An investigation into a programme of enquiry-based continuing professional development for professional development leaders

Emily Perry
February 2014
MA Education

Supervisor:
Mark Boylan
Teacher Education
Faculty of Development and Society
Sheffield Hallam University

Abstract

Professional development leaders are practitioners whose role includes the planning and delivery of continuing professional development to teachers. There is little formalised support for professional development leaders, even though their role is critical to school improvement. This dissertation describes an action research project in which a programme of enquiry-based continuing professional development for professional development leaders was developed, delivered and evaluated. Participants video-recorded themselves delivering continuing professional development, then analysed their practice in critical friendship groups using web-based video observation technology. Data was collected from participant questionnaires and interviews before, during and after the programme. Analysis of the data, using a range of techniques including a framework based on the Clarke and Hollingsworth model of teacher growth, led to an evaluation of the programme. The programme was found to be effective in stimulating participant learning about effective CPD and about the use of video, but less effective in improving understanding of ways of supporting teacher enquiry.

Contents

Abstract i
Contents ii
List of Tables and Figures iii
List of Appendices iv
Chapter 1: Introduction 1
Chapter 2: Literature review 5
2.1 Introduction 5
2.2 Effective Continuing Professional Development 5
2.3 Video Observation in Continuing Professional Development 8
2.4 Models for the Evaluation of Continuing Professional Development 10
2.5 Summary 14
Chapter 3: Methodology 16
3.1 Introduction 16
3.2 Research strategy 16
3.3 Development and delivery of the Expert Episodes programme 19
3.4 Data collection 25
3.5 Ethical issues 28
3.6 Data analysis 31
3.7 Summary 35
Chapter 4: Findings and Discussion 36
4.1 Introduction 36
4.2 Findings 36
4.3 Discussion 44
Chapter 5: Reflection and Next Steps 51
5.1 Introduction 51
5.2 Reflection 51
5.3 Next steps 56
References 57
Appendices 61

List of Tables and Figures

Figure 2.1: Guskey's levels of CPD impact 11
Figure 2.2: Coldwell and Simkins' model of CPD evaluation 12
Figure 2.3: Clarke and Hollingsworth model of teacher professional growth 13
Figure 3.1: Action research cycle 16
Figure 3.2: Action research structure of Expert Episodes programme 19
Table 3.1: Project timeline 20
Table 3.2: Expert Episodes programme 21
Table 3.3: Face-to-face days 23
Table 3.4: Data collection 25
Table 3.5: Data analysis methods 32
Table 4.1: Data analysis 36
Table 4.2: Participants' backgrounds 37
Table 4.3: Analysis of intended learning outcomes 38
Table 4.4: Themes emerging from video analysis 39
Table 4.5: Analysis of evaluation form ratings scales 40
Table 4.6: Clarke and Hollingsworth analysis of evaluation forms 41
Table 4.7: Comparison of intended learning and reported change 41
Table 4.8: Reported changes in the personal domain 42
Table 4.9: Analysis of follow-up interviews and questionnaires 43
Figure 4.1: Mike's change sequence 45
Figure 4.2: Liz's change sequence 46
Figure 4.3: Jack's change sequence 47
Figure 5.1: Change sequence relating to identity 52
Figure 5.2: Change sequence relating to beliefs about effective CPD 54
Figure 5.3: Change sequence showing learning about the use of video 55

List of Appendices

Appendix A: Letter of invitation 61
Appendix B: Precourse tasks 64
Appendix C: Face-to-face day 1 65
Appendix D: Face-to-face day 2 66
Appendix E: Mid-programme meeting agenda 67
Appendix F: Protocol for video observations 68
Appendix G: Evaluation form 70
Appendix H: Follow-up questionnaire 72
Appendix I: Background information survey 75
Appendix J: Intended learning outcomes form 76
Appendix K: Follow-up interview protocol 77
Appendix L: Ethical review form 78
Appendix M: Participant consent form 81
Appendix N: Teacher consent form 85
Appendix O: Sample intended learning outcomes form 88
Appendix P: Sample video analysis forms 89
Appendix Q: Sample completed evaluation form 94
Appendix R: Extract from notes of video of follow-up interview 95
Appendix S: Sample follow-up questionnaire 97

Chapter 1: Introduction

In this dissertation an action research project is described in which a programme of enquiry-based continuing professional development for professional development leaders is developed, delivered and evaluated. Professional development leaders are practitioners whose role includes the planning and delivery of continuing professional development to teachers. There is little formalised support for professional development leaders, with few opportunities to enquire individually or collectively into the practice and pedagogy of continuing professional development. The Expert Episodes programme, which was funded by the national network of Science Learning Centres, aimed to fill this gap. Participants video-recorded themselves delivering continuing professional development, and used a web-based video observation technology, to share and analyse their "episodes", with the aim of generating understanding of their practice and the use of video in continuing professional development.

The importance of continuing professional development for teachers is now widely acknowledged. As Adey (2004, p3) says, "the continuing professional development of teachers remains the most important force in the quest for educational improvement", and consequently in recent years there has been a great deal of academic interest and financial investment in professional development designed with the aim of improving student learning (Loucks-Horsley et al. 2010). For example, in England in 2004 the national network of Science Learning Centres was established, with the aim of providing high quality continuing professional development for science teachers, thereby improving their subject and pedagogical content knowledge, and ultimately increasing pupil attainment, engagement and progression into scientific career pathways (Science Learning Centres 2011).

In the literature, there is no agreed term for the group of professionals whose role involves the planning, delivery and evaluation of continuing professional development (CPD) to teachers, and there is a lack of research into their roles (Lange and Meaney 2013) and skills (van Driel et al. 2012). This seems surprising when compared to the numerous models which have been suggested for the evaluation of CPD, but these models tend to focus on mechanistic aspects of

CPD, such as its subject content or delivery model (for example, the programme length, use of online environments or ongoing support), and ignore the key issue of the quality of the professional development leader.

These factors could be seen to imply a downplaying of the importance of the role and a lack of clarity over the practice of professional development leaders. This may be because their role is often combined with others. For example, “hybrid teacher leaders” (Margolis 2012) combine the role with teaching, as in the new Specialist Leaders of Education in England (Department for Education 2013). Many professional development leaders working in higher education combine the role with teacher education and seem comfortable being identified as teacher educators, while many other professional development leaders are freelance consultants, who also carry out curriculum development and related tasks. In this project, I use the term professional development leaders to refer to all practitioners whose role involves the planning, delivery and/or evaluation of CPD to teachers.

As someone who moved from the first order role of classroom teaching into the second order (Murray and Male 2005) role of professional development leader, I feel that we should build a stronger knowledge base about this key group of education professionals. Through observation of changes in my own professional identity as I made the transition from teacher to professional development leader, and through my own previous research into the skills and characteristics of professional development leaders, it seems that the role of a professional development leader is different from both teacher and teacher educator. There is a need for research into professional development leaders as a particular subset of practitioners.

For me there is a further imperative, since I now carry out what might be called a third order role: to commission and quality assure the professional development leaders who work for the national network of Science Learning Centres. I need to ensure that appropriate and effective ways of supporting our professional development leaders are available. Meanwhile, as the English government promotes the delivery of school-based CPD, teachers are increasingly being tasked with the delivery of professional development. It is even more important, therefore, that we understand what makes an effective professional development

leader, so that we can identify teachers who could take on the role, and support them appropriately.

In this dissertation, an action research project is described in which a programme of CPD for professional development leaders was implemented and evaluated. The Expert Episodes programme brought together a group of professional development leaders to collaboratively enquire into their practice. My objectives in developing the programme were to:

- improve our understanding of the skills and pedagogies used by professional development leaders;
- trial a model of CPD for professional development leaders;
- trial the use of video-observation and -sharing technology.

The rationale for the first two objectives was described above. The final objective, centring on the use of video, arose from the increasing number of schools which are purchasing video-observation technology. The programme provided an opportunity for professional development leaders to better understand the experience, benefits and drawbacks of being video-recorded, thereby enabling them to work with teachers to use video effectively in CPD.

The value of the Expert Episodes programme was recognised by the national network of Science Learning Centres through a financial grant which supported my time delivering the programme and gave bursaries to the participants. The network agreed that the programme could provide a useful case study into ways of supporting professional development leaders and could improve our expertise in the use of video observation. I hope that the programme will have wider applications beyond the national network of Science Learning Centres. The enquiry-based, video-observation model used in the programme could be extended to other groups of professional development leaders as well as teacher educators and teachers.

In planning Expert Episodes, I drew on key research into the meaning and structure of effective CPD, its evaluation, and the use of video observation in CPD. A critical evaluation of this research forms Chapter 2. Chapter 3 describes the

methodology of the project, including a justification of action research as a strategy. It goes on to describe the data collected and the analysis techniques used in order to evaluate the programme. The final chapters explore the findings of the data analysis, using them to evaluate the impact of the programme on the participants and on my own learning. Finally, next steps for me and for the further development of the programme are described.

Chapter 2: Literature review

2.1 Introduction

In this chapter three themes relating to continuing professional development (CPD) are examined: the features of effective CPD, the use of video observation in CPD, and CPD evaluation. First, research into the characteristics of effective CPD is examined, in order to identify key components which should be built into CPD programmes. Next, the potential of video observation as a tool for CPD will be evaluated. Finally, three models for the evaluation of CPD will be explored. The literature reviewed here focuses on CPD for teachers. Since there is little research into CPD for professional development leaders, I made an assumption: what is effective for teachers is also effective for professional development leaders. The three themes explored here therefore form the foundations of Expert Episodes: its planning, delivery structure and evaluation.

2.2 Effective continuing professional development

There is a “conceptual vagueness” (Fraser et al. 2007, p155) about the meaning of professional development in the literature, with definitions ranging from the self-evident: “the process whereby a person’s professionality and/or professionalism may be considered to be enhanced” (Evans 2008, p30), to the optimistic: “effective professional development is the process of professional learning which results in great pedagogy” (National College for Teaching & Leadership 2012). Van Driel’s more balanced view links an improvement in teachers’ skills with an impact on pupils: “[CPD is] those processes and activities designed to enhance the professional knowledge, skills and attitudes of teachers so that they might, in turn, improve the learning of their students” (van Driel et al. 2012, p129).

With this lack of an agreed definition, it might be expected that there would be a related vagueness over what makes CPD effective. In fact, there is no shortage of authors listing "characteristics…that make it effective for increasing teacher learning and changing practice, and ultimately for improving student learning" (Desimone 2009, p183). Van Driel claims that enough research exists to provide a consensus on what makes effective CPD, and lists these six core features:

"focus, active and inquiry-based learning, collaborative learning, duration and sustainability, coherence and school organisational conditions" (van Driel et al. 2012, p131). These provide useful pointers for the development of a CPD programme, and will be elucidated here in turn.

Focus

Effective CPD should be focussed on classroom impact. Not surprisingly, there is little disagreement about this in the literature; after all, teachers would be unlikely to engage in CPD which was *not* aimed at improving pupil outcomes. How this classroom focus manifests itself in practice may take different forms in different CPD programmes. For example, Joyce and Calhoun (2010) indicate the need for CPD to be planned with teacher learning objectives linked to student outcomes, while Guskey (2009) suggests that effective CPD should incorporate the dissemination of research-based teaching strategies.

Active and enquiry-based learning

CPD delivery should be based on active learning techniques. One way to deliver active learning is through “participant-driven enquiry” (Hamilton 2013, p45). This is gaining ground as a CPD strategy with increasing acceptance that, as McNiff (2002, p9) says, “professionals already have a good deal of professional knowledge and are highly capable of learning for themselves”. To counter this, though, Guskey (2009) reminds us of the importance, even in teacher-led CPD, of using ideas which come from outside experts, perhaps since this limits the perpetuation of organisational myths and practices and/or brings with it the research evidence base mentioned above.

Collaborative learning

Although Guskey (2009) points out that none of the successful models he examined included peer coaching or collaborative problem-solving, many authors

highlight the value of teachers working together. Van Driel suggests a number of strategies for collaboration, such as involving teachers in the focus and design of their CPD, or bringing teachers together to form professional learning communities (Wells 2013). This "embedded" professional development (Hamilton 2013) is another example of participants leading the process, and many enquiry-based models of CPD highlight the importance of collaboration (McNiff 2002).

Duration and sustainability

To be effective CPD should take place over a "substantial amount of time" (van Driel et al. 2012, p133), although van Driel fails to suggest what this might mean. Adey (2004) suggests a contact time of thirty hours. While it may be the case that, as van Driel contests, "one-shot, short-term" programmes are less effective than "long-term interventions combined with enduring follow-up support" (2012, p133), this cannot be to say that all long-term CPD programmes have classroom impact and all short-term programmes do not. If well-delivered (Guskey and Yoon 2009), single workshops can have impact on classroom practice (Lauer et al. 2013). As Joyce and Calhoun (2010) indicate, the choice of delivery model should stem from deciding what will best achieve the intended outcomes and duration is one of the factors involved in that choice.

Coherence

By coherence, van Driel means two things: the aims of the CPD should fit with school, local and national policies, so that it is not an "isolated endeavour" (2012, p133), and the delivery model should be "congruent with teachers' knowledge and beliefs" (2012, p133), so that it reflects participants' daily experiences and problems. As Hamilton (2013) points out, CPD which is embedded in teachers' school lives means that they can make sense of teaching and learning in their own contexts. The literature on adult learning reinforces this: adults learn when there is a problem to be solved (Hoban 2002), and so CPD in which teachers analyse and find solutions to their problems may be particularly effective. As Dillon says: "I

believe that we need to focus on teachers as individuals more than we do at the moment when we consider their CPD needs and wants" (Dillon 2010).

School organisational conditions

The final condition for effective CPD is that it should be supported by school leaders. This is highlighted in many models of CPD evaluation (see below), but van Driel (2012) suggests it is neglected in most studies of effective CPD. However, it is surely the case that the impact of CPD will be enhanced by school support in the form of time, funding or colleagues, since it is inevitably "intertwined" with its context (Lange and Meaney 2013, p535).

It is interesting to consider that ineffective programmes of CPD are rarely reported in the literature. As van Driel (2012) points out, it would be instructive to investigate what makes these programme ineffective, particularly if they were built on these six core features. Of particular relevance to the Expert Episodes programme is the lack of focus on the professional development leaders who deliver CPD. Van Driel suggests that future research should "pay more attention to issues related to the role of people who plan and deliver" CPD (2012, p.155), and this is one of the key drivers of the Expert Episodes programme.

The six features described here will be used to check on the development and effectiveness of the Expert Episodes programme.

2.3 Video observation in continuing professional development

In this section, the use of video observation in CPD is reviewed, with an eye to considering how effectively it could be used as a tool for effective CPD, making reference to the six core features described above. Although research into the use of video in CPD is still in its early stages (Sherin and van Es 2009), there is growing evidence that video can be a medium for "provoking discussion and reflection" (Grant and Kline 2010, p70), and that, by developing skills in observing

through video, teachers' skills in lesson observation in general are enhanced (Sherin and van Es 2009).

Reported uses of video observation as a tool for continuing professional development include live (synchronous) observations, video clubs and online review. The least reported use of video is in synchronous observation, where participants watch a live feed from a classroom, thereby "bringing theory to life" (Mitchell et al. 2010, p22) with real examples of classroom strategies, and providing a (rarely taken) opportunity for live coaching and feedback.

Asynchronous observation of lessons has been reported more frequently, with uses including self-reflection, coaching and peer review, and sharing good practice with colleagues (Preston 2013). This last holds a potential problem: schools may be keen to build banks of idealised "best practice", but this top-down dissemination does not promote the development of teachers' reflective skills. Indeed, it has been found that the use of "authentic" video clips, with key features chosen by participants, was most likely to be of value in CPD (Newton and Sorensen 2010).

Iris Connect (Preston 2013) found that the most frequent use of video observation is self-review, with nine out of ten teachers in their survey reporting having used the technology in this way. Teachers may thereby be using video as a way to "manage their own professional development" (Newell 2012, p6), leading, apparently, to increased confidence to take risks in the classroom (Preston 2013). However, this seems an isolated approach to CPD, at odds with the idea of teachers working in collaboration.

Video clubs are a more collaborative approach to CPD in which participants collectively review clips of classroom practice. The reported benefits of this "collaborative reflection" (Sherin and Han 2004, p165) include developing teachers' ability to write reflections on their teaching, and a longer-term shift in the focus of observation from the teacher to the learning of the pupils in the class (Rosaen et al. 2008).

The role of the facilitator is acknowledged by one or two researchers into video observation. For example, Coles (2013) gives a useful list of five key activities for

the facilitator, including choosing the video clip, setting up the structure of the discussion, deciding when and how often to watch the clip, when to push participants to move from description to interpretation, and meta-commenting, which he describes as giving “a succinct articulation of an issue the teachers are discussing” (Coles 2013, p180). He suggests that there is a lack of research into the role of the facilitator in professional development, reinforcing both my view and that of van Driel (2012).

Referring back to the six core features described above, video observation is naturally focussed on classroom practice. Its use, if structured correctly, can be active and collaborative, with participants working together to enquire into their practice in a sustained professional learning community. If built on authentic video clips, it can be coherent with teachers’ beliefs, and, since investment in the technology is required, it is likely to be supported by participants’ schools. With the other benefits described above, this shows that, with appropriate delivery structures in place, video observation could provide CPD which contains all six core features.

2.4 Models for the evaluation of continuing professional development

In the final section of this chapter, I consider models for the evaluation of CPD. A number of models of evaluation have been described in the literature; just three will be considered here: Guskey’s, which is probably the most widely used model, Coldwell and Simkins’, which builds on Guskey’s, and the Clarke and Hollingsworth model of teacher growth, which suggests a new way of evaluating CPD.

Guskey's (2000) model of CPD evaluation is based on five levels (Figure 2.1). In order to evaluate the effectiveness of CPD, data is gathered to assess whether the programme led to change at any of the levels. For example, at level 1, participants can be asked whether they felt the CPD was useful and enjoyable. At levels 2 and 4 respectively, participants may be asked to explain what they learned and how they have used this new learning in their teaching. At the

highest level, evidence can be gathered of changes in pupil outcomes. Guskey suggests that impact at one level is a pre-requisite for the next.

Level 3 is somewhat contentious (Coldwell and Simkins 2011). It is relatively straightforward to establish whether or not a CPD participant effected any change in their school as a result of the CPD, but within level 3 is also the idea of organisational support. This is not so much a measure of impact as one of van Driel's (2012) six core features. It may therefore act as facilitator or blocker to the higher levels of impact (Coldwell, Simkins and Maxwell 2009), but is not an evaluative measure.

Level 1	Participants' reactions
Level 2	Participants' learning
Level 3	Organisational support and change
Level 4	Participants' use of new knowledge and skills
Level 5	Student learning outcomes

Figure 2.1: Guskey's levels of CPD impact

Guskey's model has credibility due to its wide use, but its linearity suggests a simplified view of the change process. It is possible to imagine scenarios where each level is not dependent on the previous: participants could use their new knowledge without having organisational support or effecting change in their colleagues (Coldwell and Simkins 2011). Perhaps most importantly, participants seem to be treated here as passive recipients of new learning, rather than active agents of change.

Coldwell and Simkins (2011) propose a more complex model which brings into play further factors. Rather than Guskey's level 3 being a stepping-stone towards classroom impact, they situate it as one of a series of moderating factors which may impact on outcomes at any stage (Figure 2.2). Interestingly, these moderating factors, which also include time and the participant's professional role, reflect some of van Driel's (2012) six core features of effective CPD, such as

duration, coherence with school policies, and organisational support. Coldwell and Simkins also acknowledge the importance of participants' motivation for taking part in CPD, which they call antecedents. This links to van Driel's features of focus and coherence.

Antecedents	Moderating factors	Intermediate outcomes	Final outcomes
• Participants' expectations and motivations	• School sector • Participant continuity • Participant role/school structure • Programme support (eg coaching) • In-school support • Time • School culture	• Participant reactions • Learning and personal development • Participant behaviour	• Short and long term pupil outcomes • Individual, team and school capacity • Participant career development

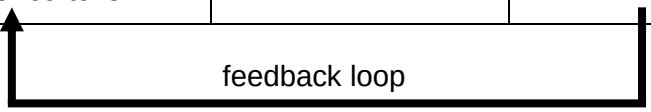


Figure 2.2: Coldwell and Simkins' model of CPD evaluation

In this model, intermediate outcomes still form staging posts on the way to classroom impact, but the final outcomes are divided into three sections: short- and long-term pupil outcomes, participant's career development, and changes in the teaching capacity of the participant and their school. Importantly, these last outcomes can cycle through a feedback loop to further effect or hinder change. In order to evaluate the impact of the CPD, data can be gathered about intermediate and/or final outcomes.

Coldwell and Simkin's model improves on Guskey's by acknowledging the role of the participants in change, through the highlighting of their motivations, roles and behaviour throughout the process, and shows how moderating factors can enhance or hinder change at any stage. However, the process described is still linear, and so the model retains a suggestion that input leads to outcome.

In order to move beyond these linear models of CPD, Clarke and Hollingsworth (2002) developed their interconnected model of teacher professional growth (Figure 2.3). This model contains four domains of change which are linked by two processes: enactment and reflection. Multiple and complex "change sequences" (Clarke and Hollingsworth 2002, p958) can be drawn through the domains to indicate the processes of learning as a result of CPD.

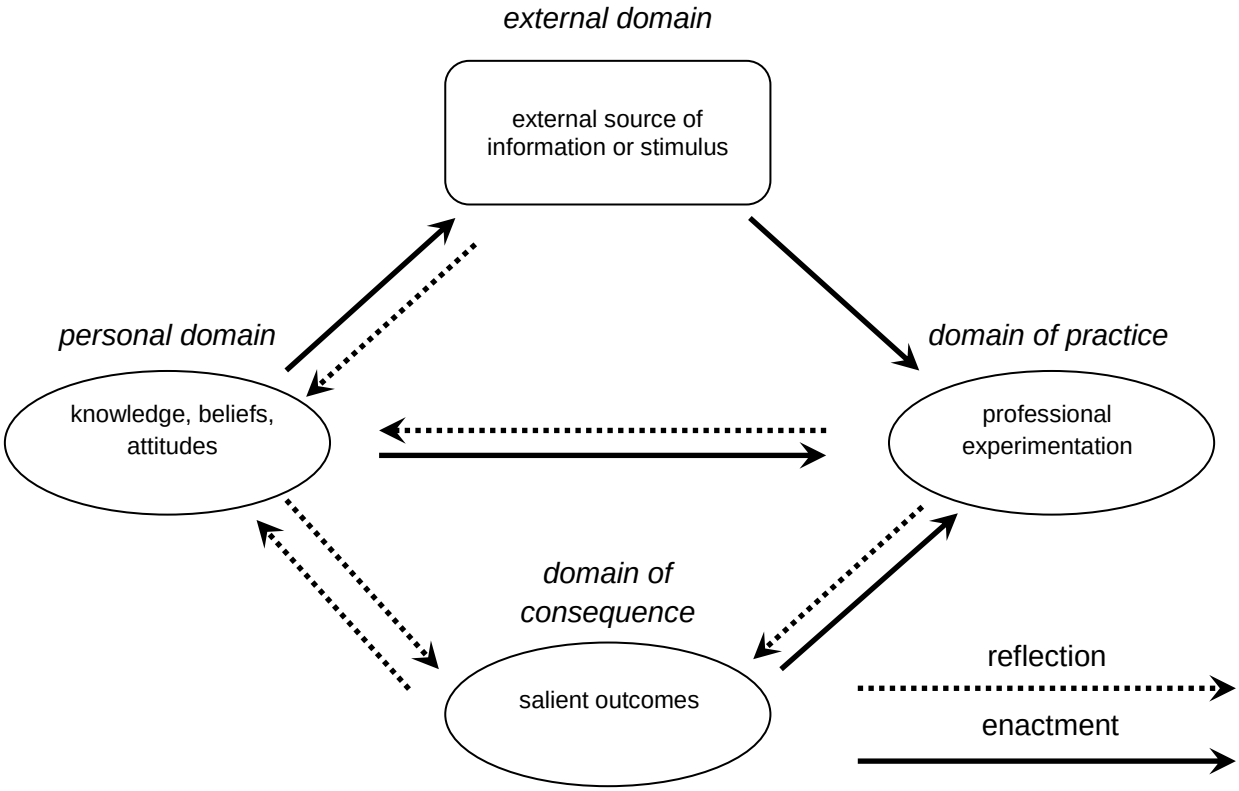


Figure 2.3: Clarke and Hollingsworth model of teacher professional growth

This model focuses attention away from the mechanism of CPD delivery and towards its impact on individuals. It highlights a number of features of the change process, including:

- the importance of reflection as a change process;
- the non-linearity of change;
- a lack of guarantee that input (in the external domain) will lead to classroom outcome (in the domain of consequence);

- the importance of participants' knowledge, beliefs and attitudes, reflecting van Driel's core feature of coherence and Coldwell and Simkins' antecedents.

The model also shows that participants can feed back into the external domain themselves, thereby providing an example of the core feature of collaboration, with teachers working together. Other core features of effective CPD can also be located in the model: active learning might be found in professional experimentation, school support in the external domain, a focus on the classroom in the domain of consequence, and duration through a series of iterative cycles between the domains of change, which may or may not lead ultimately to an improvement in pupil outcomes.

While this model is not in itself evaluative, it suggests three possibilities for the collection of data with which to carry out an evaluation. First, CPD programmes can be categorised based on their intended impacts in each domain of change (van Driel et al. 2012). Next, the model allows for a sophisticated analysis of CPD through the identification of change sequences followed by participants (Clarke and Hollingsworth 2002). Through this analysis, it may be possible to identify facilitators and blockers to particular pathways of change. Finally, data can be gathered from CPD participants on their learning, which is classified against each of the four domains in order to analyse where exactly a programme's impacts were felt. This is the process was used to evaluate Expert Episodes.

2.5 Summary

This chapter explored three themes in continuing professional development: the core features of effective CPD, the use of video observation and the evaluation of its impact. In the first section, a research synthesis by van Driel was used to identify six core features of effective CPD: focus, active and enquiry-based learning, collaboration, duration, coherence and organisational support. Next, the use of video observation in CPD was described, and van Driel's core features were used to analyse the potential of video in CPD. Finally, three models for the evaluation of CPD were explored, moving from Guskey's linear model, through

Coldwell and Simkins' more complex model, to Clarke and Hollingsworth interconnected model of teacher growth. A number of ways of analysing the impact of CPD using this non-linear model were suggested.

In the next chapters, the development, delivery and evaluation of Expert Episodes are described.

Chapter 3: Methodology

3.1 Introduction

In this chapter the methodology of the project carried out for this dissertation is described. Firstly, action research, the research strategy which underpinned the development, delivery and evaluation of the programme, will be explained and its choice justified, considering its benefits and limitations compared with other strategies. Next, the Expert Episodes programme is described, looking at its content and delivery structure. Following this, the evaluation methodology is explored, looking at both data collection and data analysis. Included here is a discussion of the ethical issues involved in the project. The findings of the data analysis and their implications are discussed in Chapter 4.

3.2 Research strategy

The aim of the Expert Episodes project, as described in Chapter 1, was to trial and evaluate a programme of professional development for professional development leaders. Since the project is situated in my own practice, it lends itself to the enquiry-based structure of action research (Bolton 2010), which begins with a question or problem about one's own practice, and moves through a cycle of implementation and evaluation (Figure 3.1).

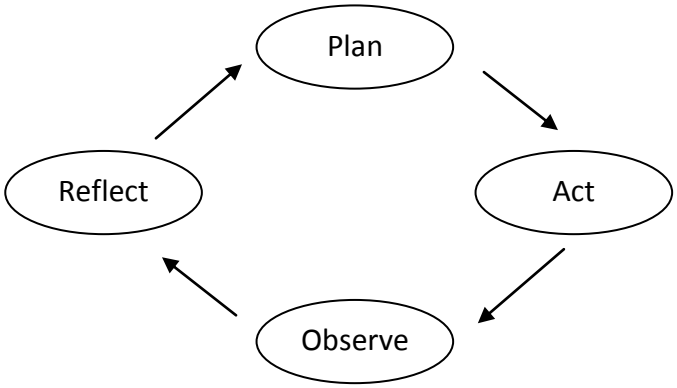


Figure 3.1: Action research cycle

Action research is "research done by people on their own work, to help them improve what they do" (Cohen, Manion and Morrison 2011, p346). Here, I am aiming to improve the work I do with teams of professional development leaders

by finding ways to support them better. Action research lends itself to small-scale interventions and an examination of their effects (Cohen, Manion and Morrison 2011), which again matches the structure of this project: an intervention with a small number of participants and a short timescale. It allows the use of a range of methods of data collection and analysis (Loucks-Horsley et al. 2010), thereby providing freedom to collect whatever data might be useful in evaluating the programme. Finally, action research is increasingly used as a model of teacher professional development, whereby teachers are empowered to enquire into and solve problems in their own practice (McNiff 2002). It seemed that using action research here could promote the strategy to participants as a way in which they could work with teachers.

Action research has some limitations. For example, its small scale does not necessarily produce findings which are generalisable, since participants may not be typical, and so any findings may not be transferable to other situations (Riggall 2009). There is also a bias inherent in practitioner-led research: the researcher is bound up in the project so that subjectivity is unavoidable, and, since participants have an ongoing relationship with the researcher, they may be unwilling to express negative views (Riggall 2009).

Other research methodologies, including large-scale data collection, experimental methods and other enquiry-based strategies could have been used instead of action research. These are now discussed, looking at why they were not chosen over action research. Firstly, this research is not suited to large-scale data collection methodologies such as surveys (Cohen, Manion and Morrison 2011), in which data is gathered from a large number of participants, nor to longitudinal studies (Cohen, Manion and Morrison 2011), in which data is gathered over a long period of time. Either of these would have been appropriate for research into the identities of professional development leaders, or into how their skills change over time, but in this case, with a single small-scale, practice-based intervention under investigation, an approach based on an evaluative enquiry is more appropriate.

However, it is possible to imagine experimental approaches to the research (Cohen, Manion and Morrison 2011). For example, two cohorts of professional development leaders could have been recruited, one group to take part in the

Expert Episodes programme, and one group to act as a control without participation. Their experiences over the duration of the programme could then have been compared in order to assess the impact of the Expert Episodes programme on participants' practice. Alternatively, in a procedure similar to that of single-case experimental research (Cohen, Manion and Morrison 2011), data from the participants, such as course evaluations, could have been compared before and after participation in the programme.

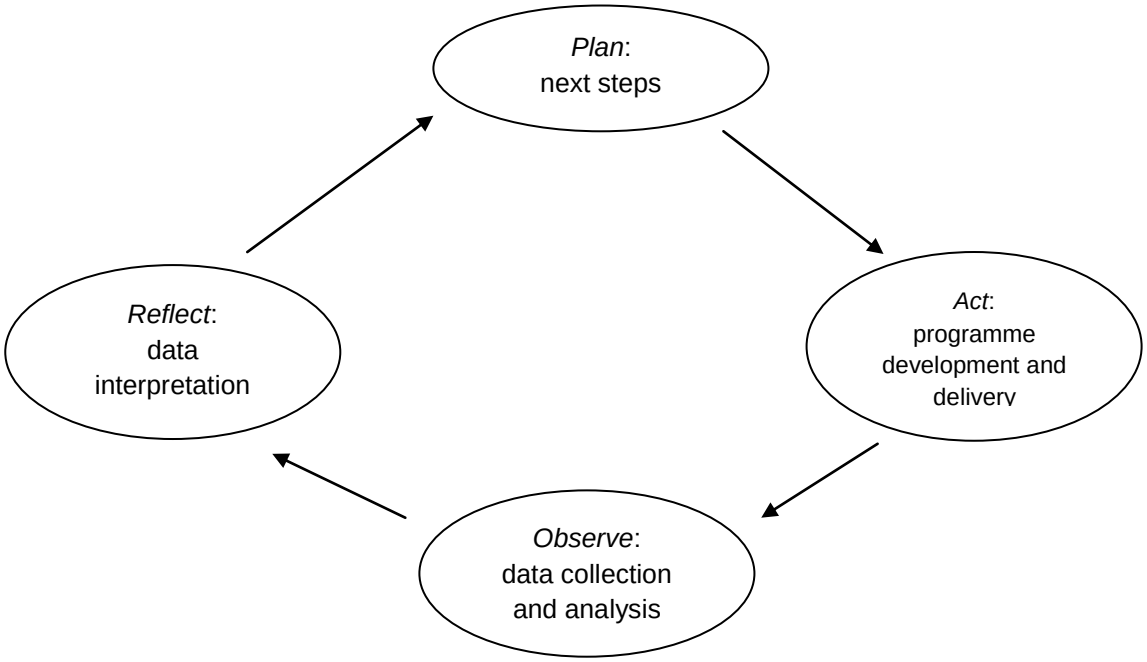
Case studies are the in-depth exploration of a single instance of a situation (Cohen, Manion and Morrison 2011), with the aim of generating knowledge which can be generalised. They "observe effects in real contexts" (Cohen, Manion and Morrison 2011, p289) so that their causes can be determined. In common with action research, case studies use mixed methods of data collection and analysis, providing detailed insights into participants' situations. However, a case study gives only a snapshot of the participants and does not link intervention to evaluation, nor provide a structure which suggests routes to further development.

These strategies could have been effective, but they lose sight of some key issues. Firstly, they suggest the need for an impartial observer as researcher. This is clearly not the case here: I am the programme leader as well as the researcher and am bound up in the programme in such a way as to make impartiality impossible. Perhaps more importantly, what is needed here is not just to understand whether or not the programme had an impact, but to try to draw out the reasons for this by exploring the experiences of the participants in the programme. It therefore lends itself to an enquiry-based strategy such as action research in which rich data can be generated and analysed.

For this project, then, a small-scale pilot intervention aimed at improving the practice of professional development leaders, leading to the further development of CPD programmes, action research provided a number of benefits. These included the opportunity to use mixed methods of data collection and analysis, its cyclical, improvement-driven structure and the opportunity to examine the impacts of the programme on a range of levels, including my own practice and that of the participants. Perhaps most importantly, action research provided a way of

"gaining a better understanding and seeking to create improvements" (Riggall 2009, pvi), both key aims in the development and delivery of Expert Episodes.

The action research cycle (Figure 3.2) is therefore used as to structure the



following sections as I move through the stages of act, observe and reflect.

Figure 3.2: Action research structure of Expert Episodes programme

3.3 Development and delivery of the Expert Episodes programme

In this section, the "act" stage of the action research cycle is described: the development and delivery of the Expert Episodes programme. The programme ran for around eighteen months (Table 3.1). Each phase was informed by key theories from the literature (Theoretical Context) and by my role in the national network of Science Learning Centres and my learning as a Masters student (Professional Context).

Timeframe	Activity	Theoretical Context	Professional Context
May – November 2012	Previous Masters project: identity and skills of professional development leaders; Programme development: project proposal submitted; funding received	Lack of research into professional development leaders; use of video observation in CPD	Taking on new role leading groups of professional development leaders
November 2012 – March 2013	Participants recruited; programme runs	Models of teacher learning; Self-study, appreciative enquiry, discipline of noticing	Ethical, technological and logistical issues
April 2013 – February 2014	Follow up interviews and questionnaires; data analysis	Models of evaluation	Data analysis, exploring impact; next steps

Table 3.1: Project timeline

The content and structure of the Expert Episodes programme were devised so that participants could gain understanding on three levels. Firstly, by observing professional development leaders "in action", it was hoped that they would generate knowledge about what makes them effective. Secondly, using video observation technology to do this would enable participants to evaluate its usefulness in CPD. Finally, by enquiring into their own practice, participants would be better equipped to support teachers in enquiry-based CPD. The intended learning outcomes (Joyce and Calhoun 2010), therefore, of Expert Episodes, as they related to the participants, were to:

- improve their understanding of the skills and pedagogies used by effective professional development leaders;
- trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice;
- explore and better understand how to support teachers in enquiring into their own practice.

Participants worked together over four months (Table 3.2), building a community of enquiry (Kennedy 2005) in which they collaborated as “coaches and modellers of ideas, strategies and techniques” (Hamilton 2013, p45).

November 2012	Participants recruited
December 2012	Precourse task; Expert Episodes face-to-face day 1; videoing begins
January 2013	Mid-programme meetings (online)
March 2013	Expert Episodes face-to-face day 2; videoing ends

Table 3.2: Expert Episodes programme

Participants were expected to engage not only with recording, observing and analysing videos of their CPD delivery, but also with theories of enquiry-based CPD and teacher learning. By combining these two key strands, it was hoped that the programme would achieve van Driel’s core features of focus on practice, collaboration and enquiry-based learning. The duration seemed sufficient for each participant to record at least one video clip and coherence was achieved by allowing participants’ to bring their own problems and interests to the video analysis, rather than prescribing what was to be observed. The final core feature, organisational support, was promoted through the Science Learning Centre bursaries.

3.3.1 Participant recruitment

A letter of invitation (Appendix A) was sent to colleagues within the national network of Science Learning Centres. The aim was to attract between six and ten participants, based partly on the reported effectiveness of this group size (Newton and Sorensen 2010), and pragmatically on the amount of bursary funding. Seven participants joined the programme. Further information on the participants can be found in Section 4.2.

3.3.2 Precourse tasks

Pre-course tasks (Appendix B) were:

- completion of an intended learning outcomes form;
- the choosing of a metaphor for the role of a professional development leader;
- reading an extract relating to one of three enquiry-based CPD strategies.

The aims of these tasks were respectively to encourage participants to reflect on why they had chosen to take part in the programme and what they were hoping to gain from it, to think about their professional identity, perhaps articulating something previously unconsidered (Bolton 2010), and to become more aware of either the discipline of noticing (Mason 2002), appreciative enquiry (Shuayb et al. 2009) or self-study (Samaras 2011).

3.3.3 Face-to-face-days

The programme contained two face-to-face days (Table 3.3), aimed at bringing participants together to share experiences and thereby build the community of enquiry. The first face-to-face day (Appendix C) included discussion of precourse tasks, opportunities to trial the video observation technology, to consider ethical and logistical issues and to reflect on what aspects of practice might benefit from exploration through video.

The second day (Appendix D) ended the formal CPD activity of the programme. It included opportunities to reflect on the processes used in the programme, to carry out a brief analysis of video feedback forms (see below), and to engage with Clark and Hollingsworth's model of teacher professional growth (Clarke and Hollingsworth 2002), through a simple mapping activity where CPD activities were matched against the model.

Face-to-face day 1	Face-to-face day 2
Metaphors for our roles: beliefs and values	Processes for enhancing reflective practice
Introductions and background to the programme	Progress reports
Research strategies: appreciative enquiry, "noticing", self-study	Learning about ourselves as PDLs
Starting the enquiry process	Models of teacher learning through CPD
Using Iris Connect	Reflections, evaluations, next steps
Logistics and ethics	
Reflections on the journey so far	

Table 3.3: Face-to-face days

Both face-to-face days were attended by all seven participants.

3.3.4 Mid-programme meetings

Between the two face-to-face days, two online meetings were held (Appendix E). These gave participants the opportunity to share logistical and technological issues of video observation, and discuss key themes emerging from the observations. Each meeting was attended by three participants.

3.3.5 Video observation

The video observation system chosen for Expert Episodes was Iris Connect. Iris Connect has been purchased by over six hundred schools in the UK (Iris Connect 2013), and is being used by schools and teachers for CPD activities including self- and peer-observation, coaching, and sharing best practice (Preston 2013). Using Iris Connect, one can record, share and review videos of classroom practice, using a secure online interface with a range of analytical tools.

Underpinning the video observation were three enquiry-based strategies: noticing (Mason 2002), appreciative enquiry (Shuayb et al. 2009), and self-study (Samaras 2011), which were introduced to participants through pre-course readings and discussion on the first face-to-face day. Each of these strategies was promoted as a way of enhancing the processes of reflection in the context of video analysis. Firstly, the "discipline of noticing" (Mason 2002) involves the identification of "salient events" (Newton and Sorensen 2010), in order to consider their causes and implications. It was hoped that this strategy would support the development of participants' "professional vision" (Sherin and Han 2004, p179), so that they could identify useful issues in the videos. Next, appreciative enquiry "builds on people's basic strengths" (Steyn 2012, p320). Beginning with the identification of good practice (Zandee and Cooperrider 2007), I hoped that participants would focus on identifying and interpreting the positives in their videos, rather than getting caught up in negatives. Finally, self-study is a way of enquiring into one's own practice, through reflection and generating strategies for improvement (Dinkelman 2003). Self-study is well-matched to video observation as a way of gathering evidence about one's own practice, and I hoped that introducing the strategy to participants would help them to feel their enquiry was legitimate research.

The participants were divided into two critical friendship groups. After a participant had analysed their own video, their critical friends did the same, in order to "provide optimal feedback, enhance self-reflection…and ease anxiety" (Samaras 2011, p75). The intention was that the critical friend would not only comment on their observations of the video, but also on the participant's own comments on the video, thereby moving from evaluative commenting (Coles 2013) towards interpretation. To support the analysis of the videos, I wrote two semi-structured questionnaires, one for the video owner and one for their critical friends, which were contained within the Iris Connect website. The protocol (Appendix F), which also details the questions in the questionnaires, aimed to structure participants' engagement with videos.

3.3.6 Follow-up activity

Two follow-up activities took place after the programme: an interview, about a month after the second face-to-face day, and a questionnaire, eight months later. The aim of these two activities was to provide data for the evaluation of the programme, so more information is provided about them in the next section, but they supported longer-term impact by giving participants a chance to reflect on their experiences of the programme.

3.4 Data collection

The next sections form the “observe” stage of the action research cycle, in which data was collected to evaluate the Expert Episodes programme. A range of data was collected before, during and after the programme (Table 3.4).

Timescale	Data	Collection method
Before Day 1	Intended learning outcomes	Questionnaire
During the programme	Background information	Online survey
During the programme	Participants' analyses of videos	Questionnaire
Day 2	Evaluations	Questionnaire
A month after Day 2	Follow-up interviews	Paired interviews
Eight months after Day 2	Follow-up questionnaires	Questionnaire

Table 3.4: Data collection

Data was collected using three methods: questionnaires, interviews and an online survey. The aim was to provide participants with a number of occasions on which to express their views, providing a crosscheck of their opinions (Onwuegbuzie and Leech 2007). Most data was qualitative, although a small amount of quantitative data was also collected. Data was collected from before the start of the programme to around eight months after its end, allowing participants time to reflect on their views and to cross-check initial findings (Onwuegbuzie and Leech 2007). Since the project had only seven participants, data was collected

throughout from all participants, thereby avoiding the bias inherent in choosing the views of particular participants.

Another layer of information could have been added by gathering data from teachers involved in participants' CPD sessions. Teachers could have been interviewed, or their evaluation forms collected, from sessions before and after participation in Expert Episodes, and this data compared to look for changes in practice. However, this could have presented a threat to the participants, leading them to feel that their effectiveness was under scrutiny. I preferred to allow participants to bring their own views to the programme, thereby showing that I valued their professional judgement.

All data was collected in writing apart from the follow-up interviews, which were video-recorded. The advantages and disadvantages of writing and video recording are discussed next.

3.4.1 Written data

It was hoped that providing time and space for writing individually would lead participants to be more honest and reflective (Bolton 2010). The evaluation forms (Appendix G) were completed during a face-to-face session in order to ensure a full response rate, which may however have restricted some participants' responses to the questions, through feeling pressurised to complete quickly or conform to other participants' views (Vicsek 2010). When questionnaires are completed away from the face-to-face environment, there is less likelihood of a full response rate (Bell 2007), and this was the case with the follow-up questionnaire (Appendix H), which was returned by only five of the seven participants. The background information survey (Appendix I) was completed online, the advantage of this being that responses could be collated and compared easily. Participants' analyses of the video-recorded CPD episodes formed an integral part of the Expert Episodes programme, and were not deliberately structured to provide evaluative data. However, they were analysed for key learning points and so are included here.

A mixture of closed and open responses was used (McNiff 2013). Closed response questions were used in the background information survey and in the evaluation forms, which contained a few ratings scale questions. The scale used (very good, good, satisfactory, poor) may bias responses towards the positive, and is open to interpretation (Bell 2007): what is the difference between good and very good? Do all participants have the same understanding of good? However, this scale is used on all Science Learning Centre evaluation forms, and so its use seemed appropriate here. A final issue here is the validity of the data when participants may feel reluctance to provide negative feedback to someone they know (Cohen, Manion and Morrison 2011), and so this may further bias responses towards the positive.

The more open questions aimed to gather useful information without restricting participants' ability to write freely. However, the use of such prompts may force participants into responses which do not represent their true opinions and feelings (Cohen, Manion and Morrison 2011). Space was therefore left for a question which asked participants to provide any other relevant information. Responses to semi-structured questions can be difficult to interpret. Questions may be misinterpreted or meanings of responses obscured by abbreviation or a lack of nuance. In some cases, in order to clarify what they had written, participants were able to follow up their written texts in face-to-face discussions, such as with the intended learning outcomes form (Appendix J).

3.4.2 Video recordings

The follow-up interviews were carried out with pairs of participants. These interviews were semi-structured (Ribbins 2007), with questions (Appendix K) being sent to participants in advance so that they had an opportunity to consider their responses before the interview. There was a pragmatic reason for choosing paired interviews rather than individual: it was easier to schedule three paired interviews than six or seven individual interviews. More importantly, though, I hoped that by having more than one person in the interview, a free-flowing discussion would take place, with my contributions being limited (Parker and Tritter 2006). Balancing this was a desire to keep the group size small so that no-

one would feel threatened by dominant members and unable to express minority opinions (Smithson 2000).

The interviews were video recorded. A number of sessions in the programme were also video recorded: selected discussions from the two face-to-face days and the two online meetings. Although these videos were not analysed formally, they were used in places to provide supporting quotes from participants. I used video to record the interviews and discussions because I did not trust my ability to take comprehensive notes capturing the discussions, but needed a record of what was being said. Audio recording provided an alternative but audio does not capture people's body language and movements, and this, I found in previous research, makes analysis difficult, especially in situations where one speaker may interrupt or speak over another (Cohen, Manion and Morrison 2011).

A problem with video is the amount of data gathered; a degree of selectivity is inevitable in the choice of what to analyse, thereby leading to potential loss of alternative viewpoints (Cohen, Manion and Morrison 2011). Videos were not transcribed in full; after review, only sections relevant to the evaluation were transcribed (Ribbins 2007). The recording of the sound in one of the interviews suffered a technical problem, and so this video was inaudible. However, I made notes following the meeting, and used these for analysis in the same way as the videos, so these participants' contributions are not entirely overlooked. One participant was unable to attend any of the interviews, and, although he was invited to email any comments, he did not respond. Interview data is therefore drawn from six participants.

3.5 Ethical issues

In this section, ethical issues surrounding the collection and analysis of data for the evaluation of the Expert Episodes programme are described (Appendix L). The project was multi-layered in terms of the video recording of both participants and teachers, and in terms of my role as professional development leader, participant and researcher. Each of these layers will be examined separately.

3.5.1 Participants

Participants were invited to take part *Expert Episodes* via a letter (Appendix A) which aimed to help them consider the benefits of taking part. The aim was to attract between six and ten participants. If more than this number had volunteered to participate in the programme, participants would have been chosen firstly to ensure a mix of backgrounds, and secondly to support easy travelling to the face-to-face meetings. Any additional volunteers would have been added to a waiting list for further cohorts of the programme. Potential participants were sent a consent form (Appendix M) which contained further details of the Expert Episodes programme and the evaluation study. Seven volunteers returned consent forms and so all were able to participate.

Some participants may have felt at risk from the peer review of their CPD sessions, leading to reduced confidence in their ability to deliver CPD. This might especially be the case here, since not only was I running the project, but I also have a degree of power in the commissioning of participants for CPD delivery. Participants were therefore given control over what they recorded and shared, and were able to direct the focus of the video analysis towards particular aspects of their practice. Critical friendship groups were asked to use the principles of appreciative enquiry (Steyn 2012), so that they looked for positives in the participants' practice rather than focussing on areas for development. Participants were also asked to respect confidentiality within the CPD programme and not discuss individuals' delivery or opinions outside the participant group. In this dissertation, participants' names have been changed.

Video clips were stored in the secure Iris Connect website, for which all users hold licenses. The owner of the video has control over which users they share it with, and in this case, videos were shared only within critical friendship groups. It was made clear to participants that they should not store videos on their own computers. All other data is stored on secure, password-protected servers owned by Sheffield Hallam University.

Technical issues with video recording were another potential threat to the confidence of the participants. Although time was spent on the first face-to-face day exploring the use of the equipment, there were still inevitably problems which

required support to put right, and these did in some cases hinder participants' engagement with the programme.

It was possible that participants may also have felt some threat from admitting to teachers that they were engaged in a programme aimed at developing their practice. Participants were therefore given detailed information sheets to hand out as part of the teacher consent process (see below), and encouraged to explain that they too were engaged in reflective enquiry into their practice, thereby modelling how this process might work for teachers. It was hoped that this would in fact enhance their credibility with teachers.

3.5.2 Teachers

Teachers in the sessions which participants wished to record were informed of the purpose of the Expert Episodes programme and of the research study. Signed consent forms (Appendix N) were collected before recording began, and if teachers did not give consent, the participant did not record the session.

It was hoped that teachers would see the benefits of participation, leading to a greater appreciation of their CPD and of their professional development leader. However, they may have felt threatened by being recorded, leading to a negative impact on their CPD. To minimise this threat, the letter of consent aimed to make it clear that videos would be uploaded to a secure environment, only watched by participants in the programme, and that the focus of the recording was the professional development leader and not the teachers' experiences or opinions, except as they related to the CPD session.

One particular issue is that consent for the research study was obtained by a third party: the professional development leader, rather than by the researcher. I hoped that the detailed teacher consent form would support participants in explaining the potential benefits of the research study, and, on the first face-to-face day of Expert Episodes, we spent time discussing the ethics of the research study, so that participants felt confident to discuss these with teachers. I also offered, where needed, to attend recording sessions in order to explain these issues.

3.5.3 Myself

My participation in Expert Episodes operated on three levels: the professional development leader for the programme, a participant exploring the use of video and the researcher carrying out the evaluation. These multiple roles lead to some tension and uncertainty for my relationship with the participants (Busher and James 2007).

A particular issue was my role as someone who commissions and quality assures the participants' CPD delivery for the national network of Science Learning Centres. As mentioned above, this may have threatened them, but equally, by opening up my own practice to scrutiny, not just through delivering the programme, but also through allowing my own CPD sessions to be recorded and analysed, I could have lost credibility. I hoped that, by modelling the process of reflective analysis of my practice, I would instead gain respect, thereby reinforcing my relationships with the participants. At times, though, this felt a difficult balancing act.

Equally, since the programme had been funded by the national network of Science Learning Centres, I felt under some pressure to ensure a successful outcome, so that I did not lose credibility with my colleagues. I hoped to alleviate any potential damage here through making it clear that this project was a pilot with the specific aim of further development before any further roll-out to other participants.

3.6 Data analysis

Data was analysed to draw out information on the impact of the programme. Three techniques were used: frequency tallying, identification of themes, and a categorisation framework based on Clarke and Hollingsworth's (2002) model of interconnected teacher growth (Table 3.5). Using different techniques, a more reliable picture of the data could be built up with each piece of data providing a cross-check on the others (Lather 1986).

Method of analysis	Data sets (Appendices F-J)
Frequency tally	• Closed and semi-structured questions from background information questionnaires • Ratings scales from evaluation forms
Themes identified	• Participants' analyses of video-recorded CPD episodes
Clarke and Hollingsworth framework	• Intended learning outcomes questionnaires • Evaluation questionnaires • Follow-up interviews • Follow-up questionnaires

Table 3.5: Data analysis methods

Each method of analysis is described below. The findings from the analyses are presented in Chapter 4.

3.6.1 Frequency tally

Two data sets contained closed questions where responses were tallied. With the background information questionnaires, responses to the closed questions were tallied to give the frequency of each response. Similar responses were grouped into ranges, and the data tabulated to show the frequency of each range. With closed, numerical questions such as these, there is little room for interpretation, although the choice of ranges could be questioned, since, in this situation, they provided little differentiation between participants (see Section 4.2 for the results of this analysis). With the evaluation forms, the ratings questions were simply tallied for frequency of response to each of the categories. Finally, frequency tallies were also used to further analyse some of the data categorised using the Clarke and Hollingsworth framework (see below).

By tallying in this way, data becomes detached from its participant, and this limits the ability to track data from specific individuals. However, the aim here was to provide a simple overview of the characteristics and opinions of the participants as a group and so the method seemed appropriate.

3.6.2 Themes identified

The proformas from each uploaded video (a sample can be found in Appendix P) were analysed to identify the features of practice which were being noticed. After these features were identified, they were grouped and categorised. The categorisations used here were open to some interpretation. Not every comment fit readily into one category and some could have been placed into more than one. However, again the aim was to generate an overview of what features were being noticed by the participants, not a detailed analysis of why these features were considered important, and so this method of analysis seemed appropriate.

3.6.3 Clarke and Hollingsworth framework

The interconnected model of teacher professional growth (Clarke and Hollingsworth 2002) (Figure 2.3) provided a novel way to explore participants' learning. A framework based on the model was used to analyse four data sets: intended learning outcomes forms, evaluation forms, follow-up questionnaires and the follow-up interviews.

For the analysis, each of the four domains of change was related to particular aspects of participant learning, providing four coding categories (Samaras 2011). Firstly, in the personal domain, change was related to participants' knowledge, beliefs and attitudes, such as improvements in understanding of a particular pedagogical concept, increased confidence, or greater reflection on practice. Changes in the domain of practice were shown by the use of new activities in the delivery or evaluation of CPD, such as a different technique for organising teachers into groups, or, as would be hoped here, the adoption of new CPD strategies, like enquiry-based models or video observation. The external domain was used to represent input from and output to other sources, including other participants or academic readings. It was also used when participants themselves fed back into the external domain, for example by asking about their own videos.

In the domain of consequence, for teachers, salient outcomes refer to observable changes in the classroom, whether positive or negative. With professional development leaders this domain is more complex: salient outcomes could be

observed in a CPD session, or might only be seen later when teachers provide feedback from their classrooms. This adds a layer of complexity to CPD (Parr and Timperley 2010) which makes analysis of this domain potentially difficult. To simplify things, in this analysis, change in the domain of consequence was taken simply to mean that participants felt a difference had been made to their delivery of CPD.

The analysis process using the Clarke and Hollingsworth framework was broadly similar for each data set. The text or video was reviewed for reported changes and each change was coded into the most appropriate domain. At this stage, the analysis of the follow-up interviews and the follow-up questionnaires ended, with key signifiers of change noted for use as verification of other data.

For the intended learning outcomes and the evaluation forms two additional steps were added. Firstly, the codings were tallied so that the number of times each domain was mentioned could be compared. Next, because the personal domain was the most frequently mentioned in both sets of data, the codings in this domain underwent a further stage of analysis, in which they were regrouped and classified again, and then tallied once more. Through this process quantitative information was produced which allowed comparison of the relative significance of different domains of change within and across data sets.

Using a pre-determined structure such as the Clarke and Hollingsworth model fixes the categories of coding (Samaras 2011) in advance, meaning that it can be somewhat contrived and occasionally difficult to shoehorn information into the framework (Cohen, Manion and Morrison 2011). Indeed, in some cases it did prove problematic to decide on the correct domain for a particular change. However, given the amount of data gathered, it was useful to have a framework which narrowed down the possibilities of categorisation and allowed a relatively quick and simple analysis.

3.7 Summary

In this chapter, the research strategy for the evaluation of Expert Episodes programme has been described. The choice of action research as the overarching research strategy was explained by considering its benefits in comparison with other possible strategies. The processes of data collection through written texts and video recordings were described, and ethical issues surrounding this were considered. Finally, the techniques used to analyse the data were explained. In the next chapter, the findings of the analysis are described and discussed, in order to evaluate the effectiveness of the programme.

Chapter 4: Findings and Discussion

4.1 Introduction

In the previous chapter, the act and observe phases of the action research cycle were described. This chapter moves into the "reflect" phase, looking at the findings of the data analysis and using them to evaluate the effectiveness of the Expert Episodes programme. Change sequences, based on the Clarke and Hollingsworth model, are used to illustrate participants' learning.

4.2 Findings

In Section 3.6, the data analysis techniques were described. Here, the findings of these analyses are described, looking at each data set in turn (Table 4.1).

Data	**Collection method (Section 3.4)**	**Analysis technique (Section 3.6)**
Background information	Questionnaire	Frequency tally
Intended learning outcomes	Questionnaire	Clarke and Hollingsworth framework
Participants' analyses of videos	Questionnaire	Themes identified
Evaluations	Questionnaire	Frequency tally; Clarke and Hollingsworth framework
Follow-up interviews	Paired interviews	Clarke and Hollingsworth framework
Follow-up questionnaires	Questionnaire	Clarke and Hollingsworth framework

Table 4.1: Data analysis

4.2.1 Background information

The background information questionnaire gathered information about participants' backgrounds and career pathways (Table 4.2).

Category	Range	Number of participants
Age	41-50	6
	51-60	1
Gender	female	3
	male	4
Length of teaching experience	11-15 years	6
	16-20 years	1
Subject specialism	biology	4
	chemistry	2
	physics/chemistry	1
Highest teaching position reached	senior management	3
	middle leadership	4
Length of experience as a professional development leader	1-5 years	2
	6-10 years	3
	11-15 years	2

Table 4.2: Participants' backgrounds

The seven participants were noticeably homogeneous as a cohort. Most were in their forties and had been teaching for 11-15 years, with a majority identifying themselves as biology specialists. All had reached a middle or senior leadership position in school before moving into the role of professional development leader. Their experience as a professional development leader varied from just a few years to almost fifteen years.

4.2.2 Intended learning outcomes

Intended learning outcomes forms (Appendix O shows a sample completed form) were analysed using the Clarke and Hollingsworth framework described in Section 3.6. Comments were classified into one of the four domains of change: external, practice, personal or consequence (Table 4.3). Illustrative comments were taken from the forms.

Intended learning domain	Number of participants commenting	Comment tally	Illustrative comment
Personal	7	18	Expand knowledge of different styles and modes of CPD (Adam)
Practice	4	6	An opportunity to investigate a tool/process for use in CPD (Jack)
Consequence	4	6	To improve my performance as a PDL: so that I can continue to give value for money; so that I can give teachers what they want and what they need (Mike)
External	2	2	Not many opportunities exist for independent consultants to… support each other (Rose)

Table 4.3: Analysis of intended learning outcomes

The intended learning outcomes commented on most frequently were in the personal domain, relating to knowledge, beliefs and attitudes; all participants made comments relating to this domain. The second most common were the domains of consequence and of practice. Fewest participants referred to outcomes in the external domain.

One participant made an intriguing comment that he was uncertain what the outcomes would be from taking part: "I don't know where it's going to lead...if you were so clear about where you would end up, why would you do it?" (Adam, video of intended learning outcomes, Day 1). It would be interesting to investigate this deliberately unplanned intention further, especially in the light of Coldwell and

Simkins' antecedents for CPD (Coldwell and Simkins 2011), which suggest participant motivation is key to CPD having an impact.

4.2.3 Participants' analyses of video recorded CPD episodes

Eight videos were uploaded to the Iris Connect website. One participant shared two videos, and one did not share any. Each video was commented on by the video owner and by at least one critical friend, with four videos commented on by all three critical friends. Participants used proformas (Appendix P contains a sample) to identify aspects of practice they had noticed in the video and explain why they felt these were worthy of comment. Analysis of the profomas found three emerging themes: participants' identity, their physical presence, and their pedagogical approaches (Table 4.4).

Theme	Explanation	Examples
Pedagogy	How does the professional development leader engage the teachers?	Use of questions, working in groups, talking time, modelling activity, starts of sessions, gathering evidence of impact/learning
Identity	How does the professional development leader appear to the participants?	Seeming knowledgeable, confident, relaxed, prepared, use of humour, building a relaxed atmosphere
Physical presence	How does the professional development leader use their body language and voice?	Making eye contact, standing or sitting, saying "um"

Table 4.4: Themes emerging from video analysis

Pedagogy, the first theme, contained the greatest variety and number of comments. These related to participants' pedagogical approaches to their CPD delivery, such as questioning styles and formative assessment strategies. The theme of participants' identity revolves around the ways in which the professional development leader is able to display their credibility in their role, by appearing relaxed, confident, knowledgeable and well-prepared. The final theme relates to the professional development leaders' physical presence in the room. Although

there were fewer comments in this theme, a number of repeating strands emerged around body language, eye contact and listening to teachers.

It is interesting that there was no reference by any participant to the subject content of the sessions. This would be worth further investigation to explore whether it is always the case that non-subject-specific features of practice are those which are noticed, and if so, what the reasons are for this.

4.2.4 Evaluation forms

Quantitative data from evaluation forms indicated a high level of satisfaction with the programme (Table 4.5). A sample evaluation form is shown in Appendix Q.

	Very good	**Good**	**Satisfactory**	**Poor**
	Number of responses			
Overall quality of the course	7	0	0	0
Usefulness of the course to your practice	6	1	0	0
Personal interest/enjoyment	7	0	0	0

Table 4.5: Analysis of evaluation form ratings scales

Qualitative data from the evaluation forms were analysed using the Clarke and Hollingsworth framework described in Section 3.6. The most numerous comments fit into the personal domain, with all participants making comments here (Table 4.6).

There were some comments relating to the domain of practice but few participants commented on using video observation in their own practice, even though this was one of the aims of the programme (it should be noted that if participants felt they had gained knowledge or confidence in using video, this was classified as change in the personal domain). Even fewer participants made comments relating

to the domain of consequence, where changes in the outcomes of CPD would be classified.

Learning domain	Number of participants commenting	Comment tally	Illustrative comment
Personal	7	22	Both watching others and reflecting on their comments has made me think about my practice (Liz)
External	6	7	[The most useful aspect of the course was] discussions with other CPD leaders (Rose)
Practice	3	6	[The most useful aspect of the course was] experimenting with the video technologies to observe others (Ben)
Consequence	2	2	Would feel able to support others in making use of this technology (Sarah)

Table 4.6: Clarke and Hollingsworth analysis of evaluation forms

Using the tallies of comments from each domain, reported learning can be compared with intended learning outcomes (Table 4.7). This reveals two significant differences: an increase in the number of participants reporting changes relating to the external domain, and a decrease in the number of participants reporting changes relating to the domain of consequence.

	Number of comments			
	Personal	**Practice**	**Consequence**	**External**
Intended learning	18	6	6	2
Reported change	22	6	2	6

Table 4.7: Comparison of intended learning and reported change

Firstly, since the majority of reported changes in the external domain related to participants learning from their colleagues in the programme; this shows that participants were not anticipating that they would gain so much from their colleagues, but unexpectedly found this aspect of the programme beneficial. There are two implications here: how do we ensure that time is provided on CPD programme for this discussion to take place, and how do we communicate its benefits to potential participants?

The other difference is a decrease in the domain of consequence: participants anticipated learning here, but reported less impact in this domain. A few participants acknowledged that this may be due to timescale, and that, if the programme had run for longer, they might have seen greater impact. This brings to mind van Driel's (2012) core feature of duration; perhaps three months with only two contact days is not sufficient to bring about change here.

Returning to the evaluation forms, changes in the personal domain were further classified. Four categories of change were identified, relating to knowledge of the participant's own practice, of other's practice, of research into CPD, and of the use of video (Table 4.8).

Reported change in personal domain	**Comment tally**	**Illustrative comment**
Knowledge/beliefs about own practice	9	Both watching others and reflecting on their comments has made me think about my practice (Liz)
Knowledge of research into CPD	6	Lots of food for thought of how we can measure impact of CPD (Rose)
Knowledge/beliefs about others' practice	4	Has definitely clarified the subtle skills used by effective CPD providers and some of the differences with teachers (Adam)
Knowledge of use of video	2	Shown me the huge potential of use of video to develop self evaluative skills in teachers (Adam)

Table 4.8: Reported changes in the personal domain

The most commonly reported impact of the programme was on participants' knowledge of their own practice, with a range of outcomes reported here, including being reflective about one's own practice and having one's own beliefs about effective CPD confirmed or in some cases challenged. For example, Ben felt that he had "become more aware of the need to be more challenging of participants, rather than simply 'giving' ideas to teachers that they simply take away" (evaluation form).

4.2.5 Follow-up interviews and questionnaires

The videos of the follow-up interviews and the follow-up questionnaires (samples can be found in Appendices R and S) were reviewed to identify key learning points relating to the Clarke and Hollingsworth framework. The findings from both data sets confirmed those described above, with the personal domain attracting the most comments, and the domain of consequence the fewest (Table 4.9).

Domain	Number of comments from follow-up interviews	Number of comments from follow-up questionnaires
Personal	8	20
Practice	6	5
External	3	2
Consequence	2	2

Table 4.9: Analysis of follow-up interviews and questionnaires

In the questionnaires, participants were given an initial analysis of the data and asked to comment on whether they agreed with the findings. Again, there was general agreement, showing that my analysis had accurately reflected their views of the programme. One interesting comment came from Sarah who said that, although she agreed with the findings, she was "a little surprised that 'changing knowledge of use of video' was ranked as least frequently mentioned" by other participants. For her, the video had had more significant impact.

Both these data sets contained other information relating to the use of video, which will be discussed below.

4.3 Discussion

The intended learning outcomes for the participants of Expert Episodes were to:

- improve their understanding of the skills and pedagogies used by effective professional development leaders;
- trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice;
- explore and better understand how to support teachers in enquiring into their own practice.

In this section, the programme will be evaluated in relation to these intended learning outcomes, drawing on the findings reported above. Change sequences, based on the Clarke and Hollingsworth (2002) model, will be used to illustrate participants' learning. Finally the effectiveness of the programme will be considered by comparison with van Driel's (2012) six core features of effective CPD.

4.3.1 Improve understanding of skills and pedagogies used by effective professional development leaders

One aim of the programme was to help participants understand what makes them and others effective as professional development leaders: a change in the personal domain. This domain was where the most change was reported, with participants reporting learning about themselves, about each other's practice and about the literature surrounding CPD. As a result, participants felt able to "explain why parts of my practice were successful" (Adam, follow-up questionnaire), were "better able to see the sorts of behaviours that I use to help people to feel comfortable" (Jack, follow-up questionnaire) and had been reflecting on this learning in planning their own CPD sessions: "I've had all that in my head while trying to think about…a particular course that's coming up" (Sarah, follow-up interview). Similar comments were heard from all participants, showing that they had improved their understanding of what makes effective CPD delivery, and

thereby suggesting a degree of catalytic validity (Lather 1986), with participants increasing in confidence as a result of learning more about themselves.

This learning seemed to stem in particular from watching and discussing each other's videos, since what was noticed repeatedly in the videos was not the CPD content of the session, but the delivery style of the professional development leader: their identity, physical presence and pedagogical approaches. In achieving this outcome, the video appeared to play an important role for the participants.

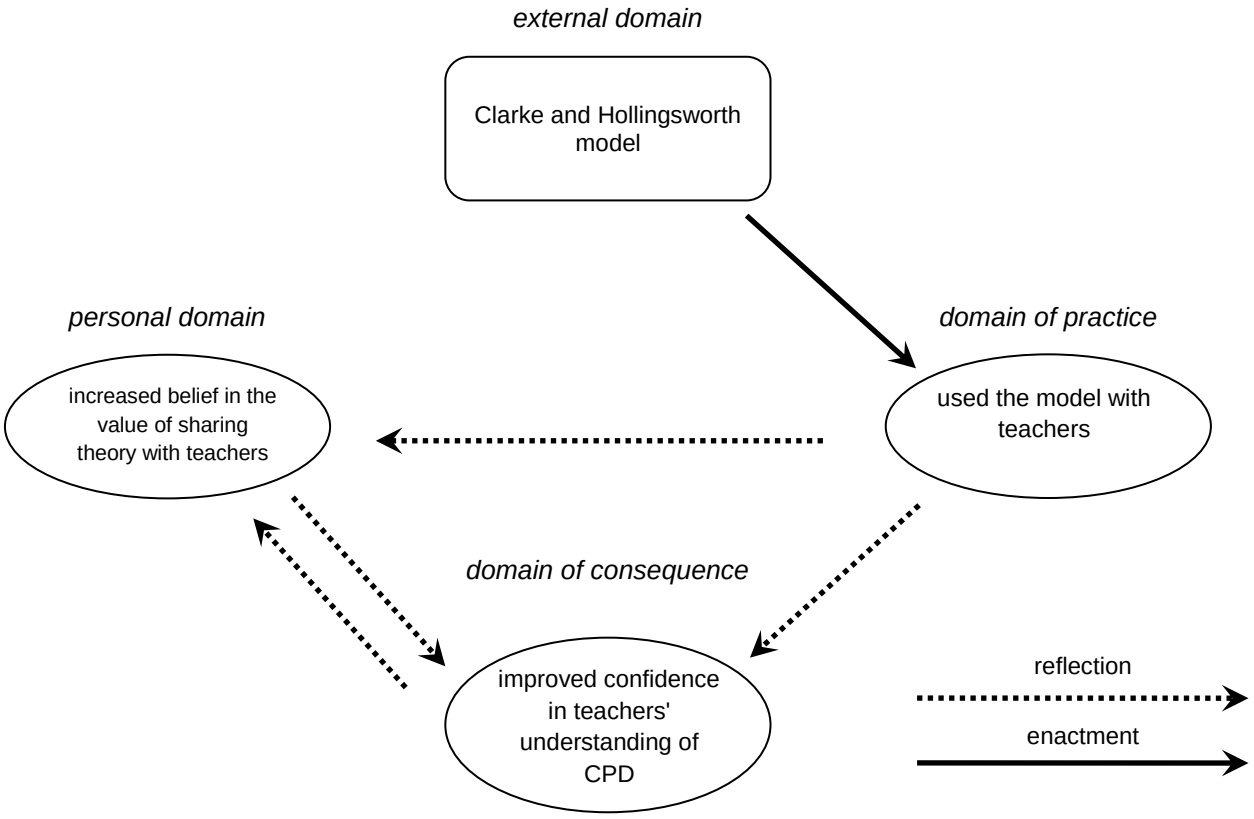


Figure 4.1: Mike's change sequence

A striking outcome in the domain of practice was participants' adoption of the Clarke and Hollingsworth model of teacher professional growth (Clarke and Hollingsworth 2002). By the time of the follow-up interviews, three participants had used the model in CPD sessions of their own, providing an enactment link from the external domain to the domain of practice (Figure 4.1). For example, Mike had used the model with the aim of giving teachers a more "accurate perception of how CPD should work" (follow-up interview). The other links in Mike's change sequence are reflective: he felt the model was a success in

improving teachers' understanding of CPD, and he would continue to use it. The model had an impact on his own learning about effective CPD, and also changed his practice.

It seems that, for all participants, through the use of video, discussions and reading, this outcome was achieved.

4.3.2 Trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice

All participants reported learning about the use of video as a tool for CPD and most felt more confident in its use as a result of the programme. To illustrate how video supported participants' learning, two change sequences are described here.

The first sequence shows Liz's learning (Figure 4.2). Unlike most participants, Liz came to Expert Episodes with a preconceived problem: she felt the starts of her sessions were paperwork-heavy, taking too long to get started. She recorded the start of a CPD session and asked her critical friends to comment on it, thereby making a link from the personal domain to the external.

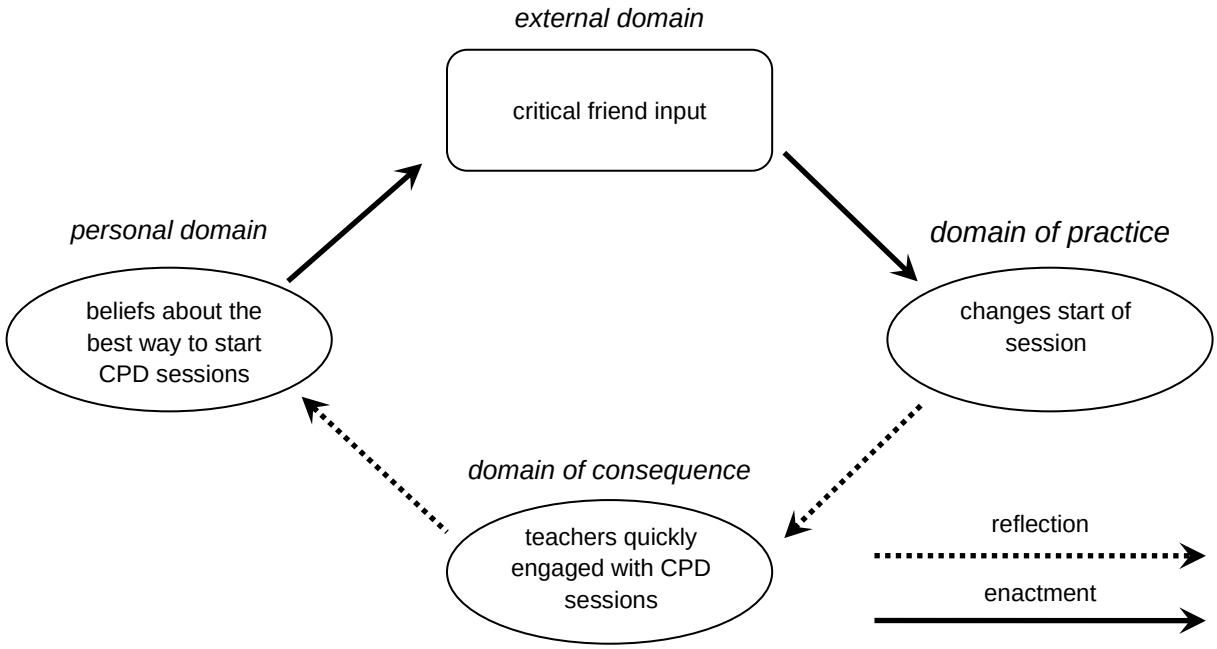


Figure 4.2: Liz's change sequence

Although her critical friends suggested alternative ways to begin the session, they also highlighted the ways in which her practice was more effective than their own. Liz was surprised and reassured by this feedback, and felt enough confidence to then trial new ways to start her sessions. As a result of this change in practice, she believed that teachers were more quickly engaged: a salient outcome. Liz's change sequence demonstrates that learning does not have to begin in the external domain. In Liz's case, the change sequence cycles from the personal domain through the other domains to the domain of consequence and then back to the personal.

The second change sequence shows how Liz's learning impacted on Jack, who was prompted by watching Liz's video to reflect on his own practice. His change sequence starts with a link from the external domain to the personal (Figure 4.3).

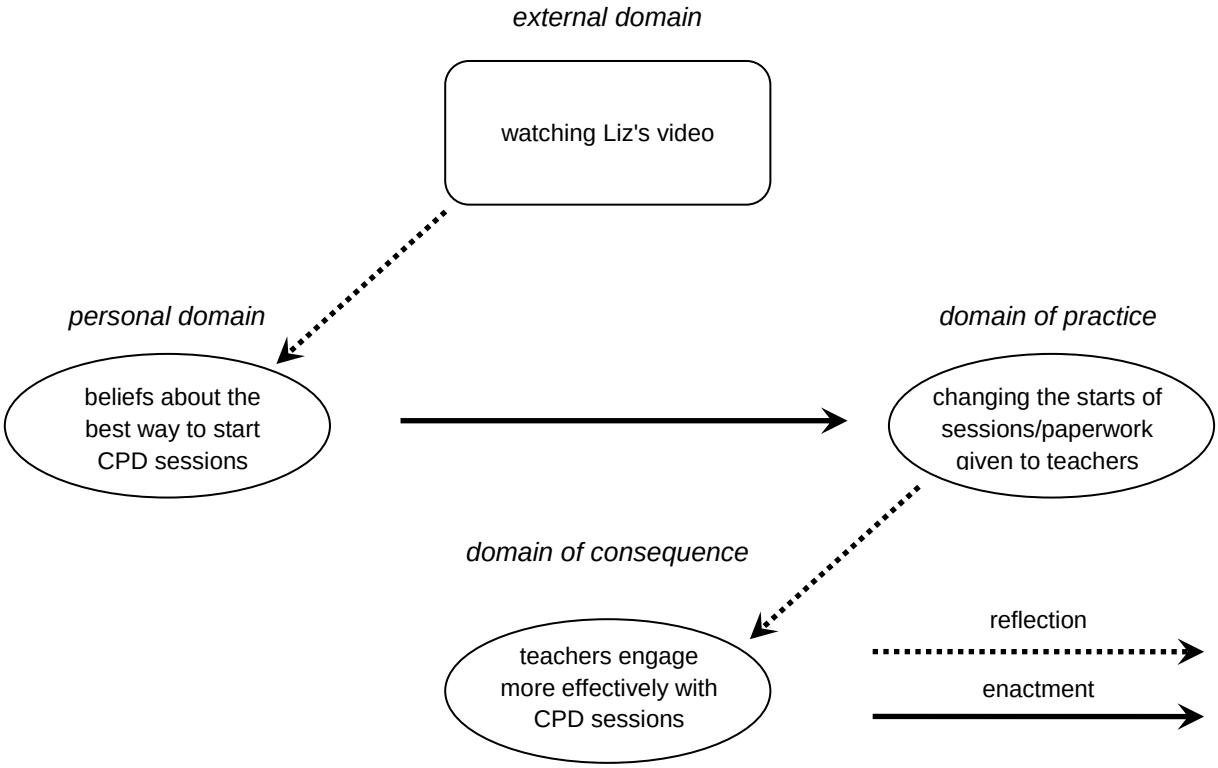


Figure 4.3: Jack's change sequence

Jack realised that he also felt dissatisfaction with the starts of his sessions, and so also found a way to tweak them. As a result, he too felt his teachers were now more quickly engaged in their CPD. Jack's change sequence describes a linear route through the domains of change, starting in the external domain and ending in the domain of consequence.

In Liz's change sequence, the video may or may not have been useful. She may have gained similar outcomes from simply discussing her concerns with other participants. However, it seems likely that Jack's reflection was stimulated by seeing the reality of Liz's video: "having seen Liz...has made me think that I don't do it well enough, so I have gone and improved a little bit there" (follow-up interview). The videos seem to provide evidence of pedagogy in a way that discussions or even live observations could not: video acts as an "objective observer" (Sarah, follow-up interview), which captures without interpretation or false memory what was taking place, stimulating reflection for both participant and their critical friends.

Not all comments about video were positive. There was repeated discussion of what became known as the hassle factor: the deterrent of the time needed to set up the video equipment. As Mike said, "the nature of CPD… requires the trainer to set up a rapport very quickly with a group of individuals they have never met before. Anything which distracts from this – such as setting up a camera etc – could then affect the whole session" (follow-up questionnaire).

There was also a feeling that the time needed to review videos formed a barrier to participation, and this is indicated by the evidence that not all videos were reviewed by a full set of critical friends. Participants suggested that review of video might be more effective in a video club (Sherin and Han 2004), where participants are all part of the same organisation, with have time set aside for review and discussion. This echoes van Driel's (2012) core feature of organisational support as key to effective CPD.

The intended learning outcome here was for participants to trial and evaluate the use of video. Even though all views of video were not positive, the evidence suggests that this outcome was achieved.

4.3.3 Explore and better understand how to support teachers in enquiring into their own practice

There is less evidence relating to the success of gaining understanding of enquiry-based CPD. While participants reported learning about the use of video

observation in teacher enquiry, they did not report feeling more confident or informed about teacher enquiry in general.

One enquiry-based feature of the programme which was felt to be successful was the critical friendship grouping. Participants felt they learned as much from being a critical friend as from having critical friends: “it’s that two-way thing that makes it really good” (Sarah, follow-up interview). Liz commented that, even while acting as a critical friend, she was thinking about her own practice: “I think all the time I was watching other people I was thinking about myself rather than them, thinking about whether I’d do it like that” (follow-up interview).

Participants showed less interest in the underlying enquiry-based strategies such as the discipline of noticing (Mason 2002), suggesting that these ideas were not new to them: “we’re probably quite good at noticing ourselves in a fairly objective way anyway” (Jack, follow-up interview).

It may be the case that I also placed less emphasis on this outcome than on the others, in part in response to participants’ intended learning outcomes, which did not highlight enquiry-based CPD as a priority. Perhaps participants felt they were already capable of supporting teachers in enquiry-based CPD, or they simply did not feel it was a priority for them to learn more about this. However, it could be argued that the first two outcomes support this third one, and so I do not feel that this outcome was entirely missed. Evidence to support this claim, though, is weaker than that to support the success of the others.

4.3.4 Conclusion

In this section, the success of the Expert Episodes programme was evaluated against the intended learning outcomes for the participants, drawing on the findings described in Section 4.2, and using change sequences to illustrate participants’ learning. There is evidence to suggest the programme was a success in achieving two of its intended learning outcomes but was less successful in the third. If the programme was used again with a new cohort of participants, there is no guarantee that it would be equally successful or achieve the same balance of outcomes. This group of participants, who volunteered to take part, presumably

had a particular interest in exploring this model of CPD which might not be shared by later cohorts and of course new group dynamics might steer the outcomes in a different direction.

Another way of considering the effectiveness of the programme is to compare it to van Driel's (2012) core features. Taking each feature in turn, the programme was clearly focussed on participants' practice; this was its heart. Participants were actively engaged in enquiring into their practice through the processes of video recording and analysing, and, by being able to make choices about what to record and what to comment on, learning was coherent with their practice and beliefs. Collaborative learning was supported through critical friendship groups. The two features where the programme might have been strengthened are its sustainability and organisational support. Although efforts were made to ensure these features were in place, both could have been supported by more funding, leading to more time in both the short- and the long-term for participants to engage with the video recording and analysis.

Chapter 5: Reflection and Next Steps

5.1 Introduction

In the final chapter, I reflect on my own learning as a result of developing, delivering and evaluating the Expert Episodes programme. I draw three change sequences, one relating to each of the original objectives for the programme, to illustrate change relating to my identity, my beliefs about effective CPD, and my views of the use of video. Finally, I suggest some next steps for the project and for myself. In this way, the last (and next) "plan" phase of the action research cycle is reached.

5.2 Reflection

My objectives in developing and delivering the Expert Episodes programme were to:

- improve our understanding of the skills and pedagogies used by professional development leaders;
- trial a model of CPD for professional development leaders;
- trial the use of video-observation and -sharing technology

In this section, I consider how effective the project was in achieving these outcomes, drawing on the evaluation described in Section 4.3, and on the learning journal (Bolton 2010) I kept throughout the programme.

5.2.1 Improve our understanding of the skills and pedagogies used by professional development leaders

In common with the Expert Episodes participants, I feel I have learned about my own practice as a professional development leader and also as a researcher, though a number of processes:

- delivery and evaluation of the project;
- conversations with and presentations to colleagues;
- feedback from participants.

These processes are brought together in a change sequence (Figure 5.1) which shows how they contributed to a change in my identity, situated in the personal domain. For example, throughout the project I have had conversations with colleagues about the programme and given presentations to different audiences. Each of these indicated that colleagues were interested in what I was doing: "everyone I talk to about what I'm doing says 'oh that's interesting!', and so that feels like a validation" (learning journal, 8 October 2012). The change sequence therefore shows a reflection path from the external domain to the personal.

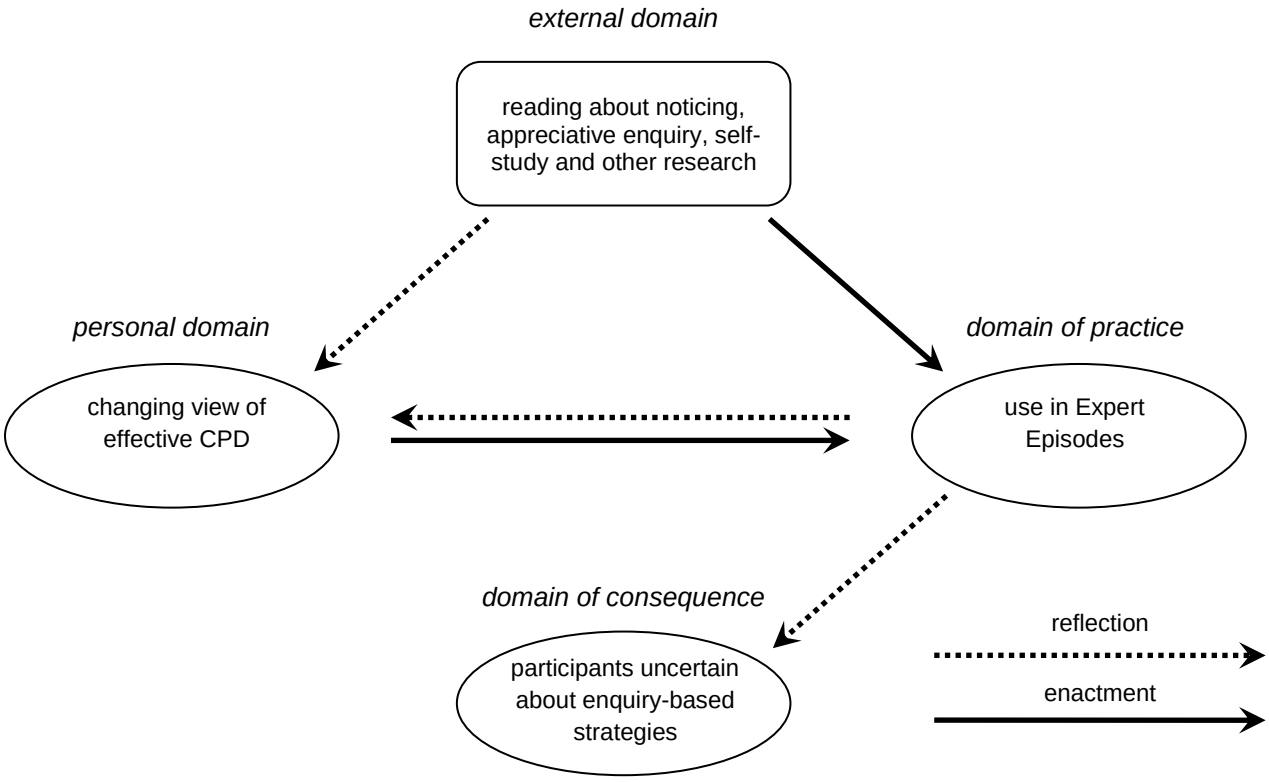


Figure 5.1: Change sequence relating to identity

Equally, although opening up my practice to scrutiny by the participants, mostly people whose work I lead, presented a potential threat, the positive response of participants to the programme validated my credibility and confidence: "what struck me…is that I am good at this stuff…bringing together a group of people and

making them feel at ease and confident to share their views and ideas." (learning journal, 10 March 2013). This links the domain of consequence to the personal domain. Finally, the success of the programme, as described in Chapter 4, further boosted my confidence as a professional development leader.

In contrast to the participants, though, I feel uncertain that I have improved my understanding of the skills and pedagogies used by professional development leaders. I have learned what the participants felt was worthy of note in their videos: aspects of their identity, physical presence and pedagogy, and I have learned about my own practice, but I have not gained further understanding of how these characteristics make CPD effective. Further work is needed, I feel, to develop knowledge in this area.

5.2.2 Trial a model of CPD for professional development leaders

This objective is self-evident: the Expert Episodes programme ran with seven participants and achieved, in the most part, its intended learning outcomes.

Even though the participants suggested that the enquiry-based CPD strategies did not impact much on their engagement with the programme, these strategies affected my thinking about the programme, leading me to approach its delivery in ways which would not have happened otherwise, and stimulating a shift in my beliefs about effective CPD (Figure 5.2), evidenced by a change in both my metaphor for CPD and my definition of effective CPD.

When I began working on the Masters programme, I had in mind a metaphor for CPD something like a gift box, from which participant could choose items – teaching tools and strategies – I had placed there for them. As Expert Episodes progressed, my view became more complex:

> "I think this is how I deliver CPD (in a take-it-or-leave-it, giftbox style), but I'm not sure it's how I now want CPD to be. Perhaps I am moving towards a place where it is rather more challenging, and aims to provoke teachers' critical reflections on their practice. A metaphor for this, then, would be a mirror, or perhaps a mirror at a fair which makes

you look *different* (but not necessarily worse) from how you normally see yourself." (learning journal, 15 December 2013)

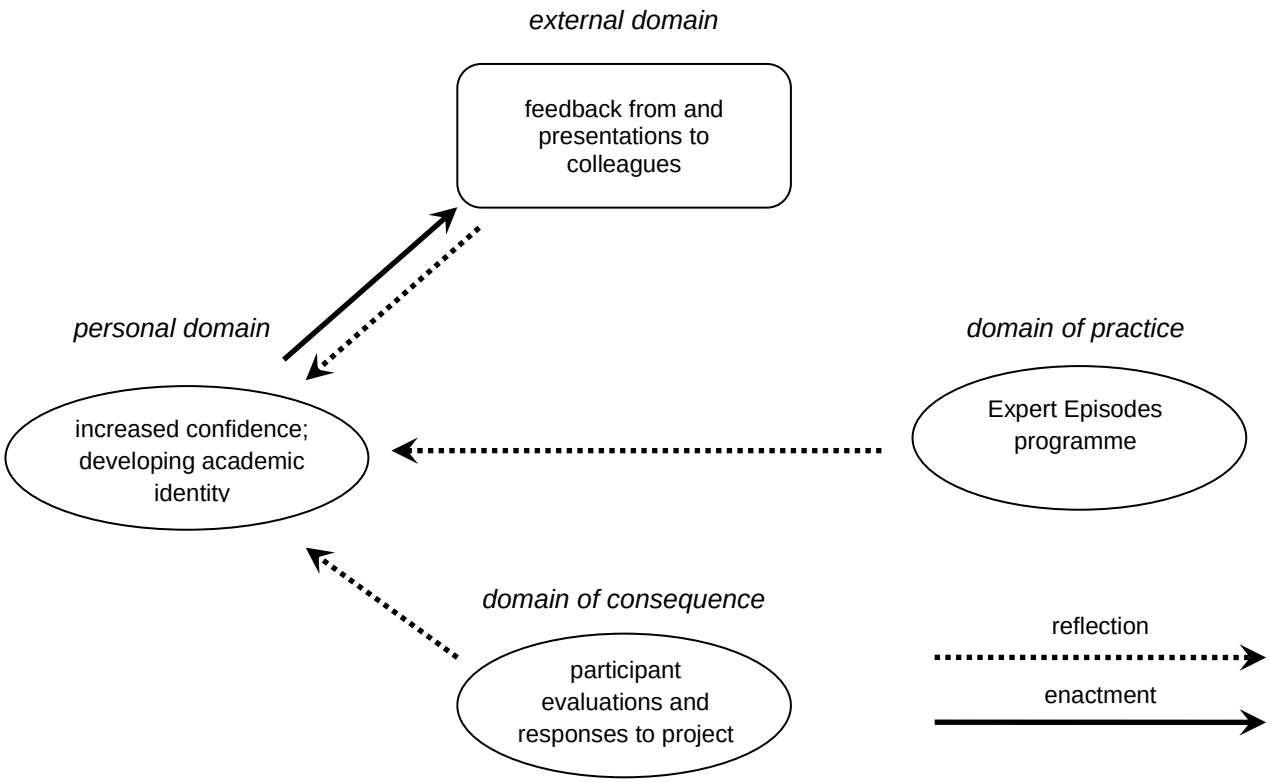


Figure 5.2: Change sequence relating to beliefs about effective CPD

I now feel able to articulate a definition of CPD which captures these beliefs: *CPD is reflective activity which is designed to lead to improvements in classroom practice*. *Reflective activity* means an evaluative process, in which participants consider their current practice, compare it to that of others, identify areas for improvement, and/or trial new classroom activities. *Designed* is important: CPD is a deliberate process, with intended learning outcomes and a structure built to achieve those outcomes. Finally, *improvements in classroom practice* represents changes in teachers' confidence, beliefs or teaching strategies, which ultimately lead to increased pupil attainment and/or engagement.

5.2.3 Learning about the use of video

Before the project, I had not used video as a tool for observing my own practice. Using video therefore indicates a change in the domain of practice (Figure 5.3). This links through my reflections on its use by myself and by the participants to the personal domain. What I find is that I still feel uncertain about its usefulness: "did the video actually make any difference in terms of what the [participants] learned or noticed about 'effective' CPD delivery? Or was what they said either what they thought they should say, or what they would have said even without watching the video?" (learning journal, 12 December 2013).

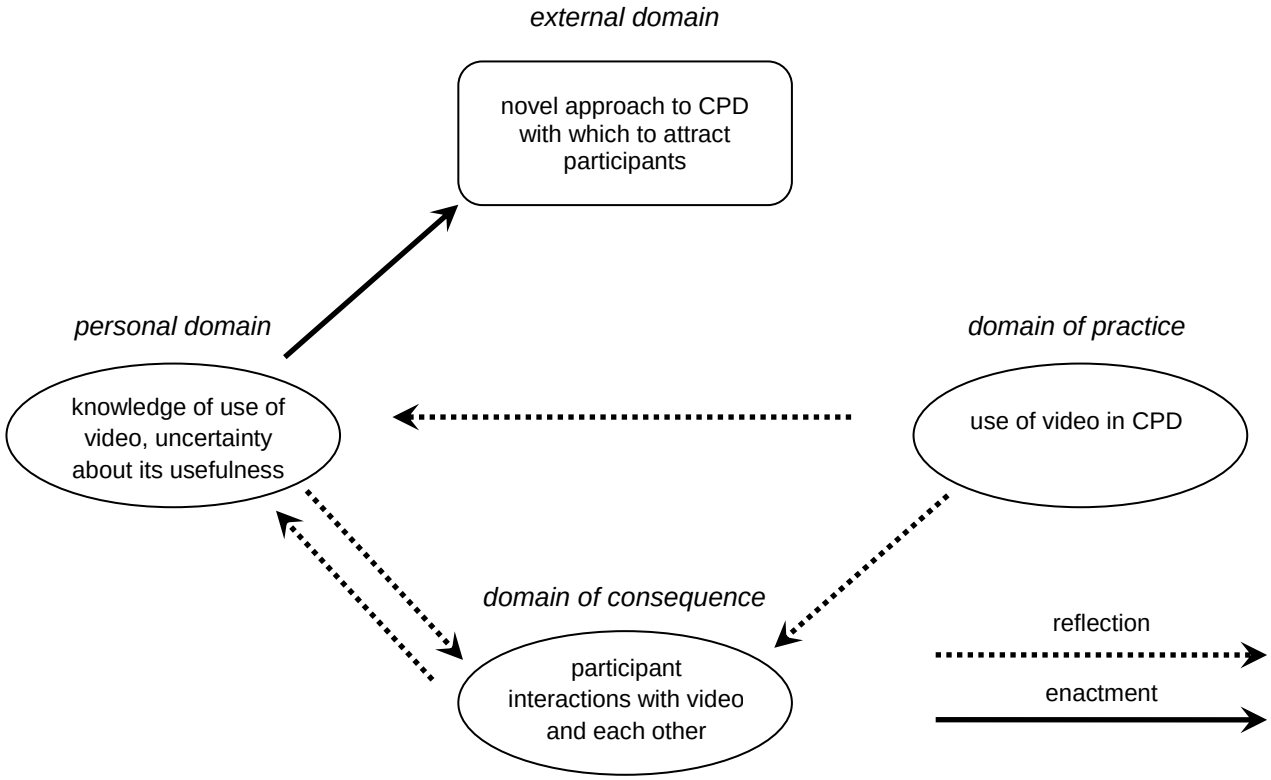


Figure 5.3: Change sequence showing learning about the use of video

I understand that video may provide an innovative hook with which to attract participants to a CPD programme, as it did in Expert Episodes, and this describes a link to the external domain. It may also add value initially to the process of reflection, thereby aiding the development of observation skills. Once these skills have been developed, though, the value of video needs to be balanced by the "hassle factor", as the participants called it: the time and effort needed to set up, record and review the videos. Whether these factors balance out in favour of the

use of video or against it may depend on other factors, such as the particular focus of the CPD programme.

5.3 Next steps

To end this dissertation, I look at future developments for the Expert Episodes programme and for myself.

My ongoing work with professional development leaders and teachers has been informed by Expert Episodes. Aspects of the programme have been developed into a programme of CPD for professional development leaders which is now running with two cohorts of around ten participants in total. There is also a cohort of teachers participating in a parallel programme, supporting them to become professional development leaders. Due in part to the previously-discussed hassle factor, the video observation has been dropped from both programmes, but participant-led enquiry into practice remains key.

The use of video observation has gathered a lot of interest from colleagues and I hope that it will be used in at least one project for supporting teacher educators and other lecturers to collaboratively explore their practice. I am also interested in setting up a self-study group with colleagues so that we can also enquire collaboratively into our practice and explore the use of this CPD model. To this end, I plan to attend a conference relating to the topic and to develop links with the wider self-study community.

Finally, I intend to explore the possibility of taking further some of the research done here. I have a set of data relating to participants' metaphors for their roles, collected from the background information questionnaires and from the pre-course tasks, which would benefit from further analysis and follow-up research. I also remain interested in exploration of professional development leaders' identities and pedagogies, what makes them effective, and what "effective" really means. I plan, therefore, to apply for funding to carry out further research in this area.

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Appendices

Appendix A: Letter of invitation

Dear colleague

We are inviting you to take part in a programme of CPD for professional development leaders.

The aims of this programme are:

- to improve our understanding of the skills and pedagogies used by effective professional development leaders
- to make use of video-observation and sharing technology (in this case, Iris Connect) in order to trial and explore how we can support teachers in using this to develop their practice
- to trial a model of CPD for professional development leaders, using an enquiry-based approach to explore, analyse and refine our practice

To achieve these aims, we are recruiting a group of around six professional development leaders to form a professional learning community which will work together for five months to share, examine and refine their practice. As well as face-to-face and online discussions, samples of each participant's practice in CPD delivery (chosen by each participant themselves) will be recorded and shared through a secure website (Iris Connect, https://eu.irisconnect.com/) for analysis and discussion by the group.

This CPD programme will provide opportunities for you to work with colleagues to reflect on and explore your and other professional development leaders' practice and to improve your understanding of some current issues in continuing professional development, including video observation technology and models of enquiry-based development and teacher learning.

Invitations to participate in this programme are being sent to colleagues working in a range of contexts, including Science Learning Centre staff, independent consultants, and school-based CPD leaders. The receipt of an invitation should not be taken to imply that you need support with your CPD delivery! The opposite is true: the aim of this programme is to explore and exemplify good practice by effective professional development leaders.

For further information on the structure, content and rationale for the CPD programme, see below.

If you would like to express your interest in participating in this programme, or would like further information about any aspect of it, please contact me by Friday 30 November:
Emily Perry, e.perry@shu.ac.uk, 0114 2254891, and include an indication of your availability to meet in Sheffield in the weeks beginning 10 and 17 December 2012.

Important note: An evaluation of the impact of the Video-Enhanced Reflection on Professional Development Practice CPD programme will form the basis of my MA Education final dissertation. Once you have expressed interest in participating in the programme I will send you more information about this research study.

Background

Much of the formal CPD we engage in as professional development leaders focuses on the dissemination of new teaching strategies and policy information from government organisations and awarding bodies. It is rare that we have the opportunity to engage in reflective, collaborative CPD of our own. This means that we run the risk of losing sight of the benefits of these models of CPD for teachers, and could be accused of not "practicing what we preach". This CPD programme aims to redress the balance by allowing us the time, space and structure to work together to explore and refine our practice, and to improve our knowledge of effective CPD.

One of the drivers for this programme is a lack of research into the practice of professional development leaders, especially when compared with the depth of research into the skills of teachers and teacher educators. In particular, CPD evaluation data tends to focus on the content and delivery model of our CPD, but provides less information about the skills used by the people delivering the CPD. By investigating our own practice, we may be able to move towards identifying some of the key skills, knowledge and characteristics of effective professional development leaders, and thereby provide better support to existing, new and aspiring professional development leaders in improving their practice.

The key method for investigating our practice in this CPD programme will be that of video-recorded observation of CPD in action. A number of systems exist for capturing "real" classroom (or CPD) experiences; we will be using Iris Connect (https://eu.irisconnect.com/), which has an expanding market and has already been licensed by over fifty schools in Yorkshire and the Humber alone. It is important, therefore, that we develop our understanding of how to support teachers in using video observations to improve their practice, and in order to work effectively in this developing market, one of the aims of this programme is to trial the use of Iris Connect through looking at our own practice.

CPD model and timescale

Activity	**Likely time period**	**Approximate time commitment**
Face-to-face day 1	w/b 10 or 17 December 2012	One day
Recording, sharing and discussion of practice	December – February 2012 Additionally, two web-conference meetings will be held in this time to raise issues and plan further developments if needed	Approximately two and half days over this time period
Face-to-face day 2	w/b 18 or 25 February 2013	One day
Follow up impact evaluations	w/b 18 March 2013	An hour or two

Note: To participate in the programme, you will need to be able to attend the face-to-face meetings, which will take place at Science Learning Centre Yorkshire and the Humber in Sheffield in December and February. Dates will be confirmed shortly.

Intended learning outcomes

By taking part in this programme of CPD, you will:

- improve your understanding of the skills and pedagogies used by effective professional development leaders, including yourself
- trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice
- explore and better understand how to support teachers in enquiring into their own practice

Funding

To support you in participating in this project, an honorarium is available from the national network of Science Learning Centres' Innovation Fund. This can be paid direct to you or to your organisation. If you work in a regional Science Learning Centre, the funding will be paid to the regional centre to cover the time you spend involved in the programme.

More information on how to claim this funding will be available later.

Dissemination

The project will initially be disseminated through the national network of Science Learning Centres' internal communication channels, such as written reports and presentations at internal conferences. It is likely that, if successful, this model of CPD through video-enhanced observation will be developed further for use with teachers, and there may be opportunities for you to be involved with this.

As a community, we may wish to consider writing an article for publication or to publish an online video or blog explaining what we have found.

If you would like to express your interest in participating in this programme, or would like further information about any aspect of it, please contact me by Friday 30 November:
Emily Perry, e.perry@shu.ac.uk, 0114 2254891, and include an indication of your availability to meet in Sheffield in the weeks beginning 10 and 17 December 2012.

Appendix B: Precourse tasks

Preparation tasks

Please complete these three tasks in preparation for 19 December. We will discuss them on the day.

1. Intended learning outcomes

Please complete the *intended learning outcomes form* to indicate your own aims and goals for the programme.

For "broader outcomes", you may wish to refer to the teachers you work with, or their schools/departments, or their pupils.

You may wish to refer to the published intended learning outcomes of the programme:

Intended learning outcomes

By taking part in this programme of CPD, you will:

- *improve your understanding of the skills and pedagogies used by effective professional development leaders, including yourself*
- *trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice*
- *explore and better understand how to support teachers in enquiring into their own practice*

2. Reading: research methodology

The programme is underpinned by three research methodologies:

- Self study (Professional self-understanding as, expertise in teaching about teaching, Amanda Berry 2009)
- Appreciative Enquiry (Using appreciative inquiry to explore the professional practice of a lecturer in higher education, David Giles and Susie Kung, 2010)
- The "discipline of noticing" (John Mason, 2002)

You have been sent an article/extract about one of these methodologies. Please read the article and prepare a few key points of relevance to our work to feedback to the group.

3. Using metaphor to explore values and beliefs

Think of a metaphor you would use to describe how you see your role as a professional development leader.

(A metaphor is another way of describing something, using an object, process or role to represent the way you see it. For example, one teacher described their experience on a CPD programme as being a gulp of air while drowning which kept him going for a little longer)

Please bring something with you on the day which represents your metaphor, and be prepared to explain it.

Appendix C: Face-to-face day 1

Date	Wednesday 19 December 2012
Time	9.45am - 3.00pm
Venue	Room 940, Science Learning Centre Yorkshire and the Humber

Outline

9.45	Arrival and refreshments
10.00	Introductions and background
10.30	Beliefs and values about our roles
11.15	Coffee
11.30	Research methodologies: self-study, appreciative enquiry, "noticing"
12.00	Starting the enquiry process
12.30	Lunch
1.00	Using Iris
2.00	Break
2.15	Logistics and ethics
2.45	Reflections on the journey so far
3.00	End

Intended learning outcomes

By taking part in this programme of CPD, you will:

- improve your understanding of the skills and pedagogies used by effective professional development leaders, including yourself
- trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice
- explore and better understand how to support teachers in enquiring into their own practice

Appendix D: Face-to-face day 2

Date	Wednesday 6 March 2013
Time	9.45am - 3.00pm
Venue	Room 940, Science Learning Centre Yorkshire and the Humber

Outline

9.45	Arrival and refreshments
10.00	Progress reports
10.30	Processes for enhancing reflective practice
11.15	Coffee
11.30	Learning about ourselves as PDLs
12.30	Lunch
1.00	Models of teacher learning through CPD
2.00	Break
2.15	Reflections, evaluations, next steps
3.00	End

Pre-session task

Please read the paper *Elaborating a model of teacher professional growth* by David Clarke and Hilary Hollingsworth before the session. We will be looking at the model of teacher learning put forward in this paper, and discussing how it relates to our own practice and experiences.

Intended learning outcomes

By taking part in this programme of CPD, you will:

- improve your understanding of the skills and pedagogies used by effective professional development leaders, including yourself
- trial and evaluate the use of video observation and sharing technology to support practitioners in developing their practice
- explore and better understand how to support teachers in enquiring into their own practice

Appendix E: Mid-programme meeting agenda

Appendix F: Protocol for video observations

Before and during filming

1. Post dates for filming onto the Google Group and arrange use of Iris kit with Emily as needed.
2. When filming, explain the project to the participants in the CPD session and ensure they have signed a consent form. Return consent forms to Emily.

After filming

3. After filming, save the video file to your computer and delete it from the camera. If the video is particularly long, you may wish to edit it down to, for example, a 30-40 minute section.
4. As soon as possible after filming, upload the video to the Iris Connect website.
5. When uploading, add some text, if you wish, to explain the context of the video.

Video analysis

6. Review the video yourself using the form "Self-study analysis for video owner" - see below for questions.
7. Share the video with your critical friend group. Critical friends groups are:

Metals	Non-metals
Mike	Rose
Sarah	Adam
Ben	Liz
Emily	Jack
	Emily (people in this group: please share your video with me so that I can access the reports etc)

8. After your critical friends have reviewed the video, return to the video and read their comments. You can download them as a *report* if you wish. You may wish to re-watch the video, or add to your own comments as a result of reading theirs.
9. Within a couple of days (but after having time to think about all this), post a message on the Google Group telling us what you've learned from this process, including something about your learning about your own practice, and also something about the process of using video in this way.

The role of critical friends in analysis of videos

Remember that critical friends are not tasked with criticising the practice of other professional development leaders, but instead should provide an objective view which may challenge others' findings or assumptions.

1. Within five days of receiving notification of the video being shared with you, watch the video, and review it using the form "Analysis for critical friend" - see below for questions.
2. After reviewing, look at other people's comments on the video (including the video owner's) and, if you wish, add to or amend your comments in response to theirs.
3. Within a couple of days, post a message on the Google Group reflecting on your experience of watching the video and what you have learned from it.

Questions on the analysis forms

Self study form for video owner	Critical friend analysis
1. Watch the video of yourself, and then note one or two features of your practice you think are interesting, whether that's because they are effective or less effective (in your view). 2. What made you notice these features of your practice? 3. What do you think these features of your practice mean in terms of your effectiveness as a professional development leader? 4. What questions would you like to have answered about your practice, whether this relates to the current video or to a future CPD episode? 5. If you have any other reflections from watching the video, note them here.	1. Watch the video which has been shared with you, and then note one or two features of the professional development leader's practice which you think are interesting. 2. What made you notice these features of their practice? 3. What do you think these features of their practice mean in terms of their effectiveness as a professional development leader? 4. What questions would you ask the professional development leader about their practice, having watched the video? 5. If you have any other reflections from watching the video, note them here.

Appendix G: Evaluation form

Overall quality of the course	Very good	Good	Satisfactory	Poor
Usefulness of the course to your practice	Very good	Good	Satisfactory	Poor
Personal interest/enjoyment	Very good	Good	Satisfactory	Poor

Which was the most useful/enjoyable/inspirational/exciting aspect of the course and why?

Describe your experience of the course in relation to improving your understanding of the skills and pedagogies used by effective professional development leaders, including yourself.

Describe your experience of the course in relation to trialling and evaluating the use of video observation and sharing technology to support practitioners in developing their practice.

Describe your experience of the course in relation to exploring and better understanding how to support teachers in enquiring into their own practice.

If you were going to deliver this CPD programme, what would you do differently?

Any further comments?

Appendix H: Follow-up questionnaire

Dear Expert Episodes participant

It is now a few months since the Expert Episodes CPD programme ended, and I am analysing data in order to identify key impacts from the programme.

The information below highlights some key findings. Please read the information in each question carefully and then respond with your views. The information you provide will be used to further clarify my findings.

Please type your responses into the boxes below each question. Boxes will expand as you type, if you wish to write a lot. When you have finished, please save the questionnaire and email it back to me at either *e.perry@shu.ac.uk* or *emilyjaneperry@gmail.com*. Alternatively, you can print this out and write into the boxes if you prefer, and then scan or post back to me.

Please return your questionnaire by Saturday 14 December.

Thanks very much for your help.

Question 1: Overall learning from the Expert Episodes programme

Evaluation forms and follow up interviews were analysed using a framework based on the Clarke and Hollingsworth model in which changes were identified in four domains:

	Domain of change	**Examples of changes cited in this domain**
Most frequently mentioned ↓	Personal domain (knowledge, skills and beliefs)	• being more reflective about one's own practice • learning more about models of teacher learning
	Domain of practice (professional experimentation)	• using the interconnected model in CPD sessions • trialling the use of the video
	External domain (external sources of information or stimulus)	• listening to others discussing their practice • watching others' videos
Least frequently mentioned	Domain of consequence (salient outcomes)	• gaining confidence in the ability to support others in using video • feeling happier with particular pedagogies

By far the most frequently reported changes were in the personal domain. Does this reflect your experiences of the programme? Explain your answer.

Question 2: Changes in the personal domain

Looking more closely at changes in the personal domain (knowledge, skills and beliefs), responses here were grouped further in order to understand more about the types of change taking place:

	Type of change	**Examples**
Most frequently mentioned ↓ Least frequently mentioned	Changing knowledge/beliefs about one's own practice	• being more reflective • thinking about how to start sessions • more aware of need to challenge
	Changing knowledge of research into CPD	• learning how we can measure the impact of CPD • learning more about teacher learning
	Changing knowledge/beliefs about others' practice	• seeing how "other people do it" • gaining experience of good practice
	Changing knowledge of use of video	• gaining confidence in using video • understanding potential of its use

The most frequently reported type of change related to changes in understanding of one's own practice. Does this reflect your experience of the programme? Explain your answer.

Question 3: Key findings in relation to use of video observation technology

Although the value of video observation was acknowledged by all participants, there appear to be two main barriers to its use:

- The time needed to watch and reflect on the video after recording
- The "hassle" involved in setting up and recording

Does this reflect your experience of the use of video observation technology? Explain your answer.

Question 4: Longer term impact of the Expert Episodes programme

Since the end of the programme, can you identify any longer term changes in your practice as a result of Expert Episodes? For example, have you continued to think about your practice in a particular way, or made use of any of the readings in your planning or in CPD sessions, or have you video recorded yourself? If so, what impact have these changes had on your practice?

If you cannot identify any longer term changes in your practice, what do you think are the reasons for this?

Please return your questionnaire to me by Saturday 14 December.

Thanks again for your time and help.

Emily

Appendix I: Background information survey

1. What is your name?
2. What is your age?
3. How many years were you a teacher? If you still are teaching, how many years have you been a teacher?
4. When teaching, what was your subject specialism (if you had one)?
5. When teaching, what was your highest position reached (eg head of science, assistant headteacher)?
6. How many years experience do you have as a professional development leader (not necessarily full time)?
7. How would you describe your current employment status (eg employed full time by a school or other organisation, independent consultant, etc)?
8. Do you feel that you have any particular areas of specialism as a professional development leader? If so, what are your areas of specialism?
9. How would you define continuing professional development?
10. How would you define your role as a professional development leader?

Appendix J: Intended learning outcomes form

Science
LEARNING CENTRES

Intended Learning Outcomes Form (ILO)

This form aims to capture the specific learning outcomes you intend to achieve from this programme.
Please complete this form and bring a copy with you on the day. You may wish to discuss your intended learning outcomes with a colleague.

Name: Date:

Intended learning outcomes	Why these outcomes are important
Personal and professional outcomes (knowledge, skills, attitudes etc)	
Broader outcomes (for teachers, colleagues, pupils)	

Appendix K: Follow-up interview protocol

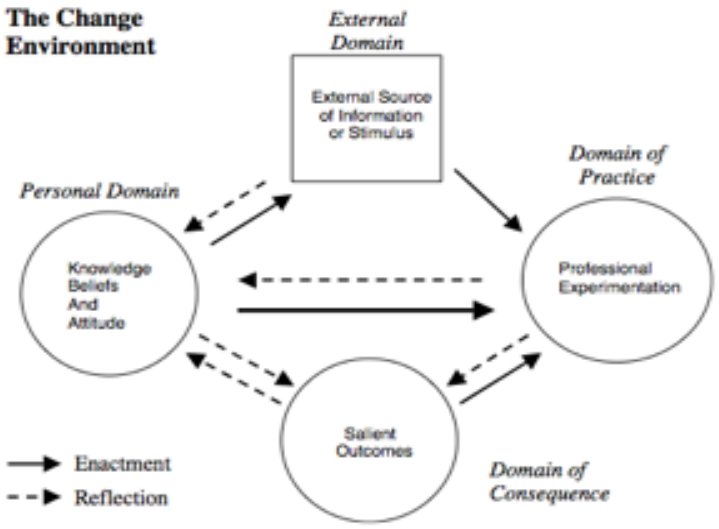
Follow Up Interviews

1. Describe your reasons for taking part in the Expert Episodes programme.

2. Looking at the Clarke and Hollingsworth model, describe and explain your learning as a result of the programme. You may wish to annotate the model to indicate particular inputs, processes and outcomes.

3. At the start of the programme, we explored three research methodologies: the discipline of noticing, self-study (in particular the role of critical friends) and appreciative enquiry. In what ways did each of these influence your experience of the programme?

4. Is there anything else you'd like to say about your experience of the programme?



Appendix L: Ethical review form

Sheffield Hallam University

SHARPENS YOUR THINKING

Masters in Education Programme

Enquiry Based Project

Ethics Sub-Committee Checklist

Student Name: Emily Perry **Committee Date: 13/11/12**

Supervisor: Mark Boylan

MEP Ethics Sub-Committee Decision

Please tick ✓

Approved	
Approved with attention to the ethical issues specified in comment box below	√
Revise and re-submit - following the guidelines below (re-submit at any time)	
Rejected for the reasons specified in the comment box below (submit for the forthcoming Ethics sub-committee meeting	

Comments

The benefits of this research to participants and others is duly noted. You acknowledge the complexity of the ethical issues particularly with regard to video, this is more carefully explained in the consent letter (this is very long – I wonder whether it could be clearer more succinct or different letters for different participants).

What will be the nature of the briefing to participants re their ethical considerations in videoing others – this could have more detail.

I think it is important that the responsibility for ethical considerations of those undertaking the CPD is with the researcher – this is difficult as it will be through a third party – and you do acknowledge some of the issues.

Committee rep	Dr N.J.Lightfoot	Date	10/11/12

signature			

Sheffield Hallam University

SHARPENS YOUR THINKING

Masters in Education Programme

Enquiry Based Project

Ethics Sub-Committee - Student Checklist

		Yes	No	See comments
1.	Is there sufficient information presented to enable a decision to be made re ethics.	√		
2.	Are all significant Ethical issues identified?			√
3.	Are there any ethical implications that make it inappropriate to undertake the project?		√	
4.	Are all ethical issues addressed appropriately? *e.g. Arrangements for voluntary consent, confidentiality and right to withdraw; consideration of power issues and conflicts of interest*	√		
5.	Does the project involve any staff or service users, parents or carers in NHS or Social Care? *If yes, which of the following applies:* *a) The application must go through the NHS or Social Care ethics committee* *b) You have attached written confirmation from your employer / placement that the project can be classified as a local audit or evaluation*		√	
6.	Has the correct and unaltered form been used?	✓		

7.	Has the form been authorised by your supervisor?	✓		
8.	Are sample consent letters/information sheets attached?	✓		
Are the following included on the consent letters/consent form/information sheets:				
9.	Supervisors contact details	✓		
10.	Right to withdraw	✓		
11.	Arrangements for confidentiality	✓		
12.	How the data will be used and disseminated	✓		

Appendix M: Participant consent form

Research study information sheet

As part of my MA Education at Sheffield Hallam University I will be evaluating the impact of the Expert Episodes CPD programme on participants' practice, values and beliefs. This means that, by taking part in this CPD programme, you will also be participating in a research study.

Before you decide to participate, it is important for you to be aware of the purpose of the study and what it will involve. Please take your time reading this information and feel free to contact me on 0114 2254891 or by email e.perry@shu.ac.uk to discuss anything about the study. We will also spend time on the first face-to-face day discussing any issues or concerns you may have about the research study.

I receive formal supervision in the conduct of this research. My supervisor, Dr Mark Boylan (m.s.boylan@shu.ac.uk, 0114 225 6012, 11th Floor, Owen Building, Sheffield Hallam University S1 1WB) is available if you have any questions or concerns about your participation in the research study.

Once you have read the information here, please sign the attached consent form and return it to me if you are still interested in participating in the CPD programme.

Please note: on this occasion it is not possible to participate in this CPD programme without also agreeing to take part in the research study. However, if the programme is successful it may be rolled out to more participants later and we will inform you if this is the case.

Aims of the research study

The aim of the research study is to evaluate the impact of a programme of CPD on the practice, values and beliefs of professional development leaders. The study will explore participants' experiences and opinions of the programme and its impact, drawing on the use of video observations, their collaborative analysis, reflective discussions and programme evaluations.

Data collection and analysis

The majority of data will be drawn from activities which will take part as an integral part of the CPD programme, including reflective learning commentaries written throughout the programme, end-of-programme evaluations and post-programme impact feedback. Follow-up small group or individual interviews may be carried out to gather more information. If interviews take place, they will be recorded using an audio recorder and then transcribed. You will be sent a copy of the transcript so that you can amend or clarify your contributions. Audio files and transcripts will be stored in password-protected files on the University's secure server.

Data will be analysed to identify key aspects of participants' learning through the CPD programme, and areas for further development in the structure and content of the

programme. Your professional skills and areas for development will not be analysed unless they relate directly to the evaluation and future development of the Expert Episodes programme.

Video observations

Video clips of participants' practice will not be used to evaluate the quality of participants' delivery. As a participant, you will choose what to record and what to share with the community; as some examples, you may choose to record yourself when introducing an activity, leading a discussion, gathering feedback, presenting information or talking to individual teachers, depending on what you think will be most beneficial to analyse and discuss. The focus of the video recording is your practice, and how this impacts on the teachers taking part in your CPD.

You will be in control of downloading and then deleting the video from the video camera, so that no-one else has a copy of it. You will upload the videos to a secure website, which only licensees have access to. Within the secure website, you have control over who (if anyone) has access to your video clips. In the context of the CPD programme, the expectation is that all participants share at least one video clip with the other members of the community.

Teacher consent

It is important that all teachers taking part in the CPD which you choose to video are aware that they too are participating in a research study. Please make sure that you explain this to them, and explain that the purpose of the video is to explore the practice of professional development leaders, not to assess their engagement in the CPD. All teachers involved in the session will need to sign a written consent form, which I will give to you at the first face-to-face day.

If teachers refuse to take part in the research study, it is important that you respect their decision and this may mean that you need to reschedule your recording. We will discuss this further on the first face-to-face day.

Confidentiality and anonymity

Within the community of participants in the CPD programme, neither confidentiality nor anonymity cannot be offered since it is important that we participate openly and honestly in discussions and activities. However, all participants will be asked to respect confidentiality within the community and not discuss individuals' specific opinions, experiences or views outside the group of participants. You may wish, however, to discuss broad aspects of the programme with colleagues in order to reflect on learning through the programme, and I would encourage this.

End-of-programme and post-programme evaluation and impact forms will be anonymous.

In my write up of the research study for the MA Education, and in any resulting publications, all participants will be anonymised.

Right to withdraw

You may withdraw from the CPD programme, and thereby from the research study, at any time while it is in progress, and then none of your contributions will form part of the analysis. After the end of the CPD programme, you will have two weeks during which you may withdraw consent for your contributions to be used in the research study. After this two week period, it will not be possible to remove your contributions from the study.

Dissemination

A report on the CPD programme will initially be disseminated through the national network of Science Learning Centres' internal communication channels, such as written reports and presentations at internal conferences. It is likely that, if successful, this model of CPD through video observation will be developed further for use with teachers and/or other professional development leaders, and there may be opportunities for you to be involved with this.

As a community, we may wish to consider writing an article for publication or to publish an online video or blog explaining our experiences of the CPD programme. If this is the case, the community of participants will agree collectively which aspects of the programme we are happy to share beyond the community. For example, we may decide as a group to disseminate the benefits of the video observation technology by sharing some of our video clips, and the discussion surrounding them, with a wider audience. However, if not all participants agree to this, their video clips, and their contributions to discussions will not be shared.

Consent form

Please answer the following questions by circling your responses:

I have read and understood the information sheet about this research study	YES	NO
I have received enough information about the study to allow me to decide whether or not to take part	YES	NO
I understand that I am free to withdraw from this study, but that if I do so, I may not also participate in the CPD programme at this time	YES	NO
I understand that participation in the research study and the CPD programme will involve the video recording of my practice	YES	NO
I understand that, in the write-up of the research study, my contributions will be anonymised	YES	NO
I agree to take part in this study	YES	NO

By signing below, you indicate that you have voluntarily decided to take part in this research study having read and understood the information in the sheet for participants. It will also indicate that you have had adequate opportunity to discuss the study and that all questions have been answered to your satisfaction.

Thank you for agreeing to take part!

Emily

Name (block letters): .....

Contact email address: .....

Signature: ..... Date: .....

Appendix N: Teacher consent form

Expert Episodes: An Enquiry-based CPD Programme for Professional Development Leaders

The professional development leader running your CPD session is currently involved in a CPD programme of their own called *Expert Episodes: An Enquiry-based CPD Programme for Professional Development Leaders.*

We would therefore like to film extracts of your CPD session today. The professional development leader running the session will explain to you exactly what they wish to record; they may wish to record themselves introducing an activity, leading a discussion, gathering feedback, presenting information or talking to individual teachers, depending on what they think will be most beneficial to share with the participants in *Expert Episodes*.

The video recording will be shared through a secure website for reflection on and analysis by the participants in the *Expert Episodes* programme.

Anything you say which is recorded on video will only be used as a reflection of the skills and pedagogies of the professional development leader. It will not be used to assess your own skills or areas for development, except where they directly relate to the CPD session you are engaged in and to the professional development leader running the session.

Research study

As part of my MA Education at Sheffield Hallam University I will be evaluating the impact of *Expert Episodes* on the practice of professional development leaders. The study will explore participants' experiences and opinions of the programme, drawing on their use of video observations, their collaborative analysis, reflective discussions and the programme's evaluations. This means that, by agreeing to be recorded, you also agree to participate in a research study.

Confidentiality and anonymity

The participants in *Expert Episodes* are professional development leaders drawn from a range of contexts, including Science Learning Centre staff, external consultants, and school-based CPD providers. All participants have agreed that anything shared in the programme is confidential and that individuals' opinions, experiences or views should not be discussed outside the group of participants.

The focus is on the pedagogies and skills used by professional development leaders. Only licensed participants, chosen by the professional development leader, will have access to the video clip through a secure website. After upload, the video will be deleted from the camera and from the professional development leader's computer.

Your professional development leader may draw on the comments you write on your evaluation forms to provide further information. If this is the case, this data will be anonymised.

Dissemination

The evaluation of the CPD programme *Expert Episodes: An Enquiry-based CPD Programme for Professional Development Leaders* will initially be disseminated through the national network of Science Learning Centres' internal communication channels, such as written reports and presentations at internal conferences.

We may also write an article for publication, or publish an online video or blog explaining what our experiences of *Expert Episodes*. If this is the case, we may share some of our video clips, and the discussion surrounding them, with a wider audience of teachers, Science Learning Centre staff and academics. If you feature in any of these video clips, you will be contacted again to ensure that you are happy with them being shared more widely.

Right to refuse

You may refuse to be video-recorded. If this is the case, the professional development leader may decide to continue with the video recording of your CPD session, depending on the focus of their recording, but will ensure that you do not feature in the recording.

Contact details

Feel free to contact me by email (Emily Perry e.perry@shu.ac.uk) to discuss anything about this study. I receive formal supervision in the conduct of this research. My supervisor, Dr Mark Boylan (m.s.boylan@shu.ac.uk 0114 225 6012, 11th Floor, Owen Building, Sheffield Hallam University S1 1WB) is also available if you have any questions or concerns about your participation in the research study.

Thank you for agreeing to take part!

Emily

Please answer the following questions by circling your responses:

I have read and understood this information sheet about the *Expert Episodes* CPD programme and the associated research study	YES	NO

I understand that video recordings will only be shared with a small group of professional development leaders through a secure website	YES	NO
I have received enough information to allow me to decide whether or not I am happy for my CPD session to be video-recorded today	YES	NO
I agree to be recorded for the purposes of this CPD programme and associated research study	YES	NO

By signing below, you indicate that you have voluntarily decided to take part in this research study having read and understood the information here.

Signature of participant: …… Date: ……

Name (block letters): .....

Contact email address: .....

Appendix O: Sample intended learning outcomes form

Science
LEARNING CENTRES

Intended Learning Outcomes Form (ILO)

This form aims to capture the specific learning outcomes you intend to achieve from this programme.
Please complete this form and bring a copy with you on the day. You may wish to discuss your intended learning outcomes with a colleague.

Name: Linda Needham

Date: 17.12.12.

Intended learning outcomes	Why these outcomes are important
Personal and professional outcomes (knowledge, skills, attitudes etc) To improve my satisfaction with the way CPD I design + deliver To be more self aware of what good looks like. Wagoll learn about the technology - be confident → so can promote the programme to teachers. To inform future thinking for my masters reflection	Self-improvement, lifelong learning
Broader outcomes (for teachers, colleagues, pupils) Better outcomes for TS and ultimately pupils - more interesting exciting lessons, better science understanding)	

Appendix P: Sample video analysis forms

Self Study analysis for video owner	
QUESTION	OPEN ENDED TEXT
Watch the video of yourself, and then note one or two features of your practice you think are interesting, whether that's because they are effective or less effective (in your view).	I think my body language- lots of use of hands, moving around a lot, delivery from standing most of the time- comes across as enthusiasm but wonder whether that is what the audience will think? This session, like most of my work, is mainly full of activities which lead to discussion. I do relatively little "presentation" (although actually I seem to be talking a lot on here!). Do I get this balance correct? Some people expect to be presented to at least for a proportion of the time on a course. Does my "expertise" come through in other ways? Do I manage discussions clearly enough to enable people to clarify their learning?
What made you notice these features of your practice?	This self observation has actually been very surprising- all the points above are things I have not really reflected on before. I always reflect on participants feedback through evaluation forms and feel I am refelctive enough to self evaluate sessions and decide whether I think they have been valued by colleagues but that tends to be an overall feel rather than specific points. Some of these questions are ones I would like to ask participants. I wonder whether the questions on the SLC evaluation forms are specific enough to give a true insight?
What questions would you like to have answered about your practice, whether this relates to the current video or to a future CPD episode?	As above
If you have any other reflections from watching the video, note them here.	I shouldn't have set the camera up in profile as this exposes my double (triple?) chin and stomach!
What do you think these features of your practice mean in terms of your effectiveness as a professional development leader?	Whilst there will alwys be people who prefer one presenter over another due to style, do my habits/ style present a barrier to some participants? Can we be all things to all people? What would participants say makes the perfect CPD session for them?
Analysis for critical friend	
QUESTION	OPEN ENDED TEXT

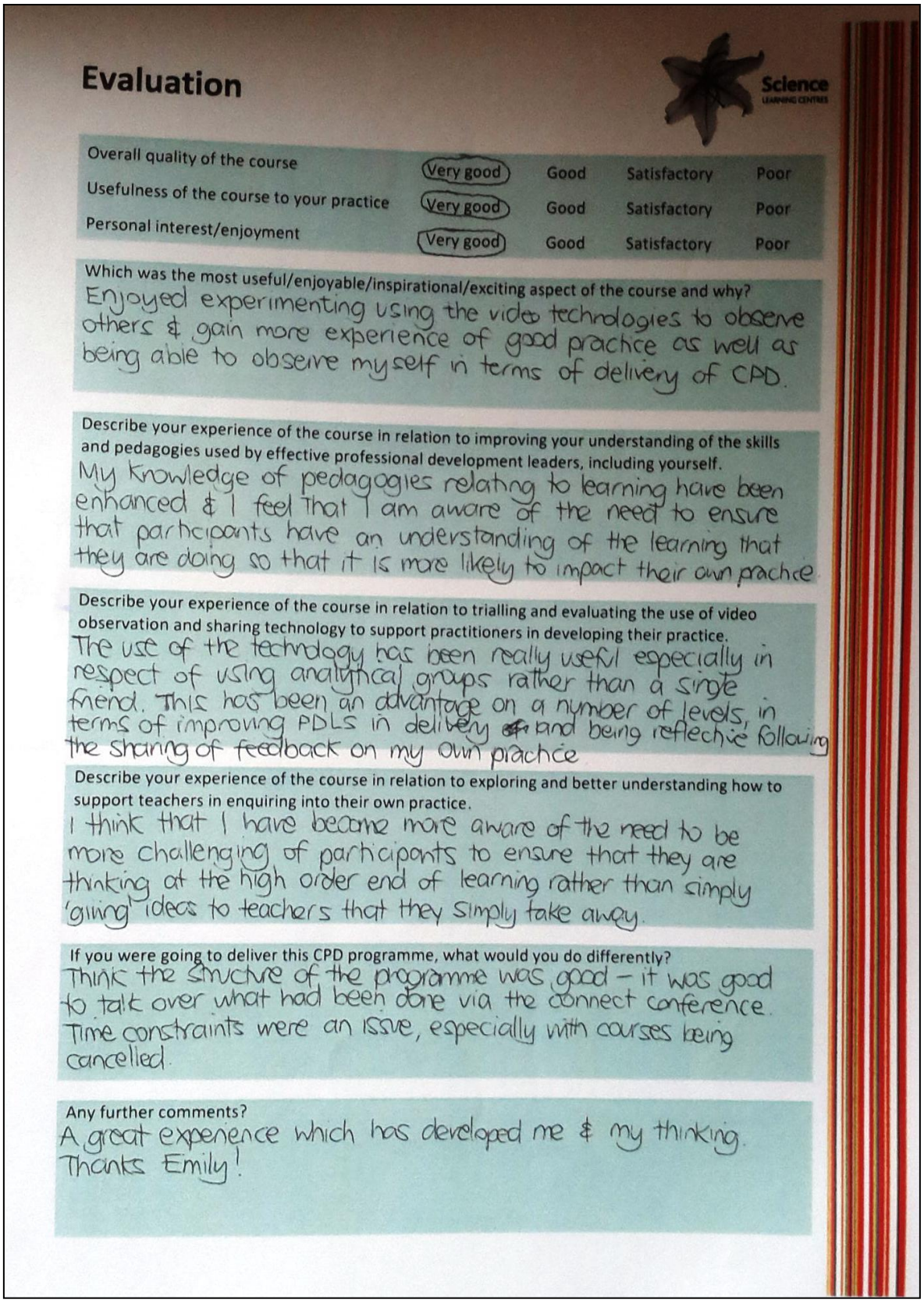
Watch the video which has been shared with you, and then note one or two features of the professional development leader's practice which you think are interesting.	Relaxed start, you are smiling, and making eye contact, sitting down at the beginning gives the impression that you are one of them. The face to face activity ensured they all talked, and you expertly extended the task to model how it could look in the classroom. You were good at keeping them to time for the task, checking your watch. You asked questions of them about how it would work, and what they might do next, you didn't give them answers. They were able to reflect on their context and decide if this activity would be something they could use in the future. An effective activity to show them that you are open to suggestions from them, and you expect them to join in. You often said, in the classroom, or in my experience, you gave confidence that you were still in tune with teaching. I have continued to watch until about 42 minutes when the tape got stuck, and I couldn't watch any more, so sorry cant see your recommended part. I noticed that you didn't give any answers to the question, 'my pupils can talk the answers but get stuck writing it down' You gave a concrete example that could be used in class for the F-F . activity When given the task to come up with conclusions for the exam command word analysis, one person (SL?) started to shout out what she thought, and you responded, that then resulted in you giving what you thought, there was no feedback from the other teachers. I thought you looked uncomfortable when the card sort task was going on, paper shuffling, sitting down briefly, and then revving up to stop the task. You say " We are not going to dwell on this too much" several times.
What made you notice these features of their practice?	I was interested in the management of the F-F activity as I have also tried it. Im relieved that they also got confused about which way they were arguing, this happened to me, and I put it down to my poor explanation of the task.For my second attempt at observing the later stages of the video, I tried to look at how you were interacting with the group, and asking for and responding to their contributions.As this is a short departmental input I was also interested in how you kept the pace up without making it feel rushed.
What do you think these features of their practice mean in terms of their effectiveness as a professional development leader?	I think I have commented on this in the first question. Open to suggestions from the group, able to take and answer questions expertly. Everyone felt as though they could contribute. Gave the impression of still been in tune with teaching and the demands of science learning Part 2 observations I think there were times when the not 'dwelling' may have made me feel that we were skirting round the issues, should more time have been set aside for departmental/paired discussion? Im a bit frustrated that I cant see the rest of the clip, I am assuming that there will be time in this and other sessions with this group to make sure their needs are addressed.

What questions would you ask the professional development leader about their practice, having watched the video?	Was there any discussion about the effect of strengthening literacy on science learning? This can often come out of the F - F discussion, some teachers DO still think that its an add on for the science department. (I think I have caught some of this going on when they returned to their seats) How did you feel about the interruptions from the subject leader? How do you think the department felt about these? She seemed to have a lot to say, and quite liked the sound of her own voice. (that comment may be a little harsh...) Part 2 observations My comment above about the SL still holds true, I think she sabotaged the discussion about command words (unintentionally) you began to give your opinion rather than listened to theirs . Were you picking up any comments made during the card sort activity? I think I would have circulated and listened in then so that I could use comments made to drive the discussion during the feedback. Were you thinking that time was racing away and you had lots to do?
If you have any other reflections from watching the video, note them here.	I will need to watch again to look out for the things you wanted us to look for, waving hands, jumping around. Or maybe its in the other clip? Yes I think there is a bit of arm waving and double handed gestures, I don't think this detracts from your presentation, it adds force to your statements.
Analysis for critical friend	
QUESTION	OPEN ENDED TEXT
Watch the video which has been shared with you, and then note one or two features of the professional development leader's practice which you think are interesting.	Work in progress, Adam. I've watched the first section and then had problems. Relaxed, friendly, authoritative, approachable, careful listener, appropriate use of humour (you made me smile too), good task clarification after some apparent misunderstanding (I think the participants maybe weren't listening carefully enough), you pointed out ways of using this task in class and clearly understand and appreciate what it's like to work in 'real' classrooms. You refer to the research base for your/our work and show that you are keeping up to date with what Ofsted expect, which gives you credibility
What made you notice these features of their practice?	What I've described above chimes with what I think I do and hope to achieve. I think it is so important to establish this kind of relaxed yet informed/authoritative and confident relationship with the participants, one where you aren't setting yourself up THE expert and above the participants in some way.

What do you think these features of their practice mean in terms of their effectiveness as a professional development leader?	I think it highly likely that participants see you as someone who is an expert and knows what it's like in the classroom and that they value what you have to say and the strategies/activities/techniques that you use and recommend.
What questions would you ask the professional development leader about their practice, having watched the video?	I'm often torn between looking at more things in less detail or going into fewer things in more detail. I wonder sometimes if I ought to get participants work up their own ideas in response to my input whilst we're together but then I end up thinking they can do this in their own time and would prefer moving on quickly. Evaluations tend to back me up but I'm still not convinced. Do you find yourself thinking the same and if so what is your conclusion?
If you have any other reflections from watching the video, note them here.	I like the way you appear - your use of 'hands and jumping around' just conveys enthusiasm and animation to me.
Analysis for critical friend	
QUESTION	OPEN ENDED TEXT
Watch the video which has been shared with you, and then note one or two features of the professional development leader's practice which you think are interesting.	Thanks for sharing the video - it has now made me start to wander what I do with my own hands and if I manage to stay on task! These comments are for the first sections you asked us to look at 5 - 17 minutes. 1. use of hands - when you are listening to some one, you do not move your arms or hands but keep them quite still, while you are activiely making eye contact with the person who is speaking. When you are speaking you move your arms quite alot! 2. Jumping around - it is always easy to get side tracked but I think you did an excellent job of staying on task but providing good reasons as to why where doing the particular activity. 3. Balance if input - I think that it is always good to get them doing something. My first thought was that you were telling them too muchh e.g. this is how I would use it in the classroom rather than getting them to come up with ideas but as I watched a bit more you started to ask them how they would follow up the activity. Comments for 40-53 mins 1. Use of hands - comments as above 2. Jumping around - During the input on Hatti's research, you did jump back to Ofsted and talk about literacy - not a problem for me who is really familiar with the research but I am just wondered if it would have distracted some of the delegates (as one of them did say earlier that she got distracted easily!) 3. Balance of input - I think that it was about right here you talked for about 7 minutes before going onto a short task but there was interaction during that time - all seemed to be listening. The discussion after the task was very interactive.

What made you notice these features of their practice?	I have looked at the three things you asked us to look at: 1. use of hands 2. Jumping around 3. Balance of input
What do you think these features of their practice mean in terms of their effectiveness as a professional development leader?	1. I actaully like how your use your arms because when you are listening, you are clearly concentrating on the question / comment and not thinking about other things. Also when you are speaking and trying to get an idea across, arm movements can help to clarify things such as pointing to which group of 4 goes first ect. How you want the group to organise themselves. I think you come across as enthusiastic and don't think it would put people off! 2. Jumping around - what you did was effective as it gave background to the task giving teachers a reason why you where doing it. 3. On reflection I think you had thebalance about right as they were all really engaged withthe task and went on to ask some good questions which shows that the task had really made them think and reflect upon their own classroom practices. Additional comments from 40-53 mins. Balance of input - I think this was very effective because you were modelling ways this should be done in the classroom and providing lots of challenge. This was backed up by the level of discussion.
What questions would you ask the professional development leader about their practice, having watched the video?	When you meet the group next time, are you intending to find out if they have used the activity in the classroom and if so find out how it went? This may be coming later - but did you / are you intending to have a discussion about what makes a good grade A answer and how it compares to for examples a grade C answer?
If you have any other reflections from watching the video, note them here.	As I was so focussed on the three things already talked about, I think that I would have to watch the video again before I could comment on anything else.

Appendix Q: Sample completed evaluation form



Evaluation

Science Learning Centres

Overall quality of the course	(Very good)	Good	Satisfactory	Poor
Usefulness of the course to your practice	(Very good)	Good	Satisfactory	Poor
Personal interest/enjoyment	(Very good)	Good	Satisfactory	Poor

Which was the most useful/enjoyable/inspirational/exciting aspect of the course and why?
Enjoyed experimenting using the video technologies to observe others & gain more experience of good practice as well as being able to observe myself in terms of delivery of CPD.

Describe your experience of the course in relation to improving your understanding of the skills and pedagogies used by effective professional development leaders, including yourself.
My knowledge of pedagogies relating to learning have been enhanced & I feel that I am aware of the need to ensure that participants have an understanding of the learning that they are doing so that it is more likely to impact their own practice.

Describe your experience of the course in relation to trialling and evaluating the use of video observation and sharing technology to support practitioners in developing their practice.
The use of the technology has been really useful especially in respect of using analytical groups rather than a single friend. This has been an advantage on a number of levels, in terms of improving PDLs in delivery and being reflective following the sharing of feedback on my own practice.

Describe your experience of the course in relation to exploring and better understanding how to support teachers in enquiring into their own practice.
I think that I have become more aware of the need to be more challenging of participants to ensure that they are thinking at the high order end of learning rather than simply 'giving' ideas to teachers that they simply take away.

If you were going to deliver this CPD programme, what would you do differently?
Think the structure of the programme was good – it was good to talk over what had been done via the connect conference. Time constraints were an issue, especially with courses being cancelled.

Any further comments?
A great experience which has developed me & my thinking. Thanks Emily!

Appendix R: Extract from notes of video of follow-up interview

What were your intended learning outcomes?

Jack
the process of using the video in CPD - domain of practice
improving your own practice - personal domain
working with critical friends, opportunity to have a formal input - external domain

Sarah
How effective I am as a professional development leader - personal domain
Iris technology, so many schools and colleges that I work with are buying it - this is also personal domain, since it's about developing knowledge of the technology

Around 8 mins:
Sarah asking about the video, and saying that the video is important - if we had had people coming to observe it would have been different:
"the alternative would have been people coming in to watch each other... it would have been very different I think if we'd have done it that way... that would have been very different. I don't think it would have been as reflective... no, cos I think if i was delivering and someone was watching it would have been different from the video... "
This is quite useful in terms of evaluating the use of the video - the importance of videoing.
"I think you get a better result [with the video], and because you can watch it"

11 mins:
Sarah - external sources of info: the discussions, the readings, the video - these have all been inputs/
Barrier to learning in the domain of practice = time:
"I think there have been some outcomes. The bit that I'm struggling with a bit is that I don't think we've really had time to do the experimentation bit because we looked at each other's videos and we said things, you know, and i obviously picked up on those things, and now when I do the next CPD i might do something different, but I haven't really now, you know, but I will do it, but in terms of the timeframe of your project, we're not necessarily going to get the full model to work really, are we? Which is a bit of a shame."

Salient outcomes:
"my interpretation of that is, you know, more reflective, more critical about the way I am delivering CPD, and perhaps thinking a lot harder about when I'm designing a day, or whatever's worth, of CPD, and picking up on some of the things that came out from watching videos and people watching my video, particularly about that whole area of monitoring, confirming that whatever you're trying to get across on that day, yes, has actually happened, cos I still don't think we're very good at it, although we preach it all the time at teachers to use with kids, I don't think we're very good at it. I don't think I'm very good at it"
..."professional experimentation is the videos"

Jack (14 mins)
"you've got to have the professional experimentation in there, or professional thinking in there...
"there's a suggestion in the paper for that, that you actually have to have done something and seen a salient outcome from doing something before it turns into knowledge, beliefs and attitudes... so you don't believe it till you've tried it for yourself and seen that it's a success. I'm not entirely sure, it's a bit rigid that, I think... maybe it's because of our experience we know that it is going to work so we don't need to experiment because we know that it will work."
- a little critique of the model? I'm not sure what he means here though, think he too may be misinterpreting the model?!

29 mins
Jack
"having seen Liz query, question herself about the way she deals with paperwork at the beginning that has made me think that I don't do it well enough, so I have gone and improved a little bit there. One of the things was getting rid of some of the stuff that's in the course packs... it's just reminded me, Liz wanted to start with something that was a bit more engaging and that made me think that we should be doing that all the time anyway, and sometimes... but going through the formalities, you've got to do that as well... so it has made me think about starts more generally.

33 mins
If we had this conversation in six months time...
Sarah - do you have in your mind the things that you might experiment with?
"Well, the things like we've discussed, like how we might do more challenge, or how... so like the challenge... so in developing [Getting to Grips with A level Biology, a particular course] I've been thinking about that whole thing around challenge, yes? And it's also quite interesting having the discussion with Richard about the way he would deliver it, which might be different to the way that Jack would deliver it, and that whole thing about, you know, are we doing knowledge or are we doing pedagogy... but that has been interesting because I've had all that [the C&H model] in my head while trying to think about, you know, a particular course that's coming up."

Jack 36 mins
"I think it has helped us, I'd like to think we'd be doing that to some extent anyway, but it's given us a bit of space to do more and to do it more thoroughly"

Sarah 37 mins
"but it is something about just having that conversation, because we don't generally, well I don't, I just get 'here go and deliver this course' and I just go and do it, yes? And I don't have a conversation with anybody"

Appendix S: Sample follow-up questionnaire

Dear Expert Episodes participant

It is now a few months since the Expert Episodes CPD programme ended, and I am analysing data in order to identify key impacts from the programme.

The information below highlights some key findings. Please read the information in each question carefully and then respond with your views. The information you provide will be used to further clarify my findings.

Please type your responses into the boxes below each question. Boxes will expand as you type, if you wish to write a lot. When you have finished, please save the questionnaire and email it back to me at either *e.perry@shu.ac.uk* or *emilyjaneperry@gmail.com*. Alternatively, you can print this out and write into the boxes if you prefer, and then scan or post back to me.

Please return your questionnaire by Saturday 14 December.

Thanks very much for your help.

Question 1: Overall learning from the Expert Episodes programme

Evaluation forms and follow up interviews were analysed using a framework based on the Clarke and Hollingsworth model in which changes were identified in four domains:

	Domain of change	**Examples of changes cited in this domain**
Most frequently mentioned ↓	Personal domain (knowledge, skills and beliefs)	• being more reflective about one's own practice • learning more about models of teacher learning
	Domain of practice (professional experimentation)	• using the interconnected model in CPD sessions • trialling the use of the video
	External domain (external sources of information or stimulus)	• listening to others discussing their practice • watching others' videos
Least frequently mentioned	Domain of consequence (salient outcomes)	• gaining confidence in the ability to support others in using video • feeling happier with particular pedagogies

By far the most frequently reported changes were in the personal domain. Does this reflect your experiences of the programme? Explain your answer.

Yes in general I would agree: I think that for me, the opportunity to be more reflective about my own practice in the delivery of CPD was the key piece of learning that took from the programme. I am surprised however that the external domain was not more frequently mentioned as I found that I also learnt a lot from listening to others and watching other's videos

Question 2: Changes in the personal domain

Looking more closely at changes in the personal domain (knowledge, skills and beliefs), responses here were grouped further in order to understand more about the types of change taking place:

	Type of change	**Examples**
Most frequently mentioned ↓ Least frequently mentioned	Changing knowledge/beliefs about one's own practice	• being more reflective • thinking about how to start sessions • more aware of need to challenge
	Changing knowledge of research into CPD	• learning how we can measure the impact of CPD • learning more about teacher learning
	Changing knowledge/beliefs about others' practice	• seeing how "other people do it" • gaining experience of good practice
	Changing knowledge of use of video	• gaining confidence in using video • understanding potential of its use

The most frequently reported type of change related to changes in understanding of one's own practice. Does this reflect your experience of the programme? Explain your answer.

Again, yes generally agree this does reflect my experience of the programme, in terms of reflecting on my own practice and understanding how I might change particular aspects of that practice such as session start. I am little surprised that "changing knowledge of use of video" was ranked as least frequently mentioned—for me-understanding the potential of its use was important and something that I have passed onto other colleagues

Question 3: Key findings in relation to use of video observation technology

Although the value of video observation was acknowledged by all participants, there appear to be two main barriers to its use:

- The time needed to watch and reflect on the video after recording
- The "hassle" involved in setting up and recording

Does this reflect your experience of the use of video observation technology? Explain your answer.

My experience was the "hassle" barrier much more than the viewing of videos.

It may be necessary to further explain "the hassle" issue; the nature of CPD (which is possibly different to a lesson with a known group of students), requires the trainer to set up a rapour very quickly with a group of individuals they have never met before. Anything which distracts from this—such as setting up a camera etc.. could then effect the whole session.

Question 4: Longer term impact of the Expert Episodes programme

Since the end of the programme, can you identify any longer term changes in your practice as a result of Expert Episodes? For example, have you continued to think about your practice in a particular way, or made use of any of the readings in your planning or in CPD sessions, or have you video recorded yourself? If so, what impact have these changes had on your practice?

If you cannot identify any longer term changes in your practice, what do you think are the reasons for this?

I think I am now more generally reflective of my practice both in planning a session and post session delivery. I tend to think much more about what delegates are going to be doing/learning than what I am going to be delivering.

As ever I think time is a barrier in terms of longer term changes, often I go with whatever I've done previously, as I'm short of time and it provides the quickest , if not necessarily the best option.

This questionnaire has served a useful purpose in reminding me about the programme and that it would be useful to re-read through some of the materials from the programme as I think about what I'm doing next term.

Please return your questionnaire to me by Saturday 14 December.

Thanks again for your time and help.

Emily