish a broader influence within national and international communities of practice beyond my own institution. I am enthusiastic in exporting innovation and good practice throughout the curriculum at all levels and internationally, and am proud of my positive impact that is reflected in feedback from users. In support of my promotion to Senior Lecturer the Dean of Natural Sciences wrote:

“Peter is not only one of those most dedicated members of geography staff, but

definitely the most innovative in his ideas and most in touch with developments in education generally. The philosophy developed in (his) book underpins second year geography at Keele and establishes the key skills of independent investigation in the principal geography course as a whole."

My contributions include:

- Service as external expert in teaching reviews and audits at other institutions
- Publications in literature of teaching and learning in Geography
- Invited lectures on teaching at the Geog. Association professional conference
- Invitations to write textbooks and articles for A-level students and teachers
- BBC TV, Radio and online appearances in educational documentaries such as http://www.bbc.co.uk/stoke/videonation/56/walk_through_time_56.ram.
- Learning materials provided to UK and US Museums and US public service TV.
- Hosting and editing a Physical Geography Learning and Teaching website
- Teaching Innovation Award (Keele University, 2001) and dissemination of its output
- My work features in a DfES report as a case study of good practice
- My textbooks have been adopted internationally and well reviewed in the literature: *"... for students interested in learning more about glaciers this book cannot be surpassed."* (*Arctic, Antarctic and Alpine Research*). *"What can I say – this book helped me to get a first"* (customer review on Amazon.co.uk)
- My textbooks are set reading for courses in schools and universities around the world. eg: <http://ksuvirtual2.geog.kent.edu/glacial/> and www.ulb.ac.be/prog/sciences/resumes/GEOG_051.html
- I have commendations from teachers around the world for my textbooks and internet teaching resources. There are many references on teaching websites to materials that I have disseminated from Keele.

"At the GA Conference in Derby last week I bought a copy of your excellent book - the best book for my AS / A2 teaching I've so far seen in 17 years of teaching 'A' level Physical Geography." (Letter from teacher)

"I have been reading your fantastic book ...I have no excuse not to be able to bring Glaciation to life for my students and hopefully to enthuse them on the subject!" (Letter from teacher)

"I can suggest nothing better than a visit to the website of Dr Peter Knight of Keele University. He put together a wonderful presentation which aimed to set the students

thinking.” <http://www.learningnet.co.uk/ubb/Forum5/HTML/001674.html> posted 31 December 2004

“Peter Knight a lecturer in Glacial Geomorphology at Keele University has set up this site, which has some stunning images of glaciers... A brilliant reminder that Geomorphology is about making sense of landscape change as well as disaster, death and destruction. Peter has kindly recreated a virtual lecture on line.” (Staffordshire Learning Net: www.sln.org.uk)

I have just started to achieve a reputation that will serve as a basis for more important contributions to the discipline, but have a lot of work yet to do. I recently embarked on my first External Audits (Advisor to an Internal Quality Audit, Bath Spa University; Assessor to Internal Subject Review, Liverpool Hope University) and External Examiner duties recently, and aim to pursue further external and national roles in dissemination of good teaching practice. I have recently established a Physical Geography website (www.PhysicalGeography.org.uk) through which to reach a wide range of students and teachers who would not typically access a University-based site. Although still sparse in content, it offers huge potential for disseminating good practice internationally and at all levels and has received a positive write-up on one of the UK's main Teacher-centred Geography sites (www.geographypages.co.uk). I see external dissemination of good practice, and engagement with a broader cross-section of the educational community, as major targets for the near future.

3. Developing excellence: commitment to my ongoing professional development with regard to teaching and learning.

My approach to teaching is one of continuous reflection and revision with the aim of maintaining a high standard of professional practice in the context of a changing academic framework. This approach is manifested in my day-to-day teaching activities, in my creation of mechanisms for the support of innovation and reflection within my teaching team, and in my commitment to a professional framework of continuous development through the Royal Geographical Society's Chartered Geographer program. My recent activities include:

- Chartered Geographer status requires annual self-evaluation and continuing

professional development (CPD) (www.rgs.org/OurWork/CharteredGeographer). My CPD activities have included working with schoolteachers to develop course materials for pre-A-level students; working with a US Museum and TV station to provide materials for public understanding of science; attending staff-development courses at Keele related to assessment and to use of technology in teaching; attendance at a national teachers' conference; regular engagement with the literature related to learning and teaching.

- I have published several books and articles exploring strengths and weaknesses of different approaches to teaching (see CV). These include articles in Professional Journals aimed primarily at teachers, study-skills textbooks for students, and subject-specific textbooks designed to help students and teachers bridge the gap between A-level and University. These publications have (judging from user feedback) been useful to readers, but writing them has been even more worthwhile for my own professional development. It has helped me to focus my attention on pedagogic research, to reflect on both my subject knowledge and my ability to communicate effectively with different audiences, and to be much more understanding of the background of new students at degree level. Studying the A-level syllabus to create a relevant but progressive text has alerted me to weaknesses I previously never knew about in the subject background of my undergraduates. This enables me to be much more relevant and constructive in my induction lectures and throughout their programme, referring them back to their previous experiences and reflecting with them more effectively on how their degree studies differ from what has gone before.
- I convene a weekly meeting of my course staff to ask ourselves “how the teaching is going” and to reflect on things we can do to improve our work. Issues that are raised by staff at the end of one week can be addressed with students at the start of the next. This has been especially valuable for career-young staff, who are encouraged to maintain reflective teaching diaries, and has facilitated the extremely rapid identification and dissemination of good practice. For example, I recently started a reflective online blog after a meeting where I heard about the excellent way that a new lecturer was using her reflective diary. In a future meeting we will compare the merits of my online blog and her paper diary, and share our experiences with the rest of the teaching team. Ideas can then be fed through to the department, faculty or university via innovation reports to learning and teaching committees. I am going to experiment this year with letting students see (and comment on) my blog as part of their tutorial program.
- After every class I annotate my teaching notes to record what went well and what

didn't. Each year, as I plan to deliver a lecture, the first thing I see in my notes is a reminder: "change this, add the other, don't do that!" I constantly update my course, and in 20 years have never repeated a lecture without update.

- I pioneered peer-review of teaching and student-evaluation of teaching before they were institutionally required, and the early experiments that I was involved in have influenced the way that University processes now operate .
- I seek out interdisciplinary and inter-institution experience in audit and examining, and import good practice from that experience. For example, in my role as external examiner at Bath Spa University I have identified some excellent practice that I have transferred to Physical Geography at Keele including the development of student "House Style" instructions and the use of "dictionary entry" as a mode of assessment. These are now embedded in the course at Keele.
- I import into my own teaching innovations identified from participation in staff development events, most recently Phil Race's "Smarter Feedback" workshop – I tried out his new ideas the very same week in a 1st-year lecture!
- I encourage and engage with constant student feedback through WebCT student discussion boards. I am currently experimenting with the use of a hierarchy of boards for different groups of students: students seem to be willing to discuss some issues only on small "private" boards, while other issues do well on course-wide cross-year boards. The outcomes of this year's experiment will lead to the more effective use of discussion boards for the next cohort of students.
- My winning 2006 Team Award application was based on course redevelopment in response to internal and external stimuli for change, and the Physical Geography programme involves many elements that were designed specifically in response to learner feedback. For example, new modules in Global Warming and in Meteorology were introduced specifically in response to student requests

Working in an environment where both teaching and research are valued, CPD in teaching does raise some problems. I aspire to go beyond the kind of critical reflection that Calderhead (1989, *Teaching and Teacher Education*) described as being no more than constructive self-criticism, and I try to engage routinely in reflective *action* both after and during teaching. However, McNamara (1990, *Journal of Education for Teaching*) is one of many commentators who recognise that effective reflection can only be fostered with time and opportunity for development. Time is a scarce commodity. I am trying hard to ensure that my workload does not prevent effective reflection during the working day. My challenge is to make more time available for myself and for my course team to engage

very specifically in deliberate constructive reflection as part of the work process as well as maintaining a habit of reflecting on the work process.

One area that especially interests me is how students use WebCT to provide feedback and how teaching staff react to that feedback. There is a virtually continuous “stream of consciousness” of feedback from some students via the WebCT staff-student discussion boards that I have in all of my modules. I find myself sometimes tempted to over-react to the most voluminous and voluble feedback at the expense of the quieter, less frequent but often clearer-thinking contributors. This year I plan an evaluative cross comparison of different feedback streams for one part of the program. Contribution fatigue (Cann et al., 2006, Bioscience Education E-journal) on WebCT discussions affects poorly motivated students more than the well-motivated ones, skewing the bias of feedback, so I am assembling feedback from traditional and electronic mechanisms to gauge whether my initial responses to different streams of feedback are appropriate. I hope this will help me to provide better feedback to students, and to gauge more effectively the students’ responses to teaching. I am also interested also in correlations of student attendance at classes, student engagement with WebCT, and student achievement. Preliminary results of my study indicate that the correlation between engagement with learning resources and achievement of learning outcomes is high at level-1 but drops off at later levels as students become more able to work independently. I am currently compiling data with a view to submitting the results for publication in the Journal of Geography in Higher Education. I see this kind of teaching-related research as essential to my continuing development and to the maintenance of my professional standards, and believe that it ultimately benefits not only me but also my colleagues and all our students.

In section one of this proposal I described something that occurred on the day I started compiling the document, and considered how not *all* students *always* benefit from any particular “improvement” that I make to my teaching. It seems appropriate to end with an event that occurred as I was finishing the application, and to reflect on how I am learning to accommodate the different learning needs of individual students. Based on discussions with students and colleagues, and informed by reading of current research, I have started to develop the idea of Peer Mentoring. Maryann Jacobi, in “Review of Educational Research” (2001) calls peer mentoring a “retention and enrichment strategy”, and I will assess its value under both those headings. After favourable student feedback on the idea, I implemented the first trial of that system this week. A 1st-year student who transferred to another institution at the end of last semester returned to Keele after a few weeks wanting

to resume our course. She wrote: *"I decided to come back because I started to question their efficiency and would rather not have had lecturers like that when there are great ones here. I am very glad to be back."* This week another student was referred to me because she, too, was thinking of leaving Keele. Previously I would simply have met with the student, enlisted the assistance of the various student-support mechanisms in place at Keele, and helped her to make the decision that was right for her. This year I supplemented that with Peer Mentoring, putting the student who is considering withdrawal in touch with the student who has already been down that road and back again, for a kind of mentoring that may involve social frameworks that quite alien to many academics. Their first action was to become Facebook Friends. In follow-up discussions with both students, I will continue my support also assess the impact of peer mentoring both students. I will also explore their styles of interaction (face-to-face, virtual, etc) to establish protocols for future introductions. Peer mentoring is used in the UK at Institutional level (eg:www.leeds.ac.uk/peermentoring) but I plan to develop the process at a much more "local" scale within a single program. Next year I will explore the relative merits of having partners from the same year or from different years of study, and of virtual and actual mentoring "spaces".

This is an exciting new development that I hope will be of great benefit to students, but it is also the start of an exciting learning opportunity for me: the kind of learning opportunity that is one of the best parts of teaching!

Finally, an e-mail received from a student on 4th March 2008: *"Hi Peter, Just thought I'd let you know how powerful your lecture today was. It was probably the best lecture I've had in my second year; it reasserted how I look at things as well as encouraging me to keep my enthusiasm going."* As I open my reflective blog I am wondering whether to be pleased about his enthusiasm or disappointed that I didn't sufficiently *challenge* how he looks at things!

Word Count: 4996 words.