



National
Teaching
Fellowship
Scheme

NTFS Projects 2007-08 Stage Two Project Bid

Project Title: “To see ourselves as others see us”: sharing and representing disciplinary classroom practice

Lead Institution: University of Kent

A. Context and Aims

1. Executive Summary

This project will undertake an intense examination of disciplinary teaching practice and its relationship to student achievement. The project has three focal areas: sharing teaching practices across institutional (but within disciplinary) boundaries; evaluating representations of practice so that they are effective in documenting practice, making it available for future use and development by others; and investigating how (and why, and with what evidence) practitioners change their practice. Building on work undertaken in a previous NTF project, this project will:

- Develop the community model of sharing teaching practice in three instantiations of Disciplinary Commons
- Create and evaluate different representations of practice (from rich, complex documents such as course portfolios, through to more abstracted and sparse forms such as guidelines and patterns).
- Undertake a small-scale longitudinal study of educators, paying particular attention to their decision-making points, and to what materials and information influence them to make change.

2. Background

The 21st century student experience is no longer confined to the classroom, but encompasses a wide variety of resources (traditional and electronic) as well as other scaffolds to success (such as learning enhancement centres, pastoral tutors and peer mentors). Resources the 21st century educator can call on, however, differ little from those historically available – faculty development workshops, conferences (or conference threads) on teaching and learning, a range of magazine articles and journal literature. As the HE environment develops, so should our professional

practices. This bid proposes a model which delivers scrutiny, capture and representation of practice across institutional boundaries.

Motivating assumption: The centrality of teachers

Whilst an HE teacher today might be seen more as orchestrating learning opportunities for students than delivering learning to them, nevertheless teachers remain central to the educational experience. (If resources alone were enough, then the existence of libraries would be sufficient for education). We believe that changes in student learning must require change in the specific practices of educators and so this project takes an intensive focus on teachers as the most direct route to enhancing students' experience.

Why is this project is needed?

To improve educational practice it is necessary be exposed to, to reflect on, and to incorporate the excellent practices of others. This is hard to accomplish locally because "a lot of what I do is simply because that is the way I (and my colleagues) have always done it"[1].

But transfer of practice is recognised as a complex process in HE [2], in professional education [3] and in other knowledge-transfer contexts [4, 5]. It is acknowledged that traditional dissemination mechanisms—such as workshops and publications—are only partially successful. It is therefore important to explore new, and more effective, ways to *share* practices between practitioners in different contexts.

It is also crucial to be able to *represent* the ephemeral, situated, act of teaching [6] in more permanent forms, to enable educators to share practice across space and over time. But deriving appropriate and effective representations of practice is not easy. It can be hard to abstract what it is about a single case that is responsible for its success; a body of evidence is needed to establish not only that a particular practice is repeatably excellent, but also to identify the factors which are important for its success. Additionally, practitioners find it difficult to identify and articulate the processes through which they actually assimilate good practice into their work; this makes it harder to identify the original sources of practice in order to build such a body of evidence. The systematic sharing of, and recording of, practice is therefore critical.

3. Purpose

Building on the concept and instantiation of existing *Disciplinary Commons* in Computing [7] this project will have outcomes with **immediate implications for practice that affects the student learning experience** within the *Disciplinary Commons* network and will also have outcomes that **further theoretical and conceptual understanding of key issues** through the *identification*,

representation and *sharing* of classroom practices. These outcomes have the **potential to result in significant practical recommendations** in the future.

This project will involve academics in a series of *Disciplinary Commons* [1, 8]. This model was devised by the PI (in collaboration with Josh Tenenber) within the context of a 2005 NTF project which had the twin aims to:

- Document and share knowledge about teaching and student learning in the UK in a disciplinary context.
- Establish practices whereby the scholarship of teaching becomes public, peer-reviewed, and amenable for future use and development by other educators, in particular by creating a teaching-appropriate document of practice equivalent to the research-appropriate journal paper. [1]

A *Disciplinary Commons* achieves these goals by means of regular meetings involving staff who teach the same course, but who come from different institutions and institutional contexts. Meetings focus on teaching and learning within participants' classrooms, with each person documenting their teaching in a *course portfolio*.

A course portfolio is a set of documents that “focuses on the unfolding of a single course, from conception to results” [9] and is an established method for advancing teaching practice and improving student learning. The purpose of the course portfolio “is in revealing how teaching practice and student performance are connected with each other” [10]. Portfolios typically include a course's learning objectives, its contents and structure, a rationale for how this course design meets its objectives, and the course's role in a larger degree program. Importantly, they also include evaluations of student work throughout the term, indicating the extent to which students are meeting course objectives and the type and quantity of feedback they are receiving.

There have been three *Disciplinary Commons* instantiations to date, two led by the PI (2005/6 and 2007/8) one led by Josh Tenenber from the University of Washington, Tacoma (2005/6).

Why is the *Disciplinary Commons* model appropriate to this project?

As well as providing a forum for sharing practice in a disciplinary community, a *Commons* also provides as a public deliverable a rich set of contextualised data. *Commons* portfolios have common form, so facilitate comparison, but are unwieldy as representations. However, the coherent body of evidence they form will be used to identify successful practices and refine them into a variety of representational forms such as guidelines, “bundles” [11, 12] and patterns [13, 14] in order to investigate appropriate mechanisms for representing excellence in practice that facilitate effective transfer [15].

How does this extend previous projects?

As well as deepening and extending previous work on sharing practice and on representing practice [12], this project will make a substantial contribution in the area of adopting practice. In particular we will explore how practitioners identify practices external to their own situation that enhance student learning, and how they incorporate them into their own work. This analysis will make a powerful contribution to our understanding—at an individual, disciplinary and inter-disciplinary level— of how excellence in teaching actually works, and how it may be adopted and embedded elsewhere.

4. Objectives

This project has objectives in three main areas: sharing disciplinary practice, abstracting and evaluating representational forms of practice and examining changes in practice.

4.1 Sharing practice: models of developmental collaboration

This project will deliver extensions and explorations of the *Disciplinary Commons* model of sharing pedagogic practice that are **wider** (i.e. exported to new disciplines), **longer** (i.e. selected participants are followed over time) and **deeper**, (i.e. set into a context of changes in practice). With a *Commons* running each year, creating its own targeted archive of outputs this activity has immediate implications for practice. This activity is also cumulative and, as the body of evidence accrues, will form the basis of dissemination of the *Disciplinary Commons* model (see section C 11, below)

4.2 Representing practice: a variety of forms

This project will create and evaluate representations of practice with targeted user communities. This strand of activity will involve broader disciplinary structures, such as Subject Centres, CETLs, and other funded projects. The resulting collection of practices will be made widely available (via a web archive). The existence of this unique resource will not only be a work of reference, but will also embody recommendations for the effective development and use of a range of representational forms. As Beetham suggests [16], there may not be a one-size-fits-all representation, but several, to fit a variety of purposes.

4.3 Adopting practice: understanding change

This project will undertake a small-scale, longitudinal study to map how practice changes over time, and how these changes impact student learning, paying especial regard to how academics seek, evaluate and incorporate new practices. By close and intense study of relatively few practitioners, we gain deep insight into the realities of educators' practice and its relationship to student learning.

Longitudinal data, tracking changes in practice of individual educators over time, is rare. Thus this contribution will provide the basis for advances in our understanding of how change actually occurs, as in some other workplace studies like [17] and [18]. Like those studies it is hoped that this work would also advance our theoretical base in this area.

B. Approach and Deliverables

5. Methodology

Our overall approach is dictated by the central project concerns to intimately investigate teaching practice, to link it to evidence of effectiveness of student learning, and to enhance its transferability. For each project strand, this approach is realised using different methods.

5.1 Extending the community of *Disciplinary Commons*

A new *Disciplinary Commons* will be run in each year of the project. In 2008/9 this will be in veterinary education in collaboration with LIVE CETL (Lifelong Independent Veterinary Education) at the Royal Veterinary College. As a very different discipline from Computing, this will allow early identification of any disciplinary-specific constraints on (or facilitators of) transfer. (Disciplines for subsequent *Commons* will be identified during the first year of the project). Additionally a *Commons* network meeting will be held each year to bring together participants from all *Commons* instantiations.

5.2 Abstracting and evaluating representational forms of practice

This activity will focus on the abstraction of examples of successful practice (from existing *Commons* portfolios and elsewhere) into a number of representational forms. This work will be conducted in collaboration with CETL ALiC (Active Learning in Computing), and participants from previous *Disciplinary Commons* in Computing. This corpus will then be subject to ongoing evaluation with communities of users to establish the effectiveness of different forms. These processes will be cyclical and grounded in active engagement with user groups, drawn initially from the *Commons* and CETL ALiC but then extended to other populations through the disciplinary subject centres and related JISC projects.

As representations are used in the development of users' normal teaching practices we will evaluate their effectiveness (to staff) through interviews and interventions at *Commons* workshops. The impact on students will be evaluated through direct observation, peer observation (within the *Commons*) and questionnaires to selected student groups. In addition, we will work to ascertain whether representations are straightforward to create as well as use, as this is vital to the ultimate usefulness of a particular form.

5.3 Evaluating changes in practice

The longitudinal study will comprise regular in-depth interviews with participants, some focus-group meetings, and a series of targeted data-collection instruments that we will devise and implement as the project progresses. In this we very much take as our model the “directives” of the Mass Observation project [19] and would expect our instruments to comprise an equally large variety of forms.

It is unclear at what point, in what circumstances and with what evidence, educators make decisions about changing their practice. Using a wide battery of techniques will allow us to identify decision-making points and then flexibly devise further instruments to illuminate them.

6. Timeline of activities and outputs

	<i>Disciplinary Commons</i>	Representations of Practice	Longitudinal Study
2008/09: Evaluators' meeting, Sept 2008; <i>Commons</i> network meeting, March 2009			
Activities	<i>Commons 1</i> (Vets)	Corpus collated. (Sources: previous <i>Commons</i> archives, CETL ALiC collections, JISC Planet project)	Participants recruited. Definition of year one instruments Baseline interviews
Outputs	Portfolio archive	Preliminary collection of representations	Preliminary analysis, informing year two
2009/10: Evaluators' meeting, Sept 2009; <i>Commons</i> network meeting, March 2010			
Activities	<i>Commons 2</i>	Recruiting user communities. Evaluating representations & analysis of their effectiveness. Applying processes to <i>Commons1</i> data	Year two interviews, year two directives
Outputs	Portfolio archive	Refined collection	Mid-term analysis, informing year three
2010/11: Evaluators' meeting, Sept 2010 & 11; <i>Commons</i> network meeting, March 2011			
Activities	<i>Commons 3</i>	Further empirical work with narrower selection of users. Applying	Year three interviews, year three directives

		processes to <i>Commons2</i> data.	
Outputs	Portfolio archive	Collation of guidelines	Longitudinal analysis
At close			
	Three portfolio archives; three scholarly communities. Papers on DC model	Collection(s) of representations Guidelines for use & development Papers in appropriate venues	Collection of case studies Papers in appropriate venues

7. Project Management

The project comprises three sorts of work: running *Disciplinary Commons*, undertaking the studies, and overall project management. We expect that all members of the team will be involved with all aspects of the project, but that each will have a primary focus. This distributed responsibility means we make a relatively light allocation for overall project management, recognising the small team size and discrete nature of many of the activities.

Sally Fincher, University of Kent. 2005 NTF and PI. 20% commitment to the work of the project.

Primary focus: longitudinal study. Additionally Sally will undertake overall project management, bringing total time commitment to 25%.

Janet Finlay, Leeds Metropolitan University. CETL ALiC & patterns expertise [20]. 20%

commitment to the work of the project. Primary focus: abstraction & representations of practice in different forms. For the first 18 months, Janet's contribution will be funded by CETL ALiC

Fincher & Finlay will each run one *Commons* in tandem with "trainee" leaders; a graduate of a previous *Commons* will run the third. In this way, leadership expertise is extended beyond the initiators. We have allocated time to run a *Commons* as 12 days, plus attendance at annual team meetings. The budget reflects allowance for this as a separate activity.

Helen Sharp, Open University. Co-founder the Pedagogical Patterns Project [21] Formative evaluator. 12 days over three years.

Isobel Falconer, Glasgow Caledonian University. Expertise in representations of learning design [22, 23] Formative evaluator. 12 days over three years

Josh Tenenberg, University of Washington, Tacoma USA. *Disciplinary Commons* consultant. Josh is PI of a parallel bid, currently under consideration by the US National Science Foundation. If funded, we would expect to work in close synergy with this sister project.

LIVE CETL, Royal Veterinary College. Will provide “in kind” support for the veterinary *Commons* through recruitment of participants, hosting meetings and maintaining the resultant archive.

C. External relations & impact

9. Communication plan

Stakeholder	Communication/Benefits	Importance
<i>Commons</i> participants	In-depth involvement through <i>Commons</i> activities. Benefit directly.	High
Teaching staff in <i>Commons</i> disciplines	Consultation for evaluation and refinement of representations of <i>Commons</i> outputs. Benefit through exposure to (and sharing of) breadth of practice. Close involvement of relevant subject centres & CETLs.	High
Students	Students directly affected by the involvement of their teachers in project activities (see C 11.1, below). Indirect benefit from project outputs on other teaching staff.	High
University senior management	We recognise policy makers for their importance in facilitating adoption of new practices within institutions. We will ensure they are informed appropriately of the outcomes of the project.	Medium
Other HE institutions/disciplines	Model of <i>Commons</i> will be offered to the HE community through conferences and staff development activities to ensure that others can run <i>Commons</i> in their disciplines.	Medium-High

10. Evaluation strategy

This is a small-scale, high-impact project. It is important to have high-quality input to ensure the project remains focussed, on track, and alert to unexpected opportunity.

10.1 Internal evaluative cycles

The project is designed to incorporate continuous evaluation and user engagement in each of its three strands: the *Commons*, representations of practice, and the longitudinal study. Formative evaluation will be captured at all stages through participant feedback on these activities.

In the case of the *Commons* and the longitudinal study evaluation is in-built as reflection on activities, and assessing their impact on student learning, is a condition of involvement. We will

capture these "naturally occurring" reflections in addition to those solicited from targeted instruments, and feed them back into the revision of the project activities

In terms of the representation of practice strand, we will be evaluating two distinct elements: the usefulness of the representation itself and the effectiveness of the process of capturing the appropriate practice. Again this will be done iteratively, with feedback from each year informing our processes in the following year. In addition we will capture the use of these representations through follow-up interviews, and analysis of sample deliveries (to identify where practices have been embedded). Here, the impact on students will be captured through interviews with practitioners, peer observation, and questionnaires to selected student groups.

10.2 Project-level strategy

We involve Helen Sharp, Isobel Falconer and Josh Tenenberg: three consultants with complementary expertise who will follow the work of the project and meet with us twice a year, at evaluators' meetings and *Commons* network meetings. Their involvement in this form will ensure we receive timely, high-value, formative feedback: our personal regard and professional respect for their knowledge and experience will ensure we take appropriate action.

11. Dissemination strategy

Dissemination is a pluralistic activity. We see three areas of dissemination, which have different audiences and require different mechanisms of engagement.

11.1 Dissemination of effect

The first, and most effective, dissemination mechanism is built in to the *Commons* model: the participants and their engagement with critical practice. Professional practices are becoming more complex and the *Commons*' new collaborative form and co-operative culture brings considerable additional value.

Engagement in a *Disciplinary Commons* is positive and productive, as participants testify. "It has brought vibrancy to my teaching. Perhaps 'life' is a better term" and "I gained more insight into my teaching and my students and, as an unlooked-for bonus, I enjoyed it" and "The *Commons* gave me the confidence to seek and respond to feedback from my students" [24].

Participants recognised the value of the collegial and participatory aspects of the *Commons* model: "the DC provided a rare opportunity to expose my complete teaching process to a wide range of peers" and "Each meeting and all the associated conversations have generated many, many ideas that have found their way into my thinking—timed perfectly just as I develop a new course"

Many participants spoke about specific changes made to their teaching: "The main thing I learnt ... was that my teaching of arrays had left many of my students confused. To be honest, I thought I

could teach arrays in my sleep; it appears that I had done.” One said they would: “partition the lesson plans so that it’s not all didactic lecture. Intermix some lab work, a break or two, engage students ...” and another that “I have gained agreement from the School to convert the surgery session into a seminar class”

As well as the strong and immediate participatory effect, we expect substantial dissemination through the “trusted channel” of the *Commons* network. “I mean there's this shared knowledge now that we don't have to repeat ... and, you know... I would trust information from any of these people”

11.2 Dissemination of product

The second area of dissemination is a public and accessible archive of excellent practices encompassing a variety of representational forms. In this matter we will work closely with relevant CETLs and Subject Centres to maximise reach to disciplinary communities.

11.3 Dissemination of model

We will engage other modes of dissemination to fit other communities – for example, documenting the model of the *Commons* so that it is available to scholars in other disciplines, making change-of-practice case studies available, and compiling recommendations on the effective development of a range of representational forms. This aspect of dissemination will take established forms: conference presentations and journal papers. We would expect to publish these both within disciplinary forums and to the trans-disciplinary scholarship of teaching and learning community.

D. Value for money

12. Value added

This project makes use of previous and concurrent projects based at partner institutions. It draws on expertise developed through the previous *Disciplinary Commons* run from Kent and serves to develop this strand of work. It also builds upon initial work at Leeds Metropolitan through CETL ALiC, which is looking at different representations of practice for computing, and the JISC funded project Planet [25], which is exploring patterns as a form for representing practice. This project will be able to draw on both the experiences and data gathered in these other projects and (as appropriate) on software and support tools developed within them. This project will make full use of the findings of these related projects, thus ensuring that it delivers excellent value for money.

The distinctive contribution of this project is to intimately investigate teaching practice, to link it to evidence of effectiveness of student learning, and to enhance its transferability.

- The value to *Commons* participants is profound. The benefit to their current students is **immediate**, and sustains to future courses.
- **Practical recommendations** on how to identify and appropriately represent practice are of significant value to the sector.
- We have no good understanding of how teachers change their practice, so the potential for this work **to further theoretical and conceptual understanding** in the area is considerable

E. Feasibility

13. Risk Management

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Loss of key staff	2	4	8	The project team contains staff with overlapping expertise who could take over activities if needed.
Withdrawal of partner organisation	2	4	8	Agree collaboration agreement to address this.
Unable to work with intended user groups	1	5	5	First <i>Commons</i> discipline has been agreed. Project team will use contacts through HEA subject centres, fellow NTFs, and CETLs to identify a range of possible follow-on <i>Commons</i> .
Team members not contributing as expected	2	4	8	Have agreed targets and action plans ensure regular communication using a variety of means including electronic and face-to-face.
Unable to recruit "trainee" <i>Commons</i> Leaders	1	3	3	Large pool of previous <i>Commons</i> participants available. If none available one of the project team could run the <i>Commons</i> .
<i>Commons</i> and representations not achievable.	1	5	5	Both the <i>Commons</i> model and the representations of practice being proposed have been used by the project team

				previously so there is experience of working with both in different contexts. One of the aims of the project is to evaluate their transferability; therefore any failure in this regard would be considered a useful (though not an expected) outcome.
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15. References

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