IRIS Connect: Developing classroom dialogue and formative feedback through collective video reflection

Evaluation report and executive summary

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Independent evaluators:

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The Education Endowment Foundation (EEF) is an independent grant-making charity dedicated to breaking the link between family income and educational achievement, ensuring that children from all backgrounds can fulfil their potential and make the most of their talents.

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- evaluating these innovations to extend and secure the evidence on what works and can be made to work at scale; and
- encouraging schools, government, charities, and others to apply evidence and adopt innovations found to be effective.

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About the evaluator

The project was independently evaluated by a team from Birmingham University. The evaluation team was led by Peter Davies. Tom Perry and John Kirkman were researchers on the evaluation.

About the evaluator

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Executive summary

The project

IRIS is designed to improve primary school teachers' use of dialogue and feedback through using video technology for collaborative teacher development with a view to improving academic outcomes for pupils. It is based around a video technology system (IRIS Connect) which enables teachers to record, edit, and comment on teaching and learning.

In this pilot, the project comprised six 'film club' events each lasting two hours: three in which teachers reviewed lesson clips from other schools, two in which they reviewed each other's lessons, and one film club in which they reviewed their experience. The project aimed to create long-term, whole-school change, embedding the use of dialogue and feedback in school culture. This evaluation, however, focused specifically on the impact of IRIS Connect on the teachers attending film clubs, as stated in the original protocol agreed prior to the project starting.

Schools were free to choose which teachers participated in the trial, but were encouraged to focus on Year 5 pupils. Teachers worked collaboratively in the 'film clubs' to review lesson clips from other schools and to plan, teach, record, and review their own lessons using the IRIS Connect online platform. The project was designed and supported by IRIS Connect and Whole Education with advice from academics at the Universities of Cambridge and Leeds, and additional content from Routledge.

This pilot project evaluated (i) how teachers implemented the intervention, and (ii) the change in teachers' thinking and practice. Teachers participating in the project were compared with other teachers in their schools who did not participate. The project lasted for seven months from January to July 2016. The first three clubs in each school were held between January and April and the second three between May and July. Twelve schools were initially recruited for the project, eleven of which participated.

Key conclusions
1. The overwhelming majority of teachers who responded to the survey believed that the intervention was a good use of their time and had improved their practice.
2. During the seven-month pilot, three of the eleven participating schools chose not to engage with the second half of the project in which teachers videoed their own lessons.
3. The intervention demanded a substantial proportion of teachers' development time. A further trial should provide schools with sufficient time to build this into their annual plans and to embed the intervention in their plans for school improvement.
4. Ten of the eleven participating schools reported that they would continue to use IRIS Connect after the pilot had ended.
5. The training materials are well developed, clearly understood by teachers, and ready for trial.

What are the findings?

On the basis of a range of evidence from videos of lessons, interviews, and 'before and after' surveys, this evaluation has found: moderate evidence of change in school climate, strong evidence that film clubs promote discussion of teaching and learning, moderate evidence of change in teachers' thinking and moderate evidence of changes in practice.

All participating schools successfully implemented the first half of the intervention, which involved groups of teachers discussing video clips provided through the online platform. Three schools did not implement the second half of the intervention, which involved teachers videoing and discussing their own lessons. A large majority of teachers responding to an end-of-project survey were positive about

the value of the project to them, and all but one of the teachers acting as a 'school champion' reported that their school would be continuing to use IRIS Connect along the lines of this project.

The intervention seems to operate in two ways: (i) by helping teachers to identify possible improvements in practice, and (ii) by helping teachers to become more comfortable with discussing their classroom work with others. The second of these processes takes longer to embed and this carries implications for the length of an efficacy trial.

The intervention is well defined and could be replicated in the form used in this pilot. Some refinements could help teachers and schools to overcome some of the challenges they faced, such as: strengthening the online guidance to emphasise the value of teachers openly discussing the impact of the programme on their own practice; emphasising the value of discussion that focuses on *why* a particular example of teaching might be engaging pupils in a particular way that is fostering their learning; highlighting for teachers how the online platform can be used to identify and comment on moments in a lesson that exemplify an aspect of teaching deemed critical to learning; and encouraging discussion of these moments between schools. Many of these recommendations have been implemented by Whole Education in the time since the pilot.

How was the pilot conducted?

A process evaluation examined the implementation of the intervention and its impact on the thinking and practice of teachers in the pilot as compared with teachers in the same schools who did not participate. The evidence used in the evaluation included usage of data from the online platform, lesson videos, reports and videos of film clubs, focus groups, interviews, and surveys of teachers before and after the project, including a comparison group of teachers who did not take part in the pilot.

Table 1: Summary of pilot findings

Question	Finding	Comment
Is there evidence to support the theory of change?	Moderate (with strong formative findings)	Participating teachers believed the intervention improved their practice. This change in practice is supported by evidence collected through surveys and analysis of videoed lessons. No data on pupil outcomes was collected as part of this pilot.
Was the approach feasible?	Moderate	Although the intervention demands teachers' time, teachers felt it was worth it and the participating schools planned to continue after the project. Three of the eleven schools did not fully implement the programme within the seven months of this pilot.
Is the approach ready to be evaluated in a trial?	Yes	The online platform and the materials used in this project are ready for systematic delivery across a larger number of schools.

Introduction

Intervention

Whole Education and IRIS Connect is a whole-school approach to using video technology for collaborative teacher development with a focus on teacher feedback and dialogic teaching in primary schools.

Whole Education is a not-for-profit organisation that supports a large network of schools to improve through professional development. IRIS Connect, a technology provider, provides video technology and associated professional support for schools that buy a three-year subscription to their system. Together, both organizations aim to develop school improvement through collaborative professional development using video technology as a vehicle for whole-school development as well as a tool for improving teachers' thinking and practice.

Schools that joined this pilot received guidance outlined in a document 'Teaching is Learning' (IRIS Connect, 2014). This guidance draws substantially on Joyce and Showers (2002) and encourages schools to embed their use of IRIS Connect within a whole-school approach to improvement led by professional development. The guide advises schools on how to overcome teachers' fears that the technology will be used to make negative evaluations of their work. The guidance also suggests that the school should identify 'pathfinders' who will champion the use of the technology. IRIS Connect promotes a culture of 'open classrooms' in which teachers learn from each other by observing and discussing practice.

Schools already subscribing to IRIS Connect, and schools that had already declared their intention to buy a subscription, were invited to join this pilot. Schools that subscribe to IRIS Connect receive training on how to use the technology and how to make it central to a programme of school improvement. This training is provided through a two-hour training session at each school. IRIS Connect suggested that up to ten teachers, including the 'school champion', should attend this session. The school champion was responsible for leading and co-ordinating the use of the video technology in schools and for liaising with senior management to align this practice with school improvement objectives. They were also the key point of contact between the school, IRIS Connect, and Whole Education. IRIS Connect also provided on-demand troubleshooting support in the event of technical problems. Additional support was provided to the schools participating in the pilot. This support comprised project meetings held in London, online support through the IRIS Connect platform, and a telephone support line for advice and problem-solving (provided by IRIS Connect and Whole Education). Each school received a £1,000 budget for travel and supply cover costs.

IRIS Connect technology

Schools could opt for different quantities and types of video equipment. Three schools in this pilot opted for a single 360° camera. The remainder (eight) used two iPads mounted on flexible tripods, one of which could be used to follow the teacher, while the other could be used to capture the interaction and dialogue of a small group of children. Both options included the IRIS Connect online platform giving access to videos stored on the 'cloud'. We found no difference in practice or outcomes that could be associated with choice of technology format. Classroom videos could not be directly shared or transmitted via the web. Access to any video was controlled by the teacher of the class who could choose others who were permitted to view (though never to download) videos stored in the cloud. The platform included a 'cartoonising' feature so that individual children were not identifiable. Teachers in different schools were able to share videos, resources, and ideas through a group space on the online platform: online guidance and materials were provided through this online group space.
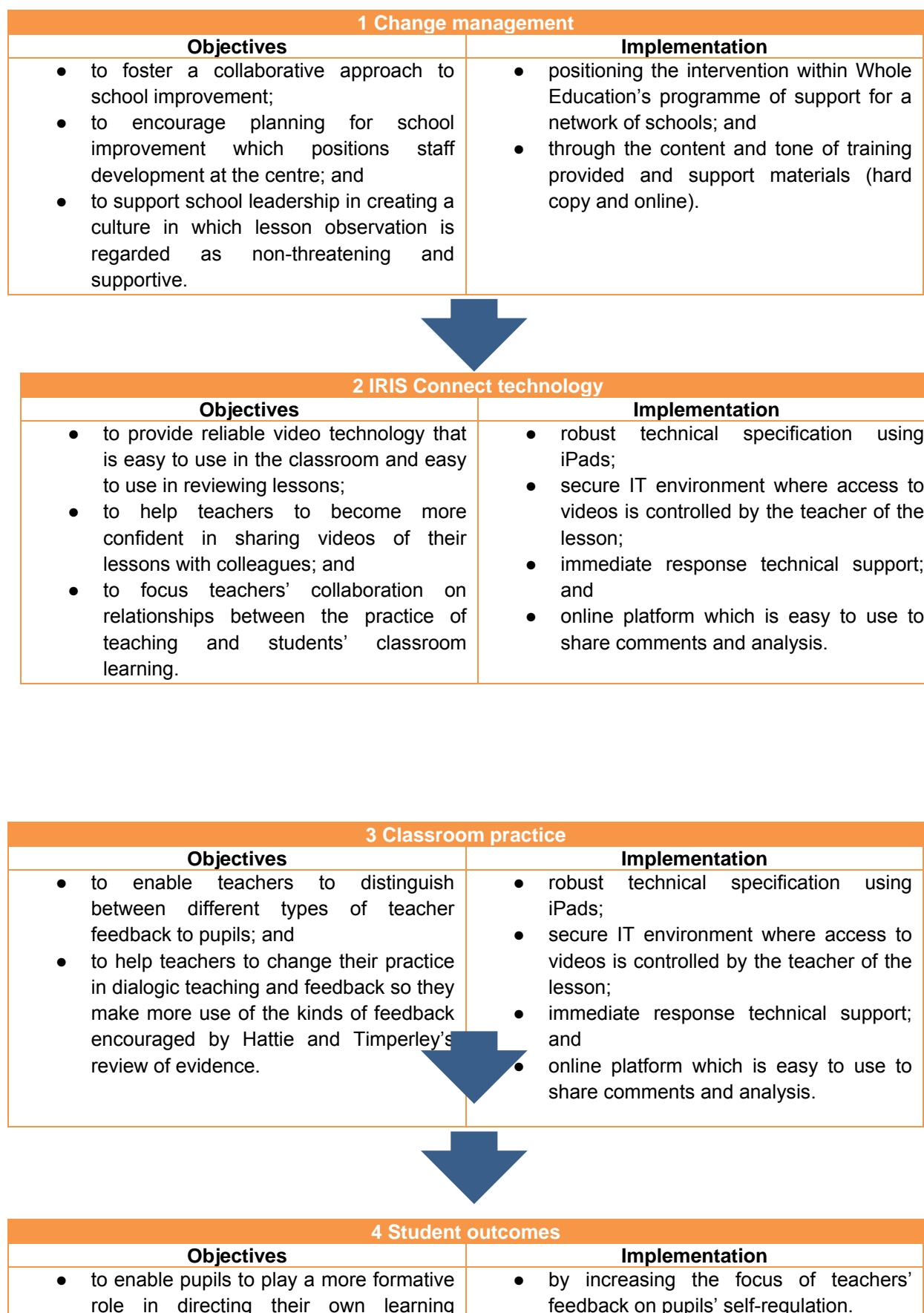
Anyone (including the teacher) viewing a video could add comments which were linked to exact moments in the video. The platform also had a facility enabling comments to be categorized using a

built-in 'form'. Data entered into these forms could be analysed using standard descriptive tools. The platform also included an edit facility which enabled teachers to edit a video, selecting a short clip illustrating a theme in which they were interested.

Improving collaborative teacher development

The theory of intervention is outlined in Figure 1. The intervention assumes that schools will use video technology more effectively when it is embedded in the school's strategy for improvement. The intervention also assumes a particular view of how schools improve. It takes it for granted that school improvement is fostered by collaboration and shared leadership in a culture which encourages teachers to be open about challenges they face and willing to discuss children's learning. These assumptions are represented in the first two sections Figure 1. Schools which have not already established this kind of culture and approach to school improvement may use the introduction of the video technology as part of a strategy to develop this approach to school improvement. In these circumstances, effects of using the technology are likely to take longer to emerge for teachers and for learners. The intervention assumes that teachers' use of the video technology (section 2 in Figure 1) will help to make teaching and learning visible to them in a way that is not routinely possible in the course of classroom teaching. Increased visibility of teaching and learning is expected to act as a stimulus for dialogue between teachers about the learning that is taking place and the ways in which teaching is helping or hindering this learning. It is presumed that this dialogue will lead to changes in teachers' thinking and practice which will improve children's learning (sections 3 and 4 in Figure 1).

Figure 1: Theory of Change

1 Change management	
Objectives	**Implementation**
• to foster a collaborative approach to school improvement; • to encourage planning for school improvement which positions staff development at the centre; and • to support school leadership in creating a culture in which lesson observation is regarded as non-threatening and supportive.	• positioning the intervention within Whole Education's programme of support for a network of schools; and • through the content and tone of training provided and support materials (hard copy and online).

2 IRIS Connect technology	
Objectives	**Implementation**
• to provide reliable video technology that is easy to use in the classroom and easy to use in reviewing lessons; • to help teachers to become more confident in sharing videos of their lessons with colleagues; and • to focus teachers' collaboration on relationships between the practice of teaching and students' classroom learning.	• robust technical specification using iPads; • secure IT environment where access to videos is controlled by the teacher of the lesson; • immediate response technical support; and • online platform which is easy to use to share comments and analysis.

3 Classroom practice	
Objectives	**Implementation**
• to enable teachers to distinguish between different types of teacher feedback to pupils; and • to help teachers to change their practice in dialogic teaching and feedback so they make more use of the kinds of feedback encouraged by Hattie and Timperley's review of evidence.	• robust technical specification using iPads; • secure IT environment where access to videos is controlled by the teacher of the lesson; • immediate response technical support; and • online platform which is easy to use to share comments and analysis.

4 Student outcomes	
Objectives	**Implementation**
• to enable pupils to play a more formative role in directing their own learning	• by increasing the focus of teachers' feedback on pupils' self-regulation.

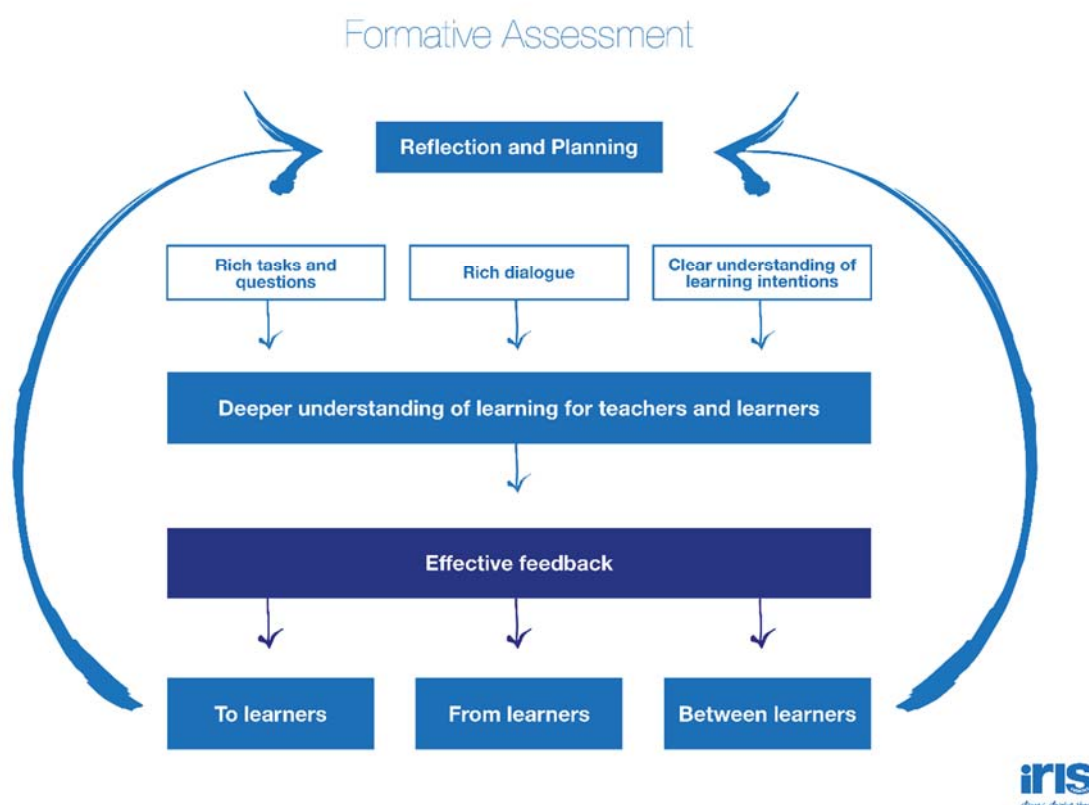| (informed by teachers' feedback); and ● to improve pupils' achievement as indicated by standardised assessments.	

Film clubs

Primary school teachers in pilot schools worked collaboratively, using IRIS Connect technology, to review lessons with a focus on improving feedback to students. Their collaboration was organised through 'film-clubs' where they reviewed a series of lessons from other schools and their own teaching.

The intervention lasted six months from January to July 2016. During this period, participating schools were asked to organise six film clubs, three between January and April and three between May and July. IRIS Connect provided videos of lessons for the first three film clubs and asked teachers to video their own lessons for the final two. Detailed guidance for organising these film clubs was provided through the online IRIS Connect platform. The film clubs were designed to develop teachers' thinking and practice in relation to classroom talk and higher-order feedback by 'making learning visible'.

Resources and guidance for the film clubs were provided through the IRIS Connect online platform (see Appendix 2A). Film clubs typically lasted about an hour and took place at the end of the teaching day in time reserved for meetings, preparation and CPD. This guidance referred to Figure 2 as an organising framework.

Figure 2: Guidance on feedback and teacher-child interaction provided through the online platform

Formative Assessment

Reflection and Planning

Rich tasks and questions | Rich dialogue | Clear understanding of learning intentions

Deeper understanding of learning for teachers and learners

Effective feedback

To learners | From learners | Between learners

iris

Film clubs one to three focused on classroom videos provided by IRIS Connect with support from the University of Cambridge and MediaMerge. Julia Snell and Adam Lefstein of the University of Leeds advised IRIS Connect in the design of the intervention and kindly provided two of the videos used in the film clubs. The online guidance suggested preparatory work for teachers along with questions the school champion could use to guide discussion. School champions were asked to arrange for film clubs four to five to focus on classroom videos provided by teachers in the school. The online guidance provided guidance to teachers on selecting video clips for the film clubs. There was also guidance to school champions on how to organise the discussion of the lessons. Following the final film club, schools were asked to complete a self-evaluation of their experience.

Film clubs one to three, between January and March, focused on short video clips of lessons on three aspects of dialogic teaching and feedback: classroom talk and teaching (film club one), questioning and group talk (film club two), and feedback (film club three). School champions were encouraged to prompt teachers' thinking before the film club using resources provided through the online system. Guidance on running and following up each film club was also provided online (see Appendix 2A for details). Teachers were asked to prepare for film clubs four and five (April to June) by selecting edited video clips of their own lessons which they believed would be useful for discussing the ways in which they were using dialogue and feedback in their teaching. The support provided through the online platform included Hattie and Timperley's categorisation of different types of feedback. The online platform also provided 'form' facilities that teachers could use to categorise comments which were added to each video clip. These clips were discussed at the film clubs and the guidance provided is summarised in Appendix 2A. In the final film club, teachers were asked to evaluate their experience in the film clubs and to discuss what they thought they had learned and how their practice had been influenced. Guidance provided to school champions asked for these reflections to be summarised using the online system.

Background evidence

Video technology was used in this pilot project to improve teachers' thinking and practice. The evidence that the school effect on achievement is largely due to the quality of individual teachers (Kane, Taylor, Tyler and Wooten, 2011; Slater, Davies and Burgess, 2012) provides a broad rationale for approaching school improvement in this way.

IRIS Connect provides over 900 primary schools in England with video technology that offers an extensive online platform enabling teachers to share and comment on videos of teaching and learning. The system gives individual teachers control over who has access to videos of their classrooms, and anyone with access to a video can add comments about specific moments in a video. The system also enables teachers to devise and share 'forms' which can be used to classify observations of events or dialogue in videos.

The proportion of state primary schools in England using IRIS Connect (930, around 5%) is considerably smaller than the proportion of state secondary schools using the system (723, around 20%).[1] Nonetheless, these figures imply 'promise' in an era when policy expects schools to be managing their own budgets and taking responsibility for teacher development.

MirandaNet and Preston (undated) reported results from a survey of 99 teachers in 30 schools using IRIS Connect. Most teachers reported improvement in their teaching skills (94%), confidence (74%), readiness to experiment (78%), and collaboration (81%). Just under half believed there had been improvements in pupils' learning and just over 10% believed there had been improvements in pupils' behaviour. The report does not explain how the sample was recruited and does not provide any information about how these teachers used IRIS Connect. Nor does it provide any direct evidence regarding outcomes for pupils.

Variation in approaches to using video technology to improve teaching and learning

There are two broad approaches to using video technology to promote and focus teachers' dialogue. One approach is one to one coaching. This may take place through real time 'in-ear' coaching or through a teacher and a coach reviewing a video after a lesson. As Quinn *et al.* (2015) point out, this increases the opportunities for teachers to review lessons together since they can do this when no lessons are timetabled. The 'Best Foot Forward' intervention based at Harvard University (Kane *et al.*, 2013; Quinn *et al.*, 2015) aimed to use this approach to video technology to 'de-privatise' teaching—to encourage more dialogue between teachers about how they are teaching and how this is connected with children's learning. A second approach to using video technology aims to improve teachers' dialogues through establishing collaborative groups that discuss videos of teaching from beyond the school as well as videos of their own lessons. This approach is referred to as 'video clubs' or 'film clubs'. The intervention in this pilot used the second approach.

One of the clear benefits of using video technology to support collaborative teacher development is increasing and deepening teachers' dialogue about teaching and learning (for example Borko *et al.*, 2008). This dialogue may be face-to-face or conducted through annotations enabled by an online system (Rich and Hannafin, 2009). Reports of interventions using video technology (for example Kane *et al.*, 2013) have emphasised that it takes time to develop a culture in which teachers are willing to talk freely about their work. At first, video technology tends to be taken up by a few enthusiasts and teachers prefer to avoid sharing videos of their lessons with others. The tendency for video technology to be gradually adopted forms the basis of the IRIS Connect approach to supporting schools, an approach that draws heavily on the arguments of Joyce and Showers (2002) for school leaders to develop a culture of shared practice and experimentation. Reviews of schools' adoption of video technology (see Brouwer, 2011) paint a similar picture to that observed during the development stage preceding this pilot. Therefore, schools' experience with the IRIS Connect video technology is likely to frame the way that teachers responded to the intervention.

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[1] Based on figures provided by IRIS Connect and data from Department for Education (2016a).

Reviews of evidence of the power of video technology for teacher development are broadly positive about impact on teachers' practice

Reviews (such as Brouwer, 2011; Gaudin and Chaliès, 2015) have identified emerging evidence that increased skills in lesson analysis, and a deeper understanding of how teachers and learners interact with subject matter, has an impact on teacher effectiveness. Brouwer's review also suggested that improvements were associated with a stronger understanding of the relationships between the practice of teaching and students' learning *and* with change in teachers' practice.

Studies reviewed by Brouwer (Sherin and Han, 2004; van Es and Sherin, 2005; Krammer *et al.*, 2006) point to these changes being a gradual process through 'video clubs' in which teachers learn through discussing videos over a sustained period, with interventions lasting up to a year. These studies have primarily used intensive qualitative observation to try to identify features of teachers' collaboration which are critical to improvement in their teaching. For example, van Es (2012) suggested that teachers learned more when they focused on 'moments of interesting thinking'. From their review of evidence, Gaudin and Chaliès (2015) infer that short clips of videos—which focus on a particular aspect of teaching and learning—are more effective than open-ended reviews of complete lessons in changing teachers' thinking and practice. Their review suggests that teachers learned more when they had opportunity to view a clip several times, and also that teachers are likely to learn more when discussion is guided by an experienced facilitator who has a deep understanding of the aspect of teaching and learning under review and well-developed skills in guiding discussions.

Interventions to improve feedback and dialogic learning align with evidence reviews disseminated by the Education Endowment Foundation

The intervention was designed in the light of the evidence (Gaudin and Chaliès, 2015) that a focus on a particular aspect of teaching and learning makes it more likely that video clips will provide a powerful focus for professional development. Gaudin and Chaliès do not cite evidence of impact on pupils. Therefore, the pilot was designed to focus on an area of teachers' practice for which evidence of impact on pupils is available. The EEF's Teaching and Learning Toolkit suggests that interventions focused on teacher feedback have an impact equivalent to eight months' progress, although the advice cautions that more recent meta-analyses indicate a more modest impact of about three months' additional progress or nearer four months when the approach is supported with professional development.[2] Teachers' feedback is framed by their expectations of children's role in learning, teachers' approach to classroom dialogue, and the design of tasks they set for children.

Film clubs provide a useful and feasible medium for teachers' collaboration in using video technology

Video recordings have been widely used in the context of 'plan-teach-review' cycles in which teachers meet regularly over an extended period to learn by analysing their own teaching. This pattern is exemplified in the literatures on 'Lesson Study' (Lewis, Perry and Murata, 2006) and 'Learning Study' (for example Holmqvist, 2011). Lesson Study and Learning Study involve small groups of teachers in cycles of collaboration in which they (1) plan, teach, and review a lesson, and (2) revise the lesson plan in the light of experience, teach the lesson again, and review the revised lesson. A typical cycle would involve three lessons. In Lesson Study the teachers decide the teaching strategies they will use; in Learning Study teachers explicitly aim to use 'Variation Theory' to direct their teaching. The key idea in Variation Theory is that teachers must highlight what they want pupils to learn through multiple varying examples while keeping constant all factors irrelevant to the learning.

The terms 'film club' or 'video club' have been coined to denote examples of 'plan-teach-review' which (1) have not explicitly referenced either Lesson Study or Learning Study and (2) have relied on direction from a researcher or facilitator who has taken a lead in selecting video clips for review and guiding teachers' discussion (for example, Sherin and Han, 2004; van Es, 2012). The film club model has been used in interventions explicitly focused on dialogue and feedback in the classroom (see, for

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[2]https://educationendowmentfoundation.org.uk/evidence/teaching-learning-toolkit/feedback/

example, Van den Bergh, Ros, and Beijaard, 2014; Gröschner, Seidel, Kiemer and Pehmer, 2015; Schindler, Gröschner and Seidel, 2015). These studies have reported positive impacts on teachers' thinking and practice about feedback—albeit with very small samples and without claims to generalisation. Kiemer, Gröschner, Pehmer and Seidel (2015) also reported positive effects on students' sense of autonomy and motivation to learn. However, impacts on pupil's achievements have not yet been reported. This pilot intervention used school champions in place of an external expert. The first three film clubs also used clips from teaching elsewhere rather than the teachers' own lessons.

Research questions

The key research questions are cross-referenced to Figure 1 in the list below. The pilot phase was used to judge (1) the likelihood of meaningful, sustainable, measurable change, and (2) the feasibility and acceptability of the intervention to schools and teachers.

- Key research questions regarding the likelihood of the intervention having meaningful, sustainable, measurable change:

    1. To what extent have teachers changed their practice (asking more open questions, allowing pupils more time to respond, and focusing feedback on the content and process of learning) while making use of the IRIS Connect technology? (3)
    2. To what extent have teachers changed their beliefs about teaching and learning (regarding the benefits of challenges for pupils, the kind of feedback that is more likely to prompt learning, and the role of dialogue in pupils' learning) while using the IRIS Connect technology? (3)
    3. To what extent have pupils changed their activity and role (for example, 'exploring' rather than 'receiving', talking as well as listening, in relation to peers as well as in relation to the teacher) while IRIS Connect technology has been used by their teachers? (3/4)
    4. What would be the appropriate student achievement measures to use? (4) (We were advised by the EEF before the pilot stage that it would not be appropriate to use the pilot to collect data on pupil achievement that would inform selection of achievement measures.)

- Key research questions regarding the feasibility and acceptability of the intervention to schools and teachers:

    1. To what extent have schools engaged with using the IRIS Connect technology? (1, 2)
    2. What (a) time, (b) money and (c) resource costs have been incurred by schools—
        i. during the set-up and adoption of the IRIS Connect technology?
        ii. during continued use of the IRIS Connect technology following its initial establishment? (1, 2)
    3. To what extent do participating schools believe that their engagement with the IRIS Connect technology has given them value for money? (1, 2)

Ethical review

This pilot evaluation received ethical approval (ERN_15-0987A) from the Humanities, Arts and Social Science ethics committee of the University of Birmingham. In this judgement the ethics committee approved amendments to the research process that were proposed in response to evidence provided through the Development Phase (for which approval was granted in judgement ERN_15-0987).

Information and consent forms for schools, teachers and parents are included in Appendix 1.

Project team

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- **Evaluation Team**

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Methods

Recruitment

The target was to recruit 12 primary schools to participate in the pilot—six with at least one year's experience with IRIS Connect and six that were new or relatively new to the technology. This sampling frame was designed to inform decisions about the time span of any future evaluation aiming to compare schools with and without video technology. The pilot followed a development phase in which 12 primary and secondary schools had participated. Each primary school in the development phase was invited to participate and informed that schools would be included on a 'first come, first served' basis. Six schools of the 12 agreed to take part in the pilot. Six schools that had purchased an IRIS Connect licence after the end of previous school year, or that were in the process of agreeing a contract, were invited to join the pilot. One of these schools dropped out in the first month of the pilot. Details of the total number of teachers in each participating school, and the number of teachers in each school participating in the intervention, are provided in table A5F.1 in the Appendices.

Six schools relatively new to IRIS Connect were also recruited, two of these starting with the system in the first month of the pilot. Three other schools that had recently purchased an IRIS Connect licence were also approached, but declined to take part. The sampling aimed to recruit one-form as well as two-form entry schools to check the feasibility of the intervention in small as well as medium sized schools. The flow of new schools being recruited shortly before the start of the pilot curtailed the scope for including more schools with high proportions of children eligible for free school meals.

The dates when each school became a user of IRIS Connect technology is shown in Table 2. This table also provides background information about the schools and the teachers participating in this intervention. School 12 dropped out early in the pilot phase when the school project lead left the school. The junior School 7 received notification of an OfSTED inspection shortly after the start of the pilot. They were subsequently graded 'Inadequate' but chose to remain in the pilot as part of their response to inspectors' recommendations, though the focus of the project work was switched to their linked infant school.

Schools were given freedom regarding the number of teachers and the process which led to these teachers participating in the project. Three schools (4, 8 and 10) required all teachers to participate. In four schools, teachers were asked to volunteer. In four schools the headteacher and school champion identified participants (see Appendix 5D for details).

Schools were encouraged to concentrate on Year 5 classes where possible, on the basis that a full trial would be likely to use assessment measures for children in Years 5 or 6 and schools would be more willing for teachers of Year 5 children to be involved in this pilot.

Schools subscribing to IRIS Connect commit to a code of ethical conduct which includes informing parents. In addition, schools participating in this pilot were asked to sign and return a memorandum of understanding (Appendix 1A). Schools were also asked to send a letter and opt-out form to parents (Appendix 1B). Schools avoided using classes where parents had opted out (for film clubs four and five). These ethical procedures were followed to allow teachers to share videos of lessons with members of the evaluation team. Film clubs four and five required teachers to create videos of their own lessons. The intervention encouraged teachers to share lesson videos with their colleagues beyond the specific expectations for film clubs four and five.

Table 2: Characteristics of participating schools (including date of first use of IRIS Connect)

Sch.[1]	Date of first use of IRIS Connect video technology	School in devpt. phase?[2]	Age range	School roll[3]	School gov.[4]	% FSM[5]	% EAL[6]	% at level 4 in KS2[7]	No. of teachers in school	TAs[8]	No. of teachers participating in the intervention
1	Sep 2011	Yes	7–11	389	Com	5	4	85	20	8	4
2	Feb 2014	Yes	5–11	610	Com	39	95	71	33	35	4
3	Apr 2014	Yes	3–11	456	Com	31	43	88	25	16	7
4	Jun 2014	Yes	2–11	439	Com	47	6	79	24	34	19
5	Jan 2015	Yes	4–11	303	F	8	9	77	13	15	4
6	Jul 2015	No	4–11	503	Com	20	12	82	21	34	5
7	Jul 2015	No	7–11	355	Com	17	2	82	18	29	9
8	Sep 2015	No	4–11	391	Com	26	5	75	21	13	17
9	Oct. 2015	No	3–11	212	Ac	39	5	86	13	18	3
10	Jan 2016	No	5–11	422	Ac	6	1	88	18	17	16
11	Jan 2016	No	4–11	241	Com	18	2	59	12	15	4
12	n/a	No	3–7	252	Com	15	3	15	13	16	n/a
	All schools in England							80			

[1]Sch = school reference number; [2]'Devpt': school participated in development phase; [3]number of children enrolled in the school in 2015; [4]School governance (Ac = academy, Com = maintained community, f = Maintained Foundation); [5]Percentage of children eligible for free school meals in last six years; [6]Percentage of children with English not first language; [7]Percentage of children achieving at least level 4 in reading, writing and maths at age 11; [8]TAs = Number of teaching assistants in the school.

Data collection

The logic model presented in Figure 1 was developed through a series of meetings between the project delivery team and the evaluation team before and during the development phase which preceded this pilot evaluation.

Apart from the metrics of use of the online platform, all the data was collected and analysed by the evaluation team. Data was not anonymised at point of collection in order to facilitate matching evidence from different sources. However, no individual data was shared with the delivery team.

IRIS Connect metrics data (see Appendix 5A)

The IRIS Connect online platform automatically records usage data. Teachers must log in to view or add content. Every time a teacher visits a page, views a video, uploads a video, or uses one of the forms provided, this is logged. Two forms of data were collected from the IRIS Connect server for the purposes of this evaluation:

1. The first set of data was associated with the feedback group itself. This was used only by project participants (or at least those that accepted the invitation to join the EEF project group). This data shows when pages in the feedback group content and associated video clips have been viewed. It is not possible to tell whether a clip has been viewed by one individual or by a group.

2. The second set of data relates to each individual teacher's use of the IRIS Connect system. This data reveals when, and by whom, videos (and clips of videos) were created. This data does not show whether a teacher has shared a video with anyone other than the evaluation team, neither does it distinguish between lesson videos specifically prompted by the project and videos which would have been created anyway.

For example, if a teacher logged on to the system in preparation for a film club and viewed several pages and watched a couple of video clips, this would all be recorded as part of the first data set. If the user subsequently attended a film club and the group accessed the system using the project leader's account, any pages visited would be attributed solely to the project leader. The system would not have recorded how many other teachers had attended the film club. Finally, if following a film club a teacher recorded three videos, the second data set would record that this teacher had created three videos (it would not distinguish between recordings prompted by the project and recordings that would have been made anyway).

These data sets provide evidence of school and teacher' engagement with IRIS Connect (RQ 5). The videos of film clubs and comments added to videos also provide evidence of ways in which teachers' thinking was stimulated (RQ 2), and videos of successive lessons taught by the same teacher offer insights into possible changes in practice (RQ 1). Although this data was collected by the project delivery team, it was collected automatically by the online platform to provide a record of use.

Project leads' summaries of film clubs (see Appendix 4A)

Schools were given an option of providing evidence of film clubs through a summary written by the project lead (rather than through sharing a video of the film club). This option was provided for schools that were in the early stage of using the IRIS Connect technology where some participating teachers were feeling cautious about sharing their work online. This evidence provided much less rich data than the videos of film clubs, but it helped to fill gaps that would have been created had we obtained no information about the implementation of film clubs.

Project lead focus group (see Appendix 3D)

During the meeting for project leads held mid-way through the project (22 April) we conducted a short focus group. Eight school project leads attended this meeting (schools 2, 3, 4, 6, 7, 8, 9 and 10). One additional teacher attended from each of schools 2 and 3. The focus group was used to gather data on (1) variation in the way that schools were implementing the project and (2) challenges and costs that were being faced (RQ 5–7). The focus group was recorded and transcribed.

School champion survey (see Appendix 3C)

School champions were surveyed at the end of the pilot to gather data on schools' engagement with the intervention, costs incurred, challenges that had been faced, and measures that had been taken to address those challenges (RQ 5–7).

Telephone interviews with teachers (see Appendix 3E)

We conducted short—roughly ten-minute—telephone interviews with eight teachers (who were not project leaders) during June and July to check our interpretation of the school's engagement with the project and video clips that had been shared with the evaluation team. Interviews were recorded and transcribed.

Surveys of all teachers in each school: January and July (to help answer RQs 1, 2, 3 and 5—see Appendices 3A, 3B)

All teachers in each pilot school were asked to complete a questionnaire administered in January and again in July (see Appendices 2A and 2B). Schools were asked to include teachers who were not participating in the intervention to provide indicators of change that might be attributable to the intervention.

Questions 1–8, 8a, 8b, 9a and 9b of the baseline survey were designed to gather evidence of teachers' thinking and practice regarding feedback. These questions were informed by Hattie and Timperley's (2007) review and by the development phase that preceded the pilot. Question 10 (first four items) was designed to gather evidence about the school context for using IRIS Connect technology in the light of the expectation that schools would typically take time to adjust their culture to facilitate effective collaboration in sharing and reviewing lessons. The final three parts of question 10 and questions 11 and 12 were designed to gather evidence of teachers' engagement with IRIS Connect and the feasibility of the intervention.

Shared teacher videos and discussion (see Appendix 5E)

The IRIS Connect online platform enabled teachers to share videos with the evaluation team. These shared video clips included any comments that teachers had added and any analysis they had conducted using the 'forms' facility on the online system. Teachers shared videos with the evaluation team with no mediation by IRIS Connect.

This data was gathered to help evaluate the extent to which teachers had engaged with IRIS technology (RQ 5) and to focus on feedback and dialogic learning (RQs 1 and 2). The video clips and comments also provided insights into any changes in teachers' thinking and practice, and ways in which such changes might be related to their use of the IRIS Connect technology.

Timeline

Table 3: Timeline

Date	Activity
Oct–Dec 2015	Recruitment of schools for the pilot managed by Whole Education
Jan 2016	One day meeting for project leads explaining the film clubs, online support, and reporting requirements
Jan 2016	Baseline survey of teachers in pilot schools (Appendix 2A)
Jan–Mar 2016	Schools implement film clubs 1–3
22 Apr 2016	Focus group with project leads (no members of the delivery team present)
Jan–Jul 2016	Metrics of teachers' use of the IRIS Connect online platform gathered automatically
Mar–Jul 2016	Teacher videos shared with the evaluation team through the IRIS Connect online platform
22 Apr 2016	One day project meeting (to check progress, introduce film clubs 4–6)
22 Apr 2016	Focus group with project leads (project delivery tem not present)
Apr–Jul 2016	Schools implement film clubs 4–6
Jun–Jul 2016	Telephone interviews with teachers
Jul 2016	End-point survey of all teachers (Appendix 2B)
Jul 2016	End-of-project survey of project leads (Appendix 2C)

Findings

Evidence to support theory of change

This intervention intended to improve children's achievement by changing teachers' thinking and practice. In this respect, the intervention is a long-term investment in teachers and schools whose fruit is expected to come over a period of years rather than as a direct consequence of one particular initiative. It assumes that schools need to provide a climate of 'open dialogue about teaching and learning' which will foster change in teachers' thinking and practice, and works towards this end. In this respect, the effect of the intervention is expected to be ongoing.

Consequently, the theory of change which justifies this intervention has many steps (as outlined in Figure 1). This section reviews the evidence this pilot provided about steps one to three in Figure 1. Videos of classrooms which were shared with the evaluation team provide some indicators of change in children's practice, but the focus of the evaluation was upon change in teachers.

IRIS Connect and the development of a climate of open dialogue ('embedding') (1 in Figure 1)

Participants in the project were more likely than other teachers in their school—according to a baseline survey—to 'learn a lot from their colleagues'. This probably reflects the voluntary nature of participation in four of the schools, and the basis for teacher selection in five others. It should be noted, however, that there was no easily discernible difference between the impact on teachers in project schools where all teachers participated compared to schools where a small (self-) selected group participated (see Appendix 5).

There was no detectable change in the likelihood that participants would 'learn from their colleagues', however participants did report feeling less pressure when colleagues discussed their teaching (see Table A5F.3), and non-participants expressed the same view. This could indicate a spillover effect of the project or it might reflect a change in the school associated with willingness to take part in the project. At the end of the project, roughly one third of participants and 40% of non-participants asserted that they felt under pressure when colleagues discussed their work (Table A5F.3).

Survey responses were higher than is typical: 80% of all teachers responded to at least one of the baseline and endpoint surveys, and 43% of teachers responded to both (Table A5F.1). These high return rates may be biased by self-selection, but nonetheless the majority of teachers—in the end-of-project survey—indicated that they would continue to use IRIS Connect to review their teaching. This suggests that the project had some success in generating a sustainable change in the opportunities for teachers to share and discuss their classroom experience.

The intervention requires schools to create time for teachers to meet together—either within or beyond designated preparation and development time. Since most schools plan programmes of continuous professional development a long time in advance, the pilot did create some challenges for schools that had not allocated time for this kind of activity (see comments from school champions in a focus group at the mid-point in the project, Appendix 5B). School champions believed that the scope for the intervention was contingent on whether school senior leaders were committed to the idea of school improvement through teacher development through open dialogue.

School champions also believed that schools needed time to help teachers to overcome fears that the technology would be used to their disadvantage. They were reluctant to put a firm timescale on this

but implied it could well take a substantial part of a school year. Nonetheless, the metrics data collected by IRIS Connect revealed no difference in the number of online platform hits per teacher between experienced schools and schools new to IRIS Connect (see Table 4).

The final two rows of Table 4 compare the use of the online platform in schools adopting a whole-school approach and schools in which participation was restricted to a small group of teachers. A majority of schools (including those with prior experience of IRIS Connect) opted for the small group approach (see Appendix 5D). On average, each participating teacher in these schools used the online platform more than teachers in schools adopting a whole-school approach. In the latter case, however, the average teacher used the online platform nearly three times as much as the average teacher in the 'small group' schools (see Table 4).

Table 4: Number of separate occasions on which the platform was accessed (per participant or teacher) over the whole pilot project period

School	School new to IRIS Connect (=1)	School adopted whole-school participation (=1)	Number of online platform hits per project participant	Number of online platform hits per teacher in the school
1	0	0	121	28
2	0	0	64	7
3	0	0	23	10
4	0	1	81	81
5	0	0	45	19
6	1	0	199	47
7	1	0	34	20
8	1	1	47	47
9	1	0	27	11
10	1	1	37	37
11	1	0	44	15
Schools new to IRIS Connect			65	29
Schools with pre-project experience			67	29
Schools with whole-school approach			55	55
Schools with small group approach			70	20

Teachers in the three schools (2, 5 and 9) with the lowest rate of 'hits on the online platform' also created no videos in the second half of the intervention. This might be interpreted as showing that the climate in these schools had not yet become sufficiently supportive of using the system to review teachers' lessons. However, two of these schools had been using IRIS Connect for nearly a year already, albeit with a very low rate of use (see Table A5A.1). There is an indication that the pattern of

use is more strongly influenced by the existing school culture and organisation than by a process of gradual acclimatisation as teachers get used to the system (as reported by school champions). School champions believed that willingness to discuss practice was helped by the sequence of film clubs focusing on others' lessons followed by film clubs in which they shared their own lessons. They also believed that the focus on feedback and classroom dialogue was consistent with schools' improvement plans (Appendix 5C). Review of videos and school champion reports of film clubs showed substantial variation in the degree to which film clubs strictly adhered to the guidance (Appendix 2). There was also variation in the openness of discussion, and the application to teachers' practice. There is an indication here of a two-way relationship between schools' general climate for teacher collaboration and the conduct of film clubs (see Appendix 5D).

Film clubs as a way of promoting review of teaching and learning (2 in Figure 1)

The spikes in the metrics data (use of the online platform, see Figures A5A.1–11) reflect the level of platform use around the time of film clubs. The end-of-project survey (Table A5F.4) also shows that teachers did engage in viewing and discussing the videos from other schools and colleagues in their school. Just over 70% of participants reported in the end-of-project survey that film clubs had made them 'more likely to reflect on my own practice'. The majority of school champions reported that teachers positively engaged with film clubs (Appendix 5G) and teachers interviewed at the end of the project reported that the videos had stimulated discussion. There is strong evidence from a range of sources (the spikes in metrics data, the end-of-project survey, and the reports from school champions) that film clubs stimulated discussion of teaching and learning. School champions reported that the level of online support for these discussions was about right (see Appendix 5C).

The shared videos of film clubs and school champions' reports of videos showed that the discussion in these meetings did focus on feedback and dialogue in the way intended by the online guidance (see Appendix 5D). Teachers identified difference in practice and the merits of different practices. For example, teachers commented on the use of 'wait time' after a teacher had asked a question, and they also commented on what they saw as a somewhat surprisingly low level of praise—praise concentrating on successful task performance rather than personal character traits. Film club discussions paid less attention to the rationale for different practices. Relationships between teaching and learning tended to be discussed in general terms rather than through examination of relationships between specific teacher actions and specific examples of learning which might be inferred from the videos.

In some schools, the film club discussions of videos from other schools (in the first term) kept very close to the guidance provided through the online platform (Appendix 2) and, in these schools, teachers made relatively few comparisons with their own practice. More open discussion was encouraged in other schools and more time was spent in these discussions considering implications for the teachers' own practice (Appendix 5D).

School champions believed that discussions were more effective when teachers had devoted more time to prepare for the film club. However, they acknowledged a tension between the gains from more preparation and the pressure on teachers' time (see Appendices 5B and 5C).

Teachers' dialogue regarding teaching and learning, and change in their thinking (2C in Figure 1)

The comparison between baseline and end-of-project surveys provides evidence of change in participating teachers' thinking about feedback. The self-characterisation feedback categories (Table 5) were designed for the evaluation on the basis of evidence from Hattie and Timperley (2007). The

right and left hand statements in Table 5 were designed to avoid signalling any obvious 'right' answer. The baseline survey (before the start of the project) indicated that participants were more likely than non-participants to assert that their feedback practice was directive—that they were more likely to assert that their feedback typically 'made plain the sequence of steps a child should follow in solving a problem', 'tells the child how close their answer was to my answer', and 'tells a child what the problem is with their thinking'. By the end of the project, participants were more likely (than at the start) to assert that their feedback 'presented children with serious challenges', 'highlighted differences between alternatives', 'reflected their judgement about children's reasoning', and 'helped children to see different ways of seeing a problem'. A comparison of change in participants' thinking with change in non-participants' thinking suggested four differences with modest effect sizes operating in the direction encouraged by the intervention (Table 5, which is also included in the Appendices as A5F.2).

Table 5: Teacher self-characterisation of feedback (reduced scale)

			Left	Neutral	Right		Effect size †(change for participants relative to non-participants)
1. My feedback typically provides the child with a simple next step they can easily achieve.	Baseline	Participant	41.7	15.0	43.3	My feedback typically presents the child with a serious challenge.	0.12
		Non Participant	51.6	19.4	29.0		
	Endpoint	**Participant**	23.8	19.0	57.1		
		Non Participant	50.0	15.6	34.4		
2. My feedback carefully highlights the differences between alternative ways of solving a problem.	Baseline	Participant	40.0	20.0	40.0	Feedback typically gives pupils a correct way of solving a problem.	-0.03‡
		Non Participant	35.5	22.6	41.9		
	Endpoint	**Participant**	54.0	20.6	25.4		
		Non Participant	56.3	9.4	34.4		
3. My feedback typically makes plain the sequence of steps a child should follow in solving a problem.	**Baseline**	Participant	25.0	11.7	63.3	My feedback typically concentrates on helping a child to review the steps they have taken to solve a problem.	0.42
		Non Participant	9.7	32.3	58.1		
	Endpoint	**Participant**	28.6	27.0	44.4		
		Non Participant	32.3	35.5	32.3		
4. My feedback typically leaves the child feeling good about what they have done.	Baseline	Participant	57.6	15.3	27.1	My feedback typically leaves the child to judge whether they have done a good job.	0.29
		Non Participant	61.3	16.1	22.6		
	Endpoint	Participant	49.2	20.6	30.2		
		Non Participant	74.2	9.7	16.1		
5. My feedback generally reflects my judgement about	**Baseline**	Participant	39.0	39.0	22.0	My feedback typically tells the child how	-0.48‡
		Non Participant	65.5	20.7	13.8		

why a child has given a particular answer.	Endpoint	**Participant**	58.7	23.8	17.5	close their answer was to my answer.	
		Non Participant	53.1	28.1	18.8		
6. My feedback typically tells a child what the problem is with their thinking.	**Baseline**	Participant	20.0	3.3	76.7	My feedback typically helps a child to work out what the problem is with their thinking.	0.36
		Non Participant	9.7	3.2	87.1		
	Endpoint	**Participant**	11.1	14.3	74.6		
		Non Participant	15.6	12.5	71.9		
7. My feedback typically concentrates on helping children to understand different ways of seeing a problem.	Baseline	Participant	50.0	10.0	40.0	My feedback concentrates on making sure that children know what they are expected to do.	0.12‡
		Non Participant	51.6	16.1	32.3		
	Endpoint	**Participant**	57.1	23.8	19.0		
		Non Participant	56.3	21.9	21.9		

† calculated by Cohen's d

‡ The intervention aimed to increase use of feedback described by the left hand side of this row, so for this row a negative effect size is desirable.

This is encouraging for the intervention, although in two cases it looks like the effect is driven by changes in the thinking of non-participants away from the desired feedback characteristics. Without further evidence that could help us to understand this change we are not able to speculate on possible causes.

Teachers' thinking and practice (3 in Figure 1)

In the end-of-project survey, over 95% of participants (80 out of 84) asserted that they had changed their practice as a consequence of the intervention (Appendix 5E open responses). Change in approach to using questions was the most frequently cited area of practice but they also referred to changes in feedback. Participants interviewed at the end of the project (Appendix 5H) expressed an equally positive view of the effect of the intervention on their practice, referring chiefly to feedback, dialogue, and pupil ownership of classroom talk. School champions asserted in their feedback to the project team at the mid-point in the project that changes in teachers' practice were already in evidence (Appendix 5C), however they implied that they were expecting more substantive changes by the end of the intervention. Participants believed their practice had changed: they cited more collaboration, more open questions and dialogue with children, and more emphasis on feedback which shared responsibility with the pupil (see Appendices 5F and 5H).

Evidence of teachers' practice was gathered through 43 lesson videos that were shared by teachers with the evaluation team through the online platform (see Appendix 5E). This data needs to be treated with some caution as we are not able to compare teaching practices with those in place before the pilot. Moreover, since teachers chose whether to share lesson videos, it is likely that their selection was somewhat affected by 'social acceptability bias' as they became familiar with the intentions of the intervention. Finally, the videos were shared during the course of the project and, therefore, cannot be treated as evidence of teachers' practice at the end of the project. Nonetheless, between 50% and

75% of the lesson videos were rated as displaying an approach to feedback in line with aims of the intervention (positive scores for items 1, 3, 4 and 6 in Table 6, and negative figures for items 2, 5 and 7). The most positive ratings were for 'poses serious challenges' and 'leaves the judgement to the pupil'. This means that the self-reported change in teachers' practice (Appendix 5F) aligned with our analysis of lessons. Given the evidence suggesting that the type of feedback matters for pupils' learning, the project evidence is encouraging for an intervention that aims to improve pupils' learning.

Table 6: Characterisation of teachers' feedback visible in shared lesson videos using the same format as the teacher survey (also provided in Appendix 5 as Table A5E.3 with additional commentary)

	Strength of tendency towards <u>left</u> hand statement						Strength of tendency towards <u>right</u> hand statement					
	-5	-4	-3	-2	-1	0	1	2	3	4	5	
1 Gives easy/simple next steps	0	2	6	2	0	0	2	10	11	9	1	Poses serious challenges
2 Highlights differences between alternative responses/method	0	5	9	5	2	7	1	6	5	1	2	Gives correct response/method
3 Gives correct series of steps or points	0	1	5	5	1	3	5	4	14	4	1	Reviews pupil's steps or points
4 Makes pupil feel good	0	1	1	2	2	7	0	0	5	18	7	Leaves the judgement to the pupil
5 Reflects the teacher's judgement about pupil's current understanding	0	5	10	9	2	2	4	2	6	3	0	Tells the pupil how close they were to teacher's answer
6 Tells a pupil the problem with their method/thinking	0	2	3	4	2	5	3	5	9	9	1	Helps the pupil to work out what the problem is with their thinking/method
7 Helps pupils understand different ways of seeing a problem	0	1	8	10	2	3	2	7	4	4	2	Helps pupils know what they are expected to do/say

Lesson videos shared by teachers at schools where film clubs were rated as 'open and applied' (where teachers debated the extent to which their own lessons exhibited similar characteristics and also whether they should change their practice) tended to display characteristics of feedback more in line with the aims of the intervention (see Appendix 5E).

Feasibility

The feasibility of the intervention can be judged by considering the following questions:

1. Did the schools make use of the technology to the extent that was envisaged?

2. How did school champions rate the feasibility of the project?

3. Do the schools and participants intend to continue using the technology in a similar way after the project?

4. How much time does it take?

5. What did participants say about the value to them of using time in this way?

6. What did participants say about improving the practicability of the project?

We will now consider these six questions.

1.   Teachers' use of the online platform (Figures A5A.1–11) was very high. Over the six months of the project, the average rate of hits on the online system per participant varied between schools from 23 to 199 (overall average 66). The average rate of hits per teacher in each school (including non-participants as well as participants) was between 7 and 81 (overall average 30). The attrition rate was low. One school (12) dropped out very early in the pilot when the school champion left the school. School 11 (Figure A5A.11) was inspected by OfSTED during the early weeks of the intervention and considered dropping out of the pilot, but after receiving a disappointing grade from OfSTED the school chose to use its participation in the project as a means of addressing priorities for development and this is reflected in the high use figures in the summer term. Ten of the schools carried out film clubs one to three, and the remaining school conducted two of these three film clubs. We are not aware of any individual teacher dropping out of the project within their school although there were, of course, some absences from particular events. However, use of the online system tailed off during the summer term in four of the schools (3, 5, 8 and 9) during the period when teachers were expected to record and share their own lessons. A bigger concern lay with the number of videos being created during the summer term. Teachers in three schools (Figure 3, see schools 2, 5 and 9) created no videos during this period. We were advised by the headteacher in school 5 that this was a consequence of staff turnover. Otherwise, there was no discernible pattern in the type of school which made less use of the technology during the second half of the project.

Figure 3: Number of videos created per teacher over three months before and during the intervention[†]
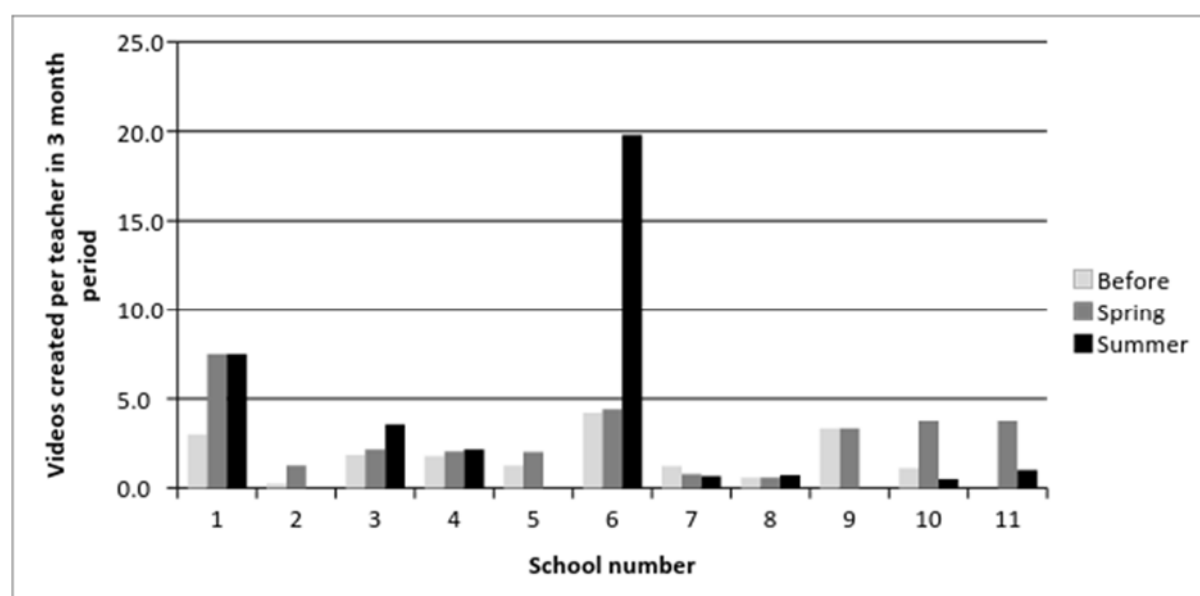
[†] The 'before' figure is based on a three-monthly average for the period in which the school had IRIS Connect equipment before the start of the project. In the case of schools 7–10, this was less than three months and the average was adjusted to take account of this.

2.   School champions were asked to evaluate the pilot project through responding to items on a Likert scale (see Appendix 5G). We received 13 responses (three from one school). All agreed or strongly agreed with the statement 'I was given enough guidance and information to be able to effectively run film clubs'. Eleven of thirteen agreed or strongly agreed with the statements 'Teachers

at my school positively engaged with film clubs' and 'Film clubs are a sustainable approach to whole-school professional development' (one missing, one unsure). Only one school champion disagreed with the statement 'Using IRIS Connect has been good value for money'.

3.   It is reasonable to conclude that the intervention is feasible if schools and participants say they intend to continue using the technology through film clubs. All bar one of the school champions indicated at the end of the project that they intended to continue using IRIS Connect, and most explicitly stated that they intended to continue using or extending the film club format. The one negative school champion response came from the school which sent in three end-of-project school champion evaluations. The other two responses were more positive, so two out of the three responses from this school indicated that the school would continue to use IRIS Connect..

4.   The intervention requires a school champion to spend time liaising with the headteacher regarding the integration of the project into the school's improvement strategy. The school champion also had to spend time organising and preparing for film clubs. School champions found it difficult to quantify just how much time they had spent on these activities since organising meetings and liaising with the headteacher were woven into their regular duties. Participating teachers were expected to prepare for, and participate in, each of film clubs one to three (estimated average time per teacher 1.5 hours per film club). They were also expected to collaborate in lesson planning and reviews for film clubs four and five, and one teacher was expected to select clips from the lesson to provide a focus for discussion. Each of film clubs four and five demanded about two hours of teachers' time plus the time taken for editing, which could be up to two hours. Assuming a group of four teachers in a group, this would entail an average of half an hour editing time. The final film club lasted up to an hour and did not require preparation. Therefore, each participating teacher was expected to devote about ten hours to the project.

5.   School champions were split 50/50 between agreeing and disagreeing with the statement 'I had to spend a lot of time to organise and set-up film clubs', but only one referred to 'preparation time' in response to an open ended question about what been time consuming for them (see Appendix 5G). Only just over 5% of participants completing the end-of-project survey disagreed with the statement 'The time I have spent using IRIS Connect has been worth it', although 14% agreed with the statement 'The amount of preparation needed for film clubs has been too much to manage'.

6.   Several school champions suggested the challenges for teachers' time could be addressed if schools were able to schedule film clubs into their professional development planning for the year. Some schools had incorporated some use of IRIS Connect into their professional development planning before agreeing to take part in the pilot. Teachers in these schools faced less of a challenge to their time management. Schools which scheduled film clubs in addition to their previously planned activities presented teachers with a greater challenge. Although the intervention does present schools and teachers with some challenging demands on time, the testimony of the participants in this pilot is that these demands can be met.

The other main limitation on the feasibility of the intervention is teachers' fear of being observed. In the baseline survey, the overwhelming majority of participants and non-participants asserted that they 'can trust their colleagues to be supportive if they observe my teaching' (see Table A5F.3). Nonetheless, only about one third disagreed with the statement 'I feel under pressure if colleagues observe my teaching'. By the end of project survey, the proportion of participants and non-participants declaring that they felt under pressure during observation had declined, but remained at 33% for participants and 40% for non-participants. The intervention appeared to have made a difference, but this kind of change takes time to become embedded in a school's culture and this issue should be borne in mind in the design of any efficacy study.

Cost

The cost of the intervention may be evaluated in different ways. Each of the schools participating in the project had either bought a licence to use IRIS Connect technology *before* participating in the project or they had already committed to buying one. Therefore, one way of judging the cost of the intervention is to only take account of the additional costs which were incurred as a direct consequence of the project. However, since a licence was a precondition of participation, it also makes sense to calculate the cost of the equipment.

The cost of the IRIS Connect technology

Schools who buy a licence for the IRIS Connect technology receive training on how to use the package and how they might embed its use in their plans for school improvement. They also receive on-demand telephone support for technical problems. These services are provided as part of the contract.

The cost per teacher depends on the number of participants in the school which, in the pilot, ranged between 4 and 20, with an average of 9. Table 7 summarises the technology and licence costs for a medium to large primary school with an average number of teachers (nine). Small primary schools are charged a platform licence at half the rate quoted in Table 7. Schools commit to a three-year licence. The annual costs in Table 7 are based on a third of the three-year platform licence and a third of the one-off cost of purchasing the video technology (in other words, the cost of one year of the pilot). The table also shows the cost implications of the choice of video technology.

Table 7: Annual cost of hardware and platform licence for a primary school

Hardware	Discovery†		LiveView†	
School size	Medium/Large	Small	Medium/Large	Small
Platform Licence	£1,998.33	£998.33	£1,998.33	£998.33
Video Technology	£566.67	£566.67	£998.33	£998.33
Total Hardware and Licence	£2,565.00	£1,565.00	£2,996.66	£1,996.67
Cost per teacher (average 9 teachers)	£285.00	£173.89	£332.96	£221.85
Cost per child	£11.40	£6.96	£13.32	£8.87

† The 'Liveview' system offers the possibility of remote (off-site) in-ear coaching which was not utilised in this intervention, but some schools opt for this system.

Additional project costs incurred

Each school was allocated a budget of £1,000 to cover the costs of travel to project meetings and of providing supply cover for teachers attending those meetings. So the expected cost of travel and supply was roughly £120 for each teacher participating in the project. Since there is some evidence of spillover effects on teachers in the schools who were not participating in the project, it is also worth noting that cost per teacher (participants and non-participants) in the schools was just over £50.

As noted earlier, school champions were not able to identify how much time they had spent on the intervention. On the basis of feedback provided during and at the end of the project we have made a very rough estimate of between 25 hours (£660) and 50 hours (£1,320). The intervention required a time commitment from classroom teachers of about ten hours. Given an average FTE salary for primary school teachers of £33,400 (DfE, 2016b) and a working year of 1,265 hours, this translates

into a per-teacher cost of £264. In the majority of schools in the pilot, film clubs were arranged in place of other allocations of time by the school (for example, as an alternative to other forms of professional development). However, it is important to note that school champions and participants devoted time to the intervention which could have been devoted to other activities.

Participants' views about value for money

Only 5% of teachers responding to the end-of-project survey disagreed with the statement 'The time I have spent using IRIS Connect has been worth it'. At the end of the project, 9 out of 13 school champions either agreed or strongly agreed with the statement 'Using IRIS Connect has been good value for money'. Only one school champion disagreed. Although school champions reported that the intervention had been time consuming for them, they also believed that using IRIS Connect represented good value for money (for details see Appendix 5G).

Conclusion

Key conclusions
1. The overwhelming majority of teachers believed that the intervention was a good use of their time and had improved their practice.
2. During the seven-month pilot, three of the eleven participating schools chose not to engage with the second half of the project in which teachers videoed their own lessons.
3. The intervention demanded a substantial proportion of teachers' development time. A further trial should provide schools with sufficient time to build this into their annual plans and to embed the intervention in their plans for school improvement.
4. Ten of the eleven participating schools reported that they would continue to use IRIS Connect after the pilot had ended.
5. The training materials are well developed, clearly understood by teachers, and ready for trial.

Formative findings

We believe there are several ways in which the intervention might be refined in order to (1) increase engagement by schools and teachers who are less confident with using video technology to prompt discussion of teaching and learning, (2) focus thinking on critical differences between ways of leading classroom dialogue and providing feedback, and (3) encourage teachers' discussions to focus on *reasons* why teachers' actions are helping children to learn (as opposed to focusing on what they do and do not like). The following should be considered:

- Recruitment for an efficacy trial should take place sufficiently early to allow schools to schedule films clubs as a core element of their strategy for professional development and school improvement. This will reduce the likelihood of teachers perceiving film clubs as a difficult-to-sustain addition to workload, and should at least partially address the issue of low summer term participation identified by the pilot.
- The intervention seems to operate in two ways, (1) by helping teachers to identify possible improvements in practice and to discuss the realisation of principles in teaching, and (2) by helping teachers to become more comfortable with discussing their classroom work with others. The second of these processes takes longer to embed and this carries implication for the length of an efficacy trial.
- The online guidance should be strengthened to emphasise the value of open dialogue between teachers who discuss implications for their own practice. This might be achieved by adding a couple of short clips from film clubs exemplifying, for example, differences between approaches to film club leadership. This might also encourage teachers to debate and reflect on their own practices relating to key issues before moving on to the next question.
- It would be helpful to emphasise (and exemplify through a video clip) the value of discussion which focuses on *why* a particular example of teaching might be engaging pupils in a particular way that is fostering learning (this might be contrasted with a video clip where teachers are effectively saying 'I like that' or 'I'm not so sure about that').
- It would also be helpful to highlight the way in which the online platform can be used to identify and comment on moments in a lesson which exemplify an aspect of teaching deemed critical to learning, and encourage sharing discussion of these moments between schools.

Interpretation

This pilot has evaluated an intervention using IRIS Connect technology as a package that incorporates several elements in a presumed causal chain. The advantage of an intervention like this, which changes the way that teachers think about their work and which develops their capabilities, is that the benefits should be long-lasting since they take the form of an 'investment'. This means that relatively small changes in the achievement of pupils in any one year could justify an intervention on the basis that longer-term benefits will ensue. But this raises two obvious challenges for further evaluation: (1) securing a sample that would have power to detect relatively small changes in pupil achievement, and (2) identifying the relative importance of each step in the logic chain.

The overwhelming majority of participants believed that the intervention had affected their practice and we found sufficient supporting evidence to accept this as a reasonable working interpretation. The intervention has a clear focus on the relationship between task design, classroom dialogue, and feedback. This focus was understood by the schools and the teachers. On the basis of a range of evidence from videos of lessons, interviews, and 'before and after' surveys, this evaluation has found:

- moderate evidence of change in school climate;

- strong evidence that film clubs promote discussion of teaching and learning;

- moderate evidence of change in teachers' thinking which can be attributed to the intervention; and

- moderate evidence of changes in practice which can be attributed to the intervention.

Future evaluation and issues for an efficacy trial

We believe that the survey items used in this pilot evaluation to gather evidence of teachers' thinking about feedback have proved useful in detecting variation relevant to the aims of the project. The potential of the video technology for providing evidence about practice could be exploited by (a) asking teachers to video a lesson and comment on one of their own lessons before the intervention (as a reference point that they can use and, if they are willing, share with others at some later point, and (b) using one camera to focus on a small group of pupils so that their thinking and learning can be tracked through a lesson.

In terms of moving the learning on, we believe two options should be considered when thinking about future research and publications. First, since this evaluation concentrated on change in teachers' thinking and practice it would make sense to investigate whether changes of this nature and scale lead to improvements in outcomes for children.

Second, the logic chain in this intervention shares some steps with other interventions which do not necessarily involve the use of video technology and which do not necessarily involve a focus on feedback. IRIS Connect is fully aware of the importance for the intervention of securing 'whole-school' commitment and the challenges that must be faced in securing this. Its collaboration with Whole Education aims to address these challenges. Issues with whole-school commitment are illustrated by the relatively low engagement by three schools in the creation of videos of teachers' lessons despite full engagement in the first part of the intervention.

The design of a further trial would need to consider carefully the nature of any comparator group. There are several issues to be addressed:

- If eligibility to participate in an RCT is restricted to schools that do not yet have video technology there is threat to generalisability since schools which already have video technology are likely to have school managements and perhaps school cultures which are more ready to make constructive use of it. If schools which already have video technology are allowed to participate then it would be important to make sure that the trial is balanced on this school characteristic (not only in terms of having video technology, but the extent of prior experience within the school).

- Since the intervention depends on the availability of video equipment in the school, the design of the trial would need to be clear as to whether the evaluation was of 'state purchase of video equipment for schools' or an evaluation of the effectiveness of schools choosing to spend their resources on video equipment. Given the widespread policy stance towards school autonomy it is difficult to envisage circumstances in which video equipment might be purchased centrally and distributed to schools. Moreover, it would not be possible to generalisable from the effectiveness of free distribution of equipment to schools which choose to purchase the equipment, given the relationships between the motivation and beliefs of school leadership teams, school culture, and the way in which video equipment is likely to be used in schools. If, on the other hand, the evaluation is of the effectiveness of school choice of spending on video equipment then there will be a problem of recruiting sufficient schools. For a large-scale trial, there will never be a sufficient number of schools making their first purchase of a video technology system. This might be addressed simply by giving schools that agree to participate the option of spending the money on video technology and then comparing those who do with those who do not. Given that the sample of schools that might be included in this kind of evaluation have not already chosen to use video technology, it is likely that the proportion of schools in the evaluation who chose to spend the money on video technology would be quite small, making this a very expensive option. Dictating that a random half of the sample would be required to buy video technology whilst the other half could buy whatever they wanted as long as it was not video technology also creates a comparison problem (according to the widely asserted benefits of autonomy).

- Moreover, since IRIS Connect have now 'rolled out' their film club model with the focus on dialogic teaching and teacher feedback as part of their general offer to schools, it will be not be possible to randomise schools which have IRIS Connect into an intervention group using the film club model with a focus on teacher feedback, and a control group which has no access to this intervention.

Therefore, we believe that an efficacy trial would prove more useful if it focused on evaluating a specific part of the logic chain presented in Figure 1. For example, an efficacy trial could focus on one of the following claims:

- that using IRIS Connect technology enables schools to increase the level and depth of teachers' collaboration in reviewing teaching and learning in their lessons;
- that using IRIS Connect improves teacher learning by offering a means to review lessons, enabling teachers to re-visit and compare instances of teaching and learning; or
- that a film club format starting with carefully chosen extracts from other lesson videos and moving on to teachers reviewing their own lessons will provide a more cost effective way of improving teachers' thinking and practice in some specific way (for example, by fostering feedback) than either (a) a film club with an (external) expert facilitator (as reported in the literature), or (b) a lesson study format in which the focus of lesson planning and review is chosen by the participating teachers.

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Appendices

Appendix 1: Examples of Information and Consent Forms

1A Memorandum of understanding with participating schools

1B Information and opt out form for parents

1C Information and Consent Form for Videoing of Teacher Discussion of Lesson Video

1D Information and Consent Form for discussion of videoed lessons online (Teachers)

1E Information and Consent Form for interviewees (Teachers)

Appendix 2: Information about the intervention

2A Guidance for film clubs

Appendix 3: Data collection instruments

3A Baseline survey administered in January

3B End point survey administered in July

3C (School) Champion survey administered in July

3D Information from school Project Leaders gathered at meeting held April 22nd

3E Protocol for telephone interviews with teachers

Appendix 4: Examples of data collection

4A Champion report of a 'whole-school' film club

4B Summary of champions' comments in focus group meeting 22d April 2016

Appendix 5: Results tables by source of evidence

5A IRIS metrics data

5B School champion midpoint focus group

5C School champion midpoint feedback

5D Film club organisation and practice

5E Videos of lessons shared by teachers

5F Teacher baseline and end of project surveys

5G School champion end of project survey

5H Teacher interviews

Appendix 1A Memorandum of understanding with participating schools

<u>Overview of your commitment</u>

The Pilot Phase of the Education Endowment Foundation-funded research project on how IRIS-Connect can support higher-order professional learning will take place between January 1st and July 31st 2016. In choosing to participate in the Pilot Phase your school commits to:

    (i)   Nominating a project lead from your school to act as the key contact for this work

    (ii)   The school project lead working with the project team to embed the pilot into your school's professional development programme. This will involve:

          a.   attending two learning events in London

          b.   making use of the IRIS-Connect platform's facilities for (a) written and shared reflections and (b) forms for reviewing teaching, supported by the project team

          c.   encouraging teachers to use IRIS-Connect to focus on practice and rationale for teachers' feedback to children in the classroom, supported by the project team

    (iii)   Providing access to the evaluation team

<u>Your commitment to the evaluation</u>

The evaluation of the Pilot Phase involves gathering evidence that will help the EEF to judge whether the intervention is ready to be evaluated through a full randomised controlled trial. In order to make this judgement it is necessary to collect some indicative evidence about the effects of using IRIS-Connect on teachers' thinking and practice, namely on formative feedback. Two types of evidence (A and B below) will be collected from every school. Two types of evidence (C and D will be collected from some schools). By agreeing to participate in the trial the school commits itself to providing A and B and indicates it will be willing to participate in ether C or D if approached to do so.

The School undertakes to arrange the following:

A) Pro Formas

    (i)   **To complete and return a pro forma** that will summarise (i) the ways in which IRIS-Connect has been used in the school between January 2016 and June 2016; (ii) the way in which these uses of IRIS-Connect are related to the school's professional development and school improvement strategies; and (iii) the validity and practicability of ways of measuring children's learning.

    (ii)   **To arrange for each teacher in the school to complete short pro formas in January and July 2016** regarding (i) their use of IRIS-Connect; (ii) their beliefs about the role of teachers' feedback to children in children's learning and (iii) their use of feedback in teaching and (iv) ways that children use feedback.

B Sharing examples of videos of lessons

    (iii)   **To share (with the evaluation team) anonymised[i] versions videos of _extracts from at least three_ lessons** and any teachers' reflections added through the online platform.

(iv)   To arrange for **teachers who share videos** of their lessons (and their reflections on lessons) to sign a **consent form** which will be returned to the evaluation team.

(v)   To **send a letter informing parents about the evaluation** and providing them with an opportunity to opt their child out of video footage that will be shared with the evaluation team.

C Telephone conversations (*some* schools will be approached to arrange two telephone conversations)

(vi)   To be ***willing* to arrange telephone conversations between two teachers** (including the school project lead) and a member of the evaluation team. The evaluation team will contact three of the participating schools for conversations about (i) the implications of using IRIS-Connect for teachers' workload and value for money and (ii) the extent to which using IRIS-Connect has led to changes in teachers' thinking and practice.

D Face-to-face interviews with teachers (*some* schools *may* be approached to arrange interviews with 2-3 teachers about their use of IRIS)

(vii)   To be ***willing* to arrange face-to-face conversations between two to three teachers** (including the school project lead) and a member of the evaluation team. The evaluation team will contact two of the participating schools for conversations about (i) the implications of using IRIS-Connect for teachers' workload and value for money and (ii) the extent to which using IRIS-Connect has led to changes in teachers' thinking and practice.

Signed:_____   Date _____
(Name, Role, Organization)

Signed:
(Douglas Archibald, Director, Whole Education)   Date: 7th December 2015

Appendix 1B Information and opt out form for parents

Dear Parent

As part of its commitment to continually improving its practice, your child's school is taking part in an evaluation of the IRIS-Connect system for videoing lessons. This evaluation has been commissioned by the Education Endowment Fund which has been set up by the government to identify effective approaches to teaching.

The purpose of recording some lessons is to help teachers to improve their practice by carefully analysing the teaching and learning that has taken place. This evaluation will gather evidence to test how much difference the system makes to the quality of teaching.

The evaluation will be conducted by three researchers at the University of Birmingham who will view some video recordings of lessons and discuss these with the teachers. The IRIS system allows teachers to blur the image of people in the classroom so that individual children cannot be identified. Also, there will be no transfer of files or individual images across the Internet. The researchers will log on to a 'remote' facility to view already 'blurred' videos which they will not be able to download.

If you are unwilling for a 'blurred' video of a lesson in which your child has taken part to be viewed by a member of the research team please sign and return the slip at the bottom of the letter. Please return this form before _____ (enter appropriate date here) to the school secretary or directly to the leader of the research evaluation team:

Professor Peter Davies
School of Education
University of Birmingham
Edgbaston
B15 2TT

Yours sincerely

Peter Davies

Evaluation of IRIS Connect

I am the parent of (child's name) ………………….. in class………………………….. attending (school name)…….

I am NOT willing for an anonymised video recording of a lesson in which my child has taken part to be viewed by a researcher at the University of Birmingham.

Signed…………………………………………
Date…………………………………………………

Appendix 1C Information and Consent Form for Videoing of Teacher Discussion of Lesson Video

The University of Birmingham is evaluating the use of IRIS Technology by schools. As part of that evaluation we ask for your permission for the three members of the evaluation team to view a video recording of your discussion of a lesson recording..

This evaluation has been commissioned by the Education Endowment Fund. The evaluation is being carried by the University of Birmingham and the leader of the evaluation team is Professor Peter Davies.

No school or individual will be named in the files we use to store the data or any subsequent document. We will allocate a code number for each school and each video of teachers discussing a lesson. The recording will be retained in the IRIS-Technology secure system so it can be copied or sent to others through the Internet. Access to the folder will be strictly controlled under the guidance of Professor Peter Davies who is leading the project.

If at any time you wish to terminate the recording of the discussion please indicate this and the recording will be stopped. You may also request any record of the discussion to be deleted.

If you have any questions about the research please contact Professor Peter Davies at the University of Birmingham. His telephone number is 0121 414 4820 and his email is p.davies.1@bham.ac.uk.

If you are willing for the discussion to be recorded using the IRIS-Connect system please sign below to indicate that you have read and agree to participate under these conditions.

Thank you

I have read and understood the information. I agree to the discussion being videoed and for this video to be used in the evaluation of the use of IRIS technology.

Name………………………………………………………………………….

School………………………………………………………………………….

Date………………………………………………….

Appendix 1D Information and Consent Form for discussion of videoed lessons online (Teachers)

The University of Birmingham is evaluating the use of IRIS Technology by schools. As part of that evaluation we would like to discuss your use of the video technology using the IRIS platform. This will involve discussion about the lesson, your use of video in the lesson and how the recording of the lesson has been used.

This evaluation has been commissioned by the Education Endowment Fund. The evaluation is being carried by the University of Birmingham and the leader of the evaluation team is Professor Peter Davies.

No school or individual will be named in the files we use to store the data or any subsequent document. We will allocate a code number for each school and each interviewee. All recordings will be kept secure with files saved in a password protected folder. Access to the folder will be strictly controlled under the guidance of Professor Peter Davies who is leading the project.

If at any time you wish to terminate the discussion please indicate this and the interview will stop. You may also request any record of the discussion to be deleted.

If you have any questions about the research please contact Professor Peter Davies at the University of Birmingham. His telephone number is 0121 414 4820 and his email is p.davies.1@bham.ac.uk.

If you are willing to take part in this online discussion please sign below to indicate that you have read and agree to participate under these conditions.

Thank you

_____

I have read and understood the information about the purpose of this interview. I agree to participate in this interview and for my answers to be used in the evaluation of the use of IRIS technology.

Name………………………………………………………………………….

School………………………………………………………………………….

Date………………………………………………….

Appendix 1E Information and Consent Form for interviewees (Teachers)

This interview is being conducted to help with the evaluation of the use of IRIS technology by schools. The interviews will be used to find out how schools are using the IRIS technology and the reasons for using the technology in these ways. This evaluation has been commissioned by the Education Endowment Fund. The evaluation is being carried by the University of Birmingham and the leader of the evaluation team is Professor Peter Davies.

No school or individual will be named in the files we use to store the data or any subsequent document. We will allocate a code number for each school and each interviewee. All recordings will be kept secure with files saved in a password protected folder. Access to the folder will be strictly controlled under the guidance of Professor Peter Davies who is leading the project.

If at any time you wish to terminate the interview please indicate this and the interview will stop. You may also request any recording to be wiped clean.

If you have any questions about the research please contact Professor Peter Davies at the University of Birmingham. His telephone number is 0121 414 4820 and his email is p.davies.1@bham.ac.uk.

If you are willing for to be interviewed and for the interview to be transcribed and an anonymous record retained in a secure folder at the University of Birmingham please sign below to indicate that you have read and agree to participate under these conditions.

Thank you

I have read and understood the information about the purpose of this interview. I agree to participate in this interview and for my answers to be used in the evaluation of the use of IRIS technology.

Name……………………………………………………………………………

School………………………………………………………………………….

Date………………………………………………….

Appendix 2A Guidance for film clubs

Film clubs 1-3: Teachers viewing and discussing video clips provided through the online platform

Guidance for each of film clubs 1-3 was provided online (through the 'group' function in online platform) under the following sub-headings:

(i) introduction;

(ii) Classroom talk & (Film Club 1) teaching; (Film club 2) questioning and group talk; (Film club 3) feedback: one 'page of guidance for each module supplemented by 1-2 'talking heads' videos of 30 sec – 1 min 30 second duration.

(iii) Things to consider: more note-form guidance including a section 'what sort of questions should I be asking myself when watching lesson video clips?'

(iv) Pre-film club reflection: more guidance on the topic

(v) Film club;: guidance (linked to two 1-2 minute video clips) on how to organise the film club meeting –

    1 Ensure everyone is aware of the lesson context

    2 Watch the clip once without pausing

    3 Consider the following questions:

      What do you think about the nature of the True or False task?
      What other ways could this maths question have been presented?
      How is the task introduced?
      How does the task affect the nature of the discussion?

    4 Watch the clip a second time with these questions in mind.

    5 Watch the clip a third time. Feel free to pause and discuss where you feel it appropriate. Use the time-stamped comments feature to make a note of anything that stands out or that you find interesting (you may notice comments from other teachers involved in the project; you may wish to consider these when having your own discussions).

(vi) Report your film club findings;

Champions were encouraged to record their film club sessions and to share these online with the evaluation team. Alternatively, they were given a set of open response items through which they could summarise the film club. For example, after film club 2 the prompts asked about: attendees; the main points of discussion during 'your own reflections'; the main points of discussion after viewing the film clips; any changes in perspective during the course of the discussion; the intentions of the project team in future practice following the film club; judgement about the effectiveness of the film club.

(vii) Reflections: prompts on how to review own practice following the film club.

Film clubs 4 & 5: Teachers reviewing and discussing videos of their own lessons

Teachers were encouraged to organise their fourth and fifth film clubs (in which they used their own lesson or lessons) in six steps:

1 Collaborative planning: in which they were asked to plan together a 'rich task or question'. Four short video clips were provided as exemplification. The planning guidance also included a 'reminder about dialogue' (with a list of 11 desirable characteristics of dialogue) and they were also reminded about feedback with a short clip featuring Dylan Wiliam and Table A2A.1 which was adapted from Hattie & Timperley's (2007) review of research on feedback.

Table A2A.1 (which was untitled in the online guidance)

Feedback level	Example	Effectiveness
Feedback about the self	What a superstar! You did that really well.	Weak
Feedback about the task	So you're saying the two sums would not be equal; can you work out what the final equation would read that proves that?	Good when supported by strategies for learners to try
Feedback about strategies or processes needed in tasks	By suggesting something might go wrong you make the reader worry about your character, which creates suspense and makes them want to read on. Is there any way you could introduce this earlier to engage the reader right from the beginning?	Powerful in the short term
Feedback about self -regulation	So you adjusted the weight at the front of your model plane, after you found it kept nose-diving, by removing a paperclip. Is there anyway you can make it glide for longer? Where can you find out how to improve this? Has anyone managed to make theirs go further? What can you learn from theirs?	Powerful in the long term

2 Reflecting, editing, commenting and sharing: in which they were again encouraged to focus on episodes in the lesson which they found interesting in terms of dialogic teaching and feedback. Instructions were provided on how to edit lessons to focus on the episodes and how these could be shared with other teachers in the group through the online platform.

3 Peer feedback: in which teachers were invited to share their lesson with one other colleague who would add comments to the video clip using the online platform. This invitation was accompanied by guidance that comments should "(i) respect and support the teachers and pupils in the video; (ii) suspend judgement to avoid faulty assumptions; (iii) focus on interactions and how they are linked; and (iv) look deeper and seek context".

4 Sharing with the project group: in which the video clip(s) and associated comments would be shared with the whole project group and comments invited from all group members.

5 Pre film club reflections: in which group participants were invited to view the clips and to reflect on aspects of the teaching and learning they wanted to discuss at the film club.

6   **Film club:** in which the group met to discuss the video clip(s) with the following focus: "(i) the effectiveness of the planned task/question; (ii) how learners are invited into dialogue; (iii) how dialogue develops; (iv) how language promotes a positive learning culture; (v) what pupil responses tell you about their learning; (vi) the source of feedback (teacher, self, task, peer) and how it is offered; (vii) how feedback relates to the perceived learning intention; (viii) how feedback promotes independent learning? (ix) how feedback creates thinking and furthers understanding; (x) how learning is led (pupil-led / teacher-led) and the impact this has".

Film Club 6 Evaluating the experience

In Film Club 6 teachers were asked to reflect on their experience using the following questions and champions were asked to summarise the thoughts expressed using the online platform. The questions were:

1 Please give an overview of your school approached the project, including who was involved and how this was organised.

2 Did you like this approach to professional learning?

3 Why?

4 What did you and the other participants learn?

5 What changes, if any, have been made to classroom practice?

6 What benefits for learners did you observe? Do you have any other evidence to back this up?

7 Were there any negative effects?

8 What challenges did you experience? How did you overcome these?

9 Where do you plan to go from here?

Appendix 3A Feedback in Teaching and Experience with IRIS-Connect: A (baseline) survey

What is this short survey for?

Your school is taking part in a project to evaluate the use of IRIS-Connect Technology. The project is funded by the Education Endowment Fund. The evaluation is being conducted by researchers from the University of Birmingham. Teachers' use of feedback has been chosen as a focus by which to measure the impact of IRIS-Connect Technology on teaching.

We would be grateful if you would complete this survey and seal it in an envelope we have provided and return it to your school office who will post responses to the University of Birmingham. We have asked for your name so that we can match your answers to this survey with any other information you provide during the course of the evaluation. By returning your survey in the envelope provided your answers will not be disclosed to anyone else in the school either now or in the future.

All data will be stored on a secure password protected folder at the University of Birmingham.

Evaluation results will NOT BE DISCLOSED IN RELATION TO NAMED SCHOOLS OR INDIVIDUALS at any stage to maintain confidentiality.

For further information, email Professor Peter Davies p.davies.1@bham.ac.uk

Please sign below to confirm that you have read this information and that you are willing for your answers to be used in the evaluation and matched with any other information you choose to disclose on the condition that your responses are treated as confidential.

Name	
Signature	
School	
Date	

Thank You!

My views on Feedback in Teaching

You are asked to complete a grid below to indicate how you think about feedback in your teaching. You may use feedback in different ways at different times and you will be asked about these differences after the grid. <u>When completing the grid please think about what the way in which you use feedback most frequently with the average or typical child you teach.</u>

Please **tick one place** on the 54321012345 scale in each row to indicate where you would position yourself in relation to the two statements. Ticking 0 indicates that you position yourself as neither leaning towards the statement on the left nor leaning towards the statement on the right. If you change your mind, simply cross out your first mark and tick another place on the scale.

	5	4	3	2	1	0	1	2	3	4	5	
My feedback typically provides the child with a simple next step they can easily achieve	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically presents the child with a serious challenge
My feedback carefully highlights the differences between alternative ways of solving a problem	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Feedback typically gives students a correct way of solving a problem
My feedback typically makes plain the sequence of steps a child should follow in solving a problem	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically concentrates on helping a child to review the steps they have taken to solve a problem.
My feedback typically leaves the child feeling good about what they have done.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically leaves the child to judge whether they have done a good job
My feedback generally reflects my judgement about why a child has given a particular answer.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically tells the child how close their answer was to my answer.
My feedback typically *tells* a child what the problem is with their thinking	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically *helps a child to work out* what the problem is with their thinking.

My feedback typically concentrates on helping children to understand different ways of seeing a problem.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback concentrates on making sure that children know what they are expected to do.

8. The previous question asked you to characterise how you think about feedback in general. However, you may use feedback in different ways in different contexts.

If you think this is the case, please use the space below to give details of any of your responses above which you think are particularly context dependent:

Professional Development

(Please tick one column for each statement)

9. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I can trust my colleagues to be supportive if they observe my teaching					
I learn a lot from my colleagues					
I feel under pressure if colleagues discuss my teaching					
I find it more useful to reflect on my lessons on my own					

The final section of this questionnaire (overleaf) is designed for teachers who have used IRIS-Connect.
If you have NOT used IRIS-Connect, please stop at this point. Thank you for completing this survey.

Professional Development Using IRIS-Connect

(Please tick one column for each statement)

10a. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
It is easy to use IRIS-Connect cameras to record videos					
It is easy to use the IRIS-Connect platform to view my recorded videos					

10b. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Using IRIS-Connect has helped me to improve my understanding of my teaching					
Using IRIS-Connect has improved my understanding of children's needs					
Using IRIS-Connect has made me feel more vulnerable.					
The amount of preparation needed for film clubs has been too much to manage					
The time I have spent using IRIS-Connect has been worth it					
Using IRIS-Connect has become an important part of my professional development practice					
The focus on formative feedback has fit within my own professional development needs					

11. How often have you used IRIS-Connect in each of these ways?	Never	Once or twice	3-4 occasions	5 or more occasions
In-ear coaching (being coached)				
In-ear coaching (as a coach)				

1-1 mentoring (being mentored)				
1-1 mentoring (as a mentor)				
In a group viewing and discussing an example of practice from another school				
In a group viewing and discussing an example from a member of the group				
In a group sharing in the planning, teaching and review of a lesson (as in Lesson Study)				

12. To what extent have you used IRIS-Connect in each of these contexts?	Not participated	Participated but not important to my job	Participated and modest part of my job	Participated as major part of my job
Supporting trainee teachers				
Support for NQTs				
As part of the school's appraisal system				
As part of the school's collaborative CPD programme				
As part of a collaboration between schools in our partnership				

13. Has IRIS-Connect helped you make changes to your classroom practice? Please give details/examples:

14. Have you changed how you think about feedback as a result of using IRIS-Connect? Please give details/examples:

15. Have you had a particular focus/purpose with regards to your use of IRIS Connect?

16. Would you continue to use IRIS-Connect in the future if the option was available to you?
If yes - would you use it in the same way as now? If no - why not?

If you have any further or other comments, please continue overleaf.

Thank you for completing this survey.

Appendix 3B End point survey administered in July

What is this short survey for?

Your school is taking part in a project to evaluate the use of IRIS-Connect Technology. The project is funded by the Education Endowment Fund. The evaluation is being conducted by researchers from the University of Birmingham. Teachers' use of feedback has been chosen as a focus by which to measure the impact of IRIS-Connect Technology on teaching.

We would be grateful if you would complete this survey and seal it in an envelope we have provided and return it to your school office who will post responses to the University of Birmingham. We have asked for your name so that we can match your answers to this survey with any other information you provide during the course of the evaluation. By returning your survey in the envelope provided your answers will not be disclosed to anyone else in the school either now or in the future.

All data will be stored on a secure password protected folder at the University of Birmingham.

Evaluation results will NOT BE DISCLOSED IN RELATION TO NAMED SCHOOLS OR INDIVIDUALS at any stage to maintain confidentiality.

For further information, email Professor Peter Davies p.davies.1@bham.ac.uk

Please sign below to confirm that you have read this information and that you are willing for your answers to be used in the evaluation and matched with any other information you choose to disclose on the condition that your responses are treated as confidential.

Name	
Signature	
School	
Date	

Thank You!

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My views on Feedback in Teaching

You are asked to complete a grid below to indicate how you think about feedback in your teaching. You may use feedback in different ways at different times and you will be asked about these differences after the grid. When completing the grid please think about what the way in which you use feedback most frequently with the average or typical child you teach.

1. Please tick **one place** on the 54321012345 scale in each row to indicate where you would position yourself in relation to the two statements. Ticking 0 indicates that you position yourself as neither leaning towards the statement on the left nor leaning towards the statement on the right. If you change your mind, simply cross out your first mark and tick another place on the scale.

	5	4	3	2	1	0	1	2	3	4	5	
My feedback typically provides the child with a simple next step they can easily achieve	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically presents the child with a serious challenge
My feedback carefully highlights the differences between alternative ways of solving a problem	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Feedback typically gives students a correct way of solving a problem
My feedback typically makes plain the sequence of steps a child should follow in solving a problem	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically concentrates on helping a child to review the steps they have taken to solve a problem.
My feedback typically leaves the child feeling good about what they have done.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically leaves the child to judge whether they have done a good job
My feedback generally reflects my judgement about why a child has given a particular answer.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	My feedback typically tells the child how close their answer was to my answer.

My feedback typically *tells* a child what the problem is with their thinking	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	My feedback typically *helps a child to work out* what the problem is with their thinking.
My feedback typically concentrates on helping children to understand different ways of seeing a problem.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	My feedback concentrates on making sure that children know what they are expected to do.

2. The previous question asked you to characterise how you think about feedback in general. However, you may use feedback in different ways in different contexts.

If you think this is the case, please use the space below to give details of any of your responses above which you think are particularly context dependent:

Professional Development

(Please tick one column for each statement)

3. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I can trust my colleagues to be supportive if they observe my teaching					
I learn a lot from my colleagues					

I feel under pressure if colleagues discuss my teaching					
I find it more useful to reflect on my lessons on my own					

The final section of this questionnaire (overleaf) is designed for teachers who have used IRIS-Connect.
If you have NOT used IRIS-Connect, please stop at this point. Thank you for completing this survey.

Professional Development Using IRIS-Connect

(Please tick one column for each statement)

4a. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
It is easy to use IRIS-Connect cameras to record videos					
It is easy to use the IRIS-Connect platform to view my recorded videos					
4b. To what extent do you agree with each of these statements?	**Strongly Disagree**	**Disagree**	**Unsure**	**Agree**	**Strongly Agree**
Using IRIS-Connect has helped me to improve my understanding of my teaching					
Using IRIS-Connect has improved my understanding of children's needs					
Using IRIS-Connect has made me feel more vulnerable.					
The amount of preparation needed for film clubs has been too much to manage					
The time I have spent using IRIS-Connect has been worth it					
Using IRIS-Connect has become an important part of my professional development practice					
The focus on formative feedback has fit within my own professional development needs					
Attending film clubs has made me more likely to reflect on my own practice					
Film clubs have led to increased teacher collaboration in my school					
Film clubs have been an effective approach to professional learning					

5. How often have you used IRIS-Connect in each of these ways?	Never	Once or twice	3-4 occasions	5 or more occasions
In-ear coaching (being coached)				
In-ear coaching (as a coach)				
1-1 mentoring (being mentored)				

1-1 mentoring (as a mentor)				
In a group viewing and discussing an example of practice from another school				
In a group viewing and discussing an example from a member of the group				
In a group sharing in the planning, teaching and review of a lesson (as in Lesson Study)				

6. To what extent have you used IRIS-Connect in each of these contexts?	Not participated	Participated but not important to my job	Participated and modest part of my job	Participated as major part of my job
Supporting trainee teachers				
Support for NQTs				
As part of the school's appraisal system				
As part of the school's collaborative CPD programme				
As part of a collaboration between schools in our partnership				

7. Has IRIS-Connect helped you make changes to your classroom practice?
Please give details/examples:

8. Have you changed how you think about feedback as a result of using IRIS-Connect?
Please give details/examples:

9. Have you had a particular focus/purpose with regards to your use of IRIS Connect?

10. Would you continue to use IRIS-Connect in the future if the option was available to you?
If yes - would you use it in the same way as now? If no - why not?

If you have any further or other comments, please continue overleaf.

Thank you for completing this survey.

Appendix 3C (School) Champion survey administered in July

What is this short survey for?

Your school is taking part in a project to evaluate the use of IRIS-Connect Technology. The project is funded by the Education Endowment Fund. The evaluation is being conducted by researchers from the University of Birmingham.

As part of the evaluation, researchers must collect evidence on the costs of using IRIS-Connect in terms of time, money and resources. As a result, we would like to hear from all school project leaders about the costs to their school and them personally of setting up and running a programme based on IRIS-Connect.

We would be grateful if you would complete this survey and seal it in an envelope we have provided and return it to your school office who will post responses to the University of Birmingham. We have asked for your name so that we can match your answers to this survey with any other information you provide during the course of the evaluation. By returning your survey in the envelope provided your answers will not be disclosed to anyone else in the school either now or in the future.

All data will be stored on a secure password protected folder at the University of Birmingham.

Evaluation results will NOT BE DISCLOSED IN RELATION TO NAMED SCHOOLS OR INDIVIDUALS at any stage to maintain confidentiality.

For further information, email Professor Peter Davies p.davies.1@bham.ac.uk

Please sign below to confirm that you have read this information and that you are willing for your answers to be used in the evaluation and matched with any other information you choose to disclose on the condition that your responses are treated as confidential.

Name	
Signature	
School	
Date	

Thank you!

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Using IRIS-Connect for Professional Development

1. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Observing others is an important part of my school's approach to professional development					
Discussing teaching and learning is an important part of my school's approach to professional development					
My school was ready to make good use of IRIS-Connect when we first bought it					
Staff at my school were initially enthusiastic about the prospect of using IRIS-Connect					
Getting some other members of staff started on IRIS-Connect was difficult					
Please use this space to give any further details on your answers:					

2. Why has your school invested in IRIS-Connect?

3. Have you had a particular focus/purpose with regards your use of IRIS Connect?

Section 2
Film Clubs as a Whole-School Approach to Professional Development
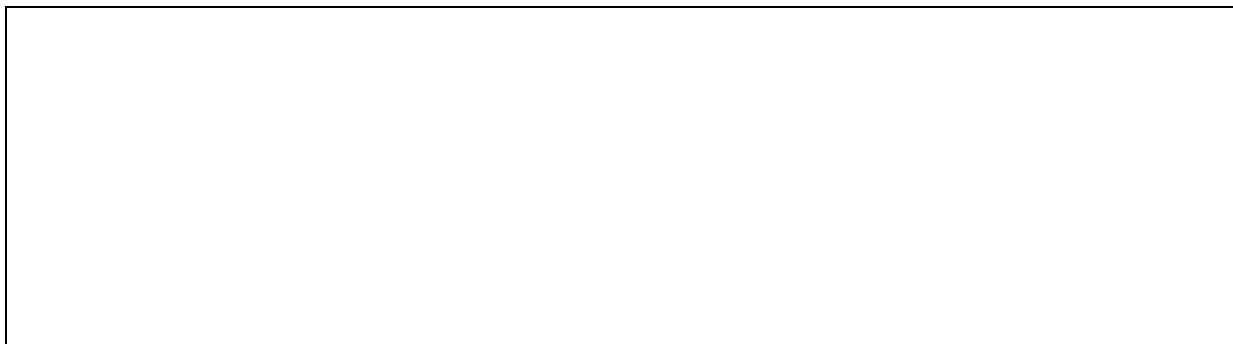
4. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Film clubs are an effective way of running whole-school CPD					
Film clubs fit within the professional development approach of my school					
The focus on feedback was suitable for my school's needs					
Using IRIS-Connect has increased the amount of collaborative professional learning taking place at my school					
I was given enough guidance and information to be able to effectively run film clubs					
The online content on the IRIS-Connect platform to support film clubs was stimulating					
Teachers at my school positively engaged with the film clubs					

Please use this space to give any further details on your answers:

5. What aspect(s) of your film clubs do you think was particularly effective?

6. How would you change film clubs for any future use?

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Section 3
Costs of Running Film Clubs

7. To what extent do you agree with each of these statements?	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I had to spend a lot of time to organise and set-up film clubs					
After the first film club, organising subsequent film clubs was much quicker					
Using IRIS-Connect has been good value-for money					
Film clubs are a sustainable approach to whole-school professional development					
The success of film clubs is highly dependent on the project leader's input					
Please use this space to give any further details on your answers:					

8. What have been the most time-consuming aspects of organising film clubs?

9. Has your school incurred any substantial costs other than the IRIS-Connect subscription fee?

Please give details if so:

Section 4 of 4
The Effectiveness of Video-Based Professional Development

10. Would you continue to use IRIS-Connect in the future if the option was available to you?
    - If yes - would you use it in the same way as now?
    - If no, please explain why not.

11. What are the problems with using videos for professional development?

12. Have you noticed any clear changes in the practice or attitudes of teachers in your school?

If you have any further comments, please continue overleaf.

Thank you for taking the time to complete this survey.

Appendix 3D Information from school Project Leaders gathered at meeting held April 22nd

Name …………………………………………………………………………

School …………………………………………………………………………

1. How many teachers (not including support-
   staff) are there at your school?   ………………………………

2. How many teachers have been actively involved
   in your school's film clubs?   ………………………………

3. Why were the participating teachers chosen to be involved?
   (i.e. are you running this as a whole-school project? Or have you selected particular
   teachers and, if so, on what basis?)

4. Have you received any parental out-out forms?

   Yes ☐   No ☐

5. If yes, how are you dealing with the affected classes? (tick one or more)

   No videos are being shared from these classes   ☐
   Affected children are being positioned off-camera   ☐
   Affected children are being edited out of the video   ☐
   Affected children are being relocated out of the class during filming   ☐
   Other   ☐
   If other, give details: …………………………………………………………

6. How many film clubs have you held so far?   ………………………………

7. Which teacher(s) have volunteered to share a series of lesson videos?

1	2
Name …………………………………	Name …………………………………
Year Group ………………………	Year Group ………………………

Email:
....

Email:
....

NB: 1-2 teachers are needed per school, of which the project lead can be one but not the only one.

Appendix 3E: Focus group with school champions April 22nd (mid-point of pilot)

Questions About the Set-Up

Q1– Did you have enough time to set-up the project? - Will you have completed all film clubs by the end of the academic year? - In a possible future evaluation, a measure of student achievement would be used. It is likely a baseline would be needed. Do you think this could have been fitted in during the set-up?
Q2 – What were the largest tasks when initially setting up the project? - (Possible tasks): Registration on the IRIS platform, learning to physically set up and use the cameras, accessing and watching videos on the IRIS platform, training/supporting other staff, working the intervention into wide school CPD plans, planning/preparation for film clubs (initial/ongoing). - Were there any problems with that? - Roughly how long did you need to spend doing that?
Q3 – What are the major tasks in continuing the project now the initial set-up is complete? - Roughly how long do you spend on that?
Q4 – Have there been any costs to your school other than the IRIS-Connect subscription and your time? - (If costs are mentioned, the project lead survey can get figures on them) - Were these costs foreseen?

Questions About Initial Impressions of the Film Clubs

Q5 – Have you been clear on how to organise film clubs and what to do in them? - What else would you have like to know/been given? - Has the content on the IRIS platform been helpful?
Q6 – Has the content on the IRIS-Platform about feedback and the opening film clubs been relevant/useful/stimulating? - What else would you have like to have been given? - Has the focus on feedback and content matched your school's profession development needs?
Q7 – How much have you had to direct/structure your film clubs? - Have you had a specific focus for each session? - Have you asked staff to prepare or follow-up anything?
Q8 – Have your staff positively engaged with film club? - Why were they enthusiastic/reluctant? - Did you have to do anything to get everyone involved? - Have your staff done the amount of preparation needed/expected?

Appendix 3F: Protocol for telephone interviews with teachers

Q1. How familiar are you with using video to reflect on teaching? - What are the main things that you have changed? - Which video can we see that in? - What prompted you to make that change? - Did you have a specific reason for using video for that/in this lesson?
Q2. Do you think the videos show any changes in your classroom practice? - What are the main things that you have changed? - Were you happy with the feedback in that lesson? - Which video can we see that in? - What prompted you to make that change? Did you have a specific reason for using video for that?
Q3. Do you think your views on effective feedback have changed during the process? - Why do you think doing it that way would be more effective? - What did you think about [that] before the process? What was/is your typical approach? - Can you explain that a bit more? - What prompted you to rethink [that]?
Q4. Has anything changed for the pupils in your classroom during the project? - (Clarify) Will they have noticed differences in your feedback? Or have they changed their role in giving or receiving feedback? - Can you give me an example of that? - What did you need to do to bring that change about?
Q5. Are there any aspects of your feedback you are still looking to improve? - How do you think you can go doing that? - What further support do you think you need with this? - What benefits do you think this change will bring?
Q5. Has using the video prompted you to rethink any other aspects of your teaching? - Did you have a specific reason for using video for that?
Q6. Is there anything you would have changed about the process and how you used IRIS? - What did you make of the content provided? - How useful were film clubs? - How would you change your approach if you continued to use IRIS?
Further questions will be prompted by the reflections the teacher has posted online already: what prompted these reflections and how have they affected subsequent teaching?

Questions specifically for this teacher:

End of questions - Is there anything you wish to add or ask?

Appendix 4A: Champion report of a 'whole-school' film club

Today's date	02/02/2016
School	Name of Primary School
Your name	Champion's name
Film Club attendees	23 names listed
What were the main points of discussion following the first video clip?	Whether the lack of modelling or visual aids hindered the task, or expanded it and gave a greater opportunity for discussion and exploration without making the answer too obvious. How the nature of the true or false statement stimulated discussion without giving any clue as to the correct response. The thinking time the teacher gave the children was seen as a positive, as well as the requirement to make the children justify their choices. Quotes: "No modelling of the task so LA might struggle to give a reason for their answer." Reply "I agree, but this could narrow the task." "We liked the task because it expected them to give a reason for their idea - but there was a definite answer. Test understanding - as if they didnt really think about it they might say it was true. Putting it in a real-life context was good. Thinking time and then talking time." "Hopefully it will deepen the level of discussion later. The discussion will be child-led depending on their reasons. It allows the teacher to flag up mis-conceptions depending on children's answers." "The thinking time / action was effective to avoid children shouting out the answer and copying their response." "Like True/ False tasks, gets away from the children being right' wrong. Clear setting out of the importance of giving a reason for answers."
What were the main points of discussion following the second video clip?	The 'excitement' over the disagreement, providing a positive environment and a safe place in which children would feel safe to give their opinions. The poker face of the teacher gave away nothing as to the actual answer. The use of language leading to an impression that it was a discussion, not an argument e.g. "defend" and "support" not "right" and "Wrong". The patience and withholding of judgement by the teacher also developed the children's confidence. The time given to each side of the discussion stopped children from interrupting each other. Quotes: "'Exciting' we have a disagreement! She makes it a positive point that the children disagree, but nor does she create an adversarial environment between the two viewpoints, this implies a class where it is 'safe' to be right or wrong when investigating a question." Reply: "Definitely agree with this, important to value everyone's options and reasoning." "No indication either way about whether the ch were right or wrong so all

	ch were happy to explain their thinking." "Teacher used phrases that showed it was a discussion/debate and not an argument. She used positive language such "defend" and "support" rather than "right" or "wrong". She encouraged chn to support each other by building on their reasoning." "There was no judgement of the children's views, no facial expression so the children seemed confident to express their views. Management was also good as other children allowed speakers to finish without 'chipping in'." "Use of 'defend', and 'talk about' rather than 'what they think' means children find it easier to give an answer they are not sure about. She implies she is keen to hear their reasoning, not to find our what's 'right' initially." "Teacher modelled good listening skills and allowed chn time to talk and think without rushing them. Chn then mirrored this behaviour and gave their peers time to talk." "Language used by the teacher to get children's opinions is less intimidating than 'can you explain your answer'" "Lots of time given to fully explain their reasoning and no comments from the teacher to break their flow or questions or encouragement that may have taken them off task"
Were there any changes in perspective during the course of discussions?	There was a move away from introducing a problem with lots of visual aids, no letting the children form their own ideas first to simulate discussion. People also moved away from correcting misconceptions faster, and allowing children the space and discussion time to explore and work through misconceptions.
What do the project participants want to reflect upon in their own practice following Film Club?	Giving children the space to be wrong. Using less judgemental language. Allowing more thinking time.
Broadly, how effective do you feel Film Club was as a learning experience?	Very effective

Appendix 4B: Summary of champions' comments in focus group meeting 22d April 2016

ID	How many People?	Understanding your Film Club				Content					Design of Intervention		
		Who and how facilitated?	When in School day?	How was it planned in advance?	How did you choose teachers?	Right amount?	Pitched at the right level?	Well explained/clear?	Logical Structure?	Useful? I.e.: feedback/focus.	Level of guidance/structure (too much/too little)	3 Film clubs (too much/too little)	Time to changes in teacher practice?
1	8	I "lead" discussion and refocus where necessary.	Monday 3:30-5pm ish.	Generally planned and timetabled 2-3 weeks in advance.	Chosen by asking teachers to join - all given information and invited.	Amount of content was perfect, but some teachers will always struggle to find time in advance of clubs.	Pitch was excellent.	Content clear and well explained,with appropriate expert analysis/opinion.	Structure was clear and effective.	Loved the focus, as all 3 modules are so clearly linked … can see evidence of each in the others.	Level of guidance was good, but some staff found it was too time exhausting.	3 Film clubs was perfect - even if it were a struggle to fit them in a short term.	Some changes in practice were instant - the key is to monitor that they continue on the long run.
2	20	Lead by me or phase leaders.	Staff/ phase meeting time. After school.	I watched clips and prepared 'crib' sheet for me to follow with key Qs on it.	All staff involved!!	A bit too much (but all great!).	Yep!	Yep!	Yep!	Yep!	Just right.	3 film clubs was fine - first one term which was too small!	Had no expectations re time but expected positive impact on practice.Happened instantly.
3	4	Started 80% guided but by 3rd film club staff felt comfortable to open discussions	After school.	I read modules before hand then asked staff to read their parts -	Headteacher decided who would be involved.	Module 2 was slightly longer - other two modules I thought were the	Pitch was good however certain vocab needed recapping	They were clear enough and gave good explanations.	Good structure.	All content was interesting and staff found focus useful.	Goof level of guidance.	3 film clubs were good, however the Spring term to complete	I think it depends on the individual.

		themselves.		produced summary of each module for them to take away.		right amount. Content in each module excellent.	with staff.					them in was a struggle.	
4	20-25	Open discussions - split into 3 groups. Guided by 1 staff member asking Qs- usually staff sharing own practice.	Staff meetings.	I took on role of pre-learning and feedback in a staff meeting (CPD). Staff then did flipped learning before film club.	Staff given option to take part.	Content excellent, materials were well chosen. Pre-learning reading was quite time consuming for teachers - although could see importance.	Pitch was appropriate.	Modules were clear in terms of focus for film club. Outcome in terms of what was covered during film club? (module 2).	Yes.	Staff took a lot from each session and focus of feedback useful.	Guidance in terms of film club timing and outcomes would have been useful.	3 film clubs seemed an appropriate amount for our school.	Changes could be seen almost immediately (each week).
5	25	Dan led and use of comments on IRIS.	Staff meeting 1 hr Tuesdays x 3.	Facilitator looked through materials. Meeting with pathfinders. Key questions. Food!	Pathfinder group selected for enthusiasm- tried to encourage self selection. Organised everyone into compatible groups.	Right amount in 1 and 3, too much in 2.	More or less.	Yes.	Yes.	Yes- feedback useful but context behind feedback i.e.: activities and nature of questions. Classroom organisation supports quality discussion.	About right.	About right.	Straight away.
6	6	I facilitated starting/focusin	End of School	I looked through	I identified core group of teachers	Have only done 2	Yes!	Very clear.	Very.	Really helped focus thinking	Very clear.	3 film clubs too	Had different expectations for

		g discussions and then stepping back until I need to move forward- teachers love to talk!	day- extra.	content first. Emailed reminders of what needed to be done and by when.	who I knew would be happy and driven to participate - those with growth mind-set and strong drive to develop. Used as part of developing outstanding teachers/excellence in teaching.	modules - content amount great for M1 and slightly more for M2. As non class based I had more time to view. Did offer teachers release time- none took me up on it.				and discussion.		many to fit in short half term - hence 3rd one scheduled for next week. 3 for a 'unit' just right.	different teachers. Saw changes in practice immediately - some surface level but some now embedded in practice. Have also seen development of learning culture/attitudes with children.
7	9	I led the discussion with the assistant head. Some staff are more vocal than others - I needed to question and 'pull' the information from the group.	Thursday evenings - usually start at 4:15.	Worked with Assistant Head to plan ideal dates for film club - had to be flexible and move some dates around.	Meeting with Assistant head and discussed who had used IRIS before and who would be willing - we wanted a good range of year groups involved.					Good level of guidance and structure.		Maybe too many to fit into the Spring term.	Pretty quickly- have already begun to see changes in practice.
8a	3	Facilitated by myself. Informal and free to talk. Comfortable with group.	During School day.	Planned within a short HT. Longer than	Confident with new ideas - flexible and open to changes. Comfortable and respectful of each							Too many film clubs within the time frame.	Immediate changes to practice.

				expected.	other.							Unclear of time needed for each film club.	
8b		Facilitated by and led by Dan but open discussion with full involvement by others.	Afternoons - release possible due to student teachers taking classes.	Planned in a short half term - longer than expected. Planned around release availability.	Chose teachers who had flexible schedules and willing to take part.	Film clips were right amount but brought up lots of issues. Didn't know how long it would all take to plan it in.	Pitched at good level.	Yes - well explained. An overview explaining how long each part would take would have been useful (to plan release time).	Structured well.	Very interesting, very useful. Generated a lot of discussion.	Guidance clear once started.	3 film clubs difficult to plan in. Generate long discussions and needed time to follow up.	Changes can be implemented almost immediately. Ideas can be taken into account in planning.

1. How many People?	8, 20, 4, 20-25, 25, 6, 8, 3 This suggests two distinct approaches: Whole school (3 schools) and Small Groups/phases (5 schools) With the exception of 1 group (chosen by the head), the groups were volunteers and therefore taking part on the basis of their enthusiasm/availability to do the film clubs.
2. Who and how facilitated?	In general, there was some leadership from the project lead but their role seemed more one of refocusing and facilitating. Staff seemed happy to be involved so the group facilitator needed to keep the discussion on track rather than to get it moving. One school that broke into smaller group tended to have 1 member of staff leading each group – usually the one who is sharing their own practice.
3. When in School day?	1 School (8) held the film clubs in an afternoon as they were released due to student teachers taking class. This was a small group (3). Where all staff were participating (see Q1) the sessions were put as a staff meeting. All other were after school, in addition to all other commitments.
4. How was it planned in advance?	This question was interpreted in different ways. Several talked about timetabling, that it was planned around release time or that it was timetabled 2-3 weeks in advance. Others discussed preparation for the session. In general, the person leading the group pre-read materials and watched clips, making notes ready for the session. It was also shared with staff prior to the meeting with an expectation that they will also have looked through the materials.
5. How did you choose teachers?	This is linked with Q1. Sometimes involvement was decided by SLT, sometimes it was entirely voluntary. It would have been more useful to hear why schools took one approach over the other. There is a suggestion in several responses that the school wanted to have 'pathfinders' to get things working first or that only selected teachers would/could benefit from it.
6. Right amount?	Most responses suggested that the content amount was about right but maybe a bit too much for module 2. There was wider discussion on the day about the role of the project leader in condensing the information and whether this was appropriate and whether module 2 in particular gave teachers too much to read.
7. Pitched at the right level?	Yes
8. Well explained/clear?	Yes – one respondent suggested that an overview of/guidance about timings would have been useful. Another comment about this in question 11 too.
9. Logical Structure?	Yes
10. Useful? I.e.: feedback/focus.	All comments were positive. Content was interesting, well linked, useful – generated a lot of discussion.

11. Level of guidance/structure (too much/too little)	Most say about right but some staff found it a bit too much. Guidance about timings would have been useful (someone mentioned that they did not know how long to put aside for film clubs or to suggest preparing for it on the day).
12. 3 Film clubs (too much/too little)	Some found it about right but there were concerns it was a bit too much to fit in to the time frame in some cases. Further concerns about guidance over timings are raised. The film clubs raised a lot of discussion points/things to do and needed to be spread out. The short Spring term made this very difficult to complete. Some schools thought this was OK though.
13. Time to changes in teacher practice?	All apart from one said that changes happened straight away. One said it depends on the individual. There is also an indication in a couple of responses that there may be more superficial changes initially or that it will take time to see whether the changes are embedded.

Appendix 5A IRIS metrics data

The IRIS-CONNECT video platform automatically collated two kinds of information. Figures A5A1-11 present the number of times someone from a school accessed the content provided on the online platform. This included the video clips from other sources provided as inputs for film clubs 1-3. We therefore expected more hits during the first three months of the intervention when schools were expected to organise film clubs 1-3. Table A5A.1 presents data on the number of videos created by teachers at each school during each of three time periods: (i) from when the school first joined IRIS-CONNECT to the start of the project. For schools 6-11 this was between 0 and 4 months; (ii) the first three months of the intervention (film clubs 1-3); (iii) the final 3 months of the intervention when teachers were expected to create videos of their own lessons (film clubs 4-6).

Platform Use by Week by School – Page and Reflection Video Access Metrics

Key

————————	Hits (separate use) on online platform per project participant
- - - - - - - - -	Hits on online platform per teacher in the school

(in Schools 4, 8 and 10 included all teachers in the project so there is no separate line for 'per teacher in the school)

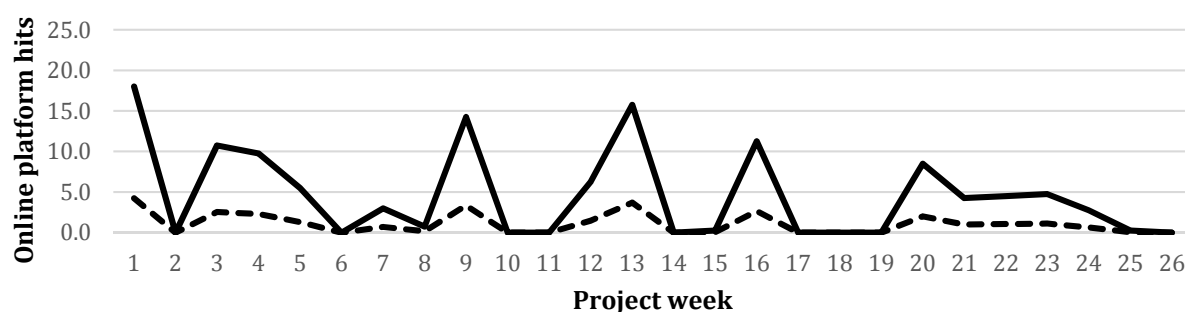
Figure A5A.1: Platform Use, School 1

Figure A5A.2: Platform Use, School 2
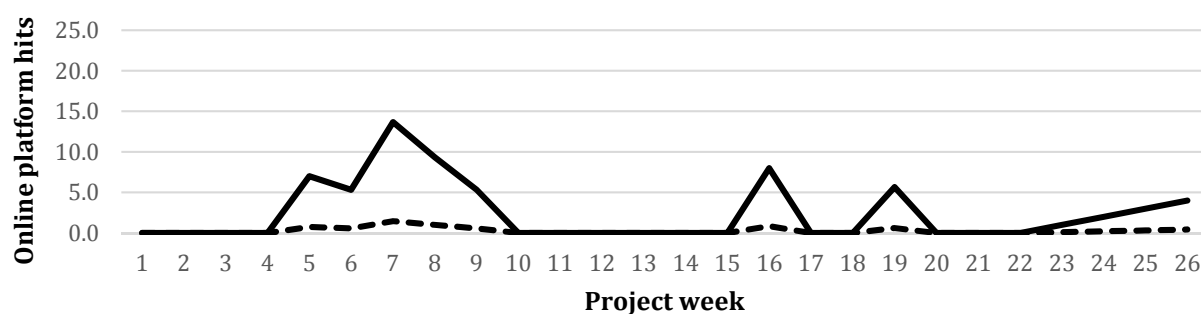
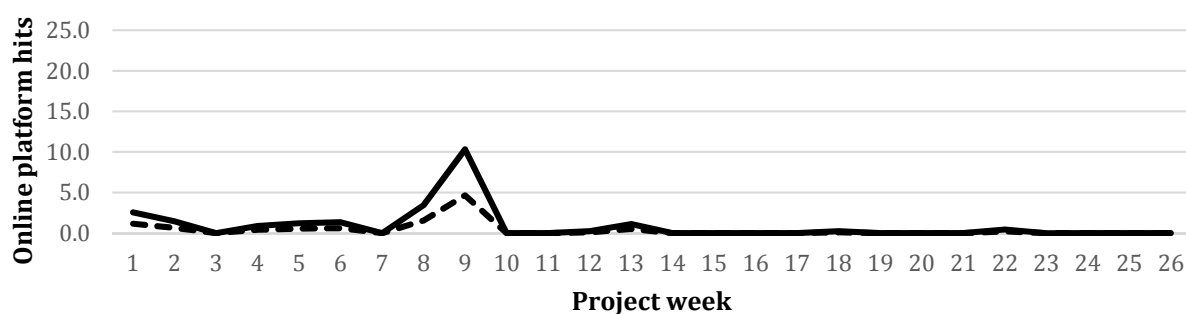## Figure A5A.3: Platform Use, School 3

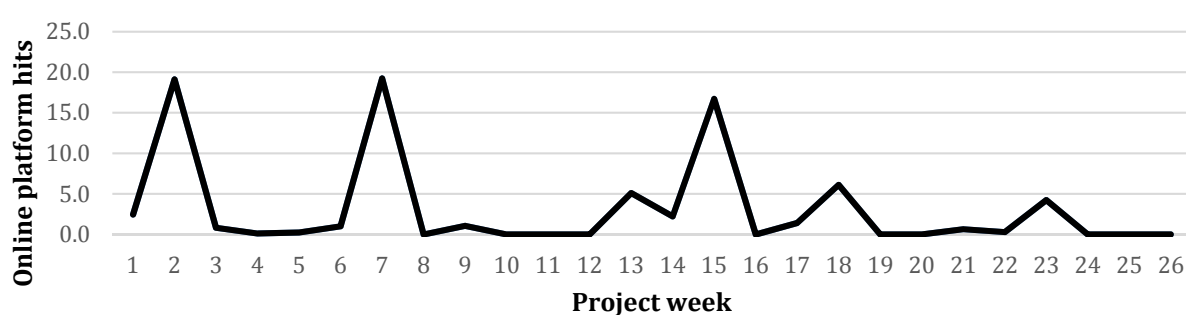## Figure A5A.4: Platform Use, School 4

Figure A5A.5: Platform Use, School 5
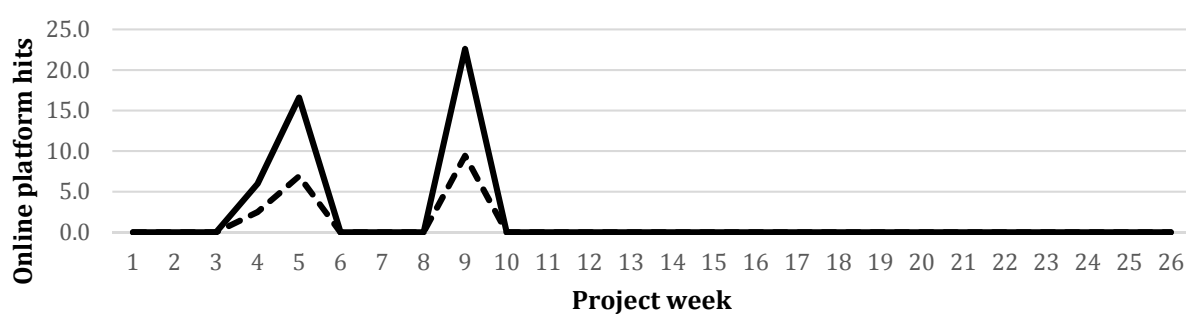

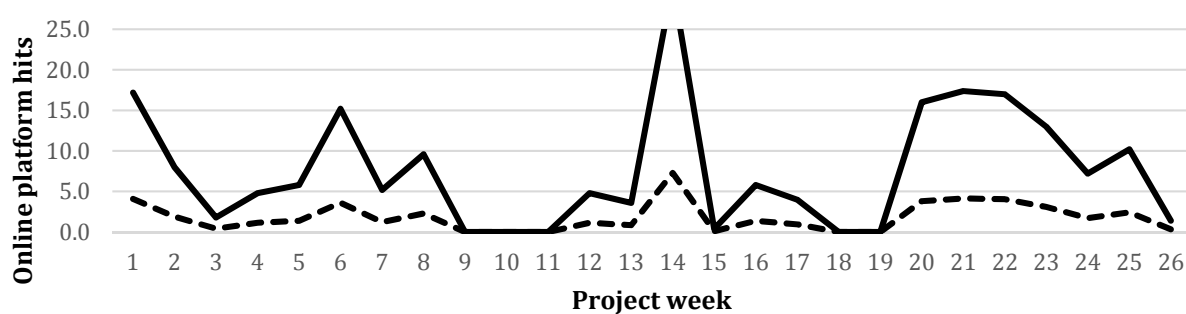## Figure A5A.6: Platform Use, School 6
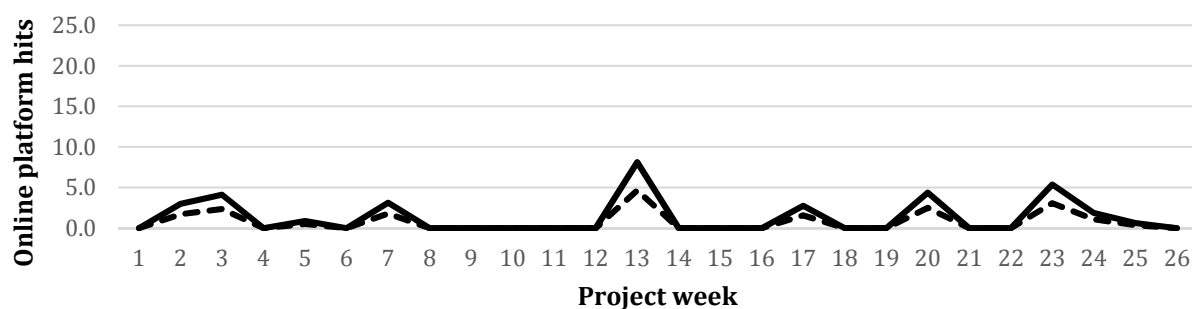
Figure A5A.7: Platform Use, School 7

Figure A5A.8: Platform Use, School 8
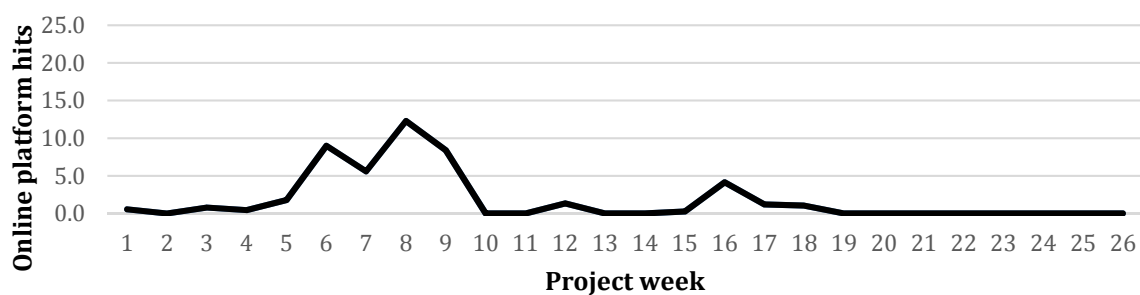
Figure A5A.9: Platform Use, School 9
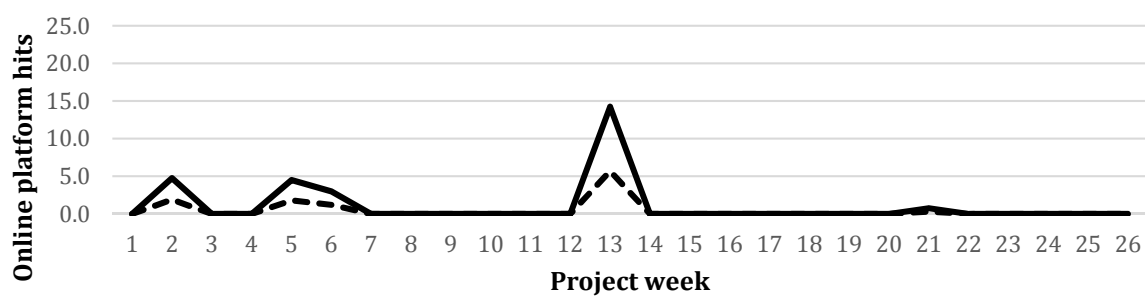
Figure A5A.10: Platform Use, School 10
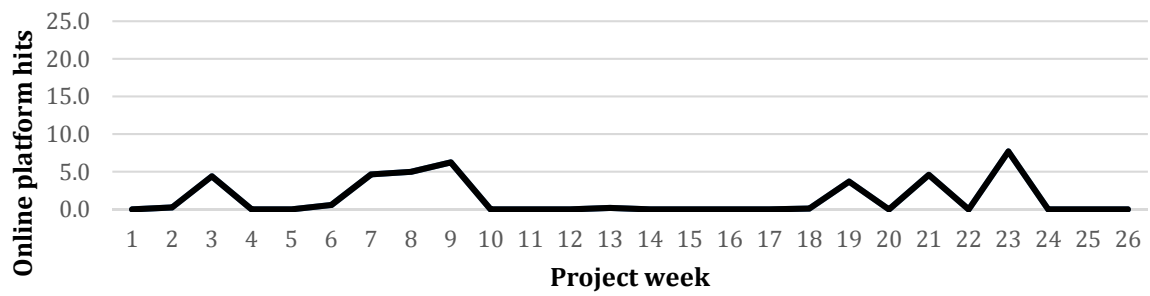
Figure A5A.11: Platform Use, School 11
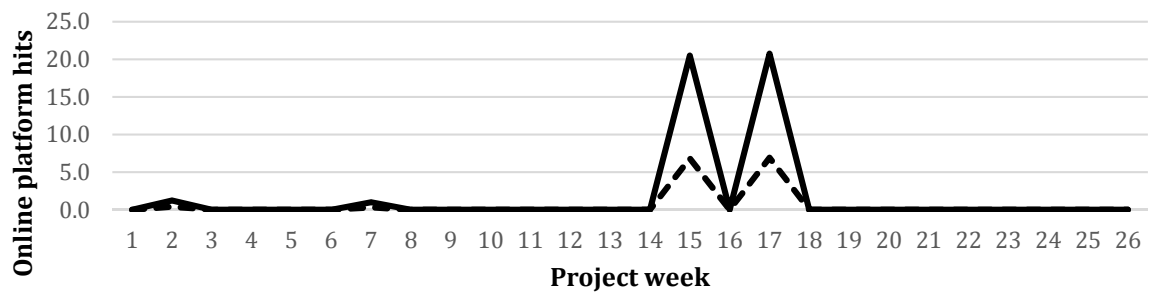
Table A5A.1 Video Creation by Schools Before and During the Project

School	First Recorded Use	Before				Spring			Summer		
		User Count	Number of videos created	Number of videos per 3 months	Duration of videos created	User Count	Number of videos created	Duration of videos created	User Count	Number of videos created	Duration of videos created
1	2/11	27	225	12	231:28:34	12	30	26:44:36	7	30	53:15:16
2	1/15	2	2	1	1:05:38	2	5	1:06:52	0	0	0:00:00
3	7/14	15	75	13	32:30:35	7	15	8:44:22	5	25	9:23:10
4	8/14	28	179	34	80:01:45	16	39	16:27:47	17	41	9:49:15
5	2/15	6	13	5	2:26:45	5	8	1:44:53	0	0	0:00:00
6	9/15	13	28	21	12:42:14	9	22	10:24:05	16	99	30:58:02
7	9/15	8	14	11	3:54:54	1	7	2:20:53	4	6	3:29:43
8	10/15	6	10	10	3:05:03	5	10	8:13:37	11	12	9:08:51
9	10/15	6	10	10	2:16:31	6	10	7:01:27	0	0	0:00:00
10	11/15	7	12	18	6:04:28	15	60	26:56:18	8	8	5:03:57
11	1/16	0	0	0	0:00:00	5	15	2:24:03	1	4	3:27:03

Appendix 5B: School champion midpoint focus group

This summary highlights the observations offered and issues raised by school champions attending the project mid-point meeting.

Integrating the intervention with the schools' strategy for professional development: The intervention creates challenges for the nature and implementation of a school's strategy for school improvement and professional development (CPD). On a practical level it creates demands on teachers' time which are easier to accommodate if a school is able to plan for this demand well in advance (ideally in the previous school year). Several school champions commented that the intervention was competing for CPD time with other activities that had already been planned. Teachers' time was used in editing as well as discussing the classroom videos. On a strategic level the intervention encourages schools to adopt a particular approach to school improvement involving open dialogue between teachers about their classroom practice. School champions believed that teachers' engagement with the intervention and the prospects for change were framed by the extent to which the school-level ambitions of the intervention were consistent with the aims of the school's senior leaders.

Time to embed. School champions commented that it took teachers several weeks to get used to the technical and procedural requirements of the system (using the cameras, the online platform and the ways these facilities could be used). This adjustment included training teaching assistants to set up cameras and learning how to handle transitions at the start and end of lessons. However, most concern about 'time to embed' related to overcoming teachers' fears about being filmed and a perceived threat that the videos would be used to make negative judgements about their teaching.

The film club format. Some school champions believed that the extent to which teachers prepared for the film clubs was a major factor in the value of the dialogue during film clubs. There was general agreement that the sequence of film clubs viewing videos from elsewhere followed by film clubs of teachers' own lessons worked well. One school champion suggested that it would have been useful if teachers had filmed one of their own lessons before the intervention so that this could be used as a base-line for later reflection.

Costs. It was noted that the cost to the school depended on which specification of the technology was provided through the school's contract with IRIS-CONNECT. Schools adopted different approaches to teachers' time. A minority released teachers during normal lesson-time whilst the majority held film clubs outside of normal teaching time. The critical factor here is whether the intervention replaces other forms of CPD or is in addition to other CPD in which case there is an additional cost borne by teachers.

Effectiveness: School champions believed that the intervention was making a difference to teachers' willingness to discuss their classroom and to teachers' thinking about their practice.

Appendix 5C: School champion midpoint feedback

During the project mid-point meeting, IRIS-CONNECT asked school champions to answer 13 questions by writing their responses on post-it notes. These responses are summarised in Table A5C.1.

Table A5C.1 Summary of school champion's written responses to questions posed by IRI-CONNECT at the project mid-point

14. How many People?	8, 20, 4, 20-25, 25, 6, 8, 3 This suggests two distinct approaches: Whole school (3 schools) and Small Groups/phases (5 schools) With the exception of 1 group (chosen by the head), the groups were volunteers and therefore taking part on the basis of their enthusiasm/availability to do the film clubs.
15. Who and how facilitated?	In general, there was some leadership from the project lead but their role seemed more one of refocusing and facilitating. Staff seemed happy to be involved so the group facilitator needed to keep the discussion on track rather than to get it moving. One school that broke into smaller group tended to have 1 member of staff leading each group – usually the one who is sharing their own practice.
16. When in School day?	1 School (8) held the film clubs in an afternoon as they were released due to student teachers taking class. This was a small group (3). Where all staff were participating (see Q1) the sessions were put as a staff meeting. All other were after school, in addition to all other commitments.
17. How was it planned in advance?	This question was interpreted in different ways. Several talked about timetabling, that it was planned around release time or that it was timetabled 2-3 weeks in advance. Others discussed preparation for the session. In general, the person leading the group pre-read materials and watched clips, making notes ready for the session. It was also shared with staff prior to the meeting with an expectation that they will also have looked through the materials.
18. How did you choose teachers?	This is linked with Q1. Sometimes involvement was decided by SLT, sometimes it was entirely voluntary. It would have been more useful to hear why schools took one approach over the other. There is a suggestion in several responses that the school wanted to have 'pathfinders' to get things working first or that only selected teachers would/could benefit from it.
19. Right amount?	Most responses suggested that the content amount was about right but maybe a bit too much for module 2. There was wider discussion on the day about the role of the project leader in condensing the information and whether this was appropriate and whether module 2 in particular gave teachers too much to read.
20. Pitched at the right level?	Yes
21. Well explained/clear?	Yes – one respondent suggested that an overview of/guidance about timings would have been useful. Another comment about this in question 11 too.

22. Logical Structure?	Yes
23. Useful? I.e.: feedback/focus.	All comments were positive. Content was interesting, well linked, useful – generated a lot of discussion.
24. Level of guidance/structure (too much/too little)	Most reported that the level of guidance was about right but some staff found it a bit too much. Guidance about timings would have been useful (someone mentioned that they did not know how long to put aside for film clubs or to suggest preparing for it on the day).
25. 3 Film clubs (too much/too little)	Some found it about right but there were concerns it was a bit too much to fit in to the time frame in some cases. Further concerns about guidance over timings are raised. The film clubs raised a lot of discussion points/things to do and needed to be spread out. The short Spring term made this very difficult to complete. Some schools thought this was OK though.
26. Time to changes in teacher practice?	All apart from one said that changes happened straight away. One said it depends on the individual. There is also an indication in a couple of responses that there may be more superficial changes initially or that it will take time to see whether the changes are embedded.

Appendix 5D: Film club organisation and practice

How did schools organise participation in film clubs?

Three schools (4, 8 and 10), arranged whole school participation in film clubs. In one of these schools (10) this was reported as voluntary (see Table A5D.1). The remaining schools adopted a small group approach. In three of these cases participation was voluntary. There was no obvious difference between the form of organisation chosen by those schools which had been using IRIS-CONNECT before the project and those which were new to using IRIS-CONNECT.

Table A5D.1: Data on film clubs shared with evaluation team

School	Format	Participants	Using IRIS CONNECT before July 2015	Film club data shared
1	Selected Group	8	Yes	five videos of film clubs and one summary from champion
2	Volunteer Group	3	Yes	two summaries from champion)
3	Volunteer Group	9	Yes	two summaries from champion)
4	Whole School	17	Yes	one summary from champion
5	Selected Group	5	Yes	one summary from champion
6	Selected Group	5	No	two videos of film clubs
7	Volunteer Group	8	No	two videos of film clubs and two summaries from champion)
8	Whole School	20	No	two videos of film clubs and one summary from champion
9	Selected Group	4	No	No data
10	Whole School	20	No	three videos of film clubs and three summaries from champion
11	Selected Group	4	N0	two summaries from champion)

What were the topics of discussion in film clubs?

The feedback forms and film club videos were analysed looking for the main points of discussion during the session. They are briefly summarised below:

- *Dialogic culture and routine.* There was a large amount of discussion of the dialogic culture that had been embedded in some of the example videos. Teachers argued that the children shown in the videos were very familiar with the approach (e.g. a culture inviting disagreement and children explaining their positions in a way that was not ego-involving or threatening).
- *Teachers refraining from giving the correct answer 'too soon'.* This was modelled in the first film club with the implication that a key aspect of the dialogic approach is to avoid closing down discussion through feedback which provides the 'right answer'. Teachers discussed the value of this strategy and also considered arguments for providing information, modelling and directing children.
- *Tasks for discussion.* The relationship between the task presented and the ensuing dialogue was a common point of discussion. Teachers debated the characteristics of tasks which promoted discussion amongst children.
- *Timing, pace and classroom management.* Teachers commented on the use of hand signals and the pace of tasks. There was discussion of the pace of the lessons which some teachers argued was rather slow. There was particular interest in the use of 'wait time' after teachers on videos had asked questions of the children.
- *Questioning:* participants discussed the quality of questions and the value of open-ended questions and higher-order questions to promote dialogue. They also drew out the specific language used for questions, the purposes of questions (e.g. whether they are for the teacher's

benefit, to promote dialogue or to scaffold pupil understanding). There were also many links between the questions and dialogue.

- *Pupil to Pupil Dialogue:* Many groups discussed how to promote pupil to pupil dialogue and how to get pupils to respond to each other, promoted by some clips that did this well. Some noted that they would have liked more group talk and one group pointed out the difficulties of always hearing pupil-pupil dialogue using IRIS.
- *Teacher language:* a fair amount of discussion identified features of language. Sometimes this was related to a specific task in a specific clip (e.g. discussion of the word 'solid' linked with one clip). Often it was picking out how the feedback was worded, (e.g. "Can you add to that?")
- *Pupil independence, ownership and engagement:* there was some discussion of how to encourage children to take ownership of the dialogue, and how to encourage reflection from them.
- *Groups and classroom organisation:* part of the difficulty of translating some of what was seen in the film clubs was difference in group size. There was some discussion of whether particular approaches or tasks would work in smaller/larger groups or with younger children for example. There were also both positive and negative points raised about engagement. This included discussion of how to bring all children into the discussion but also criticism of some platform clips where it was unclear whether all children were engaged.
- *The role of praise:* the smaller role for praise evident in many of the clips was discussed in several groups. Some just noted that the praise was task rather than ego involved, one comment made by one group was that there was no ego involvement at all and this had taken it too far.

Adherence, ownership and reflection. In some schools teachers used film clubs as a stimulus for quite wide ranging discussion. Teachers in these schools adopted a more relaxed approach throughout and appeared, from the video evidence, to be more engaged in discussing the issues and trying to relate these to their own practice. This was evident in contributions from teachers which began with phrases such as 'I find it hard…', 'Most of our feedback…', 'We often…', 'My children…', 'I say…', ' I tend to…', 'I think sometimes we…', 'So what I'm trying to do is….'. Discussion largely focused on implementing ideas. In these schools, teachers commented on things they had tried and discussed challenges and successes, referring in detail to each other's videos whilst picking out things to do differently. Film clubs in other schools appeared to stick rigidly to working through the questions provided in the support on the online platform. In this more rigid format the session leader asked questions posed in the guidance on the platform. Relatively few opinions were aired, followed by a small amount of clarification/agreement before the next question was 'read out'. In one case, the staff seemed slightly reticent to contribute and the sessions were very formulaic. These film clubs were more likely to be dominated by one film club member who shared their experience at considerable length. This may have been due to reluctance of other teachers to share and a school champion aiming to model the kind of disclosure they were trying to encourage in others. : Nonetheless, even in schools which started with a rigid format, later film clubs became more relaxed. In the few schools which included all their teachers in the intervention we observed one case where film clubs kept rigidly to the questions on the online support and one which was characterised by open discussion and application to practice.

Identification of implications for teaching. In some schools, discussion in film clubs focused on implementing changes in teachers' own practice. In these schools, the project leader encouraged teachers to commit to actions. Sometimes these commitments were quite general. For example, one school champion asked, "How are we going to use this to improve our own dialogue in classrooms?" and the group agreed to a couple of points for action. But several schools who took a highly managed approach in which teachers committed themselves to specific actions. Teachers in one school agreed to specific actions to complete before the next session. The school champion started the following session by asking (somewhat humorously), 'Has everyone done the homework?' In another school the school champion outlined in the opening their expectations about what teachers would do during the project. Subsequent sessions in this school showed teachers agreeing to create 2 or more

videos to illustrate progression in specific aspects of teaching. Teachers stated specific objectives and identified lessons or activities that they would undertake before the next session.

In other schools, possible points for development were identified in a more tentative and general way: the talk was of what we 'want to develop' and 'reflecting on how [they] can best facilitate this.' Discussion in one school identified aspects of teaching to develop yet no specific targets were suggested. The project leader closed this session by suggesting that teachers should 'maybe have a think about your questioning as you are in class, such as the questions they have given us'. It is possible these schools translated points from film club sessions into changes in classroom practice. For other schools, the management of this transfer was far more managed

Appendix 5E: Videos of lessons shared by teachers

Teachers shared some of the videos they created with the evaluation team. These videos provide evidence of some of the feedback which teachers provided to children. (see Table A5E.1) Although the intervention design encouraged production and sharing of videos of teachers' practice in the second half of the pilot period, some lesson videos were shared with the evaluation team during the earlier stage of the project. Forty-three lesson videos were shared. Seven teachers shared more than one video with more than a month between the lessons. It was not possible to discern clear changes in practice through this very small sample. Therefore, the analysis of the lesson videos is presented as a reflection of teachers' practice during, largely, the second half of the pilot project.

Twenty-four of the lesson videos were shared by teachers from schools in which film clubs were conducted through open, exploratory discussion in which there were strong references to teachers' practice. Nine of the lesson videos were shared by teachers in which film clubs were strongly directed by one individual, closely following the online guidance and with more limited reference to teachers' practice. The reporting in this appendix compares the lesson videos from these two types of school.

Table A5E.1 The number of lesson videos shared by teachers from each school

School	Number of lessons shared with the evaluation team	Number of project teachers in the school
1	12	4
2	0	4
3	4	7
4	1	19
5	0	4
6	8	5
7	6	9
8	4	17
9	0	1
10	6	16
11	4	4
Total	45	

These videos were analysed in terms of the nature of children's participation in classroom dialogue (Table A5E.2) and in terms of the type of feedback provided by teachers (Tables A5E.3). Table A5E.2 shows that teachers dominated whole class dialogue and that they provided limited opportunities for children to talk about their work with each other. Table 5E.3 presents an analysis of the 43 videos using the same categories as the survey of teachers. Each video extract was coded on a scale of -5 to +5 according to how closely the teaching resembled the left hand or right hand statement in each row. Table A5E.3 shows the considerable range in feedback visible in the videos. School champions argued that this reflected diversity in situation: that one type of feedback might be the most appropriate in one circumstance whilst another type of feedback would be more suitable in another situation.

Table A5E.2 Frequency of type of role for children in classroom dialogue (n=43)

	None/ very little	Some examples	Frequent/ complex
Participation by children in whole class dialogue			
Pupil gives extended response	31	8	4
Pupil asks an unprompted question	39	3	0
Pupil responds directly to a point made by another pupil	30	10	3
Child-child dialogue			
Small group discussion	34	2	7
Sharing with partner	31	8	4
'Reciprocal teaching' style where children were encouraged to use feedback strategies with peers	39	4	0

Table A5E.3 Characterisation of teachers' feedback visible in shared lesson videos using the same format as the teacher survey

	Strength of tendency towards <u>left </u>hand statement						Strength of tendency towards <u>right</u> hand statement					
	-5	-4	-3	-2	-1	0	1	2	3	4	5	
1 Gives easy/simple next steps	0	2	6	2	0	0	2	10	11	9	1	Poses serious challenges
2 Highlights differences between alternative responses/method	0	5	9	5	2	7	1	6	5	1	2	Gives correct response/method
3 Gives correct series of steps or points	0	1	5	5	1	3	5	4	14	4	1	Reviews pupil's steps or points
4 Makes pupil feel good	0	1	1	2	2	7	0	0	5	18	7	Leaves the judgement to the pupil
5 Reflects the teacher's judgement about pupil's current understanding	0	5	10	9	2	2	4	2	6	3	0	Tells the pupil how close they were to teacher's answer
6 Tells a pupil the problem with their method/thinking	0	2	3	4	2	5	3	5	9	9	1	Helps the pupil to work out what the problem is with their thinking/method
7 Helps pupils understand different ways of seeing a problem.	0	1	8	10	2	3	2	7	4	4	2	Helps pupils know what they are expected to do/say.

The categories in Table A5F.3 were analysed to compare the 24 videos from schools with more 'open and applied' film clubs were compared with the 9 videos from schools with 'closely directed, less applied' film clubs. The lessons from schools using the more 'open applied' film clubs were categorised as displaying feedback which gave more emphasis to: posing serious challenges; highlight different methods; reviewing pupils' steps; leaving judgements to pupils, reflecting the teachers' judgement of a pupil's current understanding; helping pupils to work out problems; and helping children to see alternative ways of seeing problems. This is a small sample which must be

treated with caution, but a simple t-test suggested that each of the differences was statistically significant at the 0.05 % level and 5 of the seven were statistically significant at the 1% level.

Appendix 5F: Teacher baseline and end of project surveys

Survey response rates

Table A5F.1 summarises the response rates to the baseline and end of project surveys. Schools were asked to arrange for all teachers in the school to complete each survey, but rates of response from non-participants varied between schools.

School	Baseline			Endpoint			Both			Unique Respondents			Total teachers in school
	Project	Not	Total	Project	Not	Total	Project	Not	Total	Project	Not	Total	
1	4	9	13	4	8	12	4	8	12	4	9	13	20
2	3	8	11	4	21	25	3	6	9	4	23	27	33
3	5	2	7	6	13	19	4	2	6	7	13	20	25
4	17	0	17	16	0	16	14	0	14	19	0	19	24
5	4	8	12	4	4	8	4	4	8	4	8	12	13
6	5	12	17	4	6	10	4	5	9	5	13	18	21
7	5	0	5	8	1	9	4	0	4	9	1	10	18
8	17	2	9	14	1	15	14	1	15	17	2	19	21
9	1	2	3	1	2	3	1	1	2	1	3	4	13
10	16	1	17	9	0	9	9	0	9	16	1	17	18
11	3	8	11	3	5	8	2	5	7	4	8	12	12
	80	52	122	73	61	134	63	32	95	90	81	80	

Table A5F.1 Survey response rates by school

Teachers' reporting of their approach to feedback

Table A4F-2 presents survey results for the questions asking participants to indicate their typical approach to each of seven aspects of feedback. Only those teachers (varying from 88 to 95 across the 7 items in Table A5F.2) who had participated in both surveys are included in this analysis (complete case analysis). There may be unobserved differences between those who completed both surveys and those who only took part in one. However, this problem applies to non-participants as well as participants. The response scale had 11 divisions in which the furthest to the left indicated strong emphasis on the statement on the left. The division furthest to the right indicated strong emphasis on the statement on the right.

There were three differences (significant at .05%, chi-squared test) between project participants and non-participants in the baseline survey. These are shown by **baseline.** Project participants were more likely to assert that their feedback 'made plain the sequence of steps a child should follow in solving a problem', 'typically tells the child how close their answer was to my answer' and 'typically tells a child what the problem is with their thinking'. That is, at the time of the baseline survey, teachers included in the project were *less* likely than other teachers in their schools to assert that their feedback displayed the qualities that the intervention aimed to develop.

A comparison of project participants' responses to the final and baseline surveys shows that they were more likely to assert their feedback presented children with serious challenges, highlighted differences between alternatives, reflected their judgement about the children's reasoning (as

opposed to the correctness of their answer), helped children to identify problems in their reasoning and helped children to understand different ways of seeing a problem. Each of these differences is consistent with the intentions of the intervention. There were also some significant differences between non-participants' assertions in the baseline and end of project surveys. However, only two of these ('my feedback highlights differences between alternative ways of seeing a problem' and ' my feedback concentrates on helping children to understand different ways of seeing a problem') were in the direction encouraged by the intervention.

Table A5F.2 Teacher Self-Characterisation of Feedback (reduced scale)

			Left	Neutral	Right		Effect size † (change for participants relative to non-participants)
1. My feedback typically provides the child with a simple next step they can easily achieve	Baseline	Participant	41.7	15.0	43.3	My feedback typically presents the child with a serious challenge	.12
		Non Participant	51.6	19.4	29.0		
	Endpoint	Participant	23.8	19.0	57.1		
		Non Participant	50.0	15.6	34.4		
2. My feedback carefully highlights the differences between alternative ways of solving a problem	Baseline	Participant	40.0	20.0	40.0	Feedback typically gives pupils a correct way of solving a problem	-.03‡
		Non Participant	35.5	22.6	41.9		
	Endpoint	Participant	54.0	20.6	25.4		
		Non Participant	56.3	9.4	34.4		
3. My feedback typically makes plain the sequence of steps a child should follow in solving a problem	Baseline	Participant	25.0	11.7	63.3	My feedback typically concentrates on helping a child to review the steps they have taken to solve a problem.	.42
		Non Participant	9.7	32.3	58.1		
	Endpoint	Participant	28.6	27.0	44.4		
		Non Participant	32.3	35.5	32.3		
4. My feedback typically leaves the child feeling good about what they have done.	Baseline	Participant	57.6	15.3	27.1	My feedback typically leaves the child to judge whether they have done a good job	.29
		Non Participant	61.3	16.1	22.6		
	Endpoint	Participant	49.2	20.6	30.2		
		Non Participant	74.2	9.7	16.1		
5. My feedback generally reflects my judgement about why a child has given a particular answer.	Baseline	Participant	39.0	39.0	22.0	My feedback typically tells the child how close their answer was to my answer.	-.48‡
		Non Participant	65.5	20.7	13.8		
	Endpoint	Participant	58.7	23.8	17.5		
		Non Participant	53.1	28.1	18.8		
6. My feedback typically tells a child what the problem is with their thinking	Baseline	Participant	20.0	3.3	76.7	My feedback typically helps a child to work out what the problem is with their thinking.	.36
		Non Participant	9.7	3.2	87.1		
	Endpoint	Participant	11.1	14.3	74.6		
		Non Participant	15.6	12.5	71.9		
7. My feedback typically concentrates on helping children to understand different	Baseline	Participant	50.0	10.0	40.0	My feedback concentrates on making sure that children know what they are expected to	.12‡
		Non Participant	51.6	16.1	32.3		
	Endpoint	Participant	57.1	23.8	19.0		

ways of seeing a problem.		Non Participant	56.3	21.9	21.9	do.	

† calculated by Cohen's d

‡ The intervention aimed to increase use of feedback described by the left hand side of this row, so for this row a negative effect size is desirable.

We analysed correlations between responses to the items in Table A5F.2 using the baseline survey. Only two correlations were statistically significant after making a Bonferroni adjustment. Items 2 and 7 were moderately correlated (r=. 46) and item 4 was weakly correlated with item 5 (r=.24). We also compared changes in participants' beliefs about their own feedback in four schools where use of the online system tailed off in the summer term and those schools where use of the online platform was more or less maintained. Participants in the schools where use of the online system tailed off were significantly (at the .05% level) less likely to report that 'My feedback carefully highlights the differences between alternative ways of solving a problem' and 'My feedback typically concentrates on helping a child to review the steps they have taken to solve a problem'.

Teachers' views of collaborative learning

Table A5F.3 reports teachers' responses to questions about their attitudes towards working with and learning from colleagues. There was one observable difference between participants and non-participants in the baseline survey (measured through a chi-squared test with columns amalgamated to makes sure there were sufficient entries in each column for this test). Participants were more likely than non-participants to assert that 'I learn a lot from my colleagues' (p<.01). This probably reflects the basis on which teachers volunteered to participate or the basis on which school senior leaders selected participants. The third question (10c) asked teachers whether they agreed with the question 'I feel under pressure if colleagues discuss my teaching'. The likelihood that teachers participating in the project would *disagree* with this statement increased between the baseline and end of project surveys (p<.01). Interestingly, teachers who were not participating in the project were also more likely to disagree with the statement 'I feel under pressure if colleagues discuss my teaching' at the end of the project. There is some tentative evidence here that the intervention had affected the climate for collaboration in the schools. Nonetheless, even at the end of the project, a third of participants and four tenths of non-participants still agreed that they felt under pressure if colleagues discussed their teaching.

Table A5F.3 – Teachers' views about working with and learning from colleagues

			Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
10a I can trust my colleagues to be supportive if they observe my teaching	Baseline	Project	0.0%	1.6%	4.8%	53.2%	40.3%
		Non-Project	0.0%	0.0%	3.1%	53.1%	43.8%
	Endpoint	Project	0.0%	1.6%	1.6%	54.0%	42.9%
		Non-Project	0.0%	6.7%	3.3%	50.0%	40.0%
10b I learn a lot from my colleagues	Baseline	Project	0.0%	0.0%	6.5%	38.7%	54.8%
		Non-Project	0.0%	0.0%	3.1%	62.5%	34.4%
	Endpoint	Project	0.0%	0.0%	4.8%	46.0%	49.2%
		Non-Project	0.0%	3.3%	6.7%	50.0%	40.0%
10c I feel under pressure if colleagues discuss my teaching	Baseline	Project	3.2%	24.2%	27.4%	37.1%	8.1%
		Non-Project	9.4%	25.0%	21.9%	43.8%	0.0%
	Endpoint	Project	3.2%	46.0%	17.5%	30.2%	3.2%
		Non-Project	3.3%	43.3%	13.3%	36.7%	3.3%
10d I find it	Baseline	Project	1.6%	47.5%	23.0%	19.7%	8.2%

more useful to reflect on my lessons on my own		Non-Project	0.0%	40.6%	25.0%	21.9%	12.5%
	Endpoint	Project	6.3%	38.1%	23.8%	25.4%	6.3%
		Non-Project	3.3%	30.0%	30.0%	30.0%	6.7%

Total n=88-95, Of which participants n=59-63, non-participants n=29-32

Use of IRIS-CONNECT by project participants and by other teachers in the school

Part of the end of project survey was only answered by 89 teachers who had made *some* use of IRIS-CONNECT. 69 of these teachers reported that they had participated in the project and 20 reported they had not participated in the project. Table A5F.4 summarises these teachers' responses to questions asking them how they had used IRIS-CONNECT. Teachers who had not participated in the project were more likely to report that they had used IRIS-CONNECT in the context of a group of teachers as opposed to working (e.g. in coaching or mentoring) with one other teacher. Teachers who had participated in the project reported high levels of use, particularly in a group format as encouraged by the intervention.

Table A5F.4 – How teachers used IRIS-CONNECT

		Never	Once or twice	3-4 occasions	5 or more occasions
11a In-ear coaching (being coached)	Non-project	16	3	1	0
	Project	59	9	0	1
11b In-ear coaching (as a coach)	Non-project	19	0	0	0
	Project	61	4	1	1
11c 1-1 mentoring (being mentored)	Non-project	13	2	4	1
	Project	48	13	4	1
11d 1-1 mentoring (as a mentor)	Non-project	17	1	1	0
	Project	45	15	3	1
11e In a group viewing and discussing an example of practice from another school	Non-project	13	6	1	0
	Project	6	23	26	13
11f In a group viewing and discussing an example from a member of the group	Non-project	9	5	6	0
	Project	2	26	33	7
11g In a group sharing in the planning, teaching and review of a lesson (as in Lesson Study)	Non-project	9	5	6	0
	Project	26	20	17	5

Teachers were also asked about the contexts in which they had used IRIS-CONNECT (see Table A5F.5). These responses show that just over a third of project participants had used IRIS-CONNECT in the contexts of supporting trainee teachers and newly qualified teachers (NQTs). A substantial minority of teachers participating in the project had experience of using video technology in other contexts. This experience might be expected to foster their willingness to use the technology and their knowledge of how to use the technology effectively to aid their learning. Participants were more likely than non-participants to report that they had used IRIS-CONNECT to support the development of new teachers. Conversely, non-participants were more likely than participants to report that they had used IRIS-CONNECT in the context of a school's appraisal system. The numbers are too small here to draw any firm inferences, but there is an indication here that there may be a tension between use of the technology for two approaches to school improvement: evaluation of performance or development of thinking and practice. The level of participants' reported use of IRIS-CONNECT in collaborative CPD suggests that most of these teachers regarded their participation as relevant to their job.

Table A5F.5 The contexts for schools' use of IRIS-CONNECT

		Not participated	Participated but not important to my job	Participated and modest part of my job	Participated as major part of my job
12a Supporting trainee teachers	Non-project	17	0	2	1
	Project	45	6	9	6
12b Support for NQTs	Non-project	17	1	2	0
	Project	43	6	9	10
12c As part of the school's appraisal system	Non-project	7	2	4	5
	Project	36	3	20	7
12d As part of the school's collaborative CPD programme	Non-project	4	2	8	5
	Project	8	6	42	13
12e As part of a collaboration between schools in our partnership	Non-project	16	0	2	0
	Project	48	3	11	4

Teachers' beliefs about the feasibility and value of the intervention

Teachers were generally positive about the technical and practical feasibility of using IRIS-CONNECT and a large majority agreed that it was easy to use the online platform to review lessons. The end of project survey asked teachers to reflect on their experience of IRIS-CONNECT. A minority of teachers (about one in seven) thought that preparation for film clubs had taken too much of their time. We received between 84 and 90 responses to these questions. Close to three-quarters of participating teachers regarded the project as good use of their time and effective CPD (see questions 4 and 9). Only a very small minority believed that their time had not been well used. More than 80% believed that the focus on formative assessment aligned well with their professional development needs. About 70% believed that the film clubs had made them more likely to reflect on their own practice, but teachers were less sure about the impact of the intervention on their own future use of IRIS-CONNECT and future collaboration (though more than half of teachers had positive expectations).

Table A5F.6 Teachers' beliefs about value and practicality of the intervention

	Statement		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Total Responses
1	It is easy to use IRIS-Connect cameras to record videos	N	2	15	13	52	8	90
		%	2.2%	16.7%	14.4%	57.8%	8.9%	
2	It is easy to use the IRIS-Connect platform to view my recorded videos	N	1	7	4	63	15	90
		%	1.1%	7.8%	4.4%	70.0%	16.7%	
3	The amount of preparation needed for film clubs has been too much to manage	N	3	44	26	12	1	86
		%	3.5%	51.2%	30.2%	14.0%	1.2%	
4	The time I have spent using IRIS-Connect has been worth it	N	0	5	20	50	14	89
		%	0.0%	5.6%	22.5%	56.2%	15.7%	
5	Using IRIS-Connect has become an important part of my professional development practice	N	0	20	20	43	7	90
		%	0.0%	22.2%	22.2%	47.8%	7.8%	
6	The focus on formative feedback has fit within my own professional development needs	N	0	5	11	61	11	88
		%	0.0%	5.7%	12.5%	69.3%	12.5%	
7	Attending film clubs has made me more likely to reflect on my own practice	N	0	7	18	50	10	85
		%	0.0%	8.2%	21.2%	58.8%	11.8%	

8	Film clubs have led to increased teacher collaboration in my school	N	0	9	25	36	14	84
		%	0.0%	10.7%	29.8%	42.9%	16.7%	
9	Film clubs have been an effective approach to professional learning	N	0	2	21	50	12	85
		%	0.0%	2.4%	24.7%	58.8%	14.1%	

Open responses in the end of project survey

This section summarises the responses of 5 open-ended items from the teacher end of project survey

Following the feedback characterisation scale, respondents were asked about the main factors affecting their choices to give different feedback in different circumstances.

Many teachers altered their typical feedback according to the following main factors:
o *Stage within a curriculum:* several teachers vary their feedback according to the stage that has been reached within a sequence of lessons. For several teachers this was over the course of the year, with greater weight being put on scaffolding and focused feedback in earlier terms, with a greater emphasis on challenge, extension and making links in later terms.
o *Type of feedback:* many respondents noted that their written and verbal feedback tends to differ, with verbal feedback being a better way of questioning and getting the children to review their steps. Written feedback is, according to one respondent, 'generally more direct'.
o *Differences between children*: The most common group of responses to this item related to differences between children. First, many respondents noted that feedback related to level of understanding or ability. Comments related to the idea that learning goes from basic to complex and feedback should reflect this (also see first point, above). The other major area where respondents thought different feedback was appropriate related to the needs of pupils and pupil groups. In particular, pupils with English as an additional language and younger pupils require the teacher to ensure that feedback is appropriate.

Has IRIS-Connect helped you make changes to your classroom practice?
(Please give details/examples)

The feedback from this item was overwhelmingly positive. Of 84 comments there were only 4 not unambiguously positive. Of these 4, 2 were simply 'no', 1 respondent said that he or she had not used it enough to be sure and 1 thought there was an impact in the short run but not in the long term. The 80 positive comments can be grouped into several, sometimes overlapping, areas (in approximate order of how frequently these were mentioned):
o *Questioning:* the most frequently referred to area of improvement was questioning. Improvements respondents commented on include a greater awareness of the questions they would ask before teaching and would plan effective questions, that their questions tended to be more open-ended, that they had made changes in the precise language they use to encourage dialogue and that they were more able to focus questions to the need of a particular group.
o *Feedback and teacher language:* there were numerous general and miscellaneous comments about feedback and language. These included comments on the tone of voice, facial expressions and non-verbal feedback, feedback being more constructive, building greater opportunities for feedback into tasks and the elimination of bad habits (e.g. saying 'okay' repeatedly).
o *Teacher CPD, reflection and awareness:* a large number of respondents thought IRIS has made them more reflective, more aware of various aspects of their practice and of the needs of their pupils. There are many comments drawing attention to the ownership teachers get of their professional development, IRIS is referred to as 'allowing' or 'enabling' them to review their own lessons, identify their own areas for improvement, to implementing things learnt from other teachers and to monitor improvements in their own teaching.
o *Personalising learning and identifying needs:* many respondents commented on using IRIS for planned observation of individual children or groups of children (e.g. pupil premium or vulnerable children) and gaining understanding of the varying needs of individual children in their class.

- o *Pupil talk:* respondents commented on using their questioning to direct children to talk to each other rather than themselves, giving pupils longer to answer (wait time), get better explanations from pupils and increases in the amount of peer talk and collaboration in their classrooms.
- o *Behaviour management and routines:* there were several comments about improvements in classroom routines, general lesson delivery and behaviour management.

Have you changed how you think about feedback as a result of using IRIS-Connect? (Please give details/examples)

Many of the points overlap with those discussed in the previous question. There are a couple of points which come out more strongly, or in more detail in this question specifically on feedback:

- o *Open ended discussions:* a large number of responses related to one of the key ideas in the first module that questions can be used to open up dialogue and often feedback can close it down. Respondents commented that they now 'hold [their] opinion back' and one opened their comment with, 'Don't always give the answers!'. In the same vein, several teachers noted that they are trying not to give non-verbal clues or be too leading in their feedback to always sustain rather than close discussion.
- o *Better and/or more child talk:* a large number of comments related to changes to the amount or quality of child talk in the respondents' classrooms. Teachers commented on thinking about their feedback as a way of encouraging explanation and justification from the children. Also, many commented on pupils having greater opportunity to respond to each other, pupil ownership of the discussion and feedback encouraging pupils to identify and work through their misconceptions to a greater extent.

Have you had a particular focus/purpose with regards to your use of IRIS Connect?

This item ties in with the previous two questions, supporting the idea that feedback, questioning, pupil talk and classroom dialogue in general are the main foci for teachers. Also, as in previous questions there are some mentions of behaviour management, pace and delivery.

Would you continue to use IRIS-Connect in the future if the option was available to you? If yes - would you use it in the same way as now? If no - why not?

The vast majority of responses to this question were positive, with about half a dozen respondents not sure or not wanting to continue use. There were a sizable minority who wanted to continue to use it but followed this with a caveat or reservation. The responses can be roughly grouped as follows, sorted approximately into descending order according to the number of respondents commenting in each area:

- o *Yes, the same or more of the same*: Many left a positive comment and wanted their use of IRIS-Connect to continue as now. Some commented that they wanted the same but with a difference focus, a wider range of lessons or an increased number or string of lessons. A large number simply responded 'yes' with no additional informative comment.
- o *Yes, with a particular focus:* several teachers wanted to continue to use IRIS for a given purpose including, for literacy, to help particular children or groups or for tying new strategies out.
- o *Yes, but with a caveat, reservation or alteration:* several teachers broadly agreed before giving a reservation, or proviso such as needing more collaboration, wanting to work in year groups or pairs, only after resolving technical issues and – as mentioned several times – if sufficient time is allocated for use and for film clubs.
- o *Yes, for NQTs/coaching mentoring:* There were several mentions of continued use of IRIS-Connect for coaching and mentoring purposes, in many cases specifically for NQTs.

Appendix 5G: Project leader end of project survey

At the end of the project a survey (see Appendix 3C) was sent to school champions (separately from the main teachers' survey reported in Appendix 5F). Although there were 11 schools we received three returns of the school champion survey from one school, giving a total of 13. The survey contained some Likert scale items (summarised in Table A5G.1) and a number of open ended items. School champions thought that using IRIS-Connect had increased the amount of collaborative professional learning at their school, despite not all staff being enthusiastic about using it at first. School champions believed that enough guidance and information was given for them to effectively run the film clubs. They also believed that the focus on feedback was suitable for the needs of their school and that staff positively engaged with the film clubs. On the whole, school champions agreed that the content on the IRIS-CONNECT platform was stimulating and that film clubs were effective for whole-school CPD. However, one respondent, disagreeing with both of these statements and 2 disagreed with the second (both from the same school).

Table A5G.1 School champions reporting of the operation of the intervention

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Missing
1a	Observing others is an important part of my school's approach to professional development	0	0	1	4	8	0
1b	Staff at my school were initially enthusiastic about the prospect of using IRIS-Connect	0	3	4	5	1	0
1c	Film clubs are an effective way of running whole-school CPD	0	1	1	6	5	0
1d	The focus on feedback was suitable for my school's needs	0	0	1	7	5	0
1e	Using IRIS-Connect has increased the amount of collaborative professional learning taking place at my school	0	0	0	8	5	0
1f	I was given enough guidance and information to be able to effectively run film clubs	0	0	0	6	7	0
1g	The online content on the IRIS-Connect platform to support film clubs was stimulating	0	2	0	4	7	0
1h	Teachers at my school positively engaged with the film clubs	0	0	1	5	6	1
4a	I had to spend a lot of time to organise and set-up film clubs	1	6	0	6	0	0
4b	After the first film club, organising subsequent film clubs was much quicker	0	2	3	8	0	0
4c	Using IRIS-Connect has been good value-for-money	0	1	2	8	1	1
4d	Film clubs are a sustainable approach to whole-school professional development	0	0	1	8	3	1
4e	The success of film clubs is highly dependent on the project leader's input	0	2	4	6	1	0

There was an even split between school champions who thought that it took a lot of time to organise and set up film clubs, although most thought that this was quicker after the first film club. Most school

champions thought that using IRIS-CONNECT is good value for money, with 2 respondents unsure and 1 disagreeing (who also disagreed about the effectiveness of the approach, see above).

All respondents apart from 1 thought that film clubs were a sustainable approach to whole-school professional development. The one respondent who was unsure referred to the time constraints and 'trying to work around hectic school schedules in order to be able to get a suitable time for everyone to attend film clubs.' This respondent recommended that fewer film club meetings should be required.

Finally, there was some agreement that the success of film clubs was dependent on the input of the project leader but many were unsure and 2 respondents disagreed.

Reponses from Open-Ended Questions:

What aspect(s) of your film clubs do you think was particularly effective?

- The main points picked out related to a) watching videos of other teachers, b) discussion of clips in general and c) discussion of teachers' own clips. There were some mentions of the platform content such as the theory/pre-reading on the platform or the ability to comment but these seemed a smaller but still appreciable part of the overall picture.
- The value of clips from various sources is mentioned: unknown teachers (exemplars of theory into practice, non-threatening), of self (having colleagues discuss own teaching, self-reflection) and other teachers in school (learn from colleagues, share good practice).
- There was a general sense about the value of professional dialogue and the project bringing this about in relation to clips in general and clips of their own lessons. As might be expected given the intervention, the idea of watching and discussing clips as a group cuts across most comments.
- There are also a couple of comments about the 'chance'/'opportunity'/being 'allowed' to reflect/discuss practice

How would you change film clubs for any future use?

- The main points raised related to time commitment (5 respondents) and having a greater emphasis on their own videos (as opposed to those provided by IRIS) (3 respondents).
- Two respondents did not want any change at all.
- One suggested an improvement to the content (more year groups and subject coverage).
- One made a comment about the design (change name and use small teams). As one of the respondents who did not think changes were needed pointed out, however, the process is quite flexible.
- In relating to timings/amount, fitting in the film clubs was a clear difficulty (see next question also). There was also a point made about the amount of material to work through.
- The need for more/earlier emphasis came up for 3 respondents. This was also something mentioned in other data (e.g. telephone interviews and reflected in the metrics data).

What have been the most time-consuming aspects of organising film clubs?

- Relating to the point in the previous question about fitting in film clubs, a key point raised by most respondents relates to finding appropriate times for staff to meet.
- A couple of respondents mentioned the time to organise for the equipment to be available when needed.
- There was only one mention of the project leader's preparation time for film clubs (presumably as the content on the platform was already ready-made).
- There was one mention of the time taken to find people to agree to share clips at film club.

Would you like to continue to use IRIS-Connect in the future (or already have plans to do so)? If yes - would you use it in the same way as now? If no, please explain why not.

- All but one respondent wanted to continue to use IRIS-Connect. This one respondent was one of three respondents from a single school where one other said they would wish to continue using it.
- Most respondents wanted to carry on running film clubs, with many intended to extend it to more staff where all staff were not already involved.
- One respondent said they would like to embed IRIS into their appraisal process.

- One respondent listed several uses: self-reflection, NQT development, sharing practice.

What are the problems with using videos for professional development?

- Many raised concerns about the reluctance of some staff to be filmed. One thought that this improved over time but one school had not resolved the problem. Similarly, one respondent pointed out that parent may not want videos shared outside of the school.
- One respondent pointed out that editing clips to find the most meaningful parts can be time consuming.
- Several respondents commented about technical problems relating to a) sound quality, b) internet connectivity and c) targeting the video. Three of the 7 comments were from the single school with three respondents.

Have you noticed any clear changes in the practice or attitudes of teachers in your school?

- Most respondents commented about the improvements in the collaborative culture in the school. Many comments relate to teachers being enthusiastic, discussing their practice and wanting to use IRIS to improve their practice.
- There are also comments about specific changes in practice relating to the project focus of feedback and dialogue.

Appendix 5H: Teacher Interviews

This appendix summarises the main points raised by teachers (who were not school champions) interviewed at the end of the project:

- *Overall design and components of the project:* There was a broad consensus that the various aspects of the intervention worked well together. Several respondents articulated how watching the videos led to discussion that were framed by the content and questions and how this had led to reflection, changes in thinking and improvements in practice. The discussion of videos (rather than merely watching the videos) was seen as essential as this encourages engagement, creates greater awareness of the important aspects of the practice being observed and lets differences of opinion in the group arise to create discussion (e.g. stemming from different teaching styles or philosophies et cetera).

- *More or less effective aspects:* While the aspects of the project were thought to work well together (see above), several respondents picked out more or less useful aspects. There is a suggestion that respondents found watching the clips and the resulting group discussions more useful than the written content on the classroom. The written content, however, was still commented on as being useful, especially in its role in helping frame the discussion. There was a mix of views about the relative benefit of videos of their own teaching compared to that of others.

- *Most effective aspects:* The most frequently mentioned single aspect of the project mentioned was a video in the first module of an American teacher doing a true/false mathematics activity. This was picked out by many respondents. This video was described by one teacher as the 'foundation building block' for the entire project, as it so clearly exemplified the dialogic approach to be developed. There are many mentions of various aspects of this clip, from the general approach, the task and the language used and one respondent attempted an almost exact replica, with a slightly different mathematics task (this is shared with us). Other learning points that were frequently raised included the 'pose, pause, pounce, bounce' approach to questioning, use of greater wait time, aspects of how questions were phrased and the general approach of not restricting the discussion with feedback the closes it down to the correct answer

- *Collaborative CPD Culture:* there were several mentions of the culture required for sharing videos and the reluctance many felt about others observing their own practice. This was sometimes explicitly mentioned to say that others did not wish to share videos. Sometimes this was mentioned as being initial reservations that were settled as the project went on. One respondent discussed how there was a lot of initial enthusiasm with 'a sort of buzz' around the school as teachers were 'desperate' to try things out for themselves. The school project leader, however, was also credited with managing this and encouraging teachers to identify a focus and share videos in smaller groups at a later stage.

- *Complementary and competing CPD:* Respondents at one school were doing the project alongside a pre-existing lesson study approach to individual professional development. This lesson study fit into the EEF feedback project and so this was seen to be complimentary, for one in particular, the focus on feedback was ideal as this fit within their pre-existing professional development focus. One respondent had run a school INSET on feedback which also complemented the project.

- *Impact:* respondents were generally very positive about the impact of the project and many specific and general changes in practice were mentioned. These changes are all in line with those raised in the teacher surveys (see above) mainly relating to feedback, dialogue, pupil ownership of discussion and questioning. For some, only minor changes were made due to their feedback practice already having many of the features promoted in the programme; even in this case, however, specific improvement points were identified. One respondent had made changes to their practice in relation to group work but apparently had not taken the approach more widely. Other teachers credited the project with significant and widespread changes in their practice, with the approach or aspects of it being evident 'daily' and across many aspects of their teaching. There is

some mention of a need to shift the classroom culture and get the pupils used to responding to each other and in greater depth. In terms of the speed of changes in classroom practice, one respondent commented that it was a gradual process but not a 'huge amount of time'.

- *Negatives:*
  - o The most common and significant criticism to arise relates to time. One respondent who had been deliberately contacted due to a survey suggesting good engagement with the project, yet a fairly negative overall judgement explained that the project had taken too much time for little benefit to them. They were not given any further time to do the project and were expected to reflect on their videos and complete film clubs outside of school time alongside all other activities. Time was also raised by other respondents, in a much more positive light, however. One respondent would have liked to have been given more time and thought that the time demands were not a problem with the project *per se*, but just related to the already heavy demands placed on schools. Getting film clubs organised was mentioned as a particular point of difficulty. Some respondents had had time set aside during staff meeting time or through release time specifically for the project, they credited this as being important to the amount of success they have had.
  - o The other negative item raised by the respondent purposively sampled to understand a more negative perspective on the project thought that the standard of some of the clips was low and that teaching of such a low standard would not have been accepted at their school. It is interesting to contrast this to other respondents who had mentioned the variable standard of clips in a positive light: that they found it useful to discuss a more typical example of the approach and identify where improvements could be made. Another explicitly noted the value in 'picking apart' some of the clips to identify strengths and weaknesses. There seems to have been a difference in the assumptions about what the clips were supposed to show, with the negative respondent expecting all clips to be exemplary.
- *Improvements:* The respondents were asked what if anything they would change about the project. Note that this is a very small sample and the teacher/project leader survey gives a more comprehensive picture. The following suggestions arose:
  - o Having a larger bank of shorter clips, especially those of a high standard/from own colleagues.
  - o Increasing the relevance of the project to pupils of different ages. One respondent especially thought that some of the clips from Key Stage 2 were less relevant for their Key Stage 1 group, and would have liked more of the latter. Another respondent, however, explicitly commented that they liked the range or age groups.
  - o Having less theory and written content. The written content was generally thought to be useful, but one respondent thought that the balance needed to be slightly shifted towards videos and supporting questions.
  - o Some respondents commented that they would have liked to see more videos of other staff and one in particular firmly believed that the project needed a greater emphasis, maybe with a greater level of compulsion, for videos to upload their own videos to demonstrate improvement in a given area of practice and more widely for discussion purposes.

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