**User engagement and research design in the EPL Project**

University of Stirling, Scotland  
Contact: p.b.gray@stir.ac.uk; j.g.mcnally@stir.ac.uk

**Introduction**

There has increasingly been a focus on user engagement within educational research, coupled with a stress on measurement and proof of success. In the educational context, this requires the real-world testing of some form of intervention into established practices. This paper explores the process of negotiating and designing such an intervention (or ‘enhancement action’) in the early professional learning (EPL) of teachers within the context of the Scottish secondary education system.

In describing the earlier history of teacher induction in England, Tickle (1994) noted that a number of initiatives to improve the induction process were abandoned and concluded by recommending further research into the process. This particular ESRC-funded TLRP Project takes as its initial, main focus the early professional development of teachers in secondary schools in Scotland, alongside which there develops an English strand. Currently, new teachers in Scotland are provisionally registered with the General Teaching Council for Scotland (GTCS) and their official objective is to meet the Standard for Full Registration (SFR) within this period. The team of teacher-researchers (TR) work in their own schools to gather and interpret data from new teachers, and constitute the front-line of the project in terms of user engagement. Having produced a tentative model of EPL from the initial data (in August 2005), the current stage is about translating the research findings, via the model, into practice settings in order to test their usefulness and credibility.

The users and stakeholders in this part of the project comprise the research team in the University, the TRs, local education authorities (LAs), schools, the Scottish Executive Education Department (SEED) and the GTCS. The paper describes how the intervention was developed and filtered through implicit and explicit negotiations with these users. It discusses tensions within the process, discusses the implementation of ‘design experiments’ in complex settings such as secondary schools and also suggests that detailed consideration of their implications is essential within the current educational research paradigm of user engagement and measurable outcomes.

The EPL project is collaborative between the University of Stirling and Manchester Metropolitan University. The purpose of the project is to ‘improve the learning of new professionals by developing, evaluating and disseminating a research-based, practical model of early professional learning [which] will add value to previous approaches to early professional development through a more comprehensive analysis of what and how new professionals actually learn’ (McNally et al 2003). This model was to be tested by a combination of quantitative and qualitative measures in a quasi-experimental design, using indicators derived from both the informal dimension of professional learning as well as from behavioural dimensions of teaching performance itself.
The induction scheme

In Scotland, the Scottish Executive Education Department has implemented an official induction scheme. Prospective new teachers, upon successful completion of ITE, are allocated to schools within LA areas, with a degree of choice as to location. They then spend a year in that school on a 0.7 timetable whilst completing a profile document, the Standard for Full Registration (SFR). One of the main research questions of the project concerned the relationship between the SFR, and the competences specified therein, and the learning process as experienced by new teachers themselves. In the data, it became clear that the SFR served a bureaucratic function but not a pedagogical one, in that it was rarely mentioned except as a necessary chore at certain times of year. The 0.3 balance of the timetable is intended to be used for CPD, as required by the SFR although the actual disposition of this time varied across individuals, schools and LEAs.

The model thus becomes an artefact at the centre of an experiment. Gorard et al (2004) describe this as a ‘design science approach’ in which currently accepted theory is used to develop an educational artefact or intervention that is tested, modified, retested and redesigned until a version is developed that both achieves the educational aims required for the classroom context, and allows reflection on the educational processes involved in attaining those aims. Although this paper is concerned with user engagement in the research process, a brief description of the dimensions of the model in its present stage of evolution is in order. The TRs not only collected the interview data but were also part of the discussion of data that led to the identification of these dimensions.

Dimensions of EPL within the model

1. The emotional dimension is the range and intensity of feeling from anxiety and despair to delight and fulfilment that permeate the new teachers’ descriptions.
2. The relational dimension is the set of social interactions, mainly with pupils and colleagues, which produce the relationships crucial and central to the new teachers’ experience.
3. The structural dimension is the school itself and the wider educational system, and includes roles, rules and procedures that govern not only teachers’ entry into the profession but also the idea of education within society (discursive constructions though sometimes realised as texts).
4. The material dimension is the concrete manifestation of structure as resources, rooms etc. as they apply to new teachers as embodied subjects.
5. The cognitive dimension is the set of explicit understandings that tend to be applied in professional practice e.g. curriculum knowledge, assessment techniques, differentiated teaching (that can be construed as a special sub-set of the structural dimension).
6. The ethical dimension is the new teachers’ expressed sense (explicit and implicit) of commitment and care, as purposive (tends to be associated with the emotional dimension).
7. The temporal dimension recognises that these dimensions have trajectories that represent both ontological and epistemological change and give expression to purpose.

Any attempts to represent these dimensions in some kind of graphic model have not so far been convincing. Like many other representations on the page, they can mislead and distort though apparent over-simplification. We continue to consider how we may produce such a model.

The Users

Teacher researchers (TRs)

In Scotland, the initial phase of the project involved the recruitment of a team of teacher-researchers to undertake ethnographic research in their own schools during the 2004/5 academic year. Due to an enthusiastic response from the profession, and the high quality of the applicants, the selection process involved a first stage of 33 interviews and a second stage of 13 interviews. Six were ultimately selected on a 1.5 day/week (0.3) secondment. This was enough to give the team ‘critical mass’ and to cover the complex range of tasks required by the methodology of naturalistic enquiry, ethnography and grounded theory. Similarly, the 0.3 timetable appeared to be the maximum proportion of time which could be devoted to the project without losing the confidence of the team members’ schools, whose support was essential to the success of the project. This was easily forgotten, since the range and depth of the initial ethnographic data, which ran to some 600 pages of transcript, was crucial to the successful design and implementation of the next phase.

New teachers provide a list of five LEAs in order of preference, and are then allocated to schools by the LEA for which they are selected. Not all candidates receive their first choice.

We have chosen the term ‘new teachers’ to avoid the common but slightly pejorative ‘probationers’, the awkward ‘provisionally registered teachers’ or ‘inductees’, the English term ‘newly-qualified teachers’ or ‘NQTs’.
Although there was no significant resistance to the research in the schools of the TRs, they did experience difficulties with finding private space for interviews and confidential writing up, disturbance by colleagues for teaching-related matters simply because they were ‘in school’ and managing their commitments in the time given, particularly the early transcribing. Though they were welcomed into the research team as full members with equal status in a friendly co-operative atmosphere, they still experienced some detachment and uncertainty. This was largely resolved later once they began to have their own meetings and became more fully participant in discussion of data and development of the model and the indicators. Their own reflections on their developing involvement are more fully developed by the TRs themselves in their own writing (paper to be presented at the SERA Symposium in November - Dodds et al 2005), in which they address a) introducing the TR role to the schools b) gathering interview data c) transcribing data d) identity issues e) bridging cultures. Employing authorities were also broadly supportive of the secondments though there were practical issues about contracts and costing that were ultimately resolved and had no impact on the project timetable.

**Project Advisory Group**

The Project Advisory Group (PAG) was set up in the early months of the project. It has three new teachers as well as one representative each from LA, GTCS, GTCE, a primary HT and two secondary HTs, one of whom is the chair. PAG meets twice a year and has also organised two workshops to help develop and critique the five indicators and the overall intervention strategy. These meetings have been valuable for the research team in practical trouble shooting, developing sensitivity to language across different audiences and guidance on how to approach schools for access. It was strongly recommended, for example, that we engage LAs as partners and invite them to a preliminary meeting.

**Local Authorities**

Of the 32 LAs in Scotland, 16 were represented at the meeting in March 2005. This meeting did raise some uncomfortable questions for us about clarity of purpose, reciprocity (‘what’s in it for the schools?’), for example, but the meeting in effect forced us to substantially revise our succinct statement to LAs and schools. The ultimate benefit was, however, that ten of the LAs at the meeting gave us two schools each and named contacts. These came in gradually over the period April to June. Our intention was to visit all schools before the start of the summer break at the end of June but the national system for the allocation of new teachers meant that this was not possible. LAs do not receive numbers of new teachers until around May and many schools do not know numbers or subjects until June. We managed to visit 13 schools in June and the others in the first few weeks at the start of the new session.

As a result of debate at the LA meeting (and further discussion at PAG), we also changed our pupil ‘attainment’ indicator to pupil ‘development’. This term was actually what we had in mind when developing the proposal but had, perhaps naively, thought that ‘attainment’ would seem a bit more precise. In the event it was rather too precise as it tends to be used in schools in the narrow sense of test marks or grades!

**Schools and new teachers**

All the schools we approached came on board with apparent interest and willingness. We do not know why they were ‘given’ to us by the LAs or the grounds on which they were ‘selected’. As the negotiations developed with the LAs at the meeting and subsequently, we simply had to accept what we were given. We hope to find out more from the schools themselves about their selection once the present test phase is well underway but we do not wish to push the matter too far at the moment. What we do have are two schools from each authority and this may offer some comparison of practice. (It should be noted in passing that of the 13 schools we managed to visit in June, at different times on different days to suit their commitments, we came across no evidence of misbehaviour or indiscipline – indeed quite the contrary). Although HTs and Depute HTS were unfailingly and helpful, we did have a few cases of resistance from the new teachers themselves at the start of the session. At a recent meeting with new teachers in one school in early October, they expressed concerns about risk to their relations with pupils if using Cepsati, our pupil questionnaire. They felt their position was too vulnerable in comparison with experienced teachers. They also felt that it would take up too much classroom teaching time and, in the case of PE particularly, be too disruptive. We discussed their concerns face to face (as we had guaranteed to do if problems arose) and the latest feedback is that the new teachers will participate with perhaps one or two of the seven opting out of Cepsati.

**Designing the intervention**

Active consideration was given to the exact nature of the proposed intervention once the TRs were in post and had begun to collect data. The model derived from the data was to form the basis of the intervention and the intention was to hand over the adapted model to them [teachers] for implementation. The data did not suggest
that a deficiency model of induction and EPL was emerging. The evidence, even at an early stage, suggested that the majority of new teachers (c.80%) were satisfied with their jobs and with the way that they had been inducted. The dissatisfied 20% included cases where the location of schools did not match domestic arrangements or where individual members of staff had unhelpful attitudes towards new teachers. This meant that we had to modify (our expectations of) the originally proposed intervention. Part of the intervention that did proceed broadly as intended was the development of the indicators that we now describe, referring to user engagement in the process.

**Developing the five indicators**

The original project proposal (McNally et al 2003) described five indicators for the measurement of changes to the early professional learning process, as follows:

1. An interactivity index (*interac*) to be based on a standard sociometric methodology adapted for present circumstances indicating the extent of socio-professional integration
2. A job satisfaction index (*jobsat*) derived from a validated instrument
3. An evaluation index based on children’s descriptions (*childesc*) to be constructed by eliciting descriptions from pupils about their ‘new’ teachers (as in similar studies of ‘good’ teachers in general), putting together selected statements as an item bank and then rating by experts for level of effectiveness.
4. A pupil attainment rating (*pattain*), based on attainment of classes in national/external and school/internal examination/tests, as rated by two experienced teaching peers, who will evaluate how raw attainment scores relate to expectations stemming from contextual and class-specific factors.
5. An expert judgement rating (*exjudge*) based on ratings of teaching performance by two independent experts (a headteacher and a teacher educator) who will observe, report on and grade the teaching of the new teachers in both groups at the end of the induction year.

Of course we did not presume that all these tools would be sharpened and set to go at the same time. The reality is that their development proceeded at different rates, depending on the amount of time available between other tasks and on the results of discussions with various project members and external advisors.

*Exjudge* was initially linked to the use of video recording classroom teaching for remote assessment by a panel. This was initially rejected for practical reasons and child protection implications. However, we have revisited this on a smaller scale and are currently in the process of negotiating video material (with parental permission and guarantees) for the examination of our panel. The panel comprises five respected teachers/teacher educators who have experience of working with student teachers or probationers and observing lessons. Discussion of the video material will be used to bring a degree of reliability to what is essentially a matter of judgement based on experience before they go in to schools to make their ‘expert judgements’ on the teaching they see.

*Pattain* ran into problems over the relative terminological claims of attainment, achievement and development. Although the idea of using standardised classroom attainment tests did receive some consideration, it was felt that issues of acceptability to schools, and subject-specificity precluded the use of such tests. There were sufficient sources of data on pupil attainment in schools to enable experienced teachers to detect whether classes taken by new teachers were progressing as well as, or better or worse than could be expected.

*Childesc* was linked early on to a TTA-funded project in which project partners at MMU were involved and which had produced an instrument called PETE (Pupil Experience of Teachers). Independently of this project, however, the teacher-researchers had carried out an exercise in which pupils in a range of their own and other classes (S1-3 and S6) had produced statements about how teachers helped and hindered learning. These took the form of approximately 1,200 pink and yellow slips which were transcribed into a Word document and coded. It is worth noting that only two of these statements were of a personal nature, illustrating that pupils took the process seriously. Feedback from the teacher-researchers suggested that their pupils enjoyed the exercise and that classroom discussion of the issues involved had been helpful. Generic versions of these statements were then combined with a modified version of WIHIC (What Is Happening In this Classroom), a classroom environment instrument developed by Fraser et al (1992) and some questions about pupils’ expectations of their own achievement to produce CEPSATI (Combined classroom Environment Pupil Satisfaction & Achievement Instrument). This was trialled in several iterations, again in the teacher-researchers’ schools, and also received favourable comment.

*Jobsat* was the first instrument to be tested with new teachers themselves. It was based on existing theories of job satisfaction which posit a two-dimensional model involving satisfiers and dissatisfiers (Boreham 2004), but with 40 items derived from discussion with the teacher-researchers and their data. An overall satisfaction item was also included. From the perspective of the development of the intervention, the need to pilot the instrument led to a number of excursions to LA–run CPD events, where the survey was administered to groups of 20-40...
new teachers. These were useful in providing an opportunity for discussion of the project with LEA officers, new teachers and outside trainers.

*Interac* was originally intended to capture the extent of "socio-professional integration". Existing instruments for social network analysis are often based on generic items which fail to capture the specificity of the induction process or life in schools. The underlying philosophy of the project, which could be described as ‘embodied realism’ (Lakoff & Johnson 1999), gave credence to naturalistic accounts by participants of events or feelings experienced by them in material settings, rather than the establishment of constructs from scaled responses to decontextualised items in standardised instruments. This involved a trade-off between technical rigour and user engagement; since it was felt that the use of language and concepts grounded in the embodied world of (Scottish) teaching would produce more accurate responses than might have been given had the language been that of (e.g.) American universities, as is the case with most of the existing instruments.

A practical consideration was the amount of time that might be taken up by participating in the study and the need for a simple, robust device which would function anywhere and at any time. This precluded the use of ICT-based systems, and this view was reinforced by difficulties experienced with the use of WebCT as a communication tool at an earlier stage in the project. Similarly, the use of quasi - Geographical Information Systems (GIS) based on tracking devices was ruled out on grounds of cost and intrusiveness. The instrument thus ended up being paper-based, as the method with the least potential for practical problems, together with ease of reproduction and coding.

Items for the instrument were generated by the teacher-researchers in a brain-storming exercise using individual slips of paper under the headings of:

- Who do you talk to? (n=58)
- What conversations are about (n=45)
  - what went right – positive outcomes of conversations (n=24)
  - what went wrong– negative outcomes of conversation (n=15)
- reasons to have a conversation (n=32)
- Barriers to [having a] conversation (n=24)

It should be emphasised that the headings reflected questions to which a credible answer could be expected rather than empirically-derived or literature-based dimensions. The items generated under these headings were grouped and standardised in discussion with the teacher-researchers. The instrument was then trialled and some modifications made as a result, mainly to the layout of the item boxes. The instruments are being distributed in the form of pads, with a front-cover instruction sheet and 20 one-off conversation recording sheets.

The other aspect of structural dissatisfaction was the possibility of being allocated to a school in an area remote from one’s normal place of residence. Some new teachers, especially those with dependents, were faced with difficult commuting and childcare arrangements. This could be perceived as resulting from an implicit assumption that new teachers were young, single and willingly mobile, an assumption that was not fully supported by the data. Such problems as arose were not easily resolved and there did not appear to be a transparent mechanism for doing so. To address this as part of the intervention would clearly have been desirable, but would not have been feasible under the current arrangements.

**From controlled intervention to possible enhancement**

A classical RCT would have called for random allocation of schools to one group or the other with stress on measurement and proof of success, using techniques such as the Random Controlled Trial (RCT) (MRC 2000; Moore et al 2003) and the design experiment (Gorard 2004). In our original design we settled provisionally, given the nature of schools as complex entities, on a ‘matched pair’ approach in which schools were assessed on the basis of size, demography etc. In RCT parlance, the critical variable was the quality of the actual induction process rather than any surface resemblance. There were no ‘measures’ of this and, although LA officers felt they could judge the quality of induction with some reliability, they also confirmed that it did vary within schools according to departments. In discussion at the LA meeting, it also became clear that the LA representatives would select the schools for us and that the criteria might become what schools would be willing to take part. We had to accept this as gaining access (for further understanding and instrument testing) was a major priority.

We then allocated schools into ‘control’ and ‘experimental’, terminology we quickly changed to ‘high intervention’ and low intervention’, then into ‘enhanced induction’ (EIG) and ‘standard induction’ (SIG). In effect we grouped together the schools into the EIG as they came on board as we had a little more time in which to negotiate with them. It was also clear that, because of the generally high standard of induction experience in
the schools themselves (confirmed by the early jobsat pilot results); our ‘intervention’ might not make any significant difference to the practice in the schools. In addition, it was clear that matching pairs of schools by LA was unworkable as teachers in the same LA do meet up and talk, rendering claims of control untenable. We decided that the intervention would take the form of enhancement through process consultancy in which we would play a more active and responsive role during the induction year in the EIG schools. We are now at then start of this stage.

Methodological implications of user engagement in RCTs

According to Lakoff & Johnson (1999), the underlying philosophical paradigm of any project which espouses user engagement is embodied realism. That is, meaning is created by the interactions of embodied beings with each other and with their environment, through metaphorical and other schemas which ultimately refer to embodied spatial practices. Embodied realism is not incompatible with positivist approaches, and indeed, much of the research on which Lakoff & Johnson build their argument is itself in the positivist tradition. Where it departs from this tradition is in arguing that external reality can be accessed in any way other than through embodied human understandings. Lakoff & Núñez (2001) argue that even mathematical understandings of reality derived from embodied being and are therefore not transcendent in a Platonic sense. These arguments are not entirely new but the strength of embodied realism, as the above authors point out, is that it derives from a wide range of empirical evidence rather than philosophical rhetoric.

Our engagement with users bears out the value of this approach. The project itself began with a question about how teachers learned to teach, but this metamorphosed into a question about how teachers became teachers. In turn, this became a series of dimensions derived from new teachers’ descriptions of their induction and early professional learning experiences. The intervention, however designed, was only real insofar as it affected those experiences and was reflected back to us by the new teachers themselves. The instruments, rather than measuring their learning outcomes, became a way of altering their self-understanding.

Rather than being a comparison of X and Y interventions which produced data at the interface between the two, the project began to derive its data from the interface between two embodied worlds, that of academics and that of teachers. Whilst ‘user engagement’ as a concept is an attempt to deal with the negative aspects of this interface, it is because of, rather than in spite of, its existence that we are able to generate data at all. This is not to denigrate research initiated and conducted by teachers independently of academic institutions, in the teachers-as-researchers paradigm. Indeed, some aspects of the project, such as a recent spin-off involving pupil opinion instruments\(^3\), are themselves pointing in this direction. However, this kind of approach is limited by the constrained spatial and temporal mobility of working teachers. Only large-scale projects in the TLRP mould have the resources to take a systemic view of a process such as induction, which, as we have seen, is heavily influenced by national policies.

The point about user engagement is that it is meaningless without power-sharing. If, as has happened here, users have the power to alter the intervention-in-progress, to make it fit their needs or to avoid disadvantaging participants, it can no longer be random or blind. The current project is thus targeted and has double-vision rather than being ‘double-blind’. The question of power was identified in the recent ESRC seminar series (seminar 1, 2005) on working with users. Before considering this in some detail, certain other themes from that seminar were also apparent in this project.

We believe that we were well aware of the slow process of trust building and co-construction of knowledge at the research-practice interface and planned to share tentative findings and conceptual framings in conversations between the two communities (though we did not presume of course that this would be a completely smooth process). However, we became more acutely aware that:

- the distinction between ‘relationships with policy communities and those developed with practitioners’
- the need to be fairly ‘explicit about the purposes of user engagement at different stages’
- LAs were more reluctant than schools to become involved or to be persuaded of the value of project involvement and they did have an exchange discourse as part of the agreement of co-operation research-based concepts do become shaped and refined in interaction with the field
- conceptualising user engagement with the policy community was indeed more challenging than working with practitioners

\(^{3}\) This involves the use of pupil opinion questionnaires with student teachers in micro-teaching and placement practice within ITE.
lead learners as research activists are important in encouraging and promoting learning from research in which they are involved (essentially our TRs but perhaps others yet to be identified).

Questions of power

It should be clear from the above discussion that power relations were evolving in a variety of ways throughout the process. Morriss (2002) points out that power, in a sociological sense, cannot be observed directly. All we can do is gather evidence and process this through the use of theories about power, which are no different to any other social theories. The central question here is about user engagement and the power of users to do something, or to produce change. That ‘something’ could be a) altering the outcomes of the research in terms of findings or products b) altering the way in which the research is conducted c) altering the research frame (Thorne et al 2002), i.e. altering the set of assumptions from which the research emerges. We can examine the power of users as exercised through the dimensions of the EPL model:

Relational: In this dimension the users are discursively engaged with the project, via meetings and other communicative acts. The discursive frame for this engagement is a wider social consensus that research is for the general good, and that conversations within this overall frame are opportunities for the exchange of power. LAs give us schools in which to conduct the research in return for enhanced status through research participation.

Emotional: The emotional climate of the project is essentially sunny. We do not want to make our participants angry or sad. .

Ethical: Since our research is purposeful, and ethically legitimated by social consensus, users are part of the ‘world’ of the research.

Structural: Organisations such as SEED and GTC(S) exert power through the maintenance of structures such as the induction scheme. Our desire to alter these structures as a result of early findings is thwarted by what Boltanski and Thévenot (1991) call the ‘grandeur’ of such organisations, which constitute a ‘civil regime of justification’. This grandeur is sustained both by the materiality of these organisations (the architecture of Victoria Quay4) and their location within the networks of finance and governance.

Material: Schools, as we discussed above, have a material existence, with well-defined boundaries, considerable resources and controlled spatial and temporal flows. Attempting to alter these flows is like trying to dam a torrent, where the sheer pressure of the flow resists apparently-solid objects. Such is the case with the intervention, where the demands of the next period or thirty teenagers descending on a classroom can sweep away interviewers or planned ‘social events’. Conversely, the flows of power through the university, although significant, are less visible. At an early stage in the project the teacher-researchers experienced isolation, as individuals and as a group, because they were unsure of the nature of these flows and the relationship between the epistemological power of academia and the practical power of the school system.

Cognitive: As an ‘intervention’, or ‘initiative’, the project becomes part of a complex set of practices which new teachers must internalise if they are to survive the flow of the material. The original purpose of the project was to compare the role of formal competence statements / the benchmark standard enshrined in the SFR with the role of informal learning (McNally et al 2003). Our early findings suggested very strongly that extensive lists of competencies did not feature in the explicit accounts of new teachers.

Temporal: Apart from the problem of temporal ‘flow’ discussed above, there was an important negotiation involved in soliciting LAs and schools to regard the project as being for-the-sake-of some future state of the induction process. Part of this negotiation involved suggesting that participation would contribute to their CPD profile as well as to the good of the profession and the school system generally.

4 The headquarters of the Scottish Executive on the waterfront in Leith, the port district of Edinburgh.
References


Dodds et al (2005) *Teacher-researchers in a major research project: some reflections and lessons learned* Paper to be presented at the annual SERA Conference, Perth.


Lakoff & Johnson (1999)

McNally Jim, Boreham Nick, Cope Peter & Stronach Ian (2003) *Enhanced Competence-Based Learning in Early Professional Development* TLRP project proposal available at <www.ioe.stir.ac.uk/Research/Projects/epl.htm>


Morris?


TLRP (Teaching & Learning Research Programme) (2003) *Outputs Portfolio* Cambridge,

TLRP Seminar Series Output (2005): *Making a difference: working with users to develop educational research* TLRP London