

CILASS (Centre for Inquiry-based Learning in the Arts and Social Sciences),
University of Sheffield

Inquiry-based Learning in the Social Sciences

A meta-analytical study

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Inquiry-based Learning in the Social Sciences

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1 Introduction

This report summarises key themes from what has been learnt about inquiry-based learning in the social sciences during the lifetime of CILASS, a CETL, drawing on impact evaluation data from educational development projects that have been funded by CILASS. CILASS employs the same evaluation methodology developed and used by Learning and Teaching Services at the University of Sheffield, intended to be a collaborative and participatory approach. It is based on a combination of Theory of Change (Connell & Kubisch, 1996) with Enabling, Process and Outcome (EPO) Performance Indicators (Helsby & Saunders, 1993). This methodology has been used at programme level within CILASS to define an overall programme level Theory of Change and resulting performance indicators (Levy et al, 2007).

The Theory of Change methodology is also employed at project level and gives a framework for the evaluation process for all CILASS curriculum development projects. At project level the Theory of Change document is used to define key project stakeholders, generate evaluation questions for the project and design the data collection methodology and instruments.

One of the advantages of this methodology is that it provides a standard framework for and comparable documentation to support research activity such as this meta-analysis for projects that took place within the Faculty of Social Sciences.

1.1 Purposes of the report

This report is intended to be used as a tool to inform educational practice in relation to the support of and development of inquiry-based learning in the social sciences. Although the data relates specifically to the University of Sheffield, it is hoped that the report outcomes will be applicable in other HE institutions.

1.2 Definitions of Inquiry-based Learning

The term 'Inquiry-based Learning' (IBL) refers to a variety of pedagogies that involve students in discovery or research and employ approaches to learning that are essentially student-led. Case or problem-based learning (PBL) can be seen as subsets of the wider concept of IBL. IBL can be embedded as small-scale tasks such as field work or project-based investigations within a more traditional transmission focused curriculum, or used as a design principle for whole modules and curricula (Levy et al, 2010).

1.3 Methodology

A purposive sample of 9 CILASS funded projects was selected from the total pool of projects to provide the data set for the analysis. These projects were chosen to represent a variety of discipline areas within the faculty of Social Sciences, and from both the CETL's departmental and IBL grant project funding streams. The projects were selected for the research on the basis of variety, in order to provide as broad an overview as possible, and quality of evaluation data, i.e. access to a number of evaluation methods, so as to allow for the exploration of the set research questions (see below) and triangulation where possible.

The data set for the analysis comprised of all CILASS requested documentation relating to the projects including funding application forms and interim and final monitoring and evaluation reports. All CILASS projects are evaluated using the 'Theory of Change' evaluation framework and all documentation relating to this process for all the selected projects was also included in the analysis. This includes Theories of Change themselves, student impact data such as focus groups and questionnaires, staff impact data including reflective interviews and focus groups, and the learning development case studies that have been generated from this data.

A full list of projects selected and the data that was included can be found in appendix A

A brief description of the activities undertaken for each project can be found in appendix B. Each project has been given a discipline/numeric code which has been used throughout this report.

2 Research questions

The research questions for the meta-analysis were drawn directly from the CILASS Theory of Change document (see www.shef.ac.uk/content/1/c6/11/08/47/CILASS_ToC.pdf), as follows:

2.1 'Teacher-focused' questions

1. Why do educators in the social sciences adopt IBL approaches, in terms of desired impact on the student learning experience?
2. How do educators in the social sciences conceptualise, design and facilitate IBL?
3. What 'models of IBL practice' have emerged from informal theories of change in the social sciences, and can disciplinary patterns and/or differences be discerned?
4. What have teachers learned about designing and facilitating IBL? What are the challenges of designing and facilitating IBL, in the social sciences?
5. What impact has doing the IBL project had on staff engagement with IBL, their valuing of it and their plans for further developing IBL practice?

2.2 'Student-focused' questions

6. What is the impact of IBL on students' learning experiences, understandings and attitudes (and its value)?
7. What is the impact of new learning spaces, networked learning strategies and information literacy development strategies in students' IBL experiences?
8. What have students learned about doing IBL?

3 Analysis

Atlas Ti software was used to facilitate the qualitative analysis of the data in response to the research questions. All available data were coded via a combination of pre-determined codes – based on the research questions and models above – and emerging codes, which resulted from the data themselves.

3.1 Rationale for adopting IBL

For the most part, reasons for adopting IBL become apparent in a project's Theory of Change document, as part of the 'current situation' description. In two departments [Architecture and Sociology], IBL is explicitly linked with the way the discipline functions. Adopting an IBL approach is seen here as a preparation for functioning in the field of work the degree leads into:

There is a conflict of cultures, between the managerial orientation of defined learning outcomes, assessment, and so forth, and disciplinary values of creativity, risk-taking, and so forth.

[Architecture]

3.1.1 Continuing Existing Excellence

Three projects link the development of IBL to the expansion of existing excellence [Information Studies, information Studies, TILL] – one of these as an extension of previous work with CILASS [TILL]. In these projects, it is less the adoption of an IBL approach and more the creation of a more challenging learning environment that is the focus, sometimes in conjunction with comments from previous external examiners, or on the back of student evaluation.

3.1.2 IBL as a motivational tool

Four projects are specifically concerned with a module that either has an underlying emphasis on research or IBL (Education, SEAS), or a module which forms part of the core of a degree programme, but which is disliked by students (Geography, Law). IBL is here seen as either a method to teach by example, or as a means to stimulate and excite students.

We believe that a greater use of IBL in GEO152 might make this a more stimulating course for students.

[Geography]

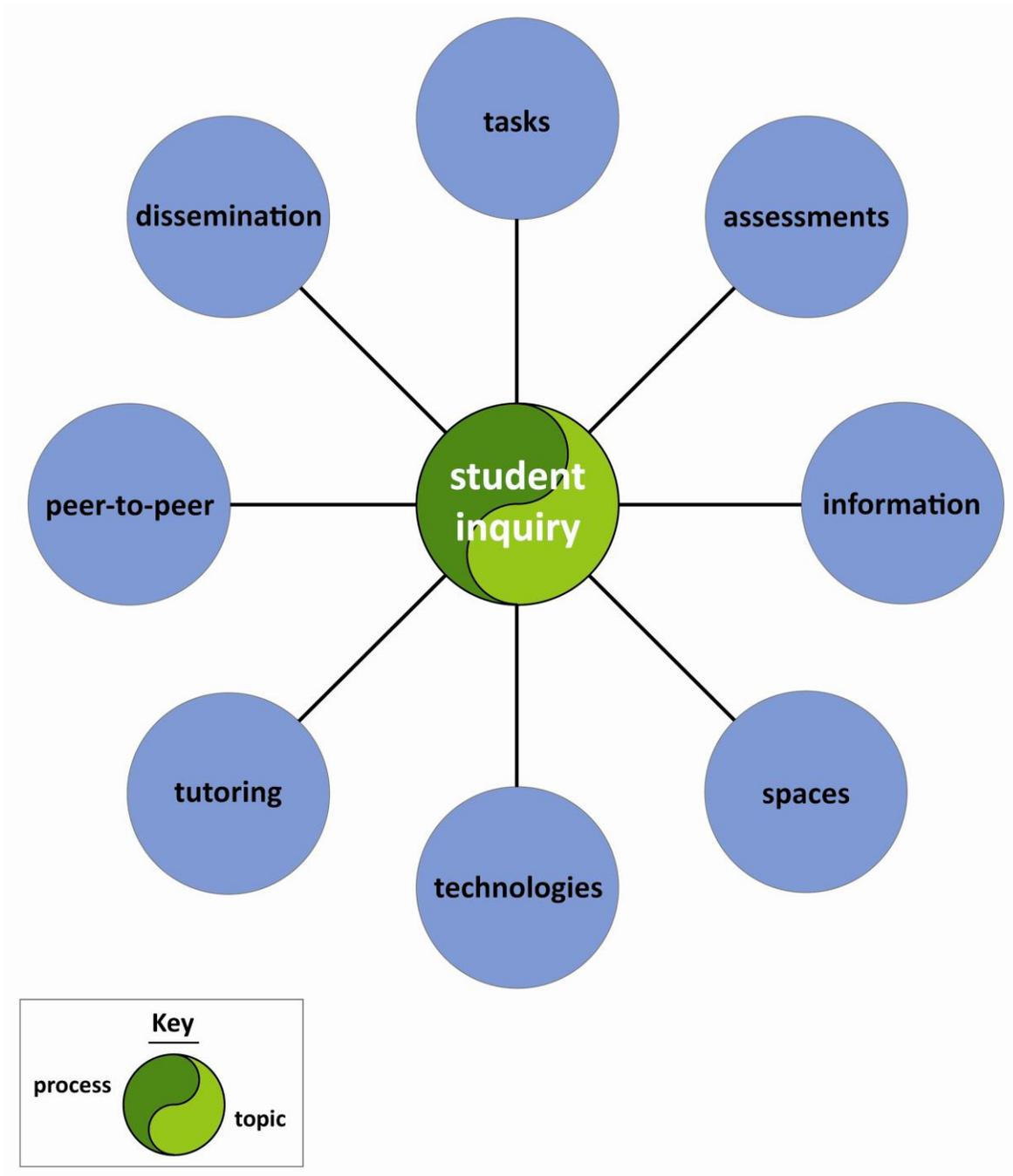
In two cases [Sociology and Law], large student numbers were cited as an issue, which resulted in students being disenfranchised with their modules. Collaborative IBL specifically was cited as an opportunity to embed smaller scale group work into the curriculum.

3.1.3 IBL as departmental model

Two projects [Sociology and TILL] also emphasised the importance of IBL as a unifying pedagogic approach which would potentially help students to tie together their various modules [TILL] or their studies across levels [Sociology]. Both projects further cited interdisciplinarity as a desired outcome of their work, with IBL as a potential pathway towards this.

4 Designing for IBL

The following diagram outlines eight factors (the 'spokes') which comprise the key features that underpin the typical IBL design (the 'hub'). The subsequent section analyses the sample projects against this framework. Similar categories have been used to organise the IBL design case studies that form the final output of each CILASS-funded project (see www.shef.ac.uk/ibl/resources/casestudies for full list of projects). The following section of the report represents a summary of what can be found in the case studies, fleshed out with other evaluation data where necessary.



In designing for IBL, projects frequently struggled with the level of freedom or leeway for error to facilitate the balancing act between the learning of content with student awareness of processes. One very explicit example of a 'stepped approach' was presented in one project [Education], where students had four opportunities to engage with information literacy with increasing responsibility for their own research. Other projects [Architecture] adopted an approach where there were three strands of IBL complexity.

At one end of the scale, the data collection projects have been quite straightforward. They've been questioning students about their attitudes to risk and motivation; risk and tutor relationships; things like that. Another group of projects have been about establishing trust, so that risk-taking can happen. Those projects are about exposing the vulnerability of the research student. They have explored exposing their work to one another on an equal footing. The third group of projects are wildcards, where the students have worked with something that disturbs the every-day and shifts thinking.

[Architecture]

The following section takes each of the spokes in turn to explore how projects in the Social Sciences have addressed them.

4.1 Tasks

4.1.1 Designing activities as a collaborative process

In most cases, the inquiry tasks were designed primarily by the project leader. One project [DIS] adopted a collaborative teaching approach, involving several members of staff in the task design. Another [Law] relied heavily on support from CILASS and LeTS to design the inquiry task. In this example, the design was very structured, but counter-balanced with an open inquiry where students could decide on a task, working in groups. In one project [TILL] the design of inquiry tasks was discussed by staff and students jointly, with opportunity for feedback and change of design based on this. This project is worth mentioning because, even though the design of IBL modules was the final outcome, a major component was the process of designing for IBL in itself, and the creation of a departmental community which would encompass marginalised members (in this case, students and part-time tutors) to facilitate over-arching communication. This approach was highly successful.

The over-riding message is that enabling the participation of students and hourly-paid tutors within the project, especially within the core area of curriculum development, was effective. It helped shape individual learning experiences, with students having a far greater sense of responsibility for their own learning processes; and added a further dimension to tutor experiences, understanding how their work fitted both with the activities of the department as a whole, and with the diverse range of student expectations and skills. Whatever success in transforming learning and teaching experiences that the project has achieved, at its heart is this participation from students and part-time tutors.

[TILL]

4.1.2 Skills development

A large number of projects designed IBL tasks in such a way that students either had to acquire new subject-specific skills [Education, Geography, SEAS] or to apply existing subject-related skills and knowledge to new contexts [Sociology, Architecture, Management], or indeed a combination of both. In order to facilitate the development of skills and knowledge, IBL activities were occasionally designed to provide a crossover between years [Architecture, TILL, SEAS], disciplines [TILL] and between similar courses/modules in different locations [Education]. One project explicitly talked about subject experts engaging with the students [DIS].

As part of their inquiry projects, students will interact with a range of researchers and practitioners in the field, though interviews/small-scale survey.

[DIS]

Students valued this external input:

Liked the guest speakers because they were talking about what it's like in the real world.

[DIS student evaluation]

This provided an additional layer of input and devolved the notion of an 'expert' across several individuals (see also above).

Two projects had a block teaching approach (Education, Management) – although there is little in the evaluation data regarding how designing for short, intense modules may be realised, notes from an observation of one such teaching session do mention potential difficulties:

Students seemed to really appreciate the balance between group work and input - it was very interesting seeing part of a block module, i.e. handling IBL as part of several days of solid teaching. It would be interesting to see how teaching in other modules took place - from experience, it is very hard to maintain student interest for a full day through lecturer input only. It seemed that the 'drip-feed' approach really helped students channel their thoughts, making some quite complex concepts easier to grasp.

[Management]

Designing the tasks on occasion resulted in very large staff working groups – for some members of staff, it was the first time they had collaborated at this level, and this was a positive experience, resulting in changes in attitudes towards collaborative design for learning:

It was very different from anything I had experienced before. Generally, in planning my teaching I don't need to consult with anyone else - other than to keep the library informed of my reading lists. The [...] project obviously involved a lot more work than planning a conventional module, but then that was expected and was always going to be the case with something new in such a large module. However, the support from everyone else - CILASS, LDMU [LeTS], [departmental technical support], etc. was invaluable and the getting the module together was actually quite enjoyable. It was useful to bounce ideas of other people and engage with other parts of the

university I hadn't come into contact with before (e.g. LDMU [LeTS], CILASS, Library's digitisation service). Now I know they're there, I'll use them again in the future.

[Law]

One comment that came out of several evaluations [Law, Education, Geography] related to the fact that the funding for projects did not stretch to the actual time necessary to design and facilitate IBL. One project specifically [Law] indicated that, if they were to apply for funding again, they would not underestimate the additional time IBL takes to organise on top of 'traditional' learning design.

4.2 Tutoring

Project staff planned for a variety of ways to implement IBL. The 'stepped approach' outlined above [Education] was one such way, other departments followed a similar course, aiming for several iterations of an IBL task with interim tutor feedback [Geography].

4.2.1 Online facilitation

Two of the projects had distance learning elements [SEAS, Education] and as such relied on online facilitation. One project [Education] did so formally via WebCT/MOLE, the other via email communication between staff and students. A third project [Law] adopted an online facilitation approach due to large student numbers, although this was supplemented by face-to-face seminars. Staff from this module commented on the need for constant and instant communication, which they felt was specific to supporting IBL:

We needed constant contact with the students. So much of this was new to them, as well as us, so it was vital that we kept in contact. We listened to their concerns, and they listened to ours. Electronic materials could be posted and amended instantaneously, which gave the academic staff a great degree of flexibility in deciding how we could adapt the course to maximise the student experience even after it had started.

[Law]

This labour-intensive approach was also echoed by another project [Architecture]:

Just having enthusiasm isn't enough. We kind of need sheep dogs to do this-gather people together and keep them moving. That's been a surprise-I thought it would be a lot easier.

[Architecture]

4.2.2 Collaborative tutoring

One department [DIS] chose to plan, teach and facilitate the module collaboratively, with several members of staff involved. While the students worked in groups, each group had one member of staff facilitating the IBL activity. The approach to facilitation was not necessarily unanimous, and staff did not always agree on the best way to facilitate. Students, however, did not seem to mind this – although they commented on the fact that having (occasionally disagreeing) input from multiple staff might be confusing, the process was also enlightening, and, over all, a positive experience. A similar approach was adopted by [Law].

4.2.3 Ongoing feedback and evaluation

An interesting commonality was the way in which ongoing feedback was embedded into the facilitation process – the modules were not seen as static units of teaching, but instead as malleable experiences which could be and were expected to be influenced by the students themselves:

[T]he course team will meet on a regular basis to ensure that a timetable is adhered to in relation to the preparation of the Manual. Once the Manual becomes 'live', students will be given opportunities to provide us with informal feedback throughout the semester, as well as responding to formal questionnaires at the end of the teaching period.

[Law]

Other projects encouraged ongoing evaluative discussion [Education, TILL], scheduled interim evaluations [Geography], or encouraged informal feedback [DIS]. Although adaptable teaching is widely regarded as good practice, the stress projects placed on putting such measures in place suggests that they were at least in part responsible for the additional workload staff commented on (see above).

Another project [Geography] which had several individuals help facilitate the module did so by involving post-graduate students as tutors. This allowed students to gather insights from several different sources, and, again, students appreciated this multi-level input. The idea of involving additional tutors was also intended for another project [Education], however, the distance learning element, as well as the use of technology, made it difficult to reach a level where other tutors felt comfortable in an environment of online facilitation:

The staff development was to take place in the computer centre where the students were going to log on and so forth. There was a power cut, so, for the entire evening, you could get onto the computers but the internet was down. So I could show slide shows, and I could give people logins. That was the clearest demonstration of what would have happened to the students if they hadn't had that half-day introduction. Someone else was supposed to do it [on the other course], and they decided not to. As a result, not a single local tutor appeared online.

[Education]

More mention of challenges will be made below, however, it is worth mentioning that, although the initial design of IBL tasks appears at a first glance to be similar across all projects, the way in which these tasks were facilitated, and the contexts within which they were situated, made for very individual approaches.

4.3 Assessments

Assessment of IBL activity was varied, however, one common denominator appears to be a reflective element to the assessment. Approaches included:

- *A portfolio of work, including a reflective review of their learning [DIS]*

- A 6000-word essay, 2000 words being a straightforward research report that might read the same for every group member, [...] followed by a 4000 word reflection on themselves as emerging researchers. [Education]
- A combination of examination, learning diary and contribution to colloquia [Law]
- A design for an activity with a lower-level student, plus a reflection on the design process [SEAS]
- A group presentation with supporting report [Management]
- A collaborative project report with reflective element [Sociology]

Only two projects did not mention a reflective element to assessment [Geography, Architecture] and one, due to its nature, influenced several modules, some of which incorporated reflection and some did not [TILL].

Assessment of IBL presented a number of challenges, which will be discussed here rather than below. An online element of the inquiry process meant that staff had to incorporate fail-safe methods that either would allow students to participate for certain, or meant that those with technical difficulties would not be disadvantaged [Education]. In another project, the students' work was initially intended to be assessed, however, changes in staff meant that the project was deemed to labour-intensive, so it was not embedded and the pilot cohort went unassessed [SEAS] and alternative ways to share the students' work were pursued via publication of work online and in student journals.

The assessment of collaborative inquiry presented the most problems, not just from the staff perspective, but also from the students' point of view. There were fears that students could get a free ride, and that those working would be dragged down by those who weren't. Good facilitation appeared to be vital so as to reassure students that assessment would be both viable and fair:

It synergised - it brought the best of the group work and coming together as a team, but the whole context as well, ensuring each one pulls their own weight, and be assessed for their own contribution. [...] We were studied right through the whole process, and I could see that. The final presentation was the icing on the cake.

[Management]

Other departments decided to circumvent the issues surrounding the assessment of collaborative inquiry, and instead opted to 'celebrate' the outcomes of the group project in a non-assessed conference-style event, and to focus the assessment on an exam and the students' ability to analyse their collaborative inquiry at a reflective level [Law]. Although students commented that it was the most work they had ever done for a non-assessed piece of work, only small numbers of students appeared to be willing to change this arrangement in favour of receiving credit for their work, instead opting for the 'safer' option of relying solely on their own reflective skills.

In one project, the department recognised that assessment of collaboration was of interest to the entire department – the current level of development here is departmental thinking about how best to proceed:

Developing groupwork and collaborative assessment: [...] how can we share, develop, and embed best practice? Do we make this a research topic, [...], and a focus of our own research? Or do we have a lower-scale exchange of ideas and best practice, through something like a brown bag or virtual equivalent? How do we ensure linkages from this more research-focused discussion to module design and teaching practice?

[TILL]

The above quote is possibly an accurate piece of evidence regarding the common exchangeability staff placed on 'collaborative inquiry' and 'group work' – although detailed discussion often showed that staff were potentially aware of distinctions, a short-hand was often used which makes it difficult to analyse data with 100% accuracy.

4.4 Information

Projects had a varied and often adaptive approach to how information was passed on to students, with approaches changing throughout the module. Information literacy features explicitly in several projects – unsurprisingly, since CILASS explicitly made reference to the term. One department outlines existing excellence:

There is already a strong focus on embedded information literacy development in DIS. Examples of learning activities include students working in pairs, developing and articulating research questions, gathering information, providing feedback to each other and assessing their efforts through detailed critical reflection. Innovative use of mindmapping and weblogs support information literacy development.

[DIS]

Two more projects [Law and SEAS] have made explicit reference to strategic information literacy development. In one case [Law], the project built on a previous one, with an extension of several forms of IBL, including information literacy. This is not dissimilar to the 'stepped approach', except that it was longer-term and split across two modules, implying collaboration between staff across modules. The approach, however, was not borne out by students, who fed back that the first module was much more demanding regarding information literacy, than the second one:

Students were not sure whether they would have preferred finding more of their own literature - they said a couple of readings asked them to go beyond what was given, and one student welcomed that initiative, whereas another disagreed, saying they'd learnt the skills in [project 1], and being made to hunt for readings themselves now was simply unnecessary.

[Law]

Another project [Management] also went down the route of specifying and creating all information resources for students, with no further reading necessary. Again, student feedback showed that they appreciated all the work being done for them, and were afraid of 'wasting time' by searching for and reading resources which might turn out to be irrelevant. Although this is a disappointing attitude, it is a point of interest to bear in mind when designing for IBL.

The other case [SEAS] involved students finding multi-media resources online and critiquing them.

4.5 Peer-to-peer (Collaboration)

As mentioned above, a large proportion of projects employed some aspect of group work with students. As also already stated, it appears that not all projects explicitly differentiated between 'group work' and 'collaborative inquiry', often using the terms interchangeably. In some cases, the collaborative inquiry was perfectly clear.

[S]tudents were asked to work in groups in order to design their own research project, of importance to their own practice. The seeds for these projects were sown during the week-long study school in January, with students working on designing and carrying out their research until the assignment deadline in May.

[Education]

In the same project, students were explicitly asked to reflect on the project, using literature to guide them where appropriate. Out of all the projects, this is doubtlessly the one with the most detailed and reflective feedback.

[G]etting involved in collaborative research has proven beneficial to all group members as we make use of our strengths and expertise for a common good. Collaborative research entails not only dialogue but also joint participation in the research by group members. Weiskopf and Laske (1996,p.132- 133) suggests that 'participatory research recognises a role for the researcher as facilitator, guide, formulator and summarizer of knowledge, and raiser of issues'. This was quite evident as group members assumed various roles at critical times of certainty and uncertainty.

[Education]

Although IBL is not mentioned as a term in this excerpt, it is obvious that students have engaged with the concept within their own setting. In other projects, more traditional evaluation methods produce more traditional student comments:

- *Fun working with others*
- *Develops team working skills and delegation tasks (x3)*
- *Improves confidence in speaking and presentations because it's a small group (x3)*
- *Social interaction/making friends*
- *Small group good*

[Geography]

Collaborative inquiry was frequently credited with presenting major challenges – see also below – however, it is worth mentioning that this was another area where collaborative inquiry and group work were used synonymously. Issues raised included students’ concerns about those not pulling their weight [Law, Education, Geography, Management, Sociology, DIS, Architecture], difficulties regarding assessment [Law, Management, DIS, Architecture] and difficulties regarding the logistics of group work, such as organising meetings, setting deadlines, etc. [Education, Management, Geography, Law]. Whilst these aspects helped to create a strong positive impact where they worked well, whenever there were problems, students appeared quick to equate their dislike of group work with a generic dislike of IBL.

Some projects [Education, DIS, Sociology, Architecture] aimed specifically to engage students in collaborative inquiry in order to simulate a realistic research process. Only two projects [Education, Management] explicitly list the students themselves as experts in this process, deliberately trying to level the field. It is worth noting that both these projects involved post-graduate students, at Masters level. Another project [SEAS] sought to engage students across year groups, creating levels of expertise among students.

Interestingly, the same project that had students say they preferred being given readings to avoid ‘wasting time’ by finding their own resources [Law], also included a comment that valued collaboration:

I got a buzz from talking to other students and getting their ideas, rather than going straight to staff and getting an answer straightaway.

[Law]

Arguably, this comment counter-balances the previous one, illustrating the many facets of evaluation and the danger regarding the drawing of too quick conclusions.

Collaborative Inquiry was high on the list of approaches that were intended to improve generic skills, such as self-confidence [Law], presentation and communication skills [Law, Management], time management [Management, Geography, Architecture, Education, Sociology], ability to negotiate [Sociology, Management, Education]. In one project, a student summarises skills gained as follows:

In our group we learnt to draw on each others [sic] strengths, share information, complete designated task, negotiate rationally, and establish very strong relationships which has kept us loyal, motivated and committed. During the course of the project we were also able to improve our intellectual and emotional teamwork skills.

[Education]

In one project [Management], gender differences were highlighted. Male group members were regarded to be more outgoing and forceful group members, and as such more likely to control, influence and lead the inquiry process. This student cohort was also from a variety of ethnic backgrounds, including several where males traditionally have more power. Gender was not mentioned in any of the other projects.

4.6 Technologies

Four of the nine projects under review involved online interaction via discussion forums and other media [SEAS, Education, TILL, Law]. In one project [TILL], this was mainly a method to sustain communication between face-to-face meetings as staff and students collaborated on the design of new modules. In another [SEAS], the online interaction was between students in two different countries, and not facilitated by staff. Out of the two remaining projects, one was distance learning [Education], the other face-to-face with added online support [Law]. In both projects staff commented on the workload related to providing a solid online, facilitating presence, just as students in both projects commented positively on the level of support they received.

The online discussions assisted with ensuring participants reflected on critical aspects of the research process that may otherwise not been given much attention. We need to commend [the tutor] for this. Moreover, her prompt responses and comments ensured that the discussions moved on and maintained a high level of interaction. For me the discussions were interesting, insightful, and motivating.

[Education]

In this particular case study, students were not expected to have any prior technical expertise. In fact, the tutor described the initial introduction to the online community as follows:

Initially, the face-to-face session at the study school proved to be the answer. In a three-hour session, all students learnt to access the University library and to post a message on WebCT (and, in some cases, to open a web browser, write a message in Word or send an email). Slotting the four focused discussions into various weeks of the timetable served some technical considerations, too, namely to allow students without access to arrange this well in advance, and to ensure a suitable time span between discussions in case some students had problems, so they would not miss the discussions. All this was done to allow for as smooth an establishment of an online community as possible. The facilitation itself consisted largely of encouraging students to explore the resources within the group and the entire cohort, rather than expecting answers.

[Education]

Support for students in the other [Law] project came from central Learning and Teaching Services, where one member of staff arranged and ran workshops for students on how to use the technology in question, such as audio recording equipment and video cameras. These workshops were supported by the CILASS student ambassadors wherever possible.

In a slightly less successful case, students had been expected to each keep a blog and to read and comment on each other's work [SEAS]. Students considered this approach to be too piecemeal, and actually – without using the terminology – are advocating a more 'networked learning'-oriented approach:

I think if you really want to get communication going between year abroad students and other students I think something like a community is what you really need, because the blogs were all

too separate. I'd be much more interested in doing something with everyone together rather than going to one page where it's just one person's input.

[SEAS]

Staff skills and confidence varied widely, as did the departmental support available. One project [Law] specifically comments on the amount of technical support given by departmental support staff, another [SEAS] explicitly comments on the lack of this. A third [Sociology] comments on their own lack of skill in this area:

We are underusing the technology dramatically. I'm not sure how to use it without just being indulging myself with toys.

[Sociology]

Expressed slightly differently, another department identified a developmental regarding networked learning and ICT, including a higher level understanding of the pedagogical thinking behind various techniques:

***Developing networked learning;** or more broadly, introducing more ICT into our practice. What are the pedagogical arguments for and against such a shift? Do we need a strategy or central directive for this? Again, how can we share best practice and current expertise? How can we take our students with us and ensure they are fully supported?*

[TILL]

Since networked learning was used as a tool to facilitate other learning, it is difficult to gauge exactly what impact might have been achieved through networked learning. In only one project [Education] was it an absolutely vital and substantial part of the project design, since all teaching was to take place at a distance, making networked learning a vital component to encourage collaborative inquiry.

The successful implementation of online collaborative learning achieved by [the project leader] proved the potential of the use of technology in collaborative inquiry in the [degree programme]. This has led to other members of the [course] team reusing the content developed and computer supported collaborative inquiry has been implemented in other modules. The use of WebCT has become an integral part of the [degree].

[Education]

4.7 Spaces

4.7.1 Impact of new learning spaces

Out of the selected nine projects, only two [Law, Information Studies] regularly used CILASS learning spaces. Both projects mention these spaces as part of their evaluation:

Contact hours took place in lecture theatres. CILASS collaboratories were used by students for their colloquia and group discussions for development of presentations. The flexibility and technology-rich nature of the teaching spaces were felt to have enhanced collaborative inquiry. CILASS collaboratories were used for the 'Celebration of Learning' event.

[Law]

This positive feedback was counter-balanced by feedback from the other project:

Project Leader 1: Often they don't want to close their laptop screens and talk with each other. Even in traditional computer labs, the students have to move away from the computers.

It often takes a huge amount of time to change the Bart House layout, so I often default to the normal setup.

Project Leader 2: Would we choose this space next time we run this module?

Project Leader 3: It would be nice to have two different spaces and have the extra sessions.

[Information Studies]

Although there is very little data to go on, it does seem interesting that the first project – which used CILASS spaces for specific purposes – has more positive comments than the second one, which was in the space throughout. This may indicate that technology-rich spaces are advantageous as 'one-off' opportunities for students to engage with IBL, whereas the spaces might be seen as prohibitive to teaching which is not intended to be technology-rich. Additional data is being gathered by CILASS on this point.

4.8 Dissemination

Most projects discussed dissemination, but within these discussions, two explicit categories quickly became apparent. On the one hand, the dissemination of the teaching approach by staff (explicitly encouraged by CILASS) was explored, either within the department or externally. On the other hand, several projects thought about how to disseminate student work – again, either internally, or within the wider sector.

4.8.1 Staff dissemination

A case study for the CILASS website was most frequently cited as a form of dissemination (5 cases). This was closely followed by internal dissemination through staff away days or departmental websites (4 cases). One project in particular is noteworthy, as dissemination of good practice was part of the project brief:

A lot of good stuff goes on within programmes - how do we help one another know about it? Do we want to develop case studies? Or have more informal exchanges, virtually or in person? Could we devise a list of teaching and learning issues, and divide up responsibility for addressing them amongst staff - e.g. find a champion for e-learning? And what do we mean by "best practice" anyway?

[TILL]

Three projects were planning on publishing research publications for academic journals and/or book publications, with one of them explicitly referencing that this work would be done by a CILASS member of staff (which it was).

Two projects mention working together with subject centres to disseminate approaches, either as part of the subject centre's generic work, or at a subject centre conference. Two projects mention other, large external conferences as a potential avenue for dissemination.

4.8.2 Student dissemination

In two projects, dissemination of student work was explicitly designed into the range of activities, and took place in the shape of 'celebratory' or 'conference-type' events. Two different projects published students' work, in one case as an 'output' purely for dissemination purposes, in the other case as a teaching aid for future students.

We had originally envisioned that the projects would be published in several different journals, but we've recently come to the conclusion that they should be published together as an independent publication. The students have been working closely together, and the projects need to be published together to make sense. They substantiate each other.

[Architecture]

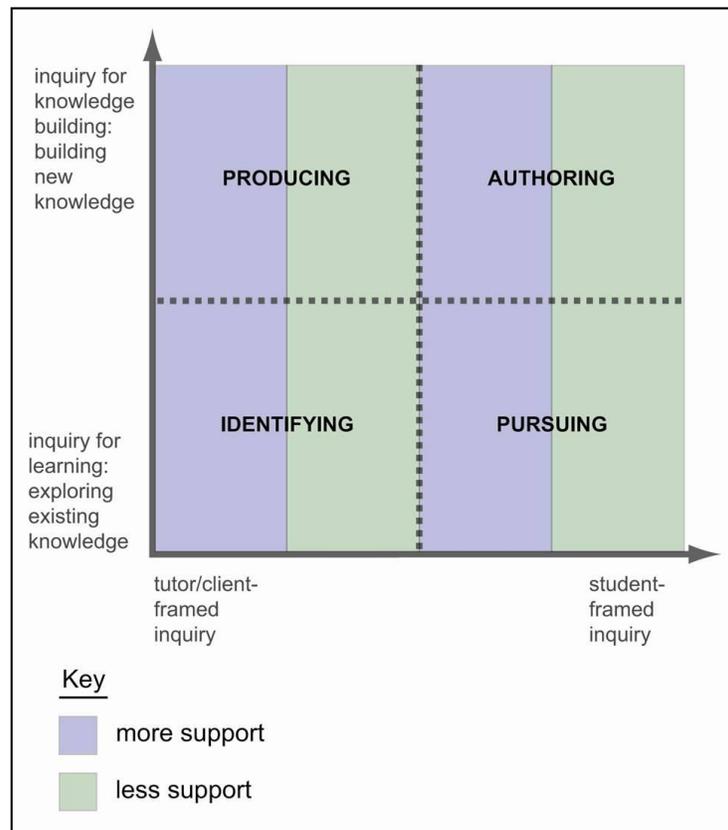
In the case of the 'celebratory event', "a number of colleagues requested that they could use the student presentations as teaching tools in their lectures in the forthcoming academic year" [Law].

Six out of the nine projects analysed had students present at one of the staff-student conferences organised by the CILASS Student Ambassador Network (one project was over by the time the SAN came into existence), with later projects explicitly mentioning this as a dissemination output opportunity for students. One (post-graduate) project had as its aim to get students to the point that they would submit their work resulting from the module to relevant academic journals.

5 Models and conceptions of IBL

5.1 Modes of IBL

The following diagram shows a framework for IBL that was developed as a result of research undertaken at CILASS into IBL pedagogies at the University of Sheffield and undergraduate student's experiences of inquiry and research (Levy, 2009). It can provide a useful model for conceptualising inquiry-based learning. It shows four quadrants through which students view their inquiry, although the additional shadings allow for further sub-divisions and applications of the model.



The following section will briefly outline the four major quadrants of the model, before mapping the projects that are part of this synthesis report, placing them within the given framework.

Authoring: Inquiry tasks are designed to encourage students to explore their own open questions, problems, scenarios or lines of inquiry, in interaction with a knowledge-base ('how can I answer my open question?').

Producing: Inquiry tasks are designed to encourage students to explore open questions, problems, scenarios or lines of inquiry, framed by teachers, or others such as an external 'client', in interaction with a knowledge base ('how can I answer this open question?').

Pursuing: Inquiry tasks are designed to encourage students to explore a knowledge-base actively by pursuing their own questions, problems, scenarios or lines of inquiry ('what is the existing answer/response to my question?').

Identifying: Inquiry tasks are designed to encourage students to explore a knowledge-base actively in response to questions, problems, scenarios or lines of inquiry framed by teachers ('what is the existing answer/response to this question?').

The model highlights three broad considerations for learning design: the epistemic status of student inquiry (vertical axis); where primary responsibility lies for establishing the inquiry question or theme (horizontal axis); the amount of 'process support' (guidance and structure) provided (mapped on to each quadrant).

5.2 Mapping of projects

5.2.1 Geography – Identifying

Tutors specified tasks which students would then complete, using IBL methods. The tasks drew on existing materials in the public domain (i.e. statistics), but were not intended to create new knowledge.

5.2.2 School Of East Asian Studies – Pursuing

Students identified their own tasks and challenges, using these to explore the Japanese language and culture – the emphasis here was on building language learning skills, rather than new knowledge.

5.2.3 Law – Pursuing

Students framed their own inquiry to explore aspects of the Law. Although the knowledge was not new to the field itself, the fact that the project led the staff in the department to use students' work as teaching resources adds an interesting additional facet to the model.

5.2.4 Information Studies – Pursuing/Authoring

Students framed their own inquiry, supported by staff. Although the knowledge created might not have been new to the field, the idea of 'research' was enhanced by the final conference event.

5.2.5 Education - Authoring

Students identify their own research questions, lead the inquiry, and create new knowledge. The level of support is flexible and dependent upon the research group's requirements.

5.2.6 Architecture – Authoring

This project had a great focus on ‘risk-taking’, encouraging students to experience the typical environment within which architectures work. Students framed action research inquiries and were supported by staff.

5.2.7 Sociological Studies – Authoring

Final year students led their own inquiry, identifying a research task and carrying this inquiry through. Outputs from the project were two-fold, comprising of research reports on the one hand, and teaching materials (a ‘survival guide’ for future students of the same module).

5.2.8 Management – Producing/Identifying

This project, like the one in the School of East Asian Studies, was more skills- than knowledge-based. Although staff generated a project brief and guided students through the consultancy process, students produced ‘new’ knowledge by exploring different aspects of the project. Overall, this project is very difficult to map onto the diagram.

5.2.9 TILL – All Four Quadrants

Since the TILL project was mainly intended as a ‘scoping study’, where staff and students collaboratively explored existing teaching and learning practices in the department, and jointly discussed ways forward, it is difficult to say who led the project when, or indeed, mapping it onto a particular quadrant, apart from saying that the project originated with a member of staff. The project sought to explore both existing knowledge and expertise, and to gauge interest in and ideas for new IBL and teaching approaches.

5.4 Designing for IBL in the Social Sciences

The main point that becomes apparent through the mapping process is that the diagram used for similar purposes in other reports may not fit the Social Sciences field exactly. Out of the nine projects evaluated, three project descriptions are explicitly placing ‘skills development’ over ‘knowledge development’, and one other project was aimed at the creation of a ‘community’. This might highlight the potential for an expansion of the model in the future, since skills development appears to be a very explicit goal in the social sciences, and may necessitate its own field, potentially linking to other quadrants where appropriate. There may be an argument here that IBL in the Social Sciences is mainly related to two aspects, namely subject-specific research on the one hand, and subject-specific skills sets on the other.

5.4.1 Staff Conceptualisation of IBL in the Social Sciences

Data is available for both staff and student conceptualisation of IBL. Since one project [TILL] involved the use of a questionnaire to gauge staff conceptualisation of IBL, it is not surprising that a lot of data spring from this particular project. The write-up of data in this particular project is as follows:

Almost all of the responses to this question focused on developing learner autonomy and responsibility, where students were seen as leading the inquiry, and tutors facilitating - as one response put it, “Learners are encouraged to find answers to their own questions facilitated and

supported by a tutor.” The inquiry was seen to be open-ended (i.e. the tutor does not have a set outcome in mind), and allowing students to shape this inquiry gave them greater responsibility for their learning activities. Several responses touched on the possibility of group inquiry, and it was hinted that peer support amongst students could to some extent replace explicit direction from the tutor. The overlap with other methods of teaching, such as problem-based learning, was identified in some responses, and IBL positioned as one point in a spectrum of learner-centred approaches. It was also recognised that, implicitly or otherwise, IBL is frequently part of common pedagogical practice within TILL - as one response put it, “I expect we all strive to get students engaging with a complex problem, actively seeking out and exploring evidence as they inquire into this problem, and then taking responsibility for analysing the evidence and presenting their findings.”

[TILL questionnaire write-up]

The move from passive to active learning as a form of IBL is echoed in several other projects. Case studies, problem-based learning, open-ended exercises and dissertations are further cited frequently. One project [Architecture] explicitly ties IBL to the real world, and links it with the concept of risk, explaining that

Risk here is about the creative use of knowledge in an uncertain context - a process that encourages the making of judgments rather than the parading of worthy goodness.

[Architecture]

Another project explicitly tying IBL to the real world was situated within a Masters degree [Education] for practitioners. The aim of the project here was to give students experience in functioning as researchers within their own context, as preparation for their Masters dissertation. This seems to suggest that IBL is conceptualized as part of the ‘real world’ particularly in those projects that are either already aimed at practitioners, or are part of a specific vocational degree.

A small number of evaluations discuss conceptualization of IBL within departments in general, and whether and how CILASS may have influenced these.

[T]here was also acknowledgement that CILASS with its emphasis on scholarship of learning and teaching and on technology enhanced learning aligned strategically with the School’s aims in relation to e-learning and sustaining excellence. This gave CILASS some leverage and also in effect began a debate which is still continuing 2 years later about ‘what does inquiry-based learning mean for [our department]’.

[Education]

Such “exchanges of ideas and insights” [Education] were echoed in a second project [TILL]. Another project highlighted that exchange of ideas was not necessarily explicit in the department [DIS] – further discussion around a community of IBL can be found in *Impact of IBL on Staff* below.

6 Challenges regarding design and facilitation of IBL in the Social Sciences

Any implementation of change is likely to present challenges as well as opportunities – this section will group these challenges according to common denominators and will allow for comparison across departments.

6.1 Time

The issue of time presented a challenge in all projects, and at a number of different levels:

Time at preparation level: In three projects [Law, Education and Geography], as already outlined above, project leaders under-estimated the time necessary to plan the IBL content and delivery. In these same projects, data is available to show that IBL also took more **time to facilitate** – both at **staff** and **student** level. Finally, it appears that, in several cases, the IBL development was heavily relying on individual enthusiastic members of staff. In three out of the nine case studies [Education, SEAS, Sociology], changes in the department – either through project leader staff leaving, or other members of staff leaving, increasing the workload – led to the project being stopped from going through further iterations.

I was in post for two years, which wasn't enough time to get two countries and six courses fully embedded online. This module was the most advanced, but the idea was that, on the back of this one, all other modules would move online and would have a similar structure to this one. Then I left, because my contract ended, and that didn't happen.

[Education]

In one case [Law], where there was joint project leadership, the remaining project leader managed to sustain the development for further iterations. Thus the **timing** or when the development occurred within one individual member of staff's career, also heavily impacted, if not on the initial success, then certainly on the sustainability.

In some departments, being CILASS-supported came with additional benefits, such as the module being regarded as a 'special project'. How and when such projects might be fully recognised as 'normal' modules was a further consideration that required timing:

I've been surprised at how long these projects take. You start out thinking you have an infinite amount of time, and it runs out really quickly. Getting closure is way down the line. I don't really want to see closure-I think it should gain in strength, at which point it's no longer a project. We're going to have to talk about where do we stop? Not the CILASS involvement, but labelling it a special project.

[Architecture]

6.2 Support

The support needs regarding design for IBL became apparent at a number of levels. Several project leaders acknowledged the positive move on CILASS's side to support bids that weren't 'proven' to work, instead supplying the evaluative framework to build a case for potential future departmental support.

I think the documentation is going to be really important. We'll need to think about what kind of resourcing it will need as it moves into the department and away from dependence on CILASS. If I can make a case to do certain things because we have evidence that they're good, that will help.

[Architecture]

Although the data collection for this report stops in spring 2009, and the projects included in this study had all completed at least one iteration by then, it is worth mentioning that the re-structuring of the institution, both at faculty-level and within the Learning & Teaching Support Unit, has had a great impact on the support needs and support received by project leaders.

6.3 Lack of student uptake

A challenge mentioned by one project was a lack of student uptake, or rather, the students' reluctance to 'take risks' to the extent staff would have welcomed.

It's slightly disappointing that there is an inherent conservatism within our students. The projects have been voluntary, because it's important that students are not manipulated into taking part. I had thought there would be a bigger uptake, because everything was transparent.

[Architecture]

Among projects that were reliant on collaborative inquiry, feelings of unfairness came through the evaluation data. In one project especially [Law], it was felt that it was too easy to 'coast', and that lack of uptake and motivation was not penalised enough by staff.

Others thought 'well, we're not getting marked, so why do it', but I thought it was quite nice to get out, and what we did was really interesting...of course, some people left it until an hour before the deadline, and I'm frustrated that nobody will see the difference between what they did and what we did.

[Law]

This reluctance to engage with a change in teaching style also permeating lectures:

Not sure whether the lectures ended up being more interactive or not. We certainly tried more to involve the students, but students seem to feel uncomfortable communicating in a large lecture theatre with over 200 of their peers present.

[Law]

7 Impact of IBL on staff and department

Several departments explicitly mention the impact of CILASS and IBL development on the department. In most cases, this impact has been slow and incremental, a sea change which reached from initial project leaders over to other staff, occasionally via additional projects through the next round of CILASS funding.

In the past, some staff have been reluctant to embrace concepts such as learner flexibility, the incorporation of new technologies, the use of online Learning Diaries and Discussion Boards and group work in large, core modules. However, a number of staff are now sharing in our vision to utilise IBL in all [departmental] modules. [Another member of staff] has already met with the team to discuss ways in which she could progress IBL within her own [teaching]. Following the [project event], a number of colleagues requested that they could use the student presentations as teaching tools in their lectures in the forthcoming academic year. Further, since many staff in [the department] are involved in service teaching in other departments, IBL methods may, in time, percolate into the teaching strategies of other departments.

[Law]

On some levels, implicit support, provided by the creation of a community, was just as important as the explicit project support given by LDRAs:

The existence of CILASS in itself stimulated a process of debate and inquiry that has encouraged critical reflection and discussion in our department, leading to exchanges of ideas and insights. In some ways this has been a process of making explicit tacit knowledge and practice - expertise that is held by individuals but because of the existence of CILASS is now being shared. Where colleagues have attended CILASS events and workshops, there has been an impact when they have come back and talked about them. There has also been new knowledge and insights gained from the sharing of practice with other departments.

[Education]

7.1 Impact of IBL on student experience, attitude and understanding

In addition to comments from students in other sections, this section is looking at the impact IBL may have had on the way students engaged with their learning on a variety of levels. Changes made as part of some projects impacted on the way students learnt, and the way they thought about their studies.

The stepped approach to information literacy had a great impact on students' ability to use the online journals and e-books, which had a positive influence on the remainder of their degree.

[Education]

From a student perspective, this same project was summarised as follows:

The approach employed in this module has definitely enhanced my skills as a researcher and has afforded me the leverage to carry out research in an organised fashion. Having been engaged in

a research assignment has boosted my confidence and self worth as I endeavour to continue finding answers to issues and problems plaguing the education system.

[Education]

The idea of self-worth cited above is related to a post-graduate degree, however, the same concept comes through below, in a project at Level 1:

It's been really great - to be able to talk to academics - as a first year [...] student, you have so many arguments inside you, you are averse to so many things, and think so many things are unjust, and it's really great to talk to somebody who has that knowledge, who can tell you 'actually, there's no precedence for that' - it's really helped me a lot!

[Law]

For both students, IBL has helped them to see themselves a part of a professional community, rather than on the outside, looking in. A project leader from a third project [Sociology] explicitly states the importance of viewing students as budding professionals/academics, rather than students of the subject. This small but significant shift appears to have had, in and of itself, a great impact on how students experienced the projects, and, as a result, their attitude towards them.

While the teaching of IBL projects had an impact on students, the open involvement in the evaluation and design of their work also influenced their experiences.

I've asked the students, if I were to fund this project to continue, can you tell me why it is useful and where might it be applied? They've had to think about that, and to say what investment in the project will allow it to be used constructively, and how they've organized their action research projects so they might be viable. Some are quite extravagant, and not sustainable. So I've asked the students how they might apply the principles of the projects in the curriculum. It's helped them to evaluate their own work more.

[Architecture]

In preparation, staff sometimes wondered whether to share with students that they are engaging in inquiry-based learning, and that a change has been made to the module. Anecdotal evidence of staff feeling vulnerable, and staff wondering whether students can be interested in the learning process, rather than focus on the product or outcome is available throughout the work of CILASS. Student evaluation for the purpose of this report, however, shows that students can indeed show interest in processes or learning:

I think the point was well made when they told us about it - it's not about the topic, it's about how you go about learning, and the process of it, you know, that you'll have to be able to answer questions on, [...] that was the point of it, and I think that's good.

[Law]

7.2 Unanticipated outcomes

Unanticipated outcomes (as voiced by staff) frequently relate to student response, both in the positive and negative sense, sometimes within the same project. As such, feedback from one project brought forward the following:

I was surprised that empowering the students had such a big effect on the success of the module. I always knew it was important to empower students, but we let them choose any question they wanted to research. We gave them power in the assessment side. I never realized how powerful that would be.

[Information Studies]

However, the same project also gave rise to the feedback that ‘one thing that was surprising’ was ‘the students’ passivity throughout’ – this from two separate project leaders, which serves as a reminder that all evaluation data is subjective.

Only two projects have provided summative examination data as part of their evaluation. In both these projects [Geography and Sociology] the unanticipated outcomes were directly linked to higher performance on part of the students. In one project [Sociology] students achieved on average 5% better than in any other module. In the other project [Geography], students achieved the highest average grades on record for the module so far.

Many positive comments are directly related to an increased feeling of partnership, or to a pleasant surprise on behalf of staff, when they allowed students to have a greater say in their learning, or to participate in the discussion around processes of learning.

I think the most unexpected thing was conjoining of student-based community and staff. [The CILASS Learning Development and Research Associate] deserves a lot of credit for that. And that hasn't happened before. Except on a personal level - it happens in the department. But this has been institutionalised - an institutionalised community spanning staff and students was unexpected and it was a really good thing to happen.

[Sociology]

In another project [Architecture], students appear to have engaged more with the department as a whole:

Students are becoming much more involved in peer review-they're talking to each other much more, and because they're talking to each other, they're less nervous about moving around the school and going into spaces where perhaps they previously felt they didn't have a place. So what they're doing is they're engaging in cross-year conversation.

[Architecture]

7.3 Impact of projects on future developments in departments

Most talk of future plans was related to further iterations of the project, and concerned minor improvements, such as the shifting of a deadline, a different way to compose groups of students, etc. In some projects, however, more strategic change was envisaged.

What I want the projects to do is to help to create habits and find places where these habits can be sustained and supported in the curriculum. That's the role of someone with an overview.

[Architecture]

A range of suggestions were put forward to develop interdisciplinarity further in [the department's] teaching. These included:

- *Sharing best practice in developing interdisciplinary study between programmes;*
- *Developing collaboration between programmes to allow students to experience (potentially sub-modular) learning in different disciplines, and finding ways to support and encourage students to do this;*
- *Using ICT to expose students to different disciplines (and there is a link back here to the networked learning responses above); and*
- *Developing new awards between programmes, to bring together existing strengths into a new package.*

[TILL]

Every single project cites the need of additional input and support, whether from the department or a central unit, to proceed with further developments and sustain the existing ones. As it is, out of the nine projects examined for this report, at least three have halted, for a number of reasons – whether due to staff leaving, changes in departmental strategy, or workload issues. All of these projects were successful.

8 Conclusions and Recommendations

This report has collated the evaluation and project data from nine projects, which represent a purposive sample of CILASS-funded projects from within the Faculty of Social Sciences. All projects had their first iteration in the early- to mid-timeframe of CILASS. Some projects had several iterations by the time this report was compiled. The projects differ widely on a number of levels, including student numbers, location, level of study, numbers of staff involved, and style, including one project that was based on discussions with students, rather than teaching [TILL]. As a result of this, the data are equally varied. Although this report draws on limited data from only nine of CILASS's 100+ projects, it is possible to see recurring themes, and, on the basis of these, to make recommendations regarding the sustainability of the impact IBL has had in the Social Sciences. Some of these recommendations appear to transfer easily into more general learning and teaching.

8.1 Dedicated support

Wherever projects had support available, whether through CILASS, the Library, LeTS, or departmental technicians, this support was valued and appreciated, in some cases [Law] going so far as to creating new teaching communities that saw support staff as partners in education. The support available from a dedicated team (i.e. CILASS) was deemed to be valuable, both for reasons of expertise, and for logistical/organisational purposes. If innovative projects in the area of IBL (or learning and teaching in general) are to continue to the same level, it appears that support at the same level would also be required.

8.2 Networked Learning

Networked Learning was seen as advantageous in those cases where it explicitly contributed to the learning outcomes, as a way to connect students with each other in order to pursue a common goal. As such, it was mainly used as a tool to facilitate collaborative inquiry. With a focus on networked learning as a pedagogical tool, rather than an approach in and of itself, project leaders valued the support available to help them understand this distinction, and the opportunity to utilise technology in this way.

8.3 Student engagement

Overall, staff had positive experiences when sharing pedagogical ideas and reasons for pedagogical approaches with students. Students valued being 'in the know', understanding why they were engaging in IBL, and being told about skills they would learn. This, in some instances, off-set their perception that IBL was 'harder' than other teaching methods they had encountered.

8.4 Staff-student partnerships

Although the projects highlighted here focus mainly on teaching of individual modules, rather than on staff-student partnerships at departmental level, input from students as partners is raised as a valuable means to staff to create meaningful and effective learning experiences. Such partnerships, and the resultant advantages, can be transferred into the culture of the institution as a whole. The benefit appears to be related to having students knowledgeable about learning and teaching issues, so a commitment is needed to sustain such a group of students, if these benefits are to be maintained.

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10 Appendix – List of projects

10.1 Education

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Education	1	PG	Y	Y	Y (project not featured)	Y	<ul style="list-style-type: none">• Student data from disc board• PL interview• Book chapter

What can be more IBL than students working in groups to design and carry out their own research in order to both report their findings and reflect on themselves as budding researchers? This post-graduate Masters (MEd) module took a very successful IBL aspect and expanded it by an online component.

Using WebCT, distance learning students in the Caribbean worked with each other to read about and reflect on various research-related aspects in order to facilitate them to carry out their research, discussing concepts of research positionality, communities of practice, methodological issues and reflective skills along the way.

Supported by a stepped approach towards information literacy, students learned ‘by the by’ how to search for and evaluate information from online journals and the Internet.

Project case study: www.shef.ac.uk/ibl/resources/casestudies/education/caribbean.html

Project leader: Dr Sabine Little

10.2 Law

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Law	IBL	1	Y	Y	Y	Y	<ul style="list-style-type: none">• Student focus group• Staff written response• Award application• Book chapter

How to engage large numbers of students in IBL activities

During this core first year module 250 students worked on a diverse combination of individual and collaborative inquiry tasks in order to develop a more holistic appreciation of law in different contexts.

Staff from the Law School collaborated with colleagues from LDMU to create a variety of resources to support this process. These included an online workbook that allowed the students to engage with and reflect upon the legal knowledge they were gaining in the course.

Additionally, the students worked collaboratively in 45 groups to research an aspect of the law that was of particular interest to them, and to create a multi-media resource (film, podcast, PowerPoint) to share with other students, staff, and visiting professionals at a 'Celebration of Learning' held in the newly opened Information Commons, home of CILASS.

'I got a buzz from talking to other students and getting their ideas, rather than going straight to staff and getting an answer straightaway.' - Student Focus Group comment

'It's been really great – to be able to talk to academics – as a first year law student, ... it's really great to talk to somebody who has that knowledge, who can tell you 'actually, there's no precedence for that' – it's really helped me a lot!' - Student comment on the 'Celebration of Learning' event.

Project case study: www.shef.ac.uk/ibl/resources/casestudies/law/ul2.html

Project leaders: Dr Jonathan Doak, Dr Claire McGourlay, Dr Fergal Davis

10.3 Geography

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Geography	2	1	Y	Y	N	N	<ul style="list-style-type: none"> SGID student evaluation Data

This project will modify a core first year module of statistics by incorporating IBL in two ways. The module will be based around the exploration of a geographical question, which is stimulating, open-ended and for which a quantitative approach provides useful insights. Students will have a role in deciding how to explore the question, thus engaging their interest and developing their skills in undertaking research. The initial instruction in the methods will be reduced, so that students are simply provided with enough information to apply the methods. In the light of this experience they are then provided with a more thorough explanation. Thus the use of the techniques in their research is a key element in their learning.

The module further includes a final consolidation stage, in which the full range of statistical methods is reviewed. In providing the explanation after students have had a chance to explore and apply the methods themselves, the links between theory and practice will be more comprehensible and easier to re-apply for future use.

Project case study: N/A

Project leader: Mr Steve Wise

10.4 Architecture

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Architecture	3	PG	Y	Y	N	N	<ul style="list-style-type: none"> Project Leader Reflective Interview

IBL lies at the heart of the architecture design studio, which takes over 50% of the students' time and at least 50% of their course credits. As tutors and lecturers, we seek to reflect on our IBL practices. In particular, we aim to examine the extent to which activities can and should be student-led and the extent to which we practise research-led teaching. The overall programme proposed aims to develop a culture of risk-taking in learning, through staff-student collaboration, building the confidence of staff and students to explore uncertain territories and pursue ideas. However, this risk-taking will be founded on strong critical skills, developed through a sophisticated understanding of information and visual information literacy.

Risk in Architectural Learning (RIAL)

Risk here is about the creative use of knowledge in an uncertain context – a process that encourages the making of judgments rather than the parading of worthy goodness. In this, risk differs from originality (which historically in architecture has been associated with formal or technical innovation), though a risky process may indeed lead to an original outcome. Risk also differs from sheer ambition, in so much as an ambitious project may be one that takes on really big issues but does so in quite normative ways. This strand is about how to encourage students and staff to take risks and also to see how and when that risk is best deployed.

Project case study: N/A

Project leader: Susi Clark

10.5 School of East Asian Studies

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
School of East Asian Studies	3	3	Y	Y	N	N	<ul style="list-style-type: none"> • PL Interview • Student Focus Group • Student Work

Currently, students on their year abroad are required to produce a 5000-word essay based on original research in the form of questionnaires or interviews conducted in Japanese. We aim to expand the project to include an IBL approach to language acquisition in relation to listening and speaking, taking advantage of the wealth of such opportunities during the year abroad. There will be two main strands for students to choose from:

a) A portfolio created from audio-visual clips gathered during the year abroad country and an accompanying reflective journal, consisting of a series of short clips illustrating different types of listening materials would be saved to a weblog together with a self-reflective on-line journal. The portfolio will not be more than 10 minutes in total length. The journal will be around 5000-words and will comprise comments on the selected audio clips and monthly journal entries reflecting on general elements of listening and speaking. Staff would provide guided materials on-line suggesting what type of clips to select together with accompanying tasks. Examples would include:

Recording a public service announcement such as a guard on the underground train and exploring the use of honorific language. The same announcement given by different people could be recorded and compared.

Recording a short clip from a lecture and exploring the use of signpost language and topic transition.

b) Designing a listening and speaking unit for a level one student working collaboratively with an existing level one student

Students on the Year Abroad will work collaboratively with a Level One student using live interactions via SKYPE or MSN Messenger as well as exchange of emails. The final submission would be a unit outline of aims, objectives and outcomes together with examples of materials to be used in the form of both audio clips and written materials; and a journal reflecting on the process of designing the unit, which might include email interactions and the like, as well as on the success of the unit.

Project case study: N/A

Project leader: Dr Angela Coutts

10.6 Department of Information Studies

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Information Studies	1	1	Y	Y	Y	Y	<ul style="list-style-type: none"> • Student Focus Group • Staff focus group

This new module challenged level one undergraduates, working in small groups, to choose a worthwhile research question and then undertake and report an original investigation on that topic. Understanding of the inquiry process was supported through workshops and online resources.

One element of the assessment was research posters, shared with members of the department in a research conference. Students participated in developing the assessment criteria for the posters and also contributed to the marking of work. Other assessment methods were group blogs and individual portfolios.

The module featured substantial input from leading practitioners in the field, who shared their experience of Information Management and commented on student project proposals.

Project case study:

www.shef.ac.uk/ibl/resources/casestudies/informationstudies/infomanagement.html

Project leaders: Dr Andrew Cox, Mr Peter Stordy, Professor Philippa Levy, Ms Sheila Webber

10.7 Management School

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Management School	2	PG	Y	Y	Y (project not featured)	N	<ul style="list-style-type: none"> • Student Focus group • Observation write-up

Inquiry-based learning has high potential in the teaching at the Management School. This is because inquiry based learning enables students to replicate more closely the types of activities that would be expected of them in practice, after graduation. For example, working in and with organisations involves inquiry of various sorts, into aspects of organisations, which are characterised by complexity, vagaries, ambiguities, different perceptions, power dimensions etc. Practitioners in Management are required to "make inquiry" in such muddy contexts in order to come to justifiable conclusions about (i) the nature of the problem(s); (ii) the current and future operational processes, (iii) the efficacy of existing and future monitoring and control functions of operational processes, (iv) the long term or strategic impacts

on operational processes, (v) intervention options (to 'improve' organisational situations), (vi) evaluation of changes. Each of these require appropriate and specifically designed inquiring activities (or "inquiring systems"), which are often undertaken in complex social contexts.

The CILASS funding will be used to build web-based case material, which will be used to replicate the rather problematic inquiring activities which are required in practice. The case material includes video clips of a real organisation's processes, some video based interviews, which capture different perceptions, motives, power dimensions etc. The principle objective will be to create an on-line case study in order to facilitate learning about inquiry in organisational contexts, and the application of specific ('systemic') constructs to help 'make sense of' muddly organisational situations.

Included in the development is an evaluation study in order to learn about the value of the learning experience of the first batch of students who will use it. The case material will be focused on Masters level students (largely MBA and MSc), although there may be some use made of the materials by other groups of students.

Project case study: N/A

Project leader: Dr John Kawalek

10.8 Sociology

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
Sociology	3	3	Y	Y	N	N	<ul style="list-style-type: none"> • PL reflective interviews • Student work

Specific strand one seeks to develop the support provided to students in the SCS317, 'Social research practice' module where groups of students undertake an empirical research project with an external sponsor. Students on the module will create an updateable module user guide for future students to guide them through the research process. They will also produce a guide for potential future sponsors. Specific strand 2 will make use of CILASS supplied digital camcorders to extend and develop student inquiry through peer and self assessment in SCS119 'Communication and Interviewing skills' and SCS6008 'Practice skills'

Project case study: N/A

Project leader: Dr David Phillips

10.9 The Institute for Lifelong Learning (TILL)

Dept/Project	Phase	Level	Bid	ToC	Final report	Case study	Other eval. data
The Institute for Lifelong Learning	4	various	Y	Y	N	N	<ul style="list-style-type: none"> • Online written discussions • IBL questionnaire summary

Students at The Institute for Lifelong Learning (TILL) are mature, part-time undergraduates from a diversity of educational and social backgrounds. They are studying in disciplines ranging from Spanish to Archaeology to Community Work, and from the Foundation Programme at Level Zero, to the full honours degree at Level Three.

Inquiry-based learning clearly has much to offer part-time mature students, and can play to their strengths as autonomous, responsible, and wide-awake grown-ups. The TILL-CILASS project attempted to recognise these strengths by including students in the curriculum design process, engaging them in creative modes of learning, and working across disciplinary boundaries to exchange ideas and perspectives. The development case offers more detail on how this happened, and what the lessons might be for other departments and sectors of students.

Project case study: www.shef.ac.uk/ibl/resources/casestudies/till/tillphase4strand1.html

Project leader: Dr Tim Herrick