

Inquiry Based Learning and University Geography teaching

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IBL is but one of the many acronyms and buzz-words circulating in the thickening pedagogic fog we stumble through as we try to pull together module designs and teaching sessions that work. Does grappling directly with Inquiry Based Learning (IBL) offer any practical benefit for the teaching of University Geography?

This document, of course, aims to be facilitating of active collaborative inquiry rather than didactically telling you the way it is, so will offer no definite answer. Rather, it tries to pull together, from a review of journal articles, professional publications and reports, the claimed benefits of IBL, the difficulties that arise around it, and the tensions that have to be managed in negotiating IBL into the curriculum. It of course also considers whether IBL isn't just what Geography's been doing all along anyway. But first, it cannot avoid trying to answer the question;

1. What is IBL?

IBL refers to a range of approaches to learning that are based around processes of self-directed inquiry. Students conduct inquiries which are designed to enable them to actively explore questions and problems within their discipline. IBL can operate as the design principle for entire modules and programmes, or can be implemented as discrete activities within a lecture-based module.

IBL is exactly the same as *Enquiry* Based Learning (EBL). The difference between the two is simply a matter of spelling. Sheffield has the Centre for *Inquiry*-based Learning in the Arts and Social Sciences (CILASS) so this report will use IBL.

IBL is not identical with *Problem* Based Learning (PBL). Rather, PBL covers some forms of IBL. Exactly where the boundary lies around PBL to keep is as a sub-set of IBL is not stable or clear. PBL tends to be structured around a problem which is given to the students, whereas IBL can also encompass activities where students come up with the problem themselves. Definitions of PBL can specify that students work in groups to address the problem (e.g. Kahn and O'Rourke 2004: 2), whereas IBL can also involve students working on their own. The PBL approach has a more defined lineage, originating in the teaching of Medicine and transferring most readily to other applied disciplines (Pawson et al. 2006). Perhaps because of this longer history and slightly more codified status, PBL appears to be easier to write about than IBL, with a number of useful considerations of its applicability to Geography (Spronken-Smith 2005; Pawson et al. 2006). Such accounts of PBL inform much of the discussion of IBL below.

With IBL, EBL and PBL, a range of other contemporary pedagogic buzz words inevitably attend:

"IBL reflects a strongly *student-centred* conception of learning. Research has demonstrated that *active learning* approaches such as IBL are particularly powerful educationally... Further benefits for students include the

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development of a wide range of *transferable capabilities* in crucial areas such as *autonomous learning, critical thinking, team-work* and *information literacy*." (CILASS nd, emphases added).

The broader principle of active learning has been used to draw together the practical experience of educators in Geography, resulting in some relevant reviews and collections of relevant practical examples (Hanson and Moser 2003; Healey and Roberts 2004).

What these varied terms and acronyms indicate – or perhaps obscure – is the way that IBL is positioned as distinctive from, and in some ways in opposition to, dominant traditional models of Higher Education teaching. The argument goes that student pursuit of inquiry brings educational benefits beyond what can be conveyed by the characteristic lecture format.

2. Is IBL new for Geography?

Not altogether. University Geography courses have long involved field-trip based student projects and independent research projects which can comfortably fit within definitions of IBL. Nevertheless, it can be argued that current debates and developments around IBL can challenge traditional expectations of where independent and collaborative inquiry should fit in the curriculum; and, more fundamentally, provoke debate on the purposes and means of a University Geography education.

The role of fieldwork in Geography courses has been the basis for a number of suggestions that Geography provides a good seed-bed for the development of IBL approaches (Bradbeer 1996; Kent et al. 1997; Panelli and Welch 2005; Harland et al. 2006). Literature specifically addressing field work in Geography highlights that being in the field is not necessarily synonymous with the characteristics of IBL. The traditional Cook's Tour approach to fieldwork, with the physical features of the field simply providing additional props to the lecturer's didactic style, is entirely consistent with a passive style of learning, however much walking the students might have to do (Panelli and Welch 2005).

However, field work has arguably been at the forefront of teaching innovations in Geography that fit within definitions of IBL, as fieldtrips have been increasingly structured around student group project work, discussions and reflectivity (Kent et al. 1997; Simm and David 2002). For some authors, active learning approaches to fieldwork are a pedagogic ideal, demanding of students the integration of different forms of academic knowledge from across the Geographical curriculum, and its application to addressing real world situations and problems. For McMorrow, fieldwork

...provides the opportunity for student-centred, experiential 'learning by doing', allowing students to engage with places and environments. At its best, it demystifies knowledge acquired from texts, allowing students to relate academic concepts to the real world, and coalescing compartmentalized knowledge from different courses. (2005: 223)

Harland goes further, arguing that residential geographical fieldtrips offer a near unique opportunity to do nothing less than 'recapture some of the more liberal values and practices that are currently being squeezed out of higher education' (2006: 94). In some cases the convergence of fieldwork with the principles of IBL has led to the conscious restructuring of fieldwork. Perkins et al (2001) give an account of the radical restructuring of a Geography fieldtrip at the University of Manchester along PBL-informed lines, entailing 16 hours of PBL-based contact time ahead of the fieldtrip itself.

Similarly consistent with understandings of IBL, dissertation projects, such as those which our own students undertake, can be seen as an audacious example of curricular design to promote autonomous, self-defined and self-directed inquiry, which in some respects (including individual student autonomy, expectations of the generation of original knowledge) go well beyond innovative examples of IBL in the literature.

Finally, Geography is seen as a good disciplinary location for the advantages of IBL approaches because of its inherently trans-disciplinary character, making learning objectives in Geography consistent with the aims of IBL by enabling students to integrate different bodies of knowledge in the processes of inquiry.

What, then, can Geography learn from engaging with IBL? First, current formulations of IBL recognise the long tradition of incorporating independent research work in degree programmes across subjects, but highlight that such work typically comes towards the end of degree courses, as major pieces of usually solo work, which consolidate and demonstrate overall subject knowledge and research skills. Proponents of IBL see student-directed inquiry-based learning as of value at all levels of education, in a range of formats and different scales of project. Second, the growth of discussion around IBL is accompanied by the (gradual and uneven) sharing of innovative ideas for using inquiry-based approaches in different educational settings and confrontation with the issues that arise. Third, discussions around IBL and related themes in University teaching might provide a location and vocabulary for reflecting upon the purposes and means of a University Geographical education.

3. Dimensions of IBL

As indicated above, IBL can be enacted in a wide variety of ways, with each IBL exercise sitting somewhere along a variety of dimensions.

3.1 Range of purpose

Perhaps core to attempting to set the limits of IBL is the purpose of the exercise. This can run from straightforward 'learning-by-doing', such as in the acquisition of an applied technique, through engendering deeper understanding of a theoretical concept to open-ended and largely immeasurable objectives of engendering independent, critical thinking.

Simply 'learning-by-doing' does not necessarily equate to IBL. If a set task requires student engagement only to execute a pre-ordained set of actions to reach a single, pre-defined successful result, then, while the student might have been visibly 'active', the exercise does not have some of the basic pre-requisites of IBL. For Khan and O'Rourke, a basic defining characteristic of IBL is "Engagement – with a complex problem or scenario – that is sufficiently open-ended to allow a variety of responses or solutions" (2004: 2). This underlies the meaningful expression of the other characteristics they identify:

- "Students direct the lines of enquiry and the methods employed.
- "The enquiry requires students to draw on existing knowledge and to identify their required learning needs.
- "Tasks stimulate curiosity in the students, encouraging them to actively explore and seek out new evidence.
- "Responsibility falls to the student for analysing and presenting that evidence in appropriate ways and in support of their own response to the problem."

Nevertheless, exercises which fall within the definition of IBL can run the gamut from the student's acquisition of specific skills, through to students participating in the production of original academic knowledge.

3.2 Dependence and autonomy

This dimension of variation, from technique acquisition to knowledge production, aligns to some extent with varying degrees of student autonomy. As Kent et al (1997) articulate in relation to fieldwork, a continuum can be identified between student dependency on the specific guidance and transmission of knowledge from staff, to the autonomy for students to define the object and mode of inquiry. Clearly within any part of a degree programme, there are limits to student autonomy, if only in the form of assessment criteria, but there remains considerable latitude for variations in degrees of autonomy.

3.3 Relation to existing student knowledge and abilities

Students cannot pursue the benefits which are offered by the autonomy to define the objects and means of inquiry if they are not sufficiently equipped with the knowledge and skills to pursue a meaningful inquiry in the first place. This underlies the explicit recognition of the importance of exercises being designed to draw upon and enhance learning prior to the inquiry project (Pawson et al. 2006). Indeed, a key benefit claimed of IBL approaches is the potential for designing exercises which require students to integrate knowledge from across compartments of their existing learning, as a more or less inevitable corollary of applying formally acquired knowledge to real world problems.

3.4 Stage of the degree programme

The commonsense requirement of appropriate knowledge before independent inquiry can be effective underlies the traditional placing of independent research towards the end of degree programmes. However, IBL is presented as being applicable throughout levels of education. The Department of Geography at the University of Manchester takes this to something of an extreme in the possible range of undergraduate stages, by taking freshers on an IBL-structured weekend field-class in Keswick as part of the initial induction programme. A one-day exercise involves team-based collaborative mapping involving role-play, whether as an ant or as a local resident. Students are responsible for the design and execution of fieldwork and reporting back with a visual representation of a part or parts of Keswick. The team suggest that the exercise plays multiple roles, including rapid immersion in University Geography entailing shifts in perspectives and expectations, getting to know a small group of fellow students well very quickly; as well as actively engaging with ideas about space, scale, perceptions and mapping (Dodge et al. 2007).

3.5 Temporal scale

IBL exercises can of course vary enormously in temporal scale, from taking a matter of minutes within an otherwise conventional lecture, to an independent research project taking many months.

3.6 Group or individual working

IBL approaches tend to valorise group work, for reasons both of intellectual exchange and of developing skills of collaborative working, often aligned with transferable skills for the world of work. Some of the benefits claimed for IBL approaches, such as developing skills of collaboration and teamwork, clearly depend on group based activities (Hindle 1993; Healey et al. 1996; Fournier 2002). While group activity may well also engender a distinctive approach to

learning, there is no inherent reason why many of the benefits of IBL cannot be served through individual student inquiry. Indeed, the strongest traditions of IBL in Geography, such as in dissertation projects, are based on individual inquiry. The review of IBL in our own department (appendix 1) also showed that individual work within modules, such as that leading to presentations, has a strong representation.

4. How to do IBL

Most literature on IBL in Geography either discusses its benefits and challenges in the abstract, or else provides description and discussion of specific case studies. Some authors do discuss how to undertake IBL or related approaches, from practical discussion of the range of activities that can be involved to programmatic philosophical statements on what it demands of the teacher.

In terms of activities involved in IBL, almost anything can go so long as it is not passively listening, watching or reading. In their account of a project developing a range of active-learning introductory level modules on human dimensions of global change, Hanson and Moser (2003: 20) describe activities including writing exercises, role playing, class debates, use of simulations, data collection, analysis and interpretation and web research. More generally, they suggest teachers should "get away from the straight lecture format in introductory courses... and develop instructional materials that actively and collaboratively engage students in the learning and research processes".

In popular understandings, IBL seems to be aligned with computer mediated learning – such as students working through problems in a dedicated application or over a virtual learning environment application. McMorrow (2005) discusses the development and use of web-based 'virtual fieldwork' resource to prepare students for real fieldwork in the Peak District, which would provide an advanced example of the sort of computer exercises that might often be envisaged as being part of an IBL approach (though McMorrow does not seek to claim an IBL label for the example). However, these exercises often appear to be using advanced technology to enable traditional 'problem-solving' rather than problem-based or inquiry-based learning. The distinction here is that 'problem-solving', while actively engaging students, does not have the openness of execution required for either a PBL or IBL approach – that is; it generally has a correct way of finding a correct solution to the problem. Computer based activities clearly are neither a necessary nor sufficient component of an IBL approach.

However, it is clear that the web, through increasing the accessibility of data and knowledge, and enabling communications, can make computers invaluable tools within IBL activities. So, students can use the web to rapidly find secondary data to work with, or can be provided with materials by the teacher. Alternatively students pursuing group work and needing to communicate and collaborate asynchronously and at spatial remove can use an increasingly wide range of web based tools, from old-fashioned email to blogs and shared online workspaces.

Pawson *et al* (2006: 113) draw together a concise summary of best practice in PBL synthesised from 11 cited accounts. Whilst specifically addressing PBL, their table has clear relevance for most expressions of IBL:

Preparation

- Prepare well in advance and, if possible, negotiate teaching release time
- Search for similar courses or assignments, and share ideas with colleagues, including those outside the discipline and academy
- Assemble resources for student use: access to pertinent library and online resources is necessary

- Consider level and training of students. Are they first years or students in a seminar or non-traditional students?

Scenario design

- The scenario should reflect reality as closely as possible and be contemporary in tone
- The scenario should be compelling, so as to draw students in and generate self-directed learning
- The scenario should be complex enough to involve multi-dimensional problems and solutions, requiring students to work as a team
- The scenario should be focused enough to be resolvable in the time available

Implementation

- The PBL experience should begin at or near the beginning of a term. Ideally this type of work will be infused into the class culture, not dropped in at random
- Students should be formed into instructor-assigned, permanent groups of 4–6; Permanent groups allow students to develop team-building skills. Reduce barriers to participation by assigning specific roles to students (leader, recorder, sceptic, etc.)
- Instructors should work with groups to provide clear guidelines for conduct and expectations; they should facilitate by asking probing questions, and help guide student inquiry (depending on student level)
- There should be a clear product or outcome for the problem. Students must know what is expected of them. A report? A poster? An oral presentation? A decision supported by references?

Assessment

- Develop authentic assessment mechanisms that mirror problem-solving process
- Instructors should have clearly established marking criteria that are transparent to students
- Work accountability into the assessment process. Consider both individual and group components to marks
- Students may be asked to do a self-assessment of their learning process, and be assessed by peers both for their problem-solving abilities and for contribution to team effort

(2007)

Cook *et al* (2007: 1123) provide something of a pedagogical manifesto, not actually for IBL, but rather more specifically for being “properly ‘radical’ commodity geographers” through adopting a co-learning approach, drawn from their account of a final year Material Culture module. It nevertheless indicates some of the dispositions required of teachers for a committed IBL approach:

Step 1. In the classroom

- drop the lecture-reading-exam format for a more engaged pedagogy
- provoke and 'orchestrate' discussions, lose some control
- get students to do some 'geographical detective work'
- use less (as well as more) didactic materials in class
- and don't value only direct 'causes and effects' of this teaching/learning step

Step 2. Between the classroom and the field

- learn from students' reactions to make research and pedagogy more effective
 - ask what teaching materials worked best and why that was the case
 - notice ideas getting stuck, hard questions asked, assumptions made
 - take these as the concerns of this 'user community' and research them
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5. What is IBL good for?

Most literature on IBL is written by its proponents, with rather more space given to discussion of its virtues and to examples of its successful execution than to critical reflection upon its limitations, whether pedagogical or practical. From

those that do systematically address its virtues, a number of themes come across as dominant.

5.1 Learning by Doing

The most pragmatic benefits of IBL lie in its involving 'learning-by-doing', cohering with incontrovertible common-sense pedagogy. Indeed, Healey (2005: 196) invokes Kropotkin's observation in *What Geography Ought to Be* (1885: 944), that "the rapidity of teaching on the 'problems' method is something really astonishing". Inspection of the original source reveals Kropotkin's observation to be restricted to the teaching of geometry, consistent with the extent to which 'learning by doing' can be most easily aligned with acquisition of skills and formalised techniques through closed-solution problem-solving exercises. Nevertheless, less narrowly defined learning objectives can be served by the 'doing' involved in IBL based exercises. In the activities and processes involved in advanced independent inquiry, skills of critical thinking, analysis and synthesis can be developed as part of the range of possible transferable skills.

5.2 Transferable skills

Development of transferable skills is a key benefit identified by proponents of IBL approaches (Hindle 1993; Hanson and Moser 2003; Healey and Roberts 2004; Spronken-Smith 2005; Pawson et al. 2006). Often, transferable skills are aligned with the skills and abilities seen as valuable in the graduate careers market, such as the abilities to work in a team, synthesise knowledge and creatively solve problems. However, objectives of IBL can also be consistent with 'transferable skills' such as critical thinking and of intellectual autonomy, which are not always valued by graduate recruiters, but which might nevertheless be desirable outcomes of a university education

5.3 Open to varied learning styles

The variety of activities that are entailed in IBL exercises, and the different forms of assessment that often come with them, are suggested to open up the overall curriculum to a wider range of learning styles (Healey 2005; Healey et al. 2005). No proponents of IBL appear to seek to abolition of lectures. Rather, by adding IBL approaches, students who are not necessarily well served by the lecture-reading-exam paradigm of university education have more of a chance to develop and to demonstrate their abilities.

5.4 Engaging students as active learners

The most fundamental benefits and legitimations of IBL rely on the pedagogical benefits claimed for active learning. The negative valuation of the conventional model of the lecture is summed up by Hanson and Moser (2003) with a quote from Kennedy (2001: 1557):

"We already have distance learning in most university science courses: it's called the lecture"

IBL therefore stands in distinction from, and opposition to, the model of learning represented by the lecture, with students as passive vessels to be filled with the wisdom of the lecturer. Whilst most lecturers would not recognise such a framing of either students or themselves, arguably the lecture format has this model of learning and teaching in its basic format and in the physical spaces in which they

happen, and most lecturers have surely experienced the difficulties of attempting to meaningfully engage with a lecture hall full of students.

One aspect of the benefits of well designed IBL exercises is claimed to be in the motivation of students when they are engaged as learners, which teachers' accounts suggest increase the satisfaction and motivation of staff as well (Khan and O'Rourke 2004; Spronken-Smith 2005).

5.5 Linking research and teaching

The IBL agenda overlaps with the contemporary agenda for developing links between university research and teaching, in the interests of maximising useful synergy between what are often seen as competing fields of academic life (Healey 2005; Pawson et al. 2006; Jenkins et al. 2007). However there is not a necessary alignment between these two agendas. Griffiths (2004, cited in Healey et al. 2003) usefully characterises different possible formulations of the research-teaching nexus:

- **Research-led** teaching – conventional 'information transmission' model with content structured around staff specialist research interests
- **Research-oriented** teaching, where there is as much emphasis on understanding processes of knowledge production as learning codified knowledge
- **Research-based** in which "the curriculum is largely designed around inquiry-based activities rather than on the acquisition of subject content;... the division of roles between the teacher and student is minimised; the scope for two-way interactions between research and teaching is deliberately exploited"
- **Research-informed** consciously drawing systematic inquiry into the teaching and learning process

Clearly, research-led teaching in this definition would not be consistent with IBL, and depending on the approach taken, research-oriented teaching would not necessarily be IBL. 'Research-based' however, appears to cover the whole gamut of IBL, to the extent of actively involving students in the production of original academic knowledge. Cook et al (2007) articulate just such an approach, termed as co-learning, where teaching staff and students generate insights and knowledge together, very much in antithesis to the framing of students as audience.

6. What issues arise from implementing IBL?

Models of learning and teaching can not be changed overnight. They are after all embedded in the institutional structures, buildings and professional practices of higher education, in the expectations and competences of both students and teaching staff. Inevitably, to the extent that IBL is challenging and new, it is going to meet difficulties in its implementation. A number of sources address particular issues, but Pawson et al (2006) provide the most comprehensive view based upon a survey of the literature on PBL.

6.1 Expectations of learning

First, not all students want their teaching to be 'student-centred'. In some ways, IBL can be seen as a reaction to the ways in which school curricula are seen to be increasingly structured around the transmission of knowledge rather than the development of skills of autonomous critical inquiry. Students arriving at university are of course in part a product of that system, and both active inquiry and group work may be 'anathema to certain students' (Pawson et al. 2006).

Arguably, learning styles developed under contemporary school curricula are legitimated by what can be seen as the increasing 'consumerisation' of higher education. For some students at least, university education should be about being taught the facts they need, not gaining the means of learning (Pawson et al. 2006). In addition to active resistance, Pawson et al (2006) highlight the extent to which open inquiry-oriented exercises can risk a loss of security for students used to clear and rigid frameworks for learning and inquiry.

6.2 Expectations of teaching

It is not only students who can experience a loss of security in the face of the openness of IBL approaches and the concomitant shifting of responsibility for learning on to students. Compared to the relatively definite boundaries of lecturers' responsibilities in a conventional lecture, the range of activities in IBL exercises can produce difficulties for teachers to know the boundaries of their own responsibilities and of legitimate intervention. Compared to the security of PowerPoint slides and lecture notes, the unpredictable nature of class inquiry-based exercises can make the teacher feel exposed. Managing group dynamics, whether in a short in-class exercise or over a semester of continuous group work, involves competencies which a minority of lecturers have received any training.

The essentially open character of IBL approaches does make it difficult to apply to the teaching of fundamental course content, where students have to acquire specific understandings. Dodge et al (2007), reflecting on their own experience of developing a significant IBL initiative, identify how staff found difficulty in establishing the appropriate balance between student freedom and teacher prescription, between creativity and rigour. Clearly, IBL is not an inversion of the traditional clear power relation between teacher and student, but is a challenge to that power relation and one which leaves once simple boundaries of responsibility problematised.

6.3 Practical problems

A range of more pragmatic issues attend to the introduction and execution of IBL approaches.

Accounts of new IBL initiatives often stress the substantial time-commitment involved. First, in the start-up phase, in the design of suitable inquiry exercises, their assessment and the preparation of materials and resources (e.g. Hanson and Moser 2003). Increase time commitment does not necessarily end once the exercise is up and running – it requires commitment from staff to resolve student issues and to guide inquiry.

A persistent problem is the design of assessment suitable for IBL approaches. Exercises designed to enable student autonomy inevitably lead to somewhat unpredictable outputs, in comparison to set essays and exam responses. Additionally, the typical prioritisation of group work in IBL approaches adds to the difficulties of fair individual assessment, leading in turn to innovations in how assessment can take place (Healey and Addis 2004).

Group work leads to a range of issues in addition to assessment, focusing on the time commitment and skills needed by teachers to manage group dynamics, from methods of selecting membership through maintaining an appropriate level of contact and intervention, to the management of difficulties in group dynamics (Pawson et al. 2006). Both staff and students often seem to be expected to have the necessary skills for constructive group work; or to be able to develop those skills through trial and error while pursuing group work towards another primary

end. If the development of group working skills is framed as an educational objective in its own right; or, more profoundly, if it is seen as a means to enhancing students ability to constructively engage with the core disciplinary content of their courses, then perhaps the skills of group working need to be more carefully developed.

6.4 Institutional factors

The potential difficulties of IBL in the above sections inevitably lead to widely varying levels of staff commitment to IBL-inspired changes. Dodge et al (2007) report a full range of colleague reactions to the initiative, from abundant enthusiasm to active hostility. Savin-Baden (2001) emphasises the need for a broad level of consensus from colleagues for any significant IBL-based re-design of the curriculum, and points out that teaching staff can be very effective saboteurs of initiatives if the approach is imposed on them.

More broadly, in academia, there is relatively little incentive for individual academics to develop new approaches to teaching, and still less to share new ideas (Hanson and Moser 2003). Teaching innovation is limited as a means of increasing an individual's professional standing, and this is often reflected in universities' reluctance to provide staff with the time and resources to develop the curriculum (initiatives such as CILASS in Sheffield and CEEBL in Manchester of course represent attempts to address this). The necessity of institutional support of teaching innovation is stressed by Savin-Baden (2001), including the provision of appropriate staff development. Pawson et al (2006) point out a number of further issues for the university, including the difficulty of quantifying the benefits of IBL, and relative lack of robust evidence for the approach's effectiveness, against the requirement implied for more instructors and contact time and staff development. They also indicate the difficulty of providing the necessary flexible teaching spaces and library resources.

7. Considering IBL and University Geography Teaching

Geography clearly lends itself particularly well to IBL approaches, specifically through its inherently trans-disciplinary character and capacity for simultaneously pursuing traditional aims of a liberal higher education whilst maintaining an orientation to real world problems. This compatibility of Geography with IBL is demonstrated by the extent to which Geography has been doing 'IBL' since long before the acronym was coined, in the form of project-oriented fieldwork and student lead independent research.

So the question remains, does University Geography have anything to gain from engaging with IBL? The gathering collection of more or less explicitly IBL-informed initiatives in our own department certainly suggests there is a growing collective interest. In addition to the examples gathered in a recent review in the department (see appendix 1), recent initiatives include the reshaping of GEO152 (Qualitative Methods) around a thematised series of student inquiries, to experience the use of methods; GEO151 is undergoing extensive redesign in an attempt to find some useful meeting ground between the principles of IBL and the teaching of introductory statistics; the new module GEO3?? (DV) comprises a substantial student group-lead inquiry as part both of course content and assessment.

In taking stock of the utility of IBL for our own teaching practice as a department, there are a range of issues which present themselves:

- Should IBL continue to be extended in the curriculum in an ad hoc manner or does there need to be some sort of collective approach?
- Can IBL usefully be integrated in large class modules?
- Does the IBL agenda recast the purpose and legitimacy of residential fieldwork, giving a case for more residential (and not necessarily long-haul) field classes, including at earlier stages?
- provoke debate on the purposes and means of a University Geography education?
- Does there need to be departmental consensus on the role of IBL and group work in relation to assessment?
- Is group working about transferable skills for the world of work, or is it also a means to engendering critical engagement with core disciplinary knowledge?
- Should students (and staff?) be taught group-working skills, rather than being expected to have already attained them or develop them along the way?
- If there is a need for ongoing collaboration in the department over the development of and issues around IBL, and if so, what is the best format for that?

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Appendix 1

Mark's review to be added