

Empowering collective reflection

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Empowering collective reflection: Realistic evaluation of video enhanced reflective practice (VERP) in an early childhood setting in England

Within professional development (PD), reflection is recognised as a key ingredient to developing high quality practice (Marcos and Tillema, 2006), however less is known about the context and mechanisms needed to enable this (Marcos *et al.* 2011) in early childhood education and care (ECEC) settings. This article explores video enhanced reflective practice (VERP), an innovative model of professional learning, which enables staff reflection on their interaction and practice with children, students and other members of staff in a day nursery in England. The study utilises realistic evaluation (Pawson and Tilley, 1997) as a framework to explore the key features of the context, the mechanisms, which are the central aspects of VERP, and the outcomes for the staff through analysis of semi-structured interviews with five of the six staff involved. The research highlights the importance of the individual choosing their focus for the videoing, good working relationships between staff, the support of the manager and the nature of the organisation as key to enabling the outcomes. The outcomes from VERP included reflection, improved confidence, collaboration and understanding of children. (178 words)

Key words: professional development, video enhanced reflection, video enhanced reflective practice, early childhood education and care (ECEC)

Introduction

Whilst professional development (PD) is recognised as a key feature of effective practice, there are questions about what works for staff in early childhood education and care (ECEC) settings, and a need for both large quantitative studies as well as qualitative studies that examine the nature of PD and its influence on the workforce (Gomez *et al.* 2015). This article, and the research presented within it, makes an original contribution to the literature on video enhanced reflection, specifically video enhanced reflective practice (VERP), as a model of professional learning. The research explores the processes and contextual features

that promote or hinder VERP alongside the outcomes as identified by the participants. This article sets the scene by exploring research on reflective practice, in particular in ECEC settings, considering the benefits and challenges of collective reflection, followed by a review of video based reflection and research on VERP as a model of professional learning in ECEC, prior to presenting the current study.

Reflection on practice

Reflection in teaching is rooted in the understanding that teaching is a process open to examination and analysis (Schön 1991), which in turn enables development in practice (Kemmis and McTaggart 1988). Reflection has become a key strategy in many PD programmes for educators (Carrington and Saggars, 2008), is considered a key aspect of practice in ECEC and encouraged through processes such as supervision in England (DfE, 2017). Marcos *et al.* (2011) note reflection constructs knowledge about teaching (Conway, 2001), enables critical thinking (Korthagen 2004), and promotes self-regulation (Singh 2008). Nevertheless, Marcos *et al.* (2011) highlight that many articles on reflection are opinion based, and indeed Loughran (2002) argues reflection can be used to rationalise, rather than reflect on decisions taken, particularly if relying on memory. In addition, Moyles *et al.* (2002a) state reflection is challenging and if unsupported can be potentially destructive (Adams, 2000)

Whilst reflection is promoted, Marcos *et al.* (2011) found, from their analysis of over a hundred articles, little attention has been given on how to undertake reflection, with few offering solutions or what to reflect on. Cherrington (2018) also highlights there are fewer studies on practising early childhood (EC) teachers' reflection, as much of the research is in the school age sector or in teacher education programmes.

Alongside individual reflection, collective reflection on practice in early childhood and care (ECEC) is developing (Cherrington, 2014), as it enables productive, analytical reflection (Davis, 2006) as different perspectives can be shared, assumptions questioned, and interactions analysed. Grey (2011) found collective reflection enabled insight on how espoused and actual practices may differ, and strengthened relationships between team members, and Mitchell (2003) noted it enabled participants to rethink their expectations and beliefs. In order to engage in collective reflection, Cherrington (2014) cites examples from New Zealand explored by Mitchell (2003) who emphasised the importance of employer support, meeting within the work day rather than after hours, and Grey (2011) who highlighted the importance of a trusting environment where practitioners feels safe to share with their colleagues. However there is a need for further research identifying what else enables effective collective reflection that includes both novice and experienced practitioners (Hadley *et al.* 2015).

Video enhanced reflection

Video recording of practice (Marcos and Tillema, 2006) has been used in several ways to support reflection in ECEC settings. Within research, Wood and Bennett (2000) used video to stimulate reflection, finding teachers stated intentions contrasted with their actual practice when they viewed recordings. Moyles *et al.* (2002a, 2002b) utilised ‘video-stimulated reflective dialogue’, based on episodes of effective teaching, in the Study of Pedagogical Effectiveness in Early Learning (SPEEL) to support practitioners to reflect on their pedagogical practices. It drew on procedures adopted by mental health professionals in Interpersonal process Recall (IPR) (Kagan, 1984), where practitioners are guided to review a session recorded with clients. A key difference was the practitioner led the process in the video-stimulated reflective dialogues; selecting the two to three short video clips, the focus and pace of the discussion, whilst the researchers set the questions. This enabled the

practitioners to talk openly about their practice and their thinking. Moyles *et al.* (2002a) highlight the positive, non-judgemental, collaborative relationship needed between the researchers and the practitioners, alongside time for the practitioners to watch the video prior to the discussion. The video was noted as a key element to stimulate dialogue and reflection on practice, with many practitioners noting they saw things previously unobserved in their practice. Interestingly, several of the practitioners chose to watch the videos with colleagues, seeing the video as an opportunity for collective critical enquiry. The teachers in this project stated the video-stimulated reflective dialogues supported their self-awareness, thinking and reflection on their teaching strategies and practice, led to greater awareness of their interactions, and how they impacted on their learners.

Other authors have also used video as part of online consultation and feedback to support the development of practice. Pianta *et al.* (2008) promoted individual, video-based, skill-focused approaches, to target teachers' delivery of instruction and provision of social, emotional supports. Similarly La Paro *et al.* (2012) highlight the benefits of instructors using video to discuss EC students' teaching practices, support reflection and to provide feedback, in this case where the students selected the clip and conducted prior analysis using Classroom Assessment Scoring system (CLASS). Zhang *et al.* (2011) noted that teachers found watching videos of themselves as most useful for reflection on practice, in comparison to video of peers or published videos, as they could see themselves at a distance and from a different perspective, view the recording multiple times, and therefore engaged in productive reflection.

More recently, Cherrington (2018) used video-stimulated recall interviews to enable early childhood teachers to discuss their thinking and reflections both during and after the episodes. Lyle (2003) argue such interviews enables professionals to describe their thinking and decision making in the moment without the interference of other thinking aloud approaches.

Durand *et al.* (2016) add that the change of viewpoint during playback supports reflection on emotions felt, and therefore enables practitioners to conduct an analysis of their behaviour, and develop alternatives.

Whilst video-based approaches have proved positive, Atilas and Pinholster (2013) note that an EC student teacher found videoing herself a challenge and was reluctant, initially focusing on areas for development before spotting her strengths. Alles *et al.* (2019) highlight the importance of a positive learning atmosphere for video-based teacher professional development, in Dialogic Video Cycles (DVC), as engagement in critical discussion with others about one's own video can be frightening (Borko *et al.* 2008, van Es *et al.* 2014). Alles *et al.* (2019) identify the key features of a positive learning atmosphere as; general appreciation, being focused on the events in the video, clear feedback rules, contextual information being shared about the video and the group feeling free to suggest teaching alternatives.

In relation to collective viewing of video, Cherrington and Loveridge (2014) highlight this enables self-reflection as well as promoting understanding of both their own and other teachers' practices. As with Moyles *et al.* (2002a), Zhang *et al.* (2011) emphasise the value of teachers controlling their own video selection, editing and playback for collective viewing. Nonetheless the authors note similar challenges to individual video based reflection, such as participants' feelings of anxiety about being filmed and sharing film, and finding it difficult to critique other practitioners' work. Whilst Gröschner *et al.* (2015) found collaborative video based discussion on teachers' own videos enabled change in teaching routines and practices, they call for further research on the structure needed to guide the discussion.

Video Interaction Guidance (VIG) and Video enhanced reflective practice (VERP)

VERP is described by Kennedy and Landor (2015) as a strength-based method of professional development that examines attuned interactions between people through video reflection. VERP involves professionals videoing their practice, and then selecting short clips or stills to share in a review session either individually or with a group, exemplifying better than usual practice. The practitioners involved set their own goal (the helping question), using this as the focus of discussion within the shared review when the video is analysed and critically considered for strengths and working points.

VERP has developed from Video Interaction Guidance (VIG) (Kennedy *et al.* 2011), and is based on the same key values of respect and empowerment. In VERP and VIG, the term attuned interaction comes from the theoretical work of Trevarthen and Aitken (2001) on intersubjectivity. This is based on the proposition that any communication has two equally important partners, and both influence each other emotionally by being mutually responsive and sensitively receptive to each other. Primary intersubjectivity is the process of communication between two individuals (Murray and Trevarthen, 1985), whereas secondary intersubjectivity includes a joint focus on something external to the two individuals (Hubley and Trevarthen, 1979). This attuned interaction pattern forms the basis for scaffolding, and extension of the communication partner's response, leading to a deeper discussion where differing opinions and perspectives can be shared equally (Kennedy, 2015). Both VIG and VERP aim movement towards attuned communication within harmonious, reciprocal and responsive relationships where both partners in the communication play an equal role.

The principles of attuned interactions were initially devised by Biemans (1990) and have been developed to incorporate primary and secondary intersubjectivity, and mediated learning (Kennedy and Landor, 2015). VIG and VERP guiders use these principles of attuned interaction and guidance (PAIG) to help clients to reflect on video clips of their own positive interactions (Kennedy, 2011). The role of the guider differs between VIG and VERP, in VIG

the guider is involved in the filming of the interaction, editing better than usual clips and review of these short extracts or stills. In comparison in VERP, the guider's role is limited to supporting with the review of the film with the client/s.

VIG and VERP in early childhood education and care (ECEC)

There is a growing literature base on VIG and VERP being used in a range of educational settings, including higher education (Greene *et al.* 2015; Sancho *et al.* 2015), mainstream schools (Gavine and Forsyth, 2011), and special schools (Lomas, 2016). The following section explores the limited literature published on the use of VIG and VERP in ECEC.

Gavine and Forsyth (2011) describe a case study of the use of VIG with a teaching assistant (TA) supporting the transition of a young child with a severe visual impairment from nursery to primary education through four cycles of filming and shared review. The films showed a change in the TA's behaviour to become less compensatory of the child in her approaches, with the child experiencing more peer interactions, going from zero to 20 instances in the final film.

Whilst this research can be criticised for a number of methodological limitations including subjective observation and the limited duration of impact, other studies of VIG in ECEC have utilised a more rigorous design. For example, Fukkink and Tavecchio (2010) explored the use of VIG with teachers working in ECEC in the Netherlands alongside a control group, utilising independent assessment of changes. The results were mixed, with an improvement in the teachers' eye contact and turn taking with children post-intervention and at a three month follow up, although less likely to respond to the non-verbal initiatives of children in comparison to the control group.

Ferguson (2015) describes the use of VERP to promote literacy teaching behaviours alongside attuned interactions with six nursery classes in 2013. In comparison to the control

group, the experimental VERP group decreased in the amount of time they spent giving instructions and information, increased in the amount of time spent interacting with the children, questioning became more open, with more examples of sustained interaction (of five turns or more). Qualitative data reflected positive views of both the initial training and the subsequent sessions.

More recently, Jilink *et al.* (2018) evaluated the effect of different forms of in-service training on the interactive skills of ECEC staff, comparing the effects of VIG, a teacher-centred ECEC program, a combined ECEC-VIG program with a control condition. Again this was a mixed picture, although all experimental conditions led to improved interaction. The ECEC training was effective in enhancing verbal communication and developmental stimulation, whereas the VIG training significant in teachers' fostering peer interactions between children, and the combined programme demonstrated positive outcomes for both verbal communication and fostering peer interactions between children.

Whilst previous research presents findings on the value and outcomes of video based collective reflection, including VERP when used in ECEC, there is little indication of what is needed in ECEC settings to make VERP work, and the key aspects of VERP that are essential for positive outcomes. This article, therefore, makes a unique contribution in exploring participant views of what inhibits and enables VERP in ECEC, alongside the outcomes achieved. The research questions were;

- What are the outcomes from undertaking a series of three group VERP sessions in the nursery?
- What are the mechanisms within VERP that enable these outcomes to occur?
- What are the barriers to VERP in the nursery?
- What are the features of this nursery (context) that enable the outcomes to occur?

Materials and methods

Research design

The research questions were explored through use of a realistic evaluation methodology. Realistic evaluation (RE) offers a rigorous alternative to traditional evaluation which assesses the value or worth of an intervention (Robson, 2002). Instead, realistic evaluation (RE) (Pawson and Tilley, 1997) explores the causal elements, mechanisms within social programmes that lead to the outcomes in the context in which it is embedded. In short, RE seeks to answer the question ‘what is about a programme that makes it work for whom?’ (Pawson and Tilley, 1997, p.26) with the aim of RE being to develop, refine and evaluate programme theories. The programme theory incorporates “...what action is required to solve a social, educational or health problem and why the problem will respond to this action...” (Chen, 2012, p.17) and is illuminated through the research. In order to explicate causal elements of a programme theory, Pawson and Tilley (1997) describe the creation of context, mechanism and outcome configurations (CMOCs), whereby the outcome will only occur within similar contexts where similar mechanisms are in place. Pawson and Tilley (1997) present the following equation to demonstrate the relationship between these elements:

$$\text{“Outcome} = \text{mechanism} + \text{context” (p.57)}$$

In this research, RE was used to explore how the mechanisms within the intervention, the aspects of VERP, work within the context of an EC setting, to enable the outcomes reported by staff engaging with it. The equation above was used as a basis for the semi-structured realistic interviews conducted with the participants of the research. From these realistic interviews, the research brings together a proposed programme theory to make ‘...sense of

the ways in which actions taken, in the context, triggered various mechanisms to generate complex outcome patterns” (Pawson and Tilley, 1997).

Participants and context

The nursery is privately owned, located in a city in the Midlands in England, employs 17 members of staff, and is open for 51 weeks of the year, full days, with approximately 70 children aged from 6 months to 4 years on roll.

I, the author, both facilitated the VERP sessions and interviewed five participants, all of whom, had taken part in the VERP sessions. The participants had all been involved in the initial training on the use of VERP and the subsequent three sessions that took place. All five participants were female and worked in the nursery, with two speaking English as an additional language. This included the proprietor/manager, deputy manager, two room leaders (pre-school and toddler room) and one senior practitioner.

Ethical considerations

The research was undertaken within the four primary ethical principles of respect, competence, responsibility and integrity (British Psychological Society (BPS) (2018)). All participants were interviewed at the nursery, given clear information about the research, reminded of the importance of honest answers and their right to withdraw and gave informed consent.

The intervention: VERP in the nursery

There was an initial training session reviewing high quality interactions, introducing the theoretical background to VERP and the principles of attuned interaction and guidance (PAIG). This was followed by collectively viewing short video recordings previously taken within the nursery (from those who consented to share their videos) to illustrate the

principles. Staff in the videos were encouraged to comment on their own video first (having already viewed it), and then others added comments about what they noticed and valued in the video.

At the end of the training, staff were invited to become involved in the project and five staff, who later participated in the research, including the proprietor and deputy manager, volunteered. Their engagement in the project included agreeing to be videoed, and to share videos in regular monthly collective viewing sessions.

For the first VERP collective viewing session, it was agreed to the participants simply become accustomed to being videoed, filming and identifying ‘better than usual’ moments of interaction. In subsequent two sessions, staff set their own focus and helping question, relating to a particular child, part of the day or aspect of the environment, and the manager and deputy manager focused on interaction with apprentices and within supervision. I facilitated the collective viewing of the video for an hour. Staff took it **in turn** to present film, sharing their views of why they liked it, highlighting specific moments that were important followed by the group collectively **reflecting on the film using the PAIG**, noting strengths **and** what staff and children may be thinking and feeling. **In addition, consideration was given to how these points** could be used in other situations, and potential working points **for practice**.

Data collection methods

I used a realistic interview (Appendix 1 for the interview schedule), firstly showing the participants the RE formula, and explaining what mechanisms of VERP may be, and the context (the features of the nursery where VERP was used). As this was a new approach to research within the nursery, I had, through supervision with other VERP practitioners, identified potential mechanisms within VERP (helping question, PAIG, shared focus on the video clips, collaboration, repeated cycles, video play back, seeing yourself on video,

selection of clips, facilitation) and potential features of the context (working relationships of staff, style of management, permission for individuality, openness to feedback, learning organisation, stability of team, understanding child development, familiarity with observation) , which were slightly modified alongside the proprietor/manager of the nursery prior to the interviews. These were then listed individually on cards for the participants to prioritise alongside blank cards for additional features. I did not list the outcomes or barriers on cards and elicited those from the participants directly through the interview. Whilst using pre-written cards has significant limitations in that participants may have felt less able to identify their own mechanisms and context features, it enabled all participants to contribute confidently across a range of verbal abilities in English as two participants spoke English as an additional language.

Quality assurance

Lincoln and Guba (1985) argue credibility, transferability, dependability and confirmability should be considered when evaluating qualitative research. Indeed, holding dual roles as facilitator and researcher can lead to a bias in responses and threaten the trustworthiness of the research, however Trondsen and Sandaunet (2008) argue this is enabling as the researcher is close to the field of study, gaining deeper access to participant views. Other threats to the quality of the research were reduced, for credibility; participants checked their responses were recorded accurately throughout the research process. Whilst research of the type conducted cannot be transferred, and this is not claimed, key details of the context were identified to enable future research. Similarly dependability and confirmability was enhanced by following a structured data analysis approach through thematic analysis (Braun and Clarke, 2006) and diamond ranking (Clark, 2012).

Data analysis

The five approximately 30 minute semi-structured interviews were recorded and transcribed, with member checks offered. Thematic analysis (Braun and Clarke, 2006) was used to explore the outcomes of and barriers to the VERP intervention elicited through the interviews as it offers a highly flexible approach for identification, analysis, organisation and reporting of themes.

Once transcribed, similar codes were combined and initial thematic maps for the outcomes of and barriers to VERP were developed, and any themes with insufficient data were discarded. Refinement of the themes took place on two levels, firstly with the coded data to make sure a coherent pattern was formed and secondly, the themes were considered to ensure they accurately reflected what was evident in the data set as a whole (Braun and Clarke, 2006). Finally, the themes were named and examples of the transcript were chosen to illustrate.

For the mechanisms and context features, a flexible, classification system was used based on the diamond ranking approach (Clark, 2012), whereby participants placed the cards in rank order of importance in a diamond shape, and then photographed for accurate data collection, scoring and analysis. Cards placed at the top of the diamond were considered the most important and given a score of 5, the second tier, quite important, a score of 4, necessary importance a score of 3, and less important a score of 2, of limited importance a score of 1, and no importance a score of zero. Participants' comments about the ranking of the items was also recorded and transcribed. This approach was selected as diamond ranking supports dialogue with a range of participants across different levels of verbal ability (Clark, 2012). In addition, the mechanisms and features that enable reflection can be difficult to explore (Manos *et al.* 2011) and this was considered to be an inclusive approach would enable all staff to participate with greater confidence and ease, particularly those who spoke English as an additional language, than a semi-structured interview.

Results

Outcomes

The five participants identified four main outcomes for them; reflection, confidence, collaboration, understanding of children, as shown in the thematic map below. These were all included by three or more of the participants and so were identified as the four superordinate themes.

Reflection was identified as a key outcome by the majority of the staff, with comments on both the amount, type and depth of reflection, as demonstrated by the following quotes;

‘Everyone is more reflective. It has given us tools to use in different situations...’ (S)

‘It’s made me think about how to approach different situations, think about how I’m talking to people, staff and children... it is making me think about the outcomes I want from the situation before going into it.’ (K)

‘We’ve always been good at reviewing our practice but this is more in depth, and it’s not just about reviewing the practice but also understanding the reasons why. Yes deeper reflection.’ (Z)

INSERT Figure 1: Thematic map showing staff perceptions of outcomes from VERP

Staff also identified it led to increased confidence, both in their own practice and also in engaging in peer observation

‘It’s brought me a bit more confidence in my practice. I think personally.’ (Z)

‘It made me more confident because I wasn’t sure at first with being videoed, and someone standing there over me, but I feel more confident now about it... I can take on all the staff feedback now. I feel more confident with the children.’ (A)

Collaboration between staff members was identified as an outcome identified by four of the five participants, and later is also noted as a mechanism for VERP.

‘...having a meeting and discussing things really does help, then know all about the other children as well’ (A)

‘Given people a voice...my contribution is valued and valuable. When we sit round this table, we are here as practitioners...it’s a collaborative process.’ (S)

Participants also identified that VERP in this nursery context had enabled a better understanding of the children in terms of their individual needs, engagement and interaction.

‘It makes me think about how they are feeling and what they understand, the children... It helps you understand that all children have different ways of understanding, so what works for one isn’t going to work for the other one.’ (Z)

Enabling mechanisms within VERP

The participants were asked to rank key aspects of the VERP intervention using pre-written cards in a diamond formation. The results are shown in the following table;

INSERT Table 1: Table showing the ranked order of mechanisms in VERP as identified by the participants

The helping question was identified as a key part of the intervention, as it was enabling ‘...a focus’ (Z), ‘highlighting what is it that you want to get out of the process’ (K) and ‘that made it more meaningful to me and my key children’ (N).

The other aspects of the intervention were of close to equal significance, with the need for repeated cycles identified as less important. The principles of attuned interaction and guidance (PAIG) were identified as important as it helped to ‘...be able to talk about them in

terms of what that interaction actually looked like’ (K) and ‘they are what you want to achieve.’ (Z)

The shared focus on video clips and collaboration were considered important, indicating the participants valued undertaking VERP as a collective reflective process.

‘I think it is important to work as a group and hear everyone’s interpretations and I think you get a lot from different perspectives which is good’ (Z)

‘I like that it was done together as a group and we were bouncing ideas of each other, praising each other’s practice as that’s not something we get to do every day’ (N)

There were fewer comments about facilitation, selection of clips, seeing yourself on video and replaying of clips and these were ranked lower, with one practitioner commenting *‘I think the video stuff, selection of clips, seeing yourself ... replaying or returning to clips are important but they come after the others.’ (Z)*

One participant added the importance of having protected time to reflect as a key mechanism.

Barriers to VERP

There was less response to the question of barriers, with four barriers identified by one or two participants. These were time, organisation of staff to video and share videos, sufficiency of equipment and initial discomfort in being filmed and watching it back. There was little elaboration on these, and often identified as issues that settled naturally or could be resolved such as participants setting up the video to record themselves, and getting more cameras.

Features of the context that enable VERP

INSERT Table 2: Table showing the ranked order of context features as identified by the participants

Three key context features were identified by the participants which were the working relationships of staff, the learning organisation and the style of management. Permission for individuality and openness to feedback were also identified which linked to the key mechanisms of the individualised helping question and the collaborative process with a shared focus on video clips.

‘...good working relationships – I think that is important in trusting each other and being happy to have those conversations, being happy for someone else to watch you working, and you to watch someone else working and then be able to comment on what you’re seeing.’ (K)

‘Learning organisation – that’s definitely true for us – I think that’s the most important...You have to want to strive to improve all the time’ (K)

‘I think management is quite important, they need to be on board, they need to understand the importance of it otherwise it becomes one of those things that is pushed to the back.’ (Z)

Discussion

Outcomes

Key outcomes from undertaking VERP in the nursery included reflection, alongside collaboration, confidence and a greater understanding of children. This differs from other research on VERP and VIG, where the outcomes are often linked closely to interaction (Fukkink and Tavecchio, 2010, Ferguson, 2015, Jilink *et al.* 2018), however this is likely to relate to the research design. Additionally, although interaction was not a superordinate theme, it was a subordinate theme within both the super-ordinate themes of reflection and understanding children’s needs.

Reflection as a key outcome aligns well with other previous research on the use of video (Moyle *et al.* 2002, Cherrington and Loveridge, 2014, Zhang *et al.* 2011, La Paro *et al.*

2012). Whilst Moyles *et al.* 2002 identified enhanced teacher self-awareness, and Cherrington and Loveridge (2014) collective viewing of videos allowed for negotiated understanding of their own practices and of others, the practitioners in this research highlighted a deeper understanding of the children, including interactions with the children, which necessarily involve the staff themselves.

'...it just makes you stop and think about, you know ... the children, it makes you stop about like how to do that. It makes me think about how they are feeling and what they understand...' (Z)

As La Paro *et al.* (2012) found in their research, student teachers became more aware children's perspectives, participants in this research reported reflecting more on children's thoughts, feelings, and understanding their needs and interaction.

It is also interesting to see that whilst Zhang *et al.* (2011) identified that collective reflection can be challenging, in this research, collaboration, enhanced confidence and understanding were reported as outcomes.

'And when we discuss things it's really, really important to have feedback from all the other staff so you can get more confident that you're doing the right thing, like when the staff say what I do is good.' (A)

This research supports the findings of Grey (2011) who also highlighted how collective reflection can strengthen relationships between team members, and qualitative data from Ferguson (2015) who reported participants had positive views of the VERP sessions. Collaboration is also reflected in key aspects of the context such as the working relationships of the staff and the nature of the nursery as a learning organisation.

Enabling mechanisms for VERP

The highest rated mechanism of VERP was the helping question, which reflects the individual's own goal for the videoing, with the video extracts focusing on positive examples of practice in relation to this question.

'Because I had the helping question, it made it easier and made me think more about me and my key children and how I interact with them.' (N)

This echoes earlier research by Moyles *et al.* (2002a) and Zhang *et al.* (2011) where the importance of practitioners having control of the filming, editing and focus was found to be important.

The principles of attuned interaction and guidance (PAIG) have been recognised as useful in VIG and VERP (Kennedy, 2011) as they offered a shared understanding of the foundations of intersubjectivity, intersubjectivity and mediated learning. Fukkink *et al.* (2011) found that video feedback had a greater effect when programmes used a standard form of observation such as in the PAIG. The PAIG represents a transparent list of observable behaviours, and offer a solution as to what to reflect on, which is noted to be needed by Marcos *et al.* (2011). For example, within the foundations for intersubjectivity, there are examples such as being attentive (looking interested, turning towards), then within intersubjectivity, examples of receiving initiatives (showing you have heard, noticed the other's initiative), and then within mediated learning, examples of deepening discussion (sharing viewpoints, naming differences of opinion). This also aligns with La Paro *et al.* (2012) finding of the importance of using rating scales to guide the video-based discussion.

It is interesting that the sharing of videos and collaboration, feature as mechanisms of VERP, as collaboration was also perceived to be an outcome by four out of the five staff.

'We don't get to say 'I really like the way you dealt with that situation' I wouldn't have got to do that because we're so caught up in the whole day so we don't get that time. It was a safe

place to do that within the team. ' (N)

As La Paro *et al.* (2012) highlight the importance of the group component in their research with student teachers. Similarly Cherrington (2018) discusses the potential of a community of practice, namely a group of professionals in this case educating and caring for young children, in supporting staff to engage collective reflection. Facilitation is also mentioned as important, and this echoes Alles *et al.* (2019) research on Dialogic Video Cycles (DVC) where it was noted the facilitator played an important role in being a part of the teacher learning community.

Selection of clips, seeing yourself on video and replaying clips were closely ranked and are all mechanisms relating to the technical aspects of using video. This study supports previous research (Moyle *et al.* 2002a; Lyle, 2003; Cherrington, 2018), that the use of video is a key mechanism that enables professionals to recall their thinking, decision making, reflect on their practices and strategies, and how they impacted on the learners.

Barriers to VERP

The barriers identified are similar to those in previous research (Atiles and Pinholster, 2013) on use of video as a tool to support reflection, highlighting how the initial discomfort is evident.

'...initially it was the newness of it and not being comfortable with each other filming and watching yourself back, but we got over it.' (S)

Time was reported by Mitchell (2003) as important to enable this approach, and the other more practical aspects of having access to equipment and someone to video are simply the opposite of what enabled VERP.

Features of the context that enable VERP

There were three key features of the context, the nursery, that were central to enabling the outcomes identified; reflection, collaboration, confidence and a greater understanding of children. They were the working relationship of the staff, the staff positioning the organisation as a learning organisation and the style of management.

'Stability of the team, working relationships of staff, style of management, openness to feedback – they all go together as they are all about being safe and being comfortable to say good things and bad things. Because if you don't feel like you can, then it's not going to work.' (N)

These reflect the findings of Grey (2011) who emphasised the central importance of a trusting environment so practitioners feel safe to share with their colleagues. Mitchell (2003) also emphasised the importance of employer support, and the importance of meeting within work hours, as was the case within this research.

These key factors in the context relate well to the theory of community of practice. Lave and Wenger (1991) introduced the term, and the theory was elaborated further by Wenger (1998). There is recent research (Thornton and Cherrington, 2019) that has explored the potential of professional learning communities (PLC) in ECEC contexts identifying that they are best sustained when there is a shared focus, commitment and research orientation, clarity of roles, opportunities for dialogue, deprivatisation of practice and stimulus of new ideas. This research suggests that VERP fulfils many of these aspects of PLCs and offers an important potential mechanism to support practitioners to collectively reflect upon videos of their practice.

Conclusions

The research builds on previous research on the value of both collective reflection and potential of video to support reflection in ECEC. It offers an original programme theory,

which can be used as a model of professional learning, to enable video based collective reflection. The context requires positive working relationships between the staff, support from the manager, and the organisation to be one that seeks to develop the staff, such as a learning organisation or a community of practice. The focus of the videoing needs to be chosen by the individual, and it is helpful to have a transparent set of indicators, in this research, the principles of attuned interaction and guidance (PAIG), to guide what should be focused on when viewing the video. This then supports reflection, confidence in practice, collaboration between staff and an improved understanding of the children with whom they work. It is important to recognise there are a number of limitations to this research, in that it is small scale, incorporates a dual evaluation and facilitator role, and pre-written cards were used to elicit responses. Nonetheless, this study offers significant points to consider when establishing collective video based reflection for practitioners in ECEC settings, and it is feasible that these could be applied to other educational settings such as schools and training institutions, as these are not features exclusively available in ECEC settings.

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Appendix

I am researching the outcomes from the VERP sessions held here at nursery. To explore this in more depth, I am going to ask you some questions to help me understand your views and use this formula to help me understand what you think has been important within the VERP sessions and why it works in this way at G nursery.

Outcomes = mechanisms + context

Are happy to talk about this and for me to record our time together on this voice recorder?

Are you happy for this research to be written up and subsequently published?

Your views will be confidential in that I won't name you or the nursery in the research, and I will share it with you and your colleagues prior to it being published. You can stop the interview at any time and please let me know if you don't wish for your information to be included within a month. I appreciate I was facilitating the VERP sessions and so this may influence you, but please be as open as you can.

I am going to ask you to start by identifying the outcomes of the use of VERP here in nursery. What do you think the outcomes are? (Prompts - Positive outcomes? Negative outcomes? To you as an individual? To the nursery or organisation as a whole?)

I have noted some features of VERP on individual cards, after a discussion with other colleagues who use VERP. Have a look, do you understand them? If there are others you want to add, please add them on new cards.

I would like you to prioritise the cards. If it is helpful you can use a diamond formation with one at the top, two below, and three below that, then two in the line below, and one in the final and fifth row (picture shared to show diamond formation). This means you put the most important at the top and the least important at the bottom. You can put cards that you feel

have equivalent weighting in the middle, however if you feel there are factors at the top or the bottom of similar weighting, then please do put them where it suits you and feel free to explain your ranking as you progress.

I have noted some features of nursery contexts that may be important to enable VERP to occur in a setting, it could be another nursery. It looks at what needs to be in place in nursery for VERP? Have a look, do you understand them? If there are others you want to add, please add them on new cards.

I would like you to prioritise the cards. If it is helpful you can use a diamond formation with one at the top, two below, and three below that, then two in the line below, and one in the final and fifth row (picture shared to show diamond formation). This means you put the most important at the top and the least important at the bottom. You can put cards that you feel have equivalent weighting in the middle, however if you feel there are factors at the top or the bottom of similar weighting, then please do put them where it suits you and feel free to explain your ranking as you progress.

Anything else you want to share?