

Reflexivity and visual technology in research: young children's perspectives of paternal engagement in the home environment

Article

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Abstract

Although existing notions of reflexivity address the positionality of researchers, they rarely consider the processes through which methods and methodologies can come about. This study builds children's reflexivity into the research design. Drawing on footage from a pilot visual ethnography of paternal engagement in home environments, we show first, that at one level, building children's reflexivity into data collection and analysis, allows us to look at the relationship between the child, technology and the subject of their images; thereby establishing a position from which their perspective is produced. We found that their age and the particular visual technology used, shaped how the children positioned themselves and in turn, the kind of representations we gathered. As this was a collaborative study with a film maker and also involving discussions of film findings with teachers; a more general level reflexive analysis allowed us generate different viewpoints from which their perspectives were produced.

Keywords

children's reflexivity, educational ethnography, paternal engagement, visual methods, home environment

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Introduction

Whilst existing notions of reflexivity addresses the positionality of researchers, they less frequently consider the processes through which methods and methodologies can come about (Pink, 2012: 4). Visual methods for example, are accepted uncritically as a neutral means of accessing children's perspectives in the field of education (Buckingham, 2009). We argue, based on our empirical material derived from a pilot study about paternal engagement in the home learning environment, that examining children's reflexivity in the research process is a way of building understanding about how to develop visual methodologies.

As yet there is limited literature on young children's relationships as learners, with their fathers in the home environment, and this may partly be because it is methodologically demanding to focus on home culture (Rogoff et al., 2003). Visual technology may hold possibilities. Young children are now very familiar with digital technologies and they increasingly shape our everyday home lives (Silverstone and Hirsch 1994). Whether using digital cameras, mobile phones or computer tablets (Ofcom, 2014), children's familiarity with this source of data allows another medium (rather than the verbal) to represent their experiences to researchers. Visual technology also provides an alternative for exploring the 'private' space of the home; as it does not necessarily depend on the presence of researchers. On the other hand, how we produce images from visual technology and the sense viewers make of them, depends fundamentally upon cultural assumptions, personal knowledge, and the context in which the image is generated and presented (Liebenberg, 2009: 445); this raises questions about perspective, truth, reliability, inclusion and omission. In this respect it is essential to critically engage with visual technology as a source of data. One way of addressing criticality is to be reflexive (Buckingham, 2009). In this paper we consider those reflexive processes.

The paper divides into three parts. First we critically examine how existing literature points to the potential of digital visual technology for ethnographic research with young children and families. Second, we outline the research design: specifically, how our understanding of reflexivity informs our research questions, and the processes we engaged in, for this study; including using a film maker's perspective. The final section discusses what we learnt from building children's reflexivity and reflexive analysis into the research design. Whilst we sometimes refer to the research setting as the 'home learning environment' (HLE), this article does not focus on 'learning', but methodological issues in the HLE (by which we mean all that occurs outside of school settings). The research context is about accessing relationships with fathers (using visual technology) given their importance for children's early years' development and learning (Chawla-Duggan and Milner, 2016).

Digital visual technology and its potential for ethnographic research with young children and families

Ethnographic research and visual technology

Our methodological position is one in which we take an ethnographic approach and wish to incorporate visual technology into it (Pink, 2013). Visual technology as a source of

data might include: web based sources, tablets, digital cameras, recorders or mobile phones; indeed, anything which incorporates that which we experience through the visual technology medium. Our ethnographic approach involves understanding meaning and action from the 'insider's' perspective (Chawla-Duggan et al., 2012), whilst also maintaining a critical position that involves asking questions about how we arrive at the insider perspective. In this respect our view of 'ethnography is a reflexive and experiential process through which academic and applied understanding, knowing and knowledge are produced' (Pink, 2015: 4-5); and this includes a greater awareness of the senses both in terms of 'ontology' (what is considered to be there to research or to know about); and its epistemology (how it can be known) (Mason and Davies, 2009). Epistemologically, the kinds of knowledge ethnography produces contrasts with research traditions which emphasise an objective account of the social world. Instead, ethnographies recognise the subjective reality of the experiences of people who constitute and construct the social world. In characterising ethnography, we also include in our definition a distinction between the ethnographic product and process; where the product is the ethnographic knowledge produced, and the process is the construction of that product (Pole and Morrison, 2003).

Young children's use of digital visual technology in research

Young children's use of digital visual technology is an emerging and diverging field in the literature, indicating possibilities for accessing their perspectives in research. Aside from the well documented 'Mosaic approach'¹ (Clark and Moss, 2011), we are beginning to gain some knowledge into the contributions that young children themselves can make to our understanding, through visual technology. According to Clark (2005) the camera is a tool to 'hear' the silent voice of the child and therefore respond to Article 12 of the United Nations Human Rights (1989). Studies that examine how children perceive the world around them through technologies such as video and photography (see for example, Clark and Moss, 2011; Cook and Hess, 2007), highlight how such approaches are participatory in the sense that children are invited to exercise some level of control in the research process. Personal photography for example raises the status of young children's image making, to enable them to enter adult debates in a way that other medium, such as their art work, would not (Clark, 2007). However, photography does not provide instant access to a child's perspective; interpretation and meaning-making processes are required in collaboration with the child. White (Clark and Moss, 2011) argues that meaning-making through such technologies 'holds great potential for generating "voice" and, ultimately, in gaining greater insights about our youngest across the world' (2011: 200).

Whilst there is persuasive academic literature suggesting that visual based methodologies offer ways of knowing, particularly with young children, that might not be accessible through more traditional means, such as interviewing (Thomson, 2008; Banks, 2001, Buckingham, 2009), it is accompanied with a caution:

The use of such methods – as of any method – needs to display a degree of reflexivity: we need to understand how research itself establishes positions from which it becomes possible for participants to 'speak' (Buckingham, 2009: 635).

This caution has not always extended to the practice of research (Buckingham, 2009). In response to this concern our study employed the concept of children's reflexivity in the procedures for data collection and analysis; and allowed us to look at the relationship between the child, the technology and the subject of their images; thereby establishing a position from which their perspective was produced.

Reflexivity, ethnography and the visual as a means of representation

Our understanding of reflexivity in this research is aligned with the work of authors, particularly Pink, who challenge the kind of naïve empiricism that tends to characterize the visual as an objective means of representation (Banks, 2001; Pink, 2013). They argue firmly that visual representations are always constructed, and that they should not be seen as a means of objectively documenting reality. Epistemologically, two positions, the scientific realist and the reflexive (Pink, 2013), underpin those understandings of visual representations. Those that take a scientific realist position effectively reject the significance and potential of visual to represent and generate new types of ethnographic knowledge. The reflexive position moves away from traditional ideas of knowledge production associated with scientific realism. For the ethnographer using visual methods this reflexive analysis means:

first, developing a consciousness of how ethnographers play their roles as photographers in particular cultural settings, how they frame particular images, and why they choose particular subjects. (Pink, 2013:78)

Wagner (2001) purports that Pink sees advocates of a 'realist' approach to image based field work – for example, Collier (1967) and Prosser (1998) (cited in Wagner, 2001) – as limited in their appreciation of visual materials. But from Pink's standpoint using photography and video recording solely to 'collect data' overlooks the value of visual ambiguity, and this is realized in the more 'reflexive' analysis to the use of visual. As Pole (2004) argues:

we need to go beyond the possible source of the data to include the ways in which the researcher works with the source and the data it might yield. In this sense it is about method and methodology, in so far as visual research relies on more than merely collecting and displaying visual images (Pole, 2004: 4)

His theoretical position is reflexive and is one which depends on the researcher's capacity to make sense of the interface between people and images. Our notion of reflexivity recognises the subjectivity of the researcher, or rather in this study, 'the children as participants' and 'producers' in the representation of the ethnographic product. From this epistemological position, subjectivity is engaged with as a central aspect of ethnographic knowledge, interpretation and representation; and we argue that by building children's reflexivity into our research design, we create a theoretical space for critically engaging with how children produce their representations. In this respect we are interested in examining the reflexive research process of young children working with visual

technology in the home environment. Whilst we use children's reflexivity at one level, we also use reflexive analysis at a more general level as we take into account collaborations with a film maker and practitioners and analyse the relationship between their purpose, the technology and the ways in which they respond to the subject of the children's images.

Methodological framework:

Children's reflexivity, methodological questions and the research context

One response to the idea of construction, or production, involves researchers handing over the means of representation to the participants, and enabling them to represent themselves. This is particularly common among anthropologists working with indigenous or marginalized communities (Banks, 2001; Pink, 2013). Pink (2013) suggests the introduction of digital video and computer based techniques seems particularly appropriate for this kind of representation, and this is primarily because technology can be used as a reflexive device, because it can be used collaboratively. For this project, we are interested in how ethnographic knowledge about paternal engagement is produced by children when they are given digital visual technology to represent their experiences.

Our reflexive approach asks the question:

- What is the relationship between the children as producers of images, the subject of their images and the technologies used and how does that influence the kind of knowledge produced?

The methodological question underpins our epistemological position, in which visual images are seen as a subjective representation of reality, because they are shaped by the process of production. In this study young children are key 'producers'. As a result, we use digital visual technologies in two ways. First, we are interested in the process of production and second, as a means of gaining 'the insider perspective', or the 'ethnographic product'. Therefore, specifically our objectives ask:

- How do the children position themselves with the visual technology to create their representations of paternal engagement?
- What do the images and the process of making them, tell us about the children's experiences of being with dad in the context of home and family life?

Whilst the questions focus upon the children choosing and representing the images, the HLE as the background complicates access to children's standpoints. This is because adults to a large degree control conditions under which any study of children's activities in home life can occur, including the time and length of research visits and even the role children are expected to play (Lomax et al., 2011). Preserving children's confidentiality is problematic if parents insist on being present during interviews to supervise the questions or to ensure children's helpfulness to the researcher (Valentine, 1999). As a solution to some of the challenges of home-based ethnography, researchers (see Silverstone

et al., 1991) may use ‘space-time oriented’ methodologies, which are not dependent on the researcher’s physical presence in the home. Such procedures, including time-use diaries, household maps and interviews, and ethnoarchaeological tracking have the advantage of recording particularities of specific moments in time and space and so are sensitive to relationships between family behavioural routines and the home’s physical geography and in turn their use of physical space. In the case of ethno archaeological tracking, the data is suitable for structural questions about the frequency and spatial distribution of activities in the home (Ochs et al., 2006). Such methods can raise important questions to gather the children’s perspective, but knowing that children’s lives are framed by broader structural forces, it is still possible to overplay their power (De Block and Buckingham, 2007); so:

we need also ... to grasp childhood as a social institution that exists beyond the activity of any particular child or adult. There must be theoretical space for both the construction of childhood as an institution and the activity of children within and upon the constraints of possibilities that the institutional level creates (Prout and James, 1997: 27).

We therefore acknowledge that there are challenges to accessing children’s representations of paternal engagement in the home environment, and they condition children’s possibilities to act in those settings. However, in asking the question ‘How do the children position themselves with the visual technology to create their representations of paternal engagement?’, we include a need for understanding what conditions young children’s ability to produce their images, and how the home environment may frame their possibilities. We can ask questions about the home setting, who does what and build up an understanding of the social situation within which the child is structurally positioned as part of the family as an institution.

Selection and sample

In this article we focus on three children in one two-parent, heterosexual family, living in the same household. Our local authority² recommended the school, which in turn facilitated access to the family. As part of the criteria for selection, we requested families to include at least two children, where one was younger (0–5) and the other slightly older (4–8). Methodologically, we thought the older child could help inform understandings of the younger child, given that s/he would be temporally closer to their world. The family reported here includes a seven-year-old girl (Ellie) and her twin brother and sister (Michael and Rosie), both aged four at time of filming.

Data collection methods and analysis

We visited the children in their home three times. First, for a briefing and training session; and in subsequent visits we conducted film elicitation interviews. Given that our definition of reflexivity recognises that subjectivity is engaged with as a central aspect of producing ethnographic knowledge, interpretation and representation, the data collection methods were:

- i. Participant (child) generated digital film footage and photographs – children recorded up to 10 regular interactions with their father
- ii. Photo and film elicitation interviews with children
- iii. Film elicitation interviews with practitioners (two early years' teachers)
- iv. Researcher generated digital film recordings of all elicitation interviews
- v. Semi structured interview with father(s)

Following the training session, the children recorded footage for a week during school term time and repeated the process during holidays. Individual photo and film elicitation interviews (Banks 2001), incorporating participants' footage and photographs, explored the meanings of these with the children. Elicitation interviews occurred over two visits to discuss footage that children collected over the two different weeks. The footage act as 'cues' (Tobin et al., 2009) for elicitation interviews, and for the subsequent identification of data (Erikson, 2011).³ We video recorded the interviews for reflexive analysis. This strategy allowed us as researchers to be reflexive by asking questions about what goes on between the participants, the subject of the image and the technology. Accordingly, we aimed to understand how the children engaged with the visual technology, alongside preliminary insights into patterns of paternal engagement occurring at different times. We transcribed verbal data from the elicitation interviews and analysed both text and image based data using a version of grounded theory (Charmaz, 2011). For us the purpose of the analysis was not to translate the 'visual evidence' into verbal knowledge, rather, our strategy was to explore the relationships between the visual and other (including verbal) knowledge (Pink, 2013:144). Whilst the focus of our study is on the children's perspective, other perspectives, particularly the father and two of their teachers, gave us insights into adult responses to children's representations and contributed to a number of emerging issues about their interactions. Additionally, one or both parents were always present during the elicitation interviews with children which helped to contextualize some of the issues children raised.

The filmmaker's perspective and research design

The project team included three university academics, a local authority representative and a filmmaker. We built the film maker's perspective into our research design. It was particularly useful in informing what equipment to use and for what purpose. For example, in discussions about action cameras, he raised interesting issues about perspective, proposing that:

If they had it on their heads, (we) could still get a very interesting film ... the head cameras will be the most interesting one as it forces them not to be the film maker, it forces them to just get on with it, whereas if you are holding an iPad and you are trying to film something, you are taking up two worlds – you're taking on being the child and taking on the recording as well (Filmmaker, team meeting, 3 October 2014).

We discussed static, interactive and moving images and how to capture differences in interaction:

There are 3 things, one is a static camera that just sits there and wide and records lots of stuff; head cam and then the more interactive one, which is vitally important; you could argue that what the child chooses to point an iPad or a Tablet at to record, is also a very interesting thing about what they place importance on ... as well as film. The ...static camera is entirely neutral, one is active ... The point of view is one of the most important film making concepts ... what is it that the film maker sees at that moment in time ... An individual's eyes is what it represents, so it is vitally important as a tool really; but I guess from a researcher's point of view but also as a film maker, because it totally changes the concept for a viewer of where you're placing the importance of experience ... my feeling ... as a film maker...this would work best with multiple cameras in this situation ... might not be easy (Filmmaker, team meeting, 3 October 2014).

In the end we gave the family the following pieces of equipment for the children to choose from during the first fieldwork period of one week during term time: an action camcorder, digital video handi cam, pocket video cameras with a small tripod for standing it. During the second visit the equipment also included smart phones and a full sized tripod for the digital handi cam. The range of visual digital technologies allowed the children to record static, moving and interactive images, and gave researchers potential for both 'point of view' and 'choice of view' footage, which we explored during elicitation interviews and in analysis.

Editing, truth telling and lying

We also built the film maker's perspective about editing into our decision making. From the filmmaker's perspective, editing involved making selections on the basis of emotional impact to the viewer, and in that respect was not the 'truth'. He argued

editing is basically ... lying ... when you are editing you are basically choosing the bits that you want ... it's not dangerous, but it's a deliberate misrepresentation (Filmmaker, video recording, project team meeting 1, 3 October 2014).

The question of what sections to edit occurred at various stages of the project, including when we were discussing child generated footage and making decisions about what teachers would find interesting, because ultimately we were thinking about how the study could be used by teachers to support their work on paternal involvement in children's learning. For example, two of the researchers had quite a long conversation with the film maker about the 'Winnie the Witch' reading (a story read by dad to his children that one of the children had recorded), and whilst the film maker included this in the edit, it was not necessarily the section teachers would have chosen. The edited section showed less interaction with the children and this was commented upon by the teachers. Having said that, the edited section included the little boy getting out a wand he made at school (to accompany the reading) and as we had discussed with the film maker, that scene impacted the teachers' responses and generated conversation about the activity. In the final 'product' we tried to reconcile the areas identified from researcher analysis, with shots that were considered to be 'good images' from a film maker's perspective.⁴

Ethics

University ethics criteria, ethical guidelines from the British Educational Research Association and visual ethics literature (Wiles et al., 2008; Phelan and Kinsella, 2013) framed ethical aspects of our design. Specifically, two interrelated ethical concerns guided us when searching for methods that would allow us to capture the dynamics of young children in the HLE, relating to being in a ‘private’ setting and the vulnerability of young children. We were conscious of the fact that the home does not readily open itself to outsiders (Lomax et al., 2011), so we produced consent forms that parents signed. They highlighted issues about:

- images and consent to use them in the public domain in different contexts,
- maintaining anonymity and confidentiality,
- researching with vulnerable participants.

Additionally, the children provided verbal consent. We wrote a letter for the children and read it with them in their homes, discussing the purpose of the study and ethics of research, especially their right to withdraw. We informed the children that the purpose of the study was to find out what the best way was of capturing stories about young children and their fathers, from the child’s point of view.

Findings

Shared participation

At the outset it seemed that the children were familiar with using visual technology as a source of data. Although we had prepared a skills based training session, children simply chose the equipment they preferred and worked with the source by themselves; locating the start, stop mechanisms, and recording both still and moving images. The seven-year-old also worked out how to play back footage. Both the 4-year-old children were able to play and record and stop; and position objects and people for filming and photographing. Figure 1 illustrates their familiarity with technology.

The source, participation and child competence. The training session left us feeling optimistic about the children’s participation. However, the first elicitation interview raised a question about whether child competence limited our access to the younger children’s perspectives. We held film elicitation interviews in the living room, where we all sat around a laptop just as if we were at the cinema. Pink points out that:

Viewing the video produced with informants can help researchers to work out what are and are not appropriate representations of individuals, their culture and experiences (Pink, 2013: 119).

We were interested in how the children were ‘producers’ in their representation of the ethnographic product. Recording the viewing of footage with the children allowed us access to the different ways in which children worked with the visual technology; that is, not just in shooting footage, but in identifying data from footage, for analysis, which was



Figure 1a-g. The skills based training session – children familiarising themselves with visual technology.

part of the production process. When watching our recordings, we found that technical and verbal competence affected the young children's potential to work with visual technology as the source of data.

Shared participation and young children's technical competence. The older child was technically familiar with 'shooting' footage and this was based on previous experience with her father's mobile phone. Steve, the father, expanded on differences in his children's technical competence:

- R2: you really get the sense, watching the footage, that Ellie took charge,
 Steve: yeah, yeah, yeah
 R2: it's really like she had an idea about what she wanted to do with this film.
 Steve: yeah, she is keen on making films, whether it was to do with that, she's
 always been keen to do things with her phone and make videos, she's
 always done that, it's interesting. The other two, well they were four then,
 they were just a bit too young. Like another year, and they'd be really
 into it. Almost now, being a bit more grown-up, and they'd be able to
 understand it a bit more (Father interview, 12 September 2015).

The younger brother became more confident with using the equipment as he observed his sisters in this shared activity (c.f. Rogoff et al., 2003), and according to his mother, Laura, his understanding increased with participation:

Laura (mother): He (Michael) did actually take some towards the end of week, not as much as the girls, he used it more towards the end of the week ... I think he had less of an understanding of what we were doing, he probably didn't quite get that, if he'd seen the girls do it more, he'd have probably joined in more (Elicitation interview 1, 6 December 2014).

We found that shared participation in the methodological task helped to address the challenge of technical competence in young children and in mediating their representations.

Using sibling structures with visual technology at home

The mediating role of the older sibling to young children's verbal competence. Given that images take up meaning from the contexts in which they are inscribed (Becker, 1974), it is important for the researcher to access the context that lies beyond the frame. The frame itself may trigger a reaction about what the child sees as important and in this respect as Pink states:

when interviewing informants about or with image one should consider how the images or material objects implicated in the interview mediate the relationship between researcher and informant (Pink, 2010: 33).

The question for us was, 'what should we do (as adult researchers) with how the youngest children react to the frames?' We wanted to access knowledge about the social

situation of the child in terms of who was doing what, the extent to which it was a regular activity and the social and material resources that conditioned the activity. Immediate reactions from the youngest children included excitement, interest and lack of interest as well as disagreement. Inevitably, language acted as the tool to expand on those reactions and whilst there was a conscious effort on the part of the researchers to allow the youngest children to verbally express their reactions to the image, by beginning with the open ended question ‘so what was going on here?’, it was here that the value of the older sibling in relation to the younger sibling, came to fruition. In the example below, the young child’s response is verbally limited, but there is an emotional reaction of excitement as Michael sees himself in the footage. Michael then provides the literal information about what he did and with whom, but it is through the older sibling’s clarification that the researcher is able to understand the wider context for choosing this piece of footage:

- Michael: That’s me! That’s me!
 R1: what was happening there?
 Michael: I put that bit on, and the tin bit on, and the back bit on, and the yellow bit...
 R1: And who did you do that with?
 Michael: No one.
 Ellie: Daddy was there, and Michael was making the Legos. Daddy was watching him (Elicitation interview 1, 6 December 2014).

In general, we found that the older sibling would typically expand on what was going on in the footage, and in this respect started to emerge as a ‘producer’ in representing younger siblings’ stories. In particular, she would implicitly use strategies to verbally mediate younger siblings’ visual reactions and their literal verbal accounts of the footage. At the same time younger siblings responded to her strategies. So when we examined differences between younger and older sibling’s verbal accounts and visual reactions, we noticed that younger siblings were able to go beyond the literal through their older sibling. Typically, they listened to the older sibling’s representations, and then responded, by for example, endorsing or refuting. As a result, the older sibling played a critical role as a ‘producer’ in mediating younger siblings’ stories. The following examples illustrate her being a film maker and producer:

The older sibling as filmmaker. During the shooting of images the older sibling represented herself as a film maker, as depicted in Figure 2⁵:

The older sibling as producer – expanding context and provoking participation. During the elicitation interviews the older sibling clarified and expanded the literal verbal accounts of the younger siblings as they watched the footage:

- Rosie: We’re nearly there, at the waterfall
 Michael: That’s daddy
 Ellie: That was going down a tight slope. Oh no, not this bit. This is quite steep
 ...

 <p>(a)</p>	 <p>(b)</p>
Ellie: This is daddy ... say ‘ello F: Hello Ellie: He’s watching TV haha	Ellie: And I’m Ellie
 <p>(c)</p>	 <p>(d)</p>
Ellie: This is Michael	Ellie: And that’s Rosie. I’m going to be telling you some um.. things that daddy does with us ...

Figure 2a-d. The older sibling as filmmaker.

We hold onto the trees ... This bit you have to hold on because it is really slopey.

R1: You know this well...

Ellie: We slide down on our bottoms sometimes because it is too hard to walk...

R1: You’re going up somewhere, right to the top ... That’s quite steep!

Rosie: Look, we run! (Elicitation interview 2–10 February 2015; Exploring the woods – taking risks).

Whilst we were cautious that the older sibling’s interpretation of footage might tell us more about her own representation, rather than the younger siblings’, Ellie’s cues actually provoked their active participation, so that they were able to endorse, highlight and refute what was important to them in their experience. In the following examples, all three children were present, watching the footage they had produced:

R1: Right, so what was going on there then?

Ellie: We were doing the Lego with daddy ...

R1: So Ellie took some of these, and did Rosie take some?

- Ellie: No she (Rosie) was like doing the Lego most, she likes doing Lego
 R1: Oh right ...what were you making there?
 Ellie: Like a little lorry ... and then there's Rosie's part ... That's Rosie's part
 Michael: Daddy made that one
 All laughing at watching each other on the footage
 R1: So is Lego something you do quite often together?
 Ellie: Yeah normally ...
 Rosie: That one's daddy's one up there (pointing to a model)
 Ellie: No ... that was my one ...
 Rosie: Actually go back to it, go back one (referring to film footage)
 (Elicitation interview 1 with children, 6 December 2014; digital footage: scene – doing Lego with daddy)
 R1: Was dad with you when you are watching this (TV)?
 Rosie: Yeah
 R1: It's the one with the kittens isn't it, the character?
 Rosie: We have that one
 Ellie: No we don't have that one
 Rosie: Yes we do ... we never watched it before. Sometimes it's on Tiny Pop.
 R1: Right, so these are the programs you watch on Tiny Pop?
 (Elicitation interview 1, 6 December 2014, watching TV with daddy)

The last example illustrates Ellie provoking Rosie with her comment, and through their subsequent conversation the researcher was able to fathom out what the younger child's motive was, when taking the photograph (to show that she watched certain TV programmes with dad). In the following situation Michael (younger) and Ellie (older) have a discussion about what we should call the extract that they are choosing as data from the footage we are watching:

- R1: What would we call that?
 Ellie: 'Daddy helps you with transformers'?
 Michael: I know how to do it on my own
 Ellie: Daddy helps Michael do transformers
 R1: But Michael says he can do it on his own
 Ellie: Yeah, but daddy helped him first
 Michael: He works on his white iPad
 R1: So when dad works on his iPad, and shows you what to do on his phone, what could we call that then?
 Mum (also clarifies): Michael, on daddy's iPad, does daddy show you clips of transformers film?
 Michael: Yeah. Daddy showed me transformers turned into toys (Elicitation interview 2: 10 February 2015, transformers with Dad, bringing children in)

The extract once again illustrates how the older sibling provoked the younger sibling to express his voice. They have a different understanding of the situation, so the younger

brother refutes the older sister's explanation. He does not see his father as helping him to build the robots physically, but rather as showing him on the technology (iPad) for his son to then do himself. His mother clarifies his explanation.

Children's inside experiences – feeling the sensory with visual technology

In this study we found that certain kinds of technology have the capacity to facilitate an empathetic understanding on the part of the viewer, which is one of the greatest advantages film has over the literary account (Henley, 2007). Early on in the project the team discussed the advantage of using the 'action camera', to position the child so that s/he was not the 'film maker'. During fieldwork the children chose to record outdoor scenes with the action camera. A chest piece (rather than a head piece) attached it to them. The footage it recorded gave a completely different 'point of view' about young children's experiences of being with their father. Rather than having the effect of the outsider looking in, the viewer was left 'feeling' the expressive side of young children's experiences; a revelatory dimension of filmmaking that could not have been achieved through the non-visual methods; or indeed through the alternative visual technology methods we had used. The film shots of Ellie, below, serve to illustrate the activity, rather than its effect on the viewer, which aroused feelings of dizziness, excitement and fear for R1.

The researcher generated footage of these kinds of scenes being watched by the children and by practitioners allowed us to access effects on the viewer. In the example below, practitioners highlighted feelings of enjoyment, relaxation, love and being free:

- T2: There is no, like, from daddy, 'be careful with that bridge!' ... he's just letting them take the risks
 - T1: They are exploring and investigating, aren't they?
 - T2: There's none of 'don't do this' or 'don't do that'
 - T1: He's actually stepping back and letting them go, he's not trying to lead them in anything. He's going in their direction, just following two paces behind. In a way, he's letting them go forwards, but not in a way that is disinterested, he's allowing them and enjoying watching them explore
 - T2: He's giving them free rein, really, isn't he? He seems far more comfortable in that environment ... Far more relaxed (than reading to them), letting them go, and explore, and investigate. Not a lot of conversation
 - T1: No ... but comfortable silence
 - T2: I think the children ... he was allowing them to just go and be children
 - T1: Discover and explore, the characteristics of effective learning!
 - T2: There's a lot of love there.
- (Elicitation interview 1 with practitioners, 10 February 2015).

Teachers used expressive terms to describe the father child relationship; terms not always tangible. As researchers, we were most able to capture this dimension of sensory experience through the way that children were positioned in relation to the source; which in this case was the action camera, directly presenting a child's 'point of view'.


 <p>(a)</p>	 <p>(b)</p>
The spin ... getting on	The spin ...being pushed
 <p>(c)</p>	
The spin ... 'stop' she shouts ... out of control	
 <p>(d)</p>	 <p>(e)</p>
Crossing the waterfall	Climbing the banks

Figure 3a-e. Exploring the woods with dad.

Discussion and conclusion: representation, point of view and technology

We have highlighted here the potential advantages of using visual technologies to elicit children’s perspectives on their interactions with fathers in the HLE. They can help to challenge the power relations inherent in research where researchers are not only adults but experts (Christensen, 2004), but only if they find ways of overcoming the limitations of working with very young children, which include their lack of knowledge, confidence or articulacy. This is important because the researcher has to understand the context of the images; but a child at this age cannot speak of anything but what is happening before

his eyes or what he hears (Vygotsky, 1998: 263). Age related sibling structures were our response to this contradiction.

In our research design the older sibling acted as mediator and facilitator of reflexivity. She expanded on the context of the situation and activities and in doing so, complemented the younger children's very literal verbal response to the visual footage, whilst also provoking them to refute and highlight what was important to them.

Our project sought from the outset to design research as participatory and reflexive. Reflexivity here included not only the positionality of researchers but an open process of discussion about the technologies, the choice of filming and its rationale, and decisions about which footage to retain or reject. The project aimed not only to integrate multiple viewpoints, but to generate reflection on the research process itself, at all stages, beginning with the reflections of the participants themselves. Because images in our study aim to be visual representations of subjective experiences, rather than objective statements, exploring visual meaning not only helps us to think about what it is we 'are seeing' and what it is we 'don't see' and 'why' (Leibenberg, 2009: 445), but also leads to questions about 'whose perspective we want to see', the 'choice of view' and 'point of view'. This process challenged and broadened our thinking as researchers and informed our own reflexivity.

Children made choices about what images to record when they used certain kinds of visual technology such as the camcorder. We call this 'choice of view', and having made those choices, we would ask them how they came to decide on those choices, in order to gain a deeper understanding of what was included and what was not included in their representations. However, there was one kind of visual technology with which the children recorded interactions with their father (the action camera) that did not allow them to make a choice, because the devices were harnessed to their bodies. With this device we were able to access what we have called a 'point of view', and in doing so a more 'sensorial perspective' of children's experiences; one in which 'it is necessary to see, hear, smell or feel a place in order to make sense of it and to communicate it to outsiders' (cited in Lomax, 2012).

A number of researchers highlight the sensory potential of research (Muir and Mason, 2012; Pink 2015). In our study we showed how the footage which shows the child's 'point of view' helped inform our broader thinking on the experience of the relationship and activities, by looking reflexively at the effect it has on the viewer. The 'action camera' as a digital visual technology positioned the children so that the source was physically part of them, and this facilitated a direct relationship between the viewer and participant, and consequently, a closer understanding of how individual children felt during their experiences of paternal engagement. Although we have only started to touch the surface of this idea, we contend that visual technologies used in this way can elicit 'the most profound type of knowledge [which] is not spoken of at all and thus inaccessible to ethnographic observation or interview' (Bendix, 2015, cited in Pink, 2015: 5). In line with Pink (2015), we should emphasise that it is not about a particular kind of data or method of data collection; rather it is about a being open to many ways of knowing and to exploring and reflecting on new routes to knowledge.

Increased interest in methodological process and innovation in research requires critical understanding of the implications of the biographies of methods and the technologies

that form part of them, for the quality of research knowledge that they can potentially produce (Pink, 2012). For education research, this kind of appreciation can better enable us to understand the status of the knowledge that our research produces and subsequently how it may be engaged for intervention processes (Pink and Leder Mackley, 2012: 4). By theorising children as competent social actors and by recognising that they have insight and knowledge about their social world, which they can choose to show us in ways that are meaningful to them, we maintain that building children's reflexivity into research designs where they use visual technologies has potential to yield important insights about young children's representations.

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Notes

1. The Mosaic approach is a multi-method approach in which children's own photographs, tours and maps can be joined to talking and observing to gain a deeper understanding of children's perspectives on their early childhood settings (Clarke and Moss, 2011).
2. An administrative body in local government.
3. We make a distinction between footage and data, where data is collected from the footage (c.f. Erikson, 2011).
4. See Appendix 1 for a diagram representing how reflexivity was built into the methodological framework.
5. Images are intentionally blurred to maintain anonymity.

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Appendix I

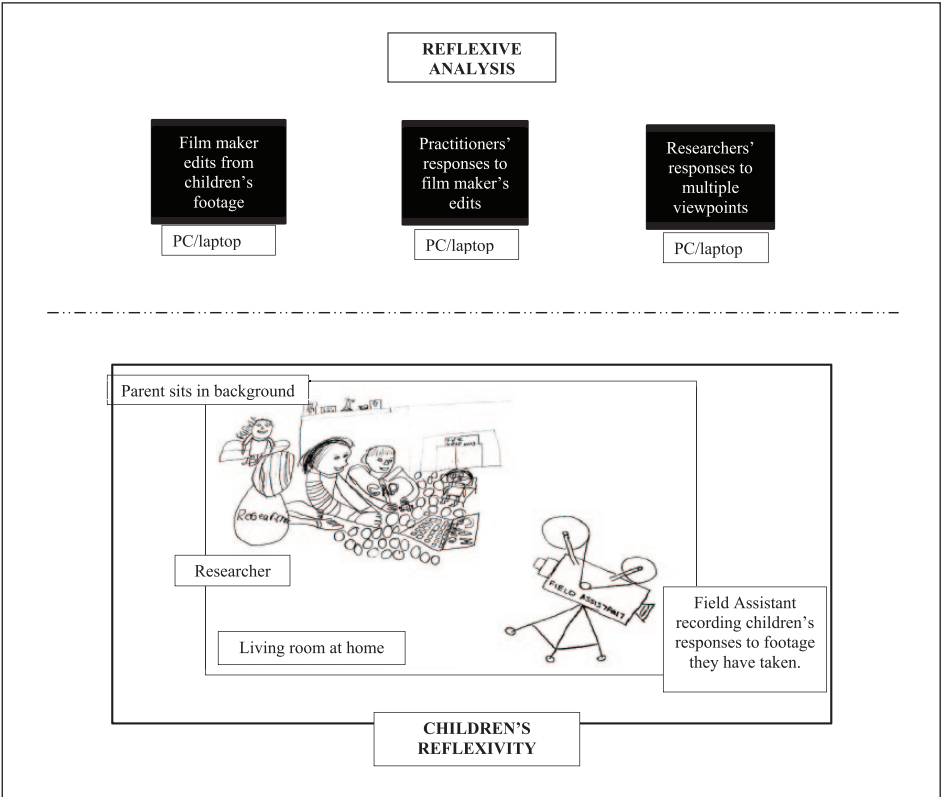


Figure 4. Building Reflexivity into the Methodological Framework.