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'An Exploration into How Collaborative Problem Solving Groups can Change Teachers' Practice'

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"Development will never succeed, and "experts" and communities will fail to achieve their full humanity unless an open, respectful dialogue is achieved between different points of view"

(Freire, 1973, p. 77.)

For my dad, whose optimism and compassion for people have greatly influenced my hopes for practice as an educational psychologist.

Overarching Abstract

This thesis includes three related documents. The first, the Systematic Review, includes a review of literature relevant to the area. In the second, the Bridging Document, there is a discussion about the conceptual framework which links the Systematic Review with the Empirical Research. It also explores ethical and methodological issues. The final document discusses findings from the Empirical Research, as well as future implications for educational psychologists' practice.

There are many Continuing Professional Development (CPD) models for teachers. This Systematic Review focuses specifically on the under researched area of 'collaborative problem solving groups'. Synthesis of findings from five articles about 'collaborative problem solving groups' suggested that benefits for teachers existed within the context of some challenges. Teachers benefited from the time and space to reflect, be with others and problem solve; thinking differently about a situation and changing their practice. Teachers also benefited from decreased stress levels. Challenges related to demands on their time, difficulties putting changes into practice and concerns that participation was judged by colleagues.

This empirical study outlines an action research project carried out with three teachers, on how the process of being in a collaborative problem solving group promoted changes to their practice. Tape recorded review sessions with participants took place before and after three collaborative problem solving groups, during which participants discussed the thinking and associated changes that occurred for them throughout the process. A second research focus considered how a facilitator could promote changes to teachers' practice during collaborative problem solving.

Constructionist grounded theory was used to analyse the data. General factors that supported changes to teachers' practice included: an acknowledgement that participants think differently, appreciating that problems and classrooms are complex, being open minded and recognising perceived impacts of social and political pressures. A facilitator can promote

changes to teachers' practice by acknowledging these areas, whilst also applying psychology to facilitate a democratic process and attend to relational factors. A constructed grounded theory outlines that the roles of the facilitator and participants are interrelated and dynamic, thus requiring ongoing attention. Implications for educational psychologists are considered.

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<u>Abstract</u>

A meta – ethnography was used to synthesise current literature about teachers' experiences of being in collaborative problem solving groups. This was carried out in order to explore the benefits and challenges for teachers participating in this under researched type of Continuing Professional Development (CPD), whilst also acknowledging the individual contexts and viewpoints in the papers. Five papers were selected, which formed the basis of the meta – ethnography, an approach described by Noblit and Hare (1988).The seven phases of this approach were followed, which allowed the papers and the findings to be analysed, related to each other, compared and synthesised. Firstly, synthesis suggested that teachers benefited from the time and space to reflect, be with others and problem solve. However, findings also suggested that the teachers' time was precious to them, and finding time to participate was a challenge. Secondly, teachers found the groups beneficial when their participation led to some practical, visual solutions that they were in control of administering. Thirdly, teachers benefited from changing their perspectives. However, teachers often faced challenges when they put these changes into practice. Finally, teachers benefited, emotionally, by not feeling alone and feeling less stressed. However, these benefits existed in a context where the fear of judgement was an overarching challenge, in some cases.

Synthesis led to a number of questions and potential gaps for further exploration. Firstly, these relate to the more specific psychological processes that occur for participants in a collaborative problem solving group and how these influence changes to practice. Secondly, these relate to the role of the facilitator and the application of psychology. The review also prompted further exploration into the nature of teachers' participation in research in this area.

1. <u>Introduction</u>

1.1 <u>Historical and Political Context</u>

Since the arrival of the National Curriculum in 1988, there has been a drive towards achieving high academic standards in schools in England and, since the election of the coalition government in 2011, there has been an increased focus on teachers improving these standards in schools (Department for Education, 2010; 2014). Standards include being "accountable for pupils' attainment, progress and outcomes", promoting "the value of scholarship" and "managing behaviour effectively" (Department for Education, 2011b, pp. 10 - 12).

In the current political context, teachers receive 'performance related pay' for the standards that they reach (Department for Education, 2013a). Some say that a context that prioritises standards fails to recognise the complexity of the teaching role, and undermines teachers' skills (Lasky, 2005; Roffey, 2012). This could arguably lead teachers to feel undervalued and disempowered in their roles, factors related to increased stress (Daniels & Strauss, 2010).

Researchers, such as Durksen and Klassen (2012), Armstrong and Hallett (2012) and Partridge (2012), have correlated political reforms with teachers' low states of wellbeing. In these and other papers, low 'wellbeing' is conceptualised and therefore researched differently: in relation to the satisfaction of basic psychological needs (Durksen & Klassen, 2012), as psychological stress and tied up with identity (Armstrong & Hallett, 2012) and in terms of emotional labour (Partridge, 2012).

Within a political context where a focus on improving standards is considered to be linked to teachers' stress levels and low sense of professional efficacy, teachers can feel that there is little time for collaborative CPD opportunities (Clements & Minnick, 2012; Ryan & Bourke, 2012). It is therefore important that teachers' time on CPD is as productive as possible (Lofthouse & Hall, 2014). This is because, when teachers do have collaborative CPD opportunities, their capacities to effect change in their classrooms can increase. This is suggested in international

studies that link collaborative CPD experiences with teachers' enhanced professional agency (Bolam & Weindling, 2006; Pyhältö, Pietarinen, & Soini, 2014) and in literature that associates teachers' professional agency with their empowerment (Mezirow, 1981) and autonomy (Billett, Fenwick, & Somerville, 2006). As with 'wellbeing', the concept of 'professional agency' for teachers is much debated and theorists vary in terms of their assumptions about the role of the individual within the social context (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013; Lasky, 2005). This point further emphasises the different conceptual lenses through which people carry out research in this area and this is discussed further in the Bridging Document.

The next section of this review considers the literature on current CPD models in schools.

1.2 <u>Models of Continuing Professional Development For Teachers</u>
Teachers are required to undergo training and development in schools to enable them to raise standards (see page 2) in their schools (Department for Education, 2011a, 2011b). There is a range of CPD approaches for teachers, which can arguably help them to meet the expected standards, whilst also including other interrelated benefits, such as increasing their autonomy, agency and feelings of empowerment (Kennedy, 2005, 2014; Leask & Younie, 2013).

Kennedy (2005) compared the most commonly used CPD models for teachers in schools (see Table 1). Kennedy (2005) conceptualised 'professional autonomy' to increase at the same time as teachers' opportunities to shape their practice and change educational policy.

Table 1: Types of CPD for Teachers: Paraphrased From Kennedy (2005)

Model	Description	Purpose/ Effects of Using the Model
1. A training model	*The most dominant form of CPD for teachers. Delivered by an "expert". An effective means of introducing new knowledge.*	Transmission of information: tend to fulfil the function of preparing teachers to implement reforms.
2. An award bearing model	*Awards are seen as a mark of quality assurance. Likely to preference learning of theory, but may also link it to teachers' practice.*	
3. A deficit model	*Designed to address a perceived deficit in teacher performance.*	
4. A cascade model	*An individual teacher attends a training event and disseminates knowledge to colleagues.*	
5. A standards based model	*Represents a desire to create a model of good teaching practice. Ignores the complexities of contexts.*	Have the capacity to support underlying agendas but also to change teachers' practice by encouraging some professional autonomy and non – hierarchical, mutual collaboration.
6. A coaching/mentoring model	*Focuses on a one to one, personal relationship. Supportive yet challenging. Aims to change teaching practice of both participants for the better.*	
7. A community of practice model	*Involves more than two people. Cooperative, aiming to change teaching practice.*	
8. An action research model	*Participants are researchers. Equal participation.*	Support teachers to contribute to shape educational policy. Promote professional autonomy and critical reflection.
9. A transformative model	*Combination of processes and conditions that lead to change.*	

Current policy recommends that CPD is most likely to increase teaching standards when the "best teachers" lead training (Department for Education, 2014). This suggests that training should be delivered according to a 'training model' (see Table 1), since best teachers are those with the most expertise who achieve the best results, and instil their knowledge to passive recipients. This 'expert' model of CPD arguably coincides with a government drive to arm teachers with improved subject knowledge (Department for Education, 2013b) and a positivist, monolithic trend in education, concerned with standards (Kincheloe, 2012; Lofthouse, 2015).

However, the same government documentation also contends that 'collaborative peer coaching', where a group of teachers learn together, is an effective way to improve teaching standards. From 'coaching and mentoring' in Kennedy's table, there is a shift in thinking, from seeing training as the transmission of knowledge to something more collaborative; in Kennedy's conceptualisation of the term: "more mutually beneficial".

1.3 <u>Challenges and Benefits of Adopting a Collaborative CPD Approach</u>
There are challenges in adopting a collaborative approach within the current political climate in education. Challenges include: difficulties evaluating learning that has occurred, practical difficulties in gathering people together, inconsistencies with an educational system that is essentially not collaborative in nature and differences in opinion as to what 'collaborative' working looks like (Walker, Jeffes, Hart, Lord, & Kinder, 2010; Weißenrieder, Roesken-Winter, Schueler, Binner, & Blömeke, 2015). However, a national review of collaborative working found that the highest achieving schools, according to results' league tables, in the United Kingdom carry out collaborative CPD, such as coaching, whereas the lowest achieving schools are more likely to solely follow a training model approach to CPD (Pedder, Opfer, McCormick, & Storey, 2010).

As well as responding to political reforms that aim to improve standards, there are also benefits for individual teachers when they experience CPD described in the latter part of Kennedy's table. In coaching and mentoring contexts, teachers describe feeling empowered, attributing this to being in control of their own learning and having opportunities to critically reflect in

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a trusted collaboration with a colleague (Lofthouse & Hall, 2014; Neuberger, 2012; Skiffington, Washburn, & Elliott, 2011).

Paired collaborations of teachers are documented most widely in the collaborative CPD literature, although the 'Evidence for Policy and Practice Information Coordinating' (EPPI) Centre reviewed various outcomes for teachers and their practice during larger group collaborative CPD (Cordingley, Bell, Evans, & Firth, 2005). They suggested that teachers participating in collaborative CPD generally increased in confidence, which enabled them to effect positive changes in their classrooms. Similar effects are mirrored elsewhere (Walker et al., 2010).

Collaborative problem solving groups fit with the coalition government's hopes that CPD should enable teachers to better understand their pupils and lead to changes to their practice. There is room for further investigation of the effects of one particular type of collaborative CPD for teachers, 'collaborative problem solving groups', which has mutually beneficial reflection, changes to practice and emotional support as explicit aims.

1.4 Collaborative Problem Solving Groups: Overview
'Collaborative problem solving groups' (Hanko, 1999) are a form of collaborative CPD for groups of teachers, being used in some Local Authorities (Bennett & Monsen, 2011). They share similarities with a coaching model (see Table 1). Similarities include an emphasis on teachers supporting colleagues to learn more about the complexities existing in their classroom in a series of professional dialogues (Hanko, 1999). They have also been described as a means to promote deeper understandings of pupils' learning (Annan & Moore, 2012; Hanko, 1999; 2002) and associated with reductions in job related stress (Bozic & Carter, 2002), increased professional efficacy (Creese, Norwich, & Daniels, 1998) and creative, more inclusive changes to teaching practice (Frederickson, Dunsmuir, Lang, & Monsen, 2004).

1.5 Collaborative Problem Solving Consultation in Groups: Specifics
The model of collaborative problem solving groups developed by Hanko is underpinned by systemic, psychodynamic and mental health consultation

approaches (Hanko, 1985, 1999, 2002). Hanko emphasises teachers' consultation with each other about social and emotional factors in children's learning, in an environment of trust and non – judgement.

Hanko (1999) outlined the structure of teachers' collaborative problem solving groups. See Table 2:

Table 2: The Hanko Model

- A teacher presents a problem to a group of teachers, providing as much detail as possible.
- The group of teachers asks questions to clarify the situation.
- There is joint exploration of the concern and this is often guided by an external facilitator.
- The 'problem owner' deepens his or her understanding of the problem and initiates his or her own ways forward.

Collaborative problem solving groups are an under - researched type of CPD which could have benefits for teachers, whilst also fulfilling the government's hopes for teachers' learning and practice.

2. Rationale For Focus

Research papers on collaborative problem solving groups are not referred to in the review by Cordingley et al. (2005) and this may be for a number of reasons. Firstly, collaborative problem solving groups are referred to in different ways; as 'consultation groups', for example, which Cordingley et al. did not focus on in their search criteria. The majority of the literature in this area has also been written after the search dates referred to in Cordingley et al.'s review.

In this review, the literature on collaborative problem solving groups is considered within an interpretative paradigm. The individual contexts of the papers contribute to how they are interpreted, as does the viewpoint from which they are both written and interpreted. There are various definitions of 'collaborative learning' and 'wellbeing' in the literature, for example, and thinking about these definitions from an interpretative position permits a

more critical consideration of implications than a descriptive account would allow (Tatano, 2011; Thorne, Jensen, Kearney, Noblit, & Sandelowski, 2004; Willig, 2001).

3. Methodology

In order to address the Systematic Review question, I used a meta – ethnography, as described by Noblit and Hare (1988).This is a systematic approach to selecting, analysing, comparing and synthesising qualitative literature relevant to a particular area. However, it also recognises the interpretative element of the endeavour.

The seven steps, according to Noblit and Hare (1988), are summarised in Table 3:

Table 3: Seven Steps of Meta - ethnography

<table>
<tr><td>
1. Getting started
2. Deciding what is relevant to the initial interest
3. Reading the studies
4. Determining how the studies are related
5. Translating the studies into one another
6. Synthesising translations
7. Expressing the synthesis

These steps, or 'phases' do not have to be linear, but rather they can overlap as the process unfolds (Noblit & Hare, 1988).
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3.1 Phase One: Getting Started: A Review Question

The review question is: 'How are the benefits and challenges for teachers who participate in collaborative problem solving groups considered in the literature?'

3.2 Phase Two: Deciding What is Relevant to the Initial Interest

Noblit and Hare (1988) recommended that considerable effort should be made when deciding which studies are relevant. In order to ensure an extensive search of the literature, an initial search process was used.

3.2.1 Inclusion Criteria

The key terms, outlined in Table 4, were used when searching for relevant Empirical Research.

Table 4: Terms Used For the Literature Search during the Searching Period

Target population:
Teach*
Collaborative problem solving group terms: "Collaborative problem solving consultation" OR "group consultation" OR "staff support teams" OR "group peer support systems" OR "staff sharing schemes".   Note: I have included the character * so that any papers containing the root 'teach' could be found.

The Boolean search terms 'and'/ 'or' were used to link the search terms 'target population' with the 'collaborative problem solving group terms'. The synonyms in Table 4 were searched for in a number of electronic databases (see Table 5) between September, 2013 and January, 2014 and initially one thousand, one hundred and forty five papers were found.

Table 5: Search Locations

Electronic database searches	Web of Knowledge Scopus, ERIC Zetoc.
Hand searches and reference searches	Educational Psychology in Practice, British Journal of Educational Psychology Teaching and Teacher Education (all volumes between dates 1985 – 2013) Citation searches.
Other	Google Scholar University search engine, which included a search of university theses Reading texts on teachers' problem solving suggested by an academic who was knowledgeable in this particular area.

The inclusion criteria (see Table 6) evolved during reading. It was not a linear process and different articles were included and excluded as the inclusion criteria were refined. These decision processes are exemplified in Appendix A. The abstracts of the one thousand one hundred and forty five papers were scanned to check their suitability to the inclusion criteria. If it was not possible to tell this from reading the abstract, the paper was read in full, before deciding whether it should be included. This left eight papers.

After discussing the inclusion criteria in phase two with a university tutor, these eight papers were reduced to five (see Table 7).

The refinement of the inclusion criteria coincided with the development of a) a more complex understanding of the area; for example, recognising that different perceptions of both 'collaboration' and Hanko's model exist, and, b) an epistemological viewpoint which suggests that people interpret situations differently (see Bridging Document for a discussion on this). The latter led to a decision to include papers where the benefits and challenges could be described 'first hand' by the teachers, in both quotations included from interviews or questionnaires, but also in researchers' observations. This is in recognition that even the inclusion of direct comments is part of an editorial decision by the researcher. See Appendix B for further justification for choices made. The final inclusion criteria can be seen in Table 6:

Table 6: Final Inclusion Criteria

Participants: Teachers, but could also include other teaching staff, such as teaching assistants alongside teachers since they could also be said to have a teaching role and their opinions are also valuable. Not trainee teachers.
Setting: Primary or Secondary Schools.
Data: Qualitative data summarised the benefits and challenges for the teachers. Data could be direct comments by the teachers or from the researchers' explanations.
Type of Group: The problem solving group had to refer to the key elements outlined by Hanko (see Table 2). There had to be an external facilitator. It had to take a collaborative view of problem solving where there was no right answer, in keeping with Hanko's objectives. See Appendix A for difficulties with this conceptualisation.
General: Any Empirical Research since 1989. English language papers only. Must be published and take place in the United Kingdom.

Five papers were selected for review:

Table 7: Authors' Papers Selected for Review

Annan, M., & Moore, S. (2012)
Bozic, N., & Carter, A. (2002)
Brown, E., & Henderson, L. (2012)
Jackson, E. (2002)
Stringer, P., Stow, L., Hibbert, K., Powell, J., & Louw, E. (1992)

These five papers were selected for the next phase of the meta – ethnography. All were then read again in the context of the inclusion criteria to evaluate their quality.

3.3. <u>Assessing the Weight of Evidence</u>

This review is not written within a realist paradigm but from an interpretative, social constructionist one that recognises that individuals construct their own realities through interactions with others (Burr, 2003) (see Bridging Document). This philosophical stance has implications for the ways in which I consider 'weight of evidence', because I view 'evidence' as a constructed concept rather than a fixed one that can simply encapsulate thoughts about whether something is effective. The synthesis of the papers in this review offers a new contextually based interpretation rather than discovered truth.

Nevertheless, this Systematic Review offers some assessment of the 'quality' of each of the five papers. This is whilst noting that there is debate about what 'quality' in qualitative research means (Atkins et al., 2008; Gough, 2007). Papers were commented on in terms of their quality, using the EPPI-Centre Weight of Evidence tool for qualitative papers (EPPI-Centre, 2007) (See Table 8, p. 13). However, this process; rather than offering absolute answers to the tool's four criteria (see Appendix C), sparked further questions and reflections (see Appendix D). In this way, 'quality' was seen as an 'object of critical thinking' (Elliott, 2007), as opposed to something tangible and comparable.

As well as this approach to quality assessment fitting with the epistemological position in the review, through critical engagement with the

literature, I discovered that offering absolute answers to the questions asked in the weight of evidence tool was difficult, practically. None of the papers included detail on their analysis choices, which others have also noted to be something lacking in qualitative papers (Atkins et al., 2008) and is a marker of quality (Mockler, 2013). The exact research questions were also not always obvious or explained which made it difficult to assess the coherency of findings.

A central notion of 'ethicality' in the papers was also explored, and can be seen in table 8. Considering qualitative papers' ethicality can suggest quality, according to Groundwater Smith and Mockler (2007). The ethical issues considered in this 'quality assessment' were, as Mockler (2013) suggested, ones of: contribution to knowledge, a desire to establish trustworthiness, paradigm dependent considerations and transparency in design and reporting.

Table 8 shows the quality assessment, as well as reasons for coming to these decisions. Appendices E and F contain additional, contextual information about the papers, which was also cross referenced throughout the quality assessment process and should be read alongside Table 8.

Table 8: Tentative Weight of Evidence for the Five Papers, Weighted From 'Low' to 'High'

Authors → Weight of Evidence Questions ↓	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	Stringer, Stow, Hibbert, Powell, and Louw (1992)
A: Could the study findings be trusted in answering the study question?	Low - medium	Medium	Medium - high	Medium - high	High
B: How appropriate was the research design and analysis for addressing the Systematic Review question?	Low	Medium	Medium	Low - medium	Medium - high
C: How relevant was the particular focus of the study (conceptual focus, context, sample and measures) for addressing the review question?	Medium	Low - medium	Low - medium	Low - medium	Medium - high

Authors → Weight of Evidence Questions ↓	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	Stringer et al. (1992)
D: Taking into account quality of execution, appropriateness of design and relevance of focus, what was the overall weight of evidence this study provides to answer the review question?	Low - medium	Low - medium	Medium	Medium	Medium - high
Ethicality? See page 12 for a description of how this was conceptualised.	Medium	Medium	Low - medium	Medium - high	Medium - high

3.4 Phase Three: Reading the Studies

Key findings and details from each paper were initially drawn up in a grid (see Appendix E). Details included: the research design, research questions, participants and conceptualisation of the collaborative problem solving group; as well as key themes, metaphors, phrases and ideas in each paper (not included in appendices to reduce document's length but can be requested). Creating a grid in this way was suggested by Britten et al. (2002) in their worked example of a meta ethnography. This process facilitated and structured the repeated reading of the studies.

3.5 Phase Four: Determining How the Studies are Related

In this phase, it was possible to compare the themes identified in the individual papers. In order to do this, thematic analysis of the papers, as described by Clarke and Braun (2013), was carried out as a way of identifying and analysing patterns in the qualitative data. Through reading the papers, some themes became apparent and these related to ideas of: time, structure, solutions, wellbeing and team work for *benefits*; and time, practicalities, lack of understanding and nervousness for the *challenges*.

Effort was made to ensure that the theme labels remained close to quotations taken from the five papers, and this was achieved by noting down both direct and indirect quotations from the participants and researchers.

3.6 Phase Five: Translating the Studies onto Each Other

Noblit and Hare (1988) wrote about the subjective role of the person carrying out a meta-ethnography, as has Arruda (2003) in the context of interpretation in the social constructionist paradigm. The purpose of meta – ethnography is not to find an absolute answer to a question, but to offer an enlightened interpretation of it, given an individual researcher's understanding of its context.

It is within this position that I read and re read the articles to add more thoughts to the interpretation process in acknowledgement of its complexity. From a dialogic perspective (see Bridging Document), this process allowed me space to consider alternative perspectives and to engage in internal

dialogues with them in order to construct my own interpretation (Cooper, Chak, Cornish, & Gillespie, 2013; Matusov, 2011). The translation of studies into each other also allowed useful comparisons to be made relating to their contexts (see Appendix F). This phase led to some changes to themes, specifically relating to the review question: 'How are the benefits and challenges for teachers who participate in collaborative problem solving groups considered in the literature?' These themes are exemplified in Table 9:

Table 9: Benefits and Challenges For Teachers who Participate in Collaborative Problem Solving Groups. Themes at the End of Phase Five.

Benefits of Participation:	Challenges of Participation:
1. Time and space to reflect	8. Time
2. Structured focus	9. Availability of teachers
3. Generalisable outcomes	10. Lack of understanding of the process
4. Changing perspectives.	11. Exposure and related tension
5. Team work, empathy and cooperation	12. Difficulty finding meaning in the process
6. Practical, new solutions	
7. Promoting positive wellbeing: improving motivation and reducing stress	

It was decided to keep these twelve themes at this point in the analysis, rather than to attempt to translate them further, to attend to the detail in the papers.

3.7 Phase Six: Synthesis, Including Second Order and Third Order Interpretations

The interpretations that led to the themes in Table 9 (or first order constructs, according to Schutz, 1962) were embedded into further theme development and adapted throughout this phase as synthesis progressed. First, second and third order interpretations (Schutz, 1962) were used as a framework for relating, developing, translating and synthesising constructed themes. This is a step suggested by Britten et al. (2002) and fits with meta-ethnography's aim to construct something bigger than the sum of its parts. Table 10 summarises development between first, second and third order

constructs. It includes some bridging explanations and questions, considered during synthesis.

Table 10: Development of First Order, Second Order and Third Order Constructs

Themes Related to Benefits (first order interpretations made by the participants/researchers)	Explanation/Theory (second order interpretations made by the researchers)	Bridging Explanation between a Number of Sub Themes (if appropriate)	My Questions, which led to the Third Order Constructions.	Third Order Interpretations
1. Time and space	Teachers benefited from the time and space to think. The ability to problem solve effectively was influenced by having time assigned to the group. Teachers viewed time as a precious commodity and so wanted it to be used in a worthwhile way. They tended to view high ordered thinking and reflection as beneficial.	None	Do teachers carry out a time – benefit analysis?	**1. Time to think is a change from the norm** Time and space and a model to support thinking can have emotional and practical benefits. This is a change from the norm, where teachers' time is precious and there is no time for reflection.
2. Structured Focus	Teachers benefited from the structured focus of the collaborative problem solving group. This related to them knowing how much of their time was needed in the sessions, in some cases.	None	Does having a structure to follow protect teachers' time?	

Themes Related to Benefits (first order interpretations made by the participants/researchers)	Explanation/Theory (second order interpretations made by the researchers)	Bridging Explanation between a Number of Sub Themes (if appropriate)	My Questions, which led to the Third Order Constructions.	Third Order Interpretations
3. Generalisable Outcomes	Teachers benefited from being able to generalise solutions gained in the group to other situations. Teachers benefited from *seeing* these benefits.	Teachers liked being the ones in control of implementing changes. There was a sense that teachers experienced feelings of control, empowerment or agency when they owned their solutions or strategies.	None	**2. Visual changes to practice** Teachers might ask, 'Is there evidence that this has been worth my time?' Teachers might consider whether the applications go beyond one particular case.
4. Practical, New Solutions	Teachers benefited from the practical solutions that they gained from being in the groups. Seeing, verbalising or measuring practical and positive solutions was beneficial.	None	None	

Themes Related to Benefits (first order interpretations made by the participants/researchers)	Explanation/Theory (second order interpretations made by the researchers)	Bridging Explanation between a Number of Sub Themes (if appropriate)	My Questions, which led to the Third Order Constructions.	Third Order Interpretations
5. Changing Perspectives.	Teachers found it beneficial to think differently about their situations.	Suggestion that they are looking for help? Open to having their thoughts changed?	None	**3. Changing perspectives** Teachers might ask, 'how do these changes make me feel? 'Are these changes to my thoughts able to lead to some more tangible change?' 'Are the changes to my thoughts benefiting enough?'

Themes Related to Benefits (first order interpretations made by the participants/researchers)	Explanation/Theory (second order interpretations made by the researchers)	Bridging Explanation between a Number of Sub Themes (if appropriate)	My Questions, which led to the Third Order Constructions.	Third Order Interpretations
6. Team work, Empathy and Cooperation 7. Promoting Positive Wellbeing and Motivation and Reducing Stress	Teachers benefited from the cooperative and supportive nature of the groups. There were changes at an emotional level. Teachers felt less alone and judged.	Teachers blame themselves for their difficulties in the classroom. Feeling part of a team seemed to lead to increased motivation and decreased stress. Emotional benefits were: stress reduction, increase in empathy from opening up with others and sharing problems.	Were teachers used to feeling alone, stressed and in a fearful context of being judged? Hence, they appreciated and emotionally benefited from being with supportive colleagues?	**4. Changes to emotions and feelings that allow connection to others**

Themes Related to Challenges (first order interpretations made by the participants/researchers)	Explanation/Theory (second order interpretations made by the researchers)	Bridging Explanation between a Number of Sub Themes (if appropriate)	My Questions, which led to the Third Order Constructions.	Third Order Interpretations
8. Time	Teachers found the time commitment difficult. Some were challenged by the time lapse between sessions.	Teachers were constrained by time limits. Teachers were under time pressures. Time commitments were associated with psychological and practical barriers to their thinking.	Were there times when teachers do not think about the time pressures?	**5. Practicalities are a challenge to the benefits. 'Time' particularly as an overarching concern**
9. Availability of Teachers	Teachers were challenged by changing group formations.	None	None	
10. Lack of Understanding of the Process	Teachers were challenged by understanding the stages of the problem solving model.	Teachers were concerned that they did not have time to follow the structure. They also felt they were being told what to do.	None	**6. There are some cognitive challenges, possibly related to some emotional difficulties**
11. Difficulty Finding Meaning in the Process	Teachers found it difficult to gain real life meaning from being in the groups.			
12. Exposure and Related Tension	Teachers found exposing their problems in front of others difficult.	Teachers were not used to or felt comfortable publically admitting what they thought were failures. They could feel judged and powerless.	Teachers asked, 'are the benefits to my wellbeing outweighing the challenges to my sense of self'?	**7. There are some emotional challenges, related to what others think of them**

In the third order interpretation, the benefits and challenges were seen as interrelated. Findings from each paper suggested a conflict between teachers' experiences of benefits and challenges and this interpretation led to a developing line of argument. Teachers could see the benefits of participation, but only through simultaneous musing on the challenges. This was evident in the following teacher's comment in the paper by Bozic and Carter (2002, p. 197):

> "Given me new ideas to think about although I haven't had the time to implement any of them yet!"

3.8 Phase Seven: Expressing the Synthesis

According to Noblit and Hare (1988), synthesis enables a reader to see phenomena in terms of others' interpretations. Figure 1 suggests that benefits exist within a context of some challenges for the teachers, which are represented with some possible internal conflicts that teachers might experience. Benefits and challenges are neither separate nor linear. The line of argument is developed again when it suggests that, if the beneficial changes seem to outweigh the challenges to the teacher, then they may decide that participation has been a worthwhile use of their time.

Figure 1: Line of Argument Model

Change: Visual Changes to Practice

Is there visual evidence that my participation has changed my practice?

Teacher participates in a collaborative problem solving group or in a series of groups. The internal conflicts or conversations he or she has include some questions…

Change: Emotional Changes

Do I feel less alone?

Do I feel supported or insecure when I am in the group?

Are there some emotional benefits (such as stress reduction, feeling more in control of things, feeling more motivated)?

Do these emotional benefits combine with some other changes?

Change: Changes to Thought Processes

Do I feel like I can identify changes to the way I think about a situation or a pupil?

Does this combine with or lead to some practical changes?

Was my participation worth my time?

Themes developed throughout phases three to seven are now critically discussed in light of the review question: 'How are the benefits and challenges for teachers who participate in collaborative problem solving groups considered in the literature?' The new interpretation, explored and developed throughout section 3, is broken down into four final themes: 'a time benefit analysis', 'visual changes to practice', 'changing perspectives' and 'emotional changes'.

4. Discussion of Themes

Direct quotations from each of the five articles are interspersed throughout the following discussion to aid the reader's immersion in the interpretation. These are signified by speech marks in the text. The interpretation is linked to wider literature.

4.1 A Time – Benefit Analysis
Time was an overarching consideration in all five articles. There was a number of phrases that suggested that teachers benefited from having "time and space…to think" and "opportunities to talk and listen" and be "thorough". Language linked to "time", and teachers' lack of it pervaded findings in the papers. In one paper, "time was noted as the most significant disadvantage" and, in another: "a significant constraint". This is why a key question in Figure 1 asks, 'was my participation worth my time?' The line of argument suggests that teachers continually assess whether something is "a good use of time" and this idea is supported by other literature (Messing, Caroly, & Riel, 2011; Philipp & Kunter, 2013). Literature in the area of Social Work has similarly found that interventions aimed at improving wellbeing or practice often add more stresses for participants in terms of time management (Clements & Minnick, 2012).

In order for the research written about in the articles to occur, it is assumed that senior staff gave their consent for teachers' participation. That said, researchers commented in the articles that teachers gave up their *free* time to take part in the groups: either coming in early or using time after school. This suggests that teachers were committed to their jobs even when time constraints led them to feel "stressed" or "pressured", but it also suggests

that senior staff might not hold such interventions highly enough to relieve teachers from other commitments. Other research has emphasised the importance that senior staff release teachers for CPD, without it adding to their workloads (Doveston & Keenaghan, 2010; Newman & Mowbray, 2012).

Although having allotted time to participate in the groups created some benefits, it is unknown from these articles how long benefits lasted for. In two of the articles, teachers commented on the benefits being applied to "any difficulty or issue that arises" in the future, suggesting some sustainability or value for time.

Teachers commented on the benefits of having a structured focus of problem solving in three of the five articles. It seems that they benefited from the formality of the model and there is a suggestion that its provision of time limited engagement and predictable format helped teachers to feel more in control of their time.

It may be possible, in other contexts, to increase the benefits identified in the model (time to think, visual changes to practice, changing perspectives and emotional changes), so that teachers are more likely to consider the group worthy of their time. Senior staff would need to offer teachers predictable, structured and protected time to participate in the groups. Giving teachers time off their lessons, in an effort to recognise their hopes to reap the benefits without simultaneously increasing their work load, could be a way of doing this (Ferguson & Johnson, 2010; Roeser et al., 2013).

4.2 Visual Changes to Practice
'Visual changes to practice' encapsulate the direct outcomes for teachers in terms of their practice that came as a result of their participation in collaborative problem solving groups. Teachers benefited from seeing the positive changes to their practice that they put down to their participation. Senior staff, overseeing the groups in three of the articles, talked of a reduction in their "workload" as the result of visual evidence they had seen that showed the improved inclusion of children with Special Educational Needs. Teachers might have felt pressure to evidence the benefits to Senior

Management, suggesting that personal changes were not enough of a benefit for them within the contexts in which they worked. There is currently a high degree of scrutiny of CPD's outcomes in the teaching profession (Lofthouse & Hall, 2014; Nelson, Spence-Thomas, & Taylor, 2015).

The developing line of argument emphasises that teachers benefited from being in control of their own visual changes to practice. The use of the pronoun "I" was frequently used next to identified changes to practice. In one article, there was a comment suggesting teachers benefited from "trialling" different solutions. This, along with other comments, suggested that teachers gained confidence to make mistakes: "it is nice to know…that strategies don't always work and it isn't necessarily my fault". Other studies have associated teachers' confidence with feeling in control (Forlin, 2001; Mujtaba, 2012). This contrasts with challenges they experience managing workload and time constraints, which can make feeling in control seem difficult. Salter - Jones (2012) hypothesised that teachers felt demotivated and stressed as the result of being told to do so many jobs, many of which teachers described as meaningless.

Teachers benefited from the "focus on positive comments and solutions" and teachers felt positive about their practice when asked for their feedback: "this work has been one of the most positive areas of work I have been involved with". This fits with wider research about teachers' wellbeing by Critchley and Gibbs (2012), who explored the effects of a positive psychology intervention on teachers' professional efficacy. Teachers commented that they felt more hopeful about their understanding of children's needs and therefore less anxious or stressed as a result, and this is supported in research by Mujtaba (2012).

There was also a benefit in being able to bridge solutions generated in the group into other situations teachers encountered. Perhaps this was because they felt that more sustainable benefits made the time they gave up to participate worthwhile. There is a need for dialogues about benefits that teachers experience from participation in interventions, since other research

has suggested that "initial enthusiasm" can be constrained by challenges over time (Critchley & Gibbs, 2012; Roffey, 2012).

4.3 Changing Perspectives

Enabling practical changes came from a change in teachers' thinking. The benefit of changing perspectives was coded in three out of five papers. Teachers identified that thinking differently about a pupil was helpful because it led them to think about problems in a more complex way:

> "*This had the effect of transforming the teachers' preoccupation with the disruptive behaviour...into a greater interest in what was motivating it*".

This change to a more complex view of the world seemed to enable more compassionate thinking about themselves. One teacher said:

> "*It is nice to know other people have the same frustrations and that strategies don't always work and that it isn't necessarily the teacher's fault*"

This is supported by other literature that suggests an ecological view of teachers' professional agency, where agency is associated with the context in which it is achieved rather than a capacity residing in the individual (Lasky, 2005; Priestley, Edwards, Priestley, & Miller, 2012). Agency is considered in more detail in the Bridging Document and Empirical Research.

4.4 Emotional Changes

Synthesis suggested that teachers experienced reduced stress levels. Teachers benefited cathartically from talking about their problems with others and felt less "wound up", but there was a sense that this was not enough to promote "a good tension release", which was more likely described as occurring when solutions were thought of and acted upon. For these changes to happen, teachers had to feel "confident" in their practice and more motivated to "help (pupils) again", as well as "cope". This suggests that a reduction in teachers' stress levels linked to their increased agency within their teaching context and this is argued elsewhere (Lasky, 2005; Welzel & Inglehart, 2010).

This suggests that teachers find benefits in terms of stress reduction, as well as solutions in their classrooms, when they "take a look from the outside". Such objective views might have come from teachers' self-regulation of their emotions, as suggested by Partridge (2012). Partridge also explained that being under pressure reduced teachers' clarity of thought. Others have similarly suggested that changing perspectives can only occur in settings that reduce teachers' stress levels (Clements & Minnick, 2012). A linear or causal relationship between the factors of stress, agency and solutions is not suggested in the five articles.

Emotional benefits seemed to come from being with colleagues and being part of "a platform for sharing and encouraging team work". Teachers benefited from the "praise", and "encouraging" and "supportive" atmosphere within the groups. These relationships with colleagues seemed to play some part in teachers feeling confident enough to facilitate their own changes in their classrooms. This is in line with research in schools suggesting that relationships in schools that foster belonging, trust, respect and value impact on teachers' capacities to change their practice (Mason & Rowling, 2005; Roffey, 2012).

Fear of exposure or ridicule was a significant challenge in three of the five articles, which resulted in teachers feeling "apprehensive" and "reluctant" to talk about their problems "publically". This is consistent with teachers' comments in an article by Partridge (2012), which led to a suggestion that the profession does not encourage teachers to be in touch with their emotions. Rather than see this as a fixed challenge, it might be useful to think about it in terms of a perceived reality amongst some teachers that they are often judged. More research related to power dynamics between teachers during CPD was suggested by Fraser, Kennedy, Reid, and McKinney (2007), and this review contends that this could be helpful.

Again these points suggest that schools might implement more encouraging, supportive cultures within them in general, something which can be achieved by promoting "inclusive belonging, that reaches out to others"

rather than "exclusive belonging which can be superior and self- protecting" (Roffey, 2012; p. 10). This could arguably mediate some of the stresses felt by teachers, currently.

5. Limitations and Ways Forward

Other meta – ethnographies have been carried out by research teams as opposed to one person (Franklin, Kim, Ryan, Kelly, & Montgomery, 2012; Priest et al., 2013). Since there was always an element of interpretation in meta – ethnography, further interpretations might have added further depth to interpretations, as opposed to triangulating findings in order to find a fixed point (Arruda, 2003).

Practically, there were a number of elements of the papers' contexts which were unknown. For example, it was not known how the researchers, in the main, constructed their themes and from what data.

It is important to remember that themes identified in this review interrelated with each other. For example, it was not possible to know whether the structure or the communal aspect of being together led to the benefits that teachers experienced, but it is likely to be a combination of these. There are a number of gaps to be addressed through subsequent research:

Table 11: Gaps Needing to Be Addressed in Subsequent Research

- Looking in more detail at the process of collaborative problem solving consultation for individual teachers. This is since the papers in the Systematic Review did not preference individuals' unique experiences.

- More exploration of the psychological processes involved in being in a collaborative problem solving group. Is it possible to further consider the relationships between such factors as collaborative learning, professional agency and changes to practice?

- Exploration into the role of the school and political context and its effects on the benefits and challenges experienced by individual teachers.

- A potential role for Educational Psychology in terms of psychological understandings of the collaborative problem solving consultation process and the facilitation of those processes that are most likely to promote changes to teachers' practice.

6. <u>Conclusion</u>

The meta – ethnography analysed and synthesised research on benefits and challenges for teachers when they participate in collaborative problem solving groups. As a result of carrying out the meta – ethnography process, suggested by Noblit and Hare (1988), this review has suggested some insights into the findings of existing literature in the area.

Firstly, it has identified that benefits cannot be viewed without consideration of some challenges for teachers. Teachers benefited from having time to problem solve, but they also felt preoccupied by the constraints it made on their time. This was despite seeing direct benefits and possibly some long term ones in their classrooms. In this sense, time was an overarching theme that affected other benefits for the teachers. The line of argument has suggested the interaction of this theme with other factors such as stress, control and agency.

It is suggested that stress felt because of time constraints could be partly moderated by experiencing a supportive and trusting environment, supported by Senior Management.

Chapter 2: Bridging Document. Moving From Systematic Review to Empirical Research

1. <u>Overview</u>

The purpose of this Bridging Document is to explain the links between the Systematic Review and the Empirical Research. I begin by explaining my personal rationale for my research focus. I follow this with a discussion of my epistemological and conceptual positions, considering how these influenced decisions throughout the research process. A discussion on ethical and quality issues follows, including critical consideration of how these factors were influenced by my epistemological and conceptual stances. Methodological and analysis choices are outlined, including my rationale for the positioning of participants.

2. <u>Personal Rationale</u>

A focus on teachers' experiences has come from both my own background as a Secondary School teacher and work with teachers at a systemic level in my practice during the Educational Psychology doctorate. I have noticed that teachers feel under pressures to perform and evidence their progress and this can affect their feelings about themselves and what they are capable of. However, I have also noticed and experienced the positive feelings that arise in teachers, when they are supported by others to reflect on their role and its impact on the children they work with.

Participating in collaborative coaching as a teacher, and in a coaching and supervisory role for teachers as a trainee educational psychologist, has led me to acknowledge the potential that positive and collaborative CPD can have on teachers' feelings about themselves as 'active agents'.

3. <u>Overall Rationale</u>

Carrying out the Systematic Review led me to question some issues about the nature of collaborative problem solving for teachers and some gaps that need addressing.

Table 12: Conclusions From Chapter 1

More research should be done:
- Looking in more detail at the process of collaborative problem solving consultation for individual teachers. This is since the papers in the Systematic Review did not preference individuals' unique experiences.

- Exploring the psychological processes involved in being in a collaborative problem solving group. Is it possible to further consider the relationships between such factors as collaborative learning, professional agency and changes to practice?

- Exploring the role of the school and political context and its effects on the benefits and challenges experienced by individual teachers.

- Considering a potential role for Educational Psychology within this area, in terms of potential psychological understandings of the collaborative problem solving consultation process and the facilitation of processes that are most likely to promote changes to practice.

I now critically consider these areas, with reference to my epistemological and theoretical positions.

4.   Epistemological and Theoretical Positions

The areas of social constructionism, dialogic theory and professional agency have affected how I will address the 'gaps' above. Although I have been attracted to a social constructionist epistemology since starting the course (reasons for this interest are explained below), conducting the Systematic Review led me to consider the potential relevance of literature in the areas of dialogic theory and professional agency to teachers' collaborative learning. I also found that the areas of 'dialogue' in collaborative learning and individuals' professional agency were relevant concepts underpinning the Empirical Research findings. Towards the end of my research journey and the Empirical Research process, I constructed T Table 13 below, in order to emphasise how social constructionism, dialogic theory and professional agency can offer complementary perspectives on the relationship between the 'individual' and the 'social' and also on 'language'

in collaborative learning. Table 13 outlines an overview of the links between the three areas, before each one is critically explored in turn (see sections 4.1, 4.2 and 4.3).

Table 13: The Three Areas of my Conceptual Basis and their Links to Key Concerns in the Empirical Research

	Social Constructionism From Burr (2003)	Dialogic Theory From Wegerif (2011b)'s conceptualisation of 'dialogue', primarily; with links made to Marková (2003) and Matusov (2011).	A Subject – Centred Sociocultural View of Professional Agency From Eteläpelto et al. (2013), Billett (2008) and Billett et al. (2006)
Links to Change	Research from this perspective is associated with critical thinking and social change.	Dialogue has been linked to transformative, participatory approaches in Education (Cooper et al., 2013; Wegerif, 2011b) and in research (Van der Riet, 2008).	Agency is linked to active striving and individuals influencing their own lives.
View of Collaborative Learning	'Knowledges' are co - constructed and evolving over time and contexts.	Learning is subjective for the individual, within the collaborative context. But, "there could be no dialogue if participants were not opposed one to another through mutually experienced strangeness, which creates tension between them" (Marková, 2003, p. 257).	Learning is seen as an individual's active construction of knowledge in a collaborative context, which impacts on their individual identity. Agency is needed for professional learning.
View of the Individual: Empowerment, Autonomy and Change	Individuals construct realities differently and they are empowered in their meaning making.	The diversity of an individual's perspectives is celebrated (Matusov, 2011; Wegerif, 2011b). For words to be representative of an individual's identity, they need to be committed to finding new meanings and being open minded to changing their perspectives within the context of hearing the words of others (Marková, 2003).	The individual is seen as capable of transforming their socio-cultural conditions. Individuals' autonomous beliefs and actions are reflected in their agency (Billett et al., 2006).

	Social Constructionism	Dialogic Theory	A Subject - Centred Sociocultural View of Professional Agency
View of the Social, Historical and Cultural Context	Human experience and perceptions are mediated socially, culturally, historically (and linguistically).	Individuals uniquely draw on their own interpretations of social, historical and cultural contexts (Wegerif, 2011b).	Individuals are embedded by their sociocultural contexts, but they are not passive in their constructions of them. Individuals have agency to change their sociocultural contexts and decide which problems need solving. Individuals are not subservient to the social.
Role of Language	Language constructs realities rather than describes 'a reality'.	"Concepts are always fuzzy and they are always temporary, provisional staging posts…where experiences are brought together in dialogues. In fact concepts are not "things" at all but more like perspectives on reality achieved in a dialogue and then given a marker in language" (Wegerif, 2011a, p. 86). Dialogue is ever evolving and constantly challenges us (Wegerif, 2011a). Dialogic space is where different ideas are held in tension enabling new insights and creativity (Wegerif, 2007).	Agency is a socially constructed phenomenon, arrived at through individuals' interactions with those in their social contexts. A specific role for language is not focused on, hence the inclusion of the dialogic frame as part of my conceptual basis.

I am aware of my bias, viewing my research, 'knowledge' and collaborative problem solving through these conceptual lenses. Other researchers in this area might consider learning and the roles of agency and dialogue in the process as less important, preferring a more unidirectional conceptualisation of learning (see 4.2). I attempted to be an epistemologically reflexive researcher, continually reflecting on this bias in writing, and with my tutor, as suggested by Donetto and Cribb (2011).

With specific regards to epistemology, some writers, such as Kincheloe (2012), coming from a social constructionist position (considered in 4.1 below), argue that this epistemological viewpoint should be encouraged in teachers participating in research. I found that being interested and transparent about participants' different perspectives was empowering for them (See 4.1.1 in the Empirical Research) and I was interested in participants' potentially different views of learning and knowledge. This is supported by Billett (2009), who wrote that recognising personal epistemologies is central to understanding how individuals engage in and through their work. There is a link with my philosophical and ethical stances here, from which participants are considered as individuals who make their own personal knowledges, but the dialogic theory I draw from sees individuals as in relationships. As well as being an ethical consideration (Guillemin & Gillam, 2004), respecting participants' autonomy is also associated with teachers' professional agency (Kennedy, 2014). This last point is considered further in section 5 of this document, where I consider the methodological choices made.

4.1 Social Constructionism

I am writing, researching and thinking from a social constructionist viewpoint. This approach is based on philosophical assumptions that contrast with those from a positivist paradigm. The positivist perspective is characterised by rationality, objectivity and truth, whereas the social constructionist perspective states that human beings cannot be viewed objectively or as objects (Burr, 2003; Kincheloe, 2012). Positivism is underpinned by a realist ontology, where knowledge within research can be collected and used to describe a world which exists independent of our constructions. However, those researching from a social constructionist

perspective hold a relativist ontology, which assumes that individuals construct their own interpretations of their experiences (Burr, 2003).

From a positivist perspective, language is depicted as a reliable and accurate link between objective and subjective worlds. From a social constructionist stance, knowledge is historically and culturally specific, and sustained by social processes between people (Burr, 2003; Freeman & Combs, 1996; Lock & Strong, 2010).

This epistemological approach sparked my interest in Hanko's (1999) collaborative problem solving approach, specifically. It is the 'problem bringer' who decides how to move forward following participation in a session, but, it is the *joint exploration* during the consultation process which informs new knowledges and understandings. It is this way of thinking that leads teachers to feel empowered (or perhaps, agentic) to make changes, according to Hanko (1999).

Another way to consider this process of joint exploration is through a dialogic lens.

4.2 <u>Dialogue</u>

Literature in the area of dialogic theory considers how people communicate with each other and how these interactions affect their thinking and learning. Amongst others, Matusov (2011) and Wegerif (2008, 2011b) have written about the differences between Vygotskian and Bakhtinian approaches to learning in groups. Both argued that learning from a Vygotskian perspective is monologic, meaning that a learner comes to a new 'right' way of thinking through dialogue. From this perspective, 'difference' is conceptualised as something that should be overcome (Ball & Freedman, 2004; Wegerif, 2008).This type of learning could be said to be evident during the research process, when participants seemingly came to a consensus on decisions such as times of sessions and ground rules.

A Vygotskian perspective diverges from those theories within education which are based on Mikhail Bakhtin's work (Matusov & Smith, 2007; Sperling & Appleman, 2011), which assume thinking to be a dynamic

process between individuals, in which differences in meaning are held in tension and there is no monologic truth. From this perspective, meaning is dynamic, emerging from the interplay of different perspectives and socially constructed.

Conceptualising learning through a dialogic lens suggests that I did not hope to directly access what was inside participants' heads, as this would not be possible. However, I could offer my own interpretation of their thought processes and facilitate a democratic process. I define a democratic process as one where individuals feel included enough that they are able to speak openly, and contribute to any decisions made in the group. In a democratic, inclusive process, difference is an asset (Arnett, Arneson, & Bell, 2006).

Considering the field of collaborative learning, Wegerif (2011a) suggested that sociocultural perspectives, such as situated communities of practice models (see Wenger, 1999), do not fit with dialogic frameworks, as they neglect individuals' unique interpretations of social and cultural views. This is now considered in light of my view of the role of professional agency.

4.3 <u>Professional Agency</u>

I take a view of agency that asserts that human beings can shape their lives and environments whilst simultaneously being shaped by social and individual factors (Lasky, 2005). I also prioritise a socio-cultural approach that takes account of individuals' subjective perspectives about social contexts. This is what Eteläpelto et al. (2013) described as a 'subject – centred sociocultural approach' to professional agency. It is further outlined in Table 14 below:

Table 14: Subject Centred Sociocultural View of Professional Agency,
According to Eteläpelto et al. (2013).

1. Professional agency is practised (and manifested) when professional subjects and/or communities exert influence, make choices, and take stances in ways that affect their work and/or their professional identities.

2. Professional agency is always exercised for certain purposes and within certain (historically formed) socio-cultural and material circumstances, and it is constrained and resourced by these circumstances.

3. The practice of professional agency is closely intertwined with professional subjects' work-related identities comprising their professional and ethical commitments, ideals, motivations, interests, and goals.

4. Professional subjects' unique (work) experiences, knowledge, and competencies function as individual developmental affordances and individual resources for the practice of professional agency at work.

5. In the investigation of professional agency, individuals and social entities are analytically separate but mutually constitutive of each other.

6. Professional subjects have discursive, practical, and natural (embodied) relations to their work; these are temporally constructed within the conditions of the work.

7. Professional agency is needed especially for developing one's work and work communities, and for taking creative initiatives. It is also needed for professional learning and for the renegotiation of work-related identities in (changing) work practices.

The view described in Table 14 suggests that a person's professional agency fluctuates, dependent on the processes involved in a collaborative learning experience (Biesta & Tedder, 2007). Eteläpelto et al. (2013) wrote that notions about professional agency have implications for how research is conducted. If the relationships between the individual and the social are viewed as separate, social contexts can be reduced to variables and

investigated in terms of their impact on individual action. However, I aimed to understand individuals' agency related to their construction of their social context and so conceptualised my methodology differently. The non – expert approach I aimed to convey meant that I valued individuals' unique opinions about their environments and their roles within them (See Empirical Research, 4.1.2; 4.1.3 and 4.1.4).

5. Methodology

5.1 Hopes of Participation and Change

One critical question asked of the social constructionist approach is, "how does chronicling stories bring about change and how does reflection become a catalyst to change practice?" (McTaggart, 1998, p. 221). But, although "social realities may not be 'essentially true' …that doesn't stop them from having real effects", for individuals, which can still be explored and enable change (Freeman & Combs, 1996, p. 36). Social constructionist approaches enhance agency as they enable an emergent, reflexive sense of what is important to individuals, thus re energising them to engage and act in ways that they believe in (Van der Riet, 2008).

Conducting research from an explicitly social constructionist viewpoint is associated with critical thinking and social change within education (Freeman & Combs, 1996; Kincheloe, 2012). The Systematic Review suggested that it was important that teachers perceived something had 'changed' as a result of their participation in a collaborative learning group, to perhaps evidence their time commitment to others, but likely also to enhance their feelings about themselves as empowered and agentic practitioners.

Given my views on the benefits of collaborative learning in both emerging meaning making and changes to practice explained above, I invited teachers to participate in the research process with me. This is so they had opportunities to be active agents in learning about them.

5.2 <u>Action Research</u>

Action research is a participatory approach which has social changes at its heart (Van der Riet, 2008). The political stance of participatory research is that all people have a right to participate in decision making about changes that affect them (Reason & Bradbury, 2006; Van der Riet & Boettiger, 2009). If participants are engaged in such decision making, it follows that they will be agentic to make sustainable and authentic changes (Van der Riet & Boettiger, 2009).

The action research model adopted in this process, shared some similarities with what Heron and Reason (2001) denoted an 'Apollonian inquiry culture' because I took an explicit approach to planning the cycles between reflection and action. However, there were also similarities with a 'Dionysian inquiry culture', in which there is a more flexible approach to making sense of what went on in the last action phase. For example, my initial intention was to carry out up to five sessions with the participants from the outset, as recommended by Hanko (1999). However, there was an emerging consensus that we had considered how the group process influenced changes by session three. Similarly, I suggested the structure for each session, however, its exact nature was subject to changes over time. For example, in session three we agreed that it was more helpful to continue our initial review session for twenty five minutes than to have two separate review sessions.

Berg (2001) identified three types of action research: 1. technical, scientific and collaborative, 2. practical, mutually collaborative and deliberative and 3. emancipating, enhancing and critical. The first type aims to test out the efficacy of a prescribed framework or model, the second type attempts to improve practice, whereas the third aims to facilitate a democratic process that enables participants to better understand the specific complexities and problems within their practice. The third conceptualisation links with literature by Reason and Bradbury (2006) who wrote that action research should focus on the 'how' rather than the 'what'. *How things changed* is the focus for action researchers (McTaggart, 1998) and this is something that I

aim to address in the Empirical Research (see sections 2 and 3 of this chapter).

Action research creates the kind of knowledge that is constructed for people within and because of social interactions. It "arises in the process of living" (Reason & Bradbury, 2006, p. 9). It recognises that viewpoints are representative of both moments in time and complex interactions (Van der Riet, 2008). This line of thinking fits with a social constructionist viewpoint, which acknowledges the importance of social, historical and cultural factors (Burr, 2003; McTaggart, 1998), whilst also allowing the conceptual view I take that permits individuals' unique and evolving constructions about how social, historical and cultural factors exist for them.

In terms of a role for language in action research, during the cycles of an action research project, reflexive knowledge develops from dialogue between participants where they reflect and learn in and through action (Bevins & Price, 2014; Groundwater Smith & Mockler, 2007; McNiff & Whitehead, 2002).The role of language could be constructed in the ways described earlier in this chapter (see 4.2).

6.   Data Analysis: Constructionist Grounded Theory

Grounded theory was originally developed by Glaser and Strauss (1967) as a way for social scientists to move between data and theory so that new theories emerged (Strauss & Corbin, 1990). In this way, grounded theory is a useful framework to enable critical consideration of changes in the research process. In the social constructionist version of grounded theory, which I take, however, categories and theories do not 'emerge' from data, but are constructed by the researcher through an interaction with it. This view of analysing data fits better with the social constructionist stance I have throughout this thesis, and my views of the unavoidable bias that a researcher brings to his or her study.

The *abbreviated* version of constructionist grounded theory was carried out in the context of this Empirical Research, due to time constraints of doing the research as part of the doctoral programme. Ideally, it would have been

valuable to analyse the process and effects of the implications for change that participants suggested at a systemic level. Others have described a tension between ideal methodologies and the practicalities of doctorate research (Locke, Alcorn, & O'Neill, 2013).

I view the data analysis as complementary to the action research and collaborative group solving processes. In terms of analysis, new interpretations occurred throughout these processes; through the line by line coding, analysis of each transcript after each session, discussions with participants at each analysis point of the research cycle, and through writing up this thesis. The participants commented that an extra level of reflection was added as a result of reading their transcripts and my tentative codes (see Appendix K for samples of the analyses described in this paragraph). In a similar, dialogic, way, my reflection was enhanced by hearing their conversations about the analysis and through engaging in further internal dialogues in writing.

7. Role of Researcher: Insider, Outsider

The nature of 'collaboration' is a complex one, when considering the potentially multifaceted roles of dialogue and agency but also ethically, coming from a viewpoint that aims to authentically invite participants to collaborate in the research process. It is a complex consideration, ethically, because of a tension between my roles as both insider and outsider.

In line with a social constructionist approach, I am aware that my own understandings and constructions have shaped decisions I made throughout the process (Willig, 2001). Although I aimed to facilitate and promote a democratic process with participants, *I* am the one who made many of the decisions. Ultimately, *I* have written up this thesis. It is in this sense that I am both an insider, sharing some similarities, whilst simultaneously being different.

I am an insider because I share an interest in collaborative problem solving with participants. I work in the same schools and know some of the same people within these schools. Our relationships already started to form before

the research as I was the trainee educational psychologist for the schools in which the participants worked. It is interesting to note that, although the research opportunity was offered to staff as a whole, it was those who knew me best who volunteered to participate.

I am an outsider because I have a different job to the teachers and I started the research process in an area, specifically of interest to me. There are some implications of this dual position for my research. I cannot deny the links between my role as an outsider and the power dynamics that affect how knowledge is created, particularly since I constructed the area for research in the first place and wrote up the thesis. I was also conscious of the demands on the teachers' time, suggested in the Systematic Review as challenging, even if participants were interested and motivated.

Participatory research methods, like action research, can address the power differential, in part, according to Van der Riet and Boettiger (2009) and this is what I aimed to do. Firstly, Van der Riet and Boettiger (2009) wrote about the importance of acknowledging the inevitability that power dynamics exist, rather than striving for romantic notions of complete equality.

Van der Riet (2008) wrote that shifting research dynamics occurs through (a) ensuring that the research process is designed and managed as equally as possible by researchers and participants, and (b) through ensuring that all the participants are enabled to participate in the research process and express their viewpoints. Through adopting a non- expert approach, as outlined by Hanko (1999), I hoped to enable participants to take control of the process of knowledge production in some ways. For example, participants had access to and read the transcripts after each session, having opportunities to make any changes, which they did. Having access to visual methods, like these transcripts, is a way to make explicit what is implicit in discussions (Van der Riet & Boettiger, 2009). Participants also took part in numerous conversations about the research process, as we went along, and two carried out their own research into some of the areas outside of the sessions. Using questions befitting a process consultation approach (Schein,

1987) was also a way of attending to group dynamics throughout the process. It seemed that the relationships fostered between group members enabled a transparency about our feelings and hopes to occur, and this is something suggested in chapter 3 (4.2.3), and also found by others (Bevins & Price, 2014).

8. Ethics and Quality

The ethical principles and guidance expected by the British Psychological Society (British Psychological Society, 2009) and the Health and Care Professions Council (2012) were followed and adhered to throughout. In this way I attended to what Guillemin and Gillam (2004) described as 'procedural ethics'. Although, like Guillemin and Gillam, I consider procedural ethics as embedded in ethical considerations throughout the research process, I also agree that "the ethical dilemmas experienced depend very much upon from what position the research is done" (Groundwater Smith & Mockler, 2007, p. 203). From my epistemological and theoretical positions explained above, I have valued ongoing critical dialogues with my tutor about these areas. These dialogues and associated thinking enabled me to view ethics as inherent in every aspect of my research.

Evaluating the 'quality' of the Empirical Research cannot be done using realist constructs of validity and reliability and these would not be helpful benchmarks within the context of participatory action research set within a social constructionist paradigm (McTaggart, 1998). According to Altrichter and Gstettner (1993), Mockler (2013) and Furlong and Oancea (2007), quality in qualitative research demands a commitment to ethics. There are three criteria for evaluating the quality of action research, according to Furlong and Oancea (2007): an adherence to principles of research ethics, including informed consent; a desire to establish trustworthiness and transparency during the research process and a commitment to the transformational potential of action research.

Table 15: Ethical Principles Committed to Throughout the Research Process

These are adapted from the principles outlined in the BPS Code of Ethics, in the HCPC proficiencies and by Furlong and Oancea (2007)

Ethical Principle	How was it Committed to in the Empirical Research?
Informed Consent	The research process was explained and discussed throughout the process with potential and actual participants. Potential participants each received an information pack (Appendix G). Participants and I discussed the information pack together in the first session and informed consent was gained throughout the process. This was in recognition that consent is complex and ongoing, especially as a relationship develops between participants.
Privacy and Confidentiality	The participants asked that I did not identify their jobs or ages in the research write up, as they did not want to be easily identified. I therefore used gender neutral pseudonyms: Frankie, Jo and Jessie. All data collected on the Dictaphone was deleted and the only copies that exist are on my password protected computer. These will be appropriately disposed of upon completion of my Doctorate. All quotations and transcripts used in the thesis were anonymised.
Right to Withdraw	Participants were reminded of the right to withdraw throughout the process. One participant chose to withdraw before participating in the sessions. Frankie did not attend after the first session, because of other commitments and I was very keen to acknowledge that previous participation was still extremely valuable. Frankie remained part of the group's evolving identity and was copied into our emails. Frankie said that this was appreciated. Participants' attendance at the sessions was encouraged but at no point was attendance expected on each occasion. I valued all contributions.

Debrief	A debrief sheet can be found in Appendix H. We discussed this together in person after the last session.
Potential Harm?	Participants experienced no physical harm during the research process. We discussed how we felt throughout the process and efforts were made to ensure that participants felt comfortable in their thoughts by the end of each session.
Trustworthiness and Transparency throughout Process	The research process was discussed in detail throughout and after our sessions; participants offering changes to the process as we went along.
Transformative Potential	The purpose of the research was to enable changes for the participants and their practice. Participants told me they experienced changes to their thinking. There is potential for the research to lead to changes within the school in terms of teachers' CPD and discussions are currently taking place with regards to this.

The commitment to facilitating an ethical research process have also become the ethical principles and core values which I aim to follow throughout all of my practice as an educational psychologist. This fits with what Mockler (2013) refers to as 'cross effects' of research.

Chapter 3: Empirical Research. How Can the Hanko Collaborative Problem Solving Model be Used to Promote Changes to Teachers' Practice and How Might Facilitation Promote Practice Changes?

Abstract

The following document presents an original piece of Empirical Research which explores the thinking processes and their links to teachers' practice for a group of teaching staff participating in a collaborative problem solving group. Hanko's problem solving model was used as a mechanism to support dialogue and thinking about school based problems in three sessions, facilitated by a trainee educational psychologist. Two research questions were explored: 'How can the Hanko collaborative problem solving model be used to promote changes to teachers' practice' and 'how might facilitation support practice changes'? Review sessions before and after each collaborative problem solving group were opportunities for participants to discuss the changes that occurred to their thinking and practice. These were facilitated by a trainee educational psychologist, tape recorded, and transcribed as data. Constructionist grounded theory was applied to the data generation and analysis. Factors which supported teachers' thinking processes and changes to practice included: acknowledging that people think and engage in dialogue differently, recognising the complexities of problems and teaching, being open minded and appreciating individuals' perceptions of their social contexts. The facilitator can promote changes to teachers' practice by considering these factors, whilst also facilitating a democratic process and attending to relational processes that can influence professional agency. A proposed constructed grounded theory suggests that the role of and processes for the facilitator and the teachers are interrelated and dynamic. Implications for educational psychologists are considered.

1. Introduction

1.1 Overview
My Systematic Review critically explored benefits and challenges for teachers when they participated in collaborative problem solving groups. This led to the identification of some gaps in the research area, specifically related to the processes involved in collaborative problem solving which promote changes to teachers' practice.

I begin by considering Hanko's (1999, 2002) understanding of the collaborative learning process. I then outline the conceptual basis on which my research rests, before considering what an educational psychologist might uniquely contribute to the facilitation of collaborative problem solving groups that have changes to teachers' practice as an overarching aim.

1.2 Collaborative Learning According to the Hanko Model
Hanko (1999, 2002) suggested a central role for consultation in the collaborative problem solving group process, particularly Caplan's mental health consultation model (1970). This fits with Hanko's psychodynamic view of children's behavioural, social and emotional needs. Hanko (2002) also conceptualised teachers' collaborative learning from a Vygotskian perspective (1978). This is further explored in 1.3.1.

In terms of collaborative learning and changes to practice, Hanko (2002) stated that teachers gained self – worth when they experienced new learning about children's needs with empathetic colleagues, and this motivated them to change their practice. Hanko's work has not explored the processes through which practice changes might occur during and after collaborative learning.

In my Systematic Review, I suggested that it is not always possible to know how other researchers conceptualise the psychological processes involved for teachers in the collaborative learning of Hanko's model. This might be because researchers share Hanko's notion of learning for teachers, briefly

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explained above, or because they do not see this consideration as relevant to the changes to practice that follow. This contrasts to my view, which deems an understanding of the intricacies of learning processes for teachers important.

1.3 <u>The Conceptual Basis</u>

I draw on two areas of literature to develop my argument that psychological processes occurring in a collaborative problem solving group are complex and dynamic, as well as important in order for practice changes to occur. These are:

1. Collaborative learning and dialogue
2. A subject – centred sociocultural view of teachers' professional agency

1.3.1 Collaborative Learning and Dialogue

In this paper, I consider some differences between Vygotskian and Bakhtinian approaches to learning in groups, emphasised in a body of literature about dialogic theory (Ball & Freedman, 2004; Matusov, 2011; Wegerif, 2011a, 2011b). These differences are not considered in other research referring to Hanko's model.

Hanko (2002) explicitly subscribed to a Vygotskian perspective of teachers' collaborative learning. A Vygotskian approach asserts that dialogue is used to resolve tensions in order to cooperatively find an answer to a problem (Matusov, 2011; Wegerif, 2011b). Hanko (1999) referred to 'the group', as a single entity, who aimed to reach consensus.

In contrast, a Bakhtinian perspective conceptualises dialogue as a dynamic, conflicting, continuous negotiation of meaning, that continues after face to face dialogue between a group of people has ceased (Wegerif, 2011b). Mutuality is not enough to bring about new ways of thinking or learning (Marková, 2003).

Wegerif (2011b) described teaching children to open a space of dialogue between them, in which they could be open to each other and 'the new'. He contended that voices that individuals engage with are not solely from

another person, but within the 'self', and the particular cultural voices that the 'self' attaches meanings to. The Hanko model could be seen as a tool to allow this space of dialogue to occur for adults.

1.3.2 Teachers' Professional Agency
The notion of teachers' professional agency, although elusive and debated (Mercer, 2011; Priestley et al., 2012), is generally viewed as important for teachers when shaping their practice (Priestley et al., 2012). Within the debate, cognitive theorists are said to be individualistic, giving primacy to an individual's cognition, and those on the other end of a continuum are said to assign primacy to social contexts, thus being socially deterministic (Mercer, 2011). A third view, which I take throughout this thesis, assigns equal importance to both the individual and the social context (Evans, 2007; Lasky, 2005). However, with the dialogic theoretical basis outlined above, it is the individual's construction of a social context that impacts their beliefs about their own agency, rather than one that is socially determined by 'the group'. This is in line with a subject – centred sociocultural approach to professional agency (Eteläpelto et al., 2013), elucidated in the Bridging Document.

In order to attend to 'dialogue in collaborative learning' and 'teachers' professional agency', it is suggested that skilled and intricate facilitation is needed.

1.4 <u>The Role of the Facilitator</u>
In much of the research in the area of collaborative problem solving, an educational psychologist takes the role of a facilitator (Bozic & Carter, 2002; Brown & Henderson, 2012; Guishard, 2000). Educational psychologists can uniquely apply psychology to the complex social systems existing in schools (Wagner, 2000), something Hanko (1999) deemed important.

Hanko (1999) suggested that the facilitator should adopt a non- expert stance. The facilitator firstly hears, non – judgementally, how the teacher feels about a problem. The facilitator then creates an exploratory climate for the group. Rather than offering a technical understanding of the facilitator's

role, Hanko's conceptualisation fits with her focus on empathy, which she considers fundamental to the collaborative problem solving process. Hanko's conceptual frame requires problematisation, as it could be said to trivialise the role of the individual in the social context (Farouk, 2004; Marková, 2003).

In summary, to promote changes to teachers' practice, I suggest that the facilitator might consider the nature of a) dialogue in collaborative learning and b) teachers' professional agency. Exactly how facilitation might occur, with what difficulties, and to what effects for teachers and their practice is the focus of this empirical study.

2. <u>Research Aims</u>
Two research questions formed the basis of this Empirical Research:

1. How can the Hanko collaborative problem solving model be used to promote changes to teachers' practice?
2. How might facilitation support practice changes?

3. <u>Method</u>

3.1 <u>Participants</u>
Three participants from two different schools formed the collaborative problem solving group (see Appendix I for details of their involvement). The participants asked that I did not refer to their backgrounds, jobs or genders in the Empirical Research, which they felt was in keeping with the 'non – expert' philosophy of our group. I randomly assigned pseudonyms to each participant to ease readers' understandings of the analysis (see section 4).

3.2 <u>Design: Action Research</u>
An action research design fitted my aim to explore teachers' collaborative thinking and learning, along with associated changes to their practice. It was also in keeping with my social constructionist stance, which asserts that knowledge is constructed through participants' social interactions with each other. According to Gustavsen (2001), in order for change to occur, there is

a need for a complex interplay between theory and practice, as can be seen in the cyclic research process expressed in Figure 2. The fluidity of action research methodology meant that it could fit both data collection and data analysis.

3.3 <u>The Research Process</u>

The qualitative research design included three collaborative problem solving (CPS) groups and four 'review sessions', which I predominantly facilitated. Figure 2 outlines the cyclic research process in more detail. Words in red show times where data was generated and analysed. The research process is described more intricately in Appendix I.

Figure 2: The Research Process
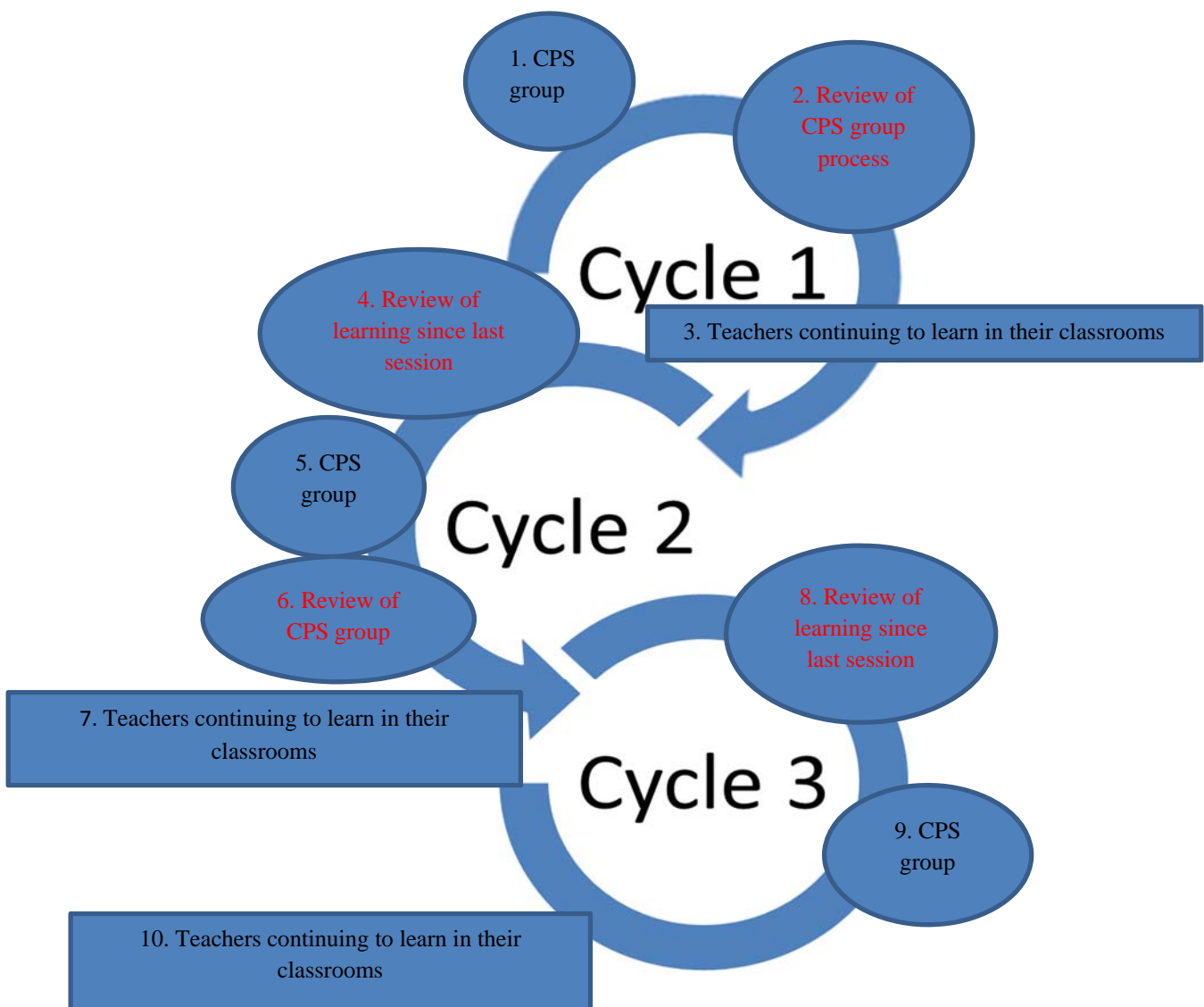
3.4 <u>Data Gathering</u>

After each of the three collaborative problem solving groups, I tape recorded our review of the learning processes that had just occurred. At the start of each collaborative problem solving group, I also tape recorded our review of any changes to practice that ensued after the discussions the session before. The questions in Table 16, suggested by action researcher, McTaggart (1998), were used as prompts and displayed on a poster to keep our thinking focused on changes to practice:

Table 16: Change Questions

- How have things changed?   - What has not changed?   - What has been confirmed?   - What has been ignored?   - What has been made problematic?

Participants thought that forcing answers to these questions was inauthentic and so they were responded to iteratively, as part of the reviews, rather than in a linear way.

3.5 <u>Framework For Analysis</u>

The data for analysis was generated by transcribing the tape recorded review sessions, shown in Figure 2, and analysing them according to the abbreviated constructionist version of grounded theory (Charmaz, 1990, 1995) (see Bridging Document for further discussion). The full process is described in Table 17. Analysis was iterative and dynamic, in keeping with my view of learning, rather than linear and unidirectional.

Table 17: The Analysis Process

Stage	Analysis
1. (see Appendix K for an example of memo writing)	Memo writing was completed directly after session 1 to help analyse and elaborate thinking processes, assumptions and to increase reflexivity (Willig, 2001). Audio files were transcribed.
2. (see Appendix K – for an example)	In the week after session 1, descriptive, line by line coding of transcript 1 took place, to prevent the "taking off on theoretical flights of fancy" (Charmaz, 1995, p. 37).
3. (see Appendix K for example tentative coding)	Tentative, initial categories were constructed, during which the data itself was the best indication of relevant theoretical categories.
4. (see Appendix L for an example of theme development)	Tentative categories were shared with the participants over email and before the start of session 2. Our discussions added to further category development, which then led to the construction of themes over time.
Complete the above steps, after sessions 2 and 3.	
5. (see appendices K and L for an example audit trail, showing how themes were constructed and developed)	As more data were gathered, the more focused the coding became. Comparisons were made between data, incidents, contexts and concepts (Charmaz, 1995). Different colour codes represented changes to thought processes over time and there was a focus on themes relevant to certain individuals as opposed to as general rules, in keeping with a complex understanding of interaction. More focus was given to research question two as a result of constructing the themes in relation to research question one in the first instance.
6. (see section 4)	Initial writing up of data occurred, using verbatim data where possible to privilege individuals' stories.
7.	After conceptual analysis of data was developed, the interpretation was compared with literature in the field.
8.	The evolving writing process was used to clarify and hone analysis, as suggested by Charmaz (1995) and literature was woven into the discussion.

3.6 My Conceptualisation of Hanko's Model

I structured our collaborative problem solving into the three stages: case presentation, gathering additional information and joint exploration, described by Hanko (1999, p. 104). These stages were displayed on a poster on the wall in each session. I hoped to adopt a 'non - expert' role as far as possible (see Bridging Document for difficulties with this). I used a combination of Wagner's (2000) consultation framework, which has social constructionist, systemic underpinnings in keeping with my epistemological position; as well as elements from a process consultation framework (Farouk, 2004; Schein, 1987). The latter approach was to afford greater attention to dynamic psychological processes occurring between participants. See Appendix J for some key principles from these two frameworks, which I aimed to follow.

I do not consider myself to be skilled in either of these two consultation frameworks at this point in my career. I also suggest that individual facilitators apply frameworks differently. Both Schein (1995) and Wagner (2008) viewed their frameworks as guiding principles rather than as technical instructions. Generalisations made from this Empirical Research can therefore be seen in terms of how others might facilitate a process that attends to individual teachers' hopes, rather than in terms of absolute strategies.

4. Findings

The analysis process was carried out in order to offer an interpretation of the two research questions.

The participants are referred to as Frankie, Jo and Jessie. Participants' individual thinking is referred to over the process, to privilege the new interpretations that occurred over time and through interactions, as well as individuals' differences. This is in keeping with my view of collaborative learning as a dynamic process where new meanings are negotiated through dialogue.

I consider findings relevant to each research question in turn, using direct quotations to support my interpretation. I weave links to previous research into my findings, before explaining a constructed grounded theory. A summary of the themes for each research question are given in Table 18:

Table 18: Summary of Themes

Research Question 1:	Research Question 2:
1. Thinking Differently 2. The Complexity of a Problem and Teachers' Agency 3. Be Open minded 4. Role of Social Context	1. Facilitate a Democratic Process 2. Personal Interpretations of Social Context 3. Attend to Relational Factors

4.1 <u>Findings and Discussion For Research Question 1: How Can the Hanko Collaborative Problem Solving Model Be Used to Promote Changes to Teachers' Practice?</u>

4.1.1: Theme 1:

Thinking Differently
Thinking processes occurring in the group seemed different for each participant. Participants could use the group as a reflective space to think more deeply about a problem. Or, they could use it to resolve an issue, or a mixture of both, depending on what was helpful at the time:

> "*it depends on how you think you need to come up with a solution*"
> (Jessie)

Frankie, who attended the first session, explained that:

> "*as you're speaking and reflecting on things, I, you know, it's just…I still…I'm* still *drawn to my kind of way*"

We were not able to check whether this thought changed after returning to the classroom, but being exposed to different points of view enabled Frankie to be drawn to an initial interpretation of the problem at that time. Similarly, Jessie thought that the group's function was:

> *"to build up people's confidence because in a small group it's a case of you can put ideas out, people will talk about them and you think 'oh, actually, that was quite a good idea I had'. And you get a little bit of feedback or you might have an idea that you don't have the confidence to just try in the classroom"*

Here, Jessie links participation with building self – confidence and to trying ideas in the classroom. Self – confidence might be constructed similarly to Mezirow's (1981) 'empowerment', which he connected to increased professional agency and changes to practice.

Frankie and Jessie shared similarities with Jo who, in session three, after experiencing the group three times said:

> *"I like that, the idea that it is not about totally changing your own hypothesis but about adding to it"*

Jo was more comfortable not resolving a problem by the end of a session than Frankie was, although Jo did not want to completely move away from an original understanding, in the same way as Frankie. Moving away from an original understanding may have been too much change and led to feelings of disempowerment and reduced professional agency. It was therefore not completely changing an original view which encouraged changes to practice:

> *"I did kind of take it forward because I was thinking of that anyway… it gave us kind of yeah I know I need to do something and clarify it"* (Jo)

Jo expressed a feeling of empowerment from being part of the collaborative thought processes and that there was no:

> *"pressure to try and, oh well, actually you've got to, you're doing it wrong but it's not that. It's about adding something and I like that"*

For all participants, completely changing thinking about a problem was daunting. It also reduced their understandings of their own contexts. The goal of individuals' thinking was not generally to come to a 'right' answer that was facilitated in a dialogue with more expert peers, in the Vygotskian

sense. Talking with others allowed individuals to hold different ideas in tension, deciding which line of thought best fitted their frame of reference (Mezirow, 1997; Wegerif, 2011b).

Being in control of their own thinking processes, whilst also open to changing them to some degree, allowed a feeling of autonomy and professional agency to, at least in the cases of Jo and Jessie, change their practice to incorporate their new thinking. All participants seemed agentic in their own situations, due to the fact that it was he or she who made any final decisions. Billett (2009) described that individuals in collaborative learning contexts can be guarded, as it can be scary to open up to uncertainty. According to Wegerif (2011b), cognitive science has tended to describe thinking as if it was a controllable process, rather than a curious, liberating one. Perhaps being part of what could be considered a monologic education system makes it difficult for teachers to change notions about their own thinking and learning processes (Ball & Freedman, 2004). This is perhaps seen in their comfort in their initial understandings.

There is a suggestion here that teachers' understandings about the pupils in their classrooms are influenced by others' ideas and also shaped by their unique thinking. This fits with literature that regards both personal and social contributions to professionals' development (Edwards, 2005; Etelapelto & Saarinen, 2006). Within this body of literature on a subject – centred sociocultural view of professional agency, there is the recognition that collaborative learning is a personally differentiated process of meaning making, shaped in terms of intensity and focus by an individual's fluctuating personal agency. This fits with literature suggesting that personal epistemologies, or individuals' views about knowledge, influence how they learn with others (Billett, 2009).

Thinking as an Ongoing Process
For Jo, the opportunity to talk with others affected clarity of thinking in the moment:

> *"I don't think you're clear in your own head, are you? And then, when you verbalise it and get it out there…"*

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But, in response to the review 'change' questions asked at the end of session two, Jo said:

> "*I need to kind of absorb it and think about how…I'd go forward in terms of making things change*"

Jo also carried out extra reading after the sessions to add to understandings, suggesting that ongoing learning continued after direct participation:

> "*I've um just, just for me own kind of research I think I've been kind of reading this…*"

Jessie similarly said that it was important to:

> "*go away and consider the ideas that have come out*"

Jo and Jessie seemed keen not to resolve their problem straight away, thus perceiving thinking in keeping with literature on dialogic theory (Cooper et al., 2013; Matusov, 2011; Wegerif, 2011b). It seemed that, particularly Jo's, further reflection came from the actions completed between sessions. This echoes the concept of double loop learning (Argyris, 1993) and the principles behind the action research cycles:

> "*re-evaluating yourself to think about things but sometimes you see people who don't re-evaluate and don't rethink the problem…I think it's a learned thing to be more reflective*" (Jo)

Knowledge was perceived by Jo and Jessie as provisional and open – ended in these examples. The quotation above suggests Jo's personal, relativist epistemology, as well as a belief in the importance of self – critique, a concept also embedded into double loop learning (Argyris, 1993).

4.1.2 Theme 2:

The Complexity of a Problem and Teachers' Professional Agency
Discussing a 'problem' appears to have led to recognition of its complexity
and this arguably promoted professional agency. After the first session,
Frankie explained that his or her thinking had changed to consider the role
of a child's family:

> "*I think the looking at the family, investigating, like going into that
> part and every child doing like a family pack*"

Frankie's professional agency potentially changed practice as recognition of
the child's wider system evoked a greater sense of personal empathy for the
child and his family context. Hanko (1999) described this as key to teachers'
practice changes. Perhaps Frankie conceptualised collaborative learning in a
similar way to Hanko, since Frankie described coming to a resolution in
thinking by the end of the session (see 4.1.1 above).

Jessie suggested that teachers' professional agency and autonomy come
from being given permission from Senior Management to change practice in
a way that fits the complexities of teachers' own classrooms:

> "*do (schools) just want a formula, this works in a classroom and if
> you're not following the formula then something's wrong. But
> actually allowing teachers to develop their own kind of formula and
> allowing them, you know, learn from, in that*"

This highlights a common tension some say exists between the requirements
of the curriculum and the experiences teachers have day to day (Lasky,
2005). In the example above, Jessie perceived there to be some social
constraints on teachers, but ones that could be lessened if teachers felt
agentic enough to develop their own formula for teaching. This is another
example of a subject – centred sociocultural view of agency, as Jessie
perceived the constraints on teachers, uniquely.

Jo experienced empowerment whilst realising that teachers do not have to
"get it right" because teaching is more complex than that:

> *"sometimes you're not gonna get it right and you know, have the
> confidence to say, "well I'm gonna do something different"*

Kincheloe (2012) connected teachers' appreciation of complexity with their
self - belief that they could carry out inclusive teaching practice, which is
what Jo referred to here.

4.1.3 Theme 3:

Be Open Minded

All of the participants seemed engaged in the learning and research
processes. This was evident in their keenness to tweak the timings of the
sessions, add to the ground rules and in their interest in the analysis process.
They wanted to:

> *"use it to their advantage…be open minded"* (Jessie).

Despite their commitment, participants wondered whether a collaborative
problem solving group process was for everyone:

> *"I'm just thinking though of the people who I would think, well
> actually you're a bit stuck in your ways and who don't reflect are
> probably the people who wouldn't get involved in something like
> this"*(Jo)

Billett et al. (2006)'s theory of relational interdependence suggests that
individuals practise agency in choosing problems they will engage in, doing
so with varying degrees of commitment. This has implications for what is
learnt or changed. A group member who was not engaged in learning might
affect the overall motivation for change within it whilst also, according to
Lasky (2005), create feelings of inefficacy, fear, anger or defensiveness for
others. Jo explained that some teachers might affect positivity:

> *"You know I'm just thinking about people who are particularly
> opinionated…they would just sit here and disagree and say, well no,
> that wouldn't work"*

This quotation also suggested that Jo favoured participants who were open
minded. Relational agency involves participants supporting each other to

interpret problems of practice (Edwards, 2005). Not feeling supported in the group might affect teachers' confidence to try out ideas in the classroom:

> *"with a little bit of kind of support from other people, you think, 'Oh right, well I will give it a go"* (Jessie)

Jo and Jessie thought that participants should volunteer, rather than by being "forced", as Jo thought was sometimes the case. This is a view supported in other collaborative problem solving literature (Jackson, 2002).

4.1.4 Theme 4:

Role of Social Context

Jessie explained an opinion about the expectation within schools to evidence learning and changes to practice:

> *"If you couldn't like evidence to say 'this is why it's good'… you wouldn't be allowed to do it"*

In line with the view of professional agency taken in this paper, that individuals interpret social contexts differently, Jo was less concerned about this requirement but said that, since the effects for people are varied and complex:

> "*you could get a questionnaire and say to people, "right do you think this has been worth it?"*

Both recognised the impact of school systems in encouraging larger groups of participants over time:

Jessie: *It depends what value the kind of organisation puts on people's...*
Jo: *Yeah*
Jessie: *development though*

Evaluating practice is an important part of both teachers and educational psychologists' practice (Department for Education, 2011a; Health & Care Professions Council, 2012). In keeping with requirements, and enhancing professional agency (Lasky, 2005); considering authentic, context specific ways to evaluate the effects of participation is important (Kennedy, 2011).

At a classroom level, there was an appreciation of pressures existing in a classroom, for example, when Jo empathised with Jessie's worries about the practicalities of an idea:

"*you don't have staff that (are) always available to him to talk...*"

Empathising with some constraints that many teachers feel under seemed a way to appreciate the complexities of a problem. This can result in teachers feeling supported and increase their motivation to think creatively about a problem (Hanko, 1999).

In terms of time needed to participate in a collaborative problem solving group, Jessie and Jo thought that one hour to ninety minutes was appropriate, although Jessie was concerned about what other teachers might think:

> Jessie: *while it's really useful*
> Jo: *Mm hmm.*
> Researcher: *Mm hmm. The reality*
> Jessie: *the reality is just...*
> Jo: *Well it's... In actual fact though... I'd probably say all the ideas I've got and, and way forward, it's probably saved me a lot of time*

Concerns about time are common challenges in related research (Annan & Moore, 2012; Brown & Henderson, 2012), although others recognise that benefits can outweigh challenges, similarly to Jo (Stringer et al., 1992).

4.2 <u>Findings and Discussion for Research Question 2: How Might Facilitation Support Practice Changes?</u>

4.2.1 Theme 1:

Encouraging Others to Take Part in the Facilitation
Encouraging participants to take on facilitating roles was an authentic move towards a democratic process and something which participants felt comfortable to do:

> Jo: *You've got time, haven't you, to do that?*
> Frankie: *Yeah.*
> Jo: *You're going to get there; it's the journey, isn't it?*

In this example, Jo took on the role of reassuring Frankie and reducing the pressure that might have come from feeling that changes to practice were time limited, rather than part of an ongoing learning process. Each participant took on a facilitating role at some point and they may have felt able to do this because I portrayed myself as a participant and non - expert, as far as possible, in the process:

> *"... can you um think of anything else, (participant's name), from last time that would be useful for (participant's name) to know?"*

A democratic process, where people feel empowered to ask questions can prevent teachers feeling like pawns in a change process (Lasky, 2005; Priestley et al., 2012). Considering consultation, Wagner (2008) wrote that an educational psychologist can be 'expert' in their application of psychology, yet 'non – expert' with their expectation that their own views are changed through dialogue. This fits with a dialogic conceptualisation where all participants in a dialogue expect to change their understandings (Cooper et al., 2013; Matusov, 2011; Wegerif, 2011b).

Participants' inclusion in the process was arguably enhanced because I followed up on changes that they suggested. This can be seen in the example below when participants asked me to anonymise their data:

> *"I'm going to take out the identifiers for ..."*

Checking and Clarifying Understandings of the Process

Checking participants' understandings of the research and the collaborative problem solving processes was a way for participants to feel empowered in their learning, another factor associated with enhanced professional agency (Mezirow, 1981):

> Researcher: *Does it kind of make sense to you, like a way of ...?*
> Jo: *Yeah, it does. It didn't when I went through it, you know?*

This then allowed participants to ask their own questions when they wanted to clarify something that I had said:

"What do you mean by seeing the child as part of a system?" (Jo)

Value People's Different Understandings

The facilitator's role can be to encourage people to share their views about a concept or problem so individuals take from the discussion what is most helpful for them:

> Jessie: *So it's not like we'll come and say...*
> Researcher: *That's it*
> Jo: *Yeah, yeah, uh-huh*
> Jessie: *because you have a better understanding of the context...*

Above, Jessie explains the uniqueness of Jo's situation. This seemingly empowered Jo to be in control of his or her thinking. In contrast, in the example below, Jo came to a new understanding by being open to new ways of thinking:

> Researcher: *I always think by thinking about a child personally, you can't do that without looking at the systems as well*
> Jo: *Systems, yeah, yeah*
> Researcher: *So I think that you can't have one without the other*
> Jo: *Mm yeah, I agree with you, uh-huh. Yeah. Mm hmm*

According to Postholm and Skrøvset (2013), a researcher can model the importance of openness by being open with participants from the beginning; stressing that there are no right ways to think. It is noticeable that Jo "agrees" with the facilitator, perhaps suggesting an unavoidable power differential between a psychologist and a teacher at odds with an expectation of complete openness. However, it may be that Jo did come to some new thinking through dialogue with me at that point in time. At other points, participants did not agree with me. Either way, it seems important that facilitators are aware of the potential power dynamics within a group, and remain attuned to participants' use of language and perhaps body language that suggests that their autonomy and agency are lacking (Cooper

et al., 2013). As Jessie said, the role of the facilitator might be to encourage the benefits of difference:

> Jessie: *a facilitator…shows those values or can encourage them and promote...*
> Jo: *get out there. Yeah.*
> Jessie: *them in other people*.

4.2.2 Theme 2:

Personal Interpretations of Social Context

It seems important that the facilitator recognises that not all teachers respond to sociocultural factors or systemic pressures in the same way. For example, in a dialogue about Senior Management, in general, putting pressures on teachers to try new initiatives, Jessie was able to make the best of the situation:

> *"So in like some cases it worked… a lot of people just didn't take it seriously and didn't use it to their advantage because of the way that it was done".*

Making assumptions about pressures on teachers is perhaps not as helpful as a facilitator trying to understand what it is like for individuals. An appreciation of the ecological factors involved for a child can be empowering, increasing beliefs about being an active agent, as it removes responsibility from the teacher as the sole factor (Lasky, 2005; Priestley et al., 2012). But, at the same time, the facilitator might be aware that a teacher could interpret that it is their responsibility to account for every aspect of the child's system, thus putting extra pressure on themselves and reducing their sense of agency because they feel overwhelmed:

> Frankie: *It's just building that partnership but I think very... we need... I think we do need to make sure we've got a very strong hold on that family kind of...*
> Researcher: *As much as you can within your control and kind of help...*

4.2.3 Theme 3: Attend to Relational Factors

Through Enabling a Safe Space to Be Together

It seems the facilitator's role is to keep a dialogue going about the ground rules that participants think are important to the process, as can be seen below:

> *"I don't know if there's anything else that you, either of you thought we could..."*

The facilitator's role also extends to practical matters that enable participants to feel psychologically secure, such as when I noticed that the door to our room had swung open and said:

> *"...just close the door"*

Attending to relationships and group dynamics is something that Farouk (2004) suggested could be promoted by using a process consultation model (Schein, 1987). Process consultation enabled me to attend to participants' hopes for a psychologically safe, democratic and enjoyable research space.

5. Conclusion

In this final section, I outline conclusions that can be made from this piece of Empirical Research about teachers' participation in collaborative problem solving groups. I highlight implications for practice already made, in terms of the role of the facilitator, in particular.

I applied a constructionist grounded theory approach to analyse data gathered in review consultation sessions with teachers before and after three collaborative problem solving groups. This was to offer an interpretation in response to two questions: 'How can the Hanko collaborative problem solving model be used to promote practice? And, 'How might facilitation promote practice changes?'

The constructed theory outlined in Figure 3 below shows that the role of the facilitator should be viewed as connected to the dynamic, personal thinking processes of individual participants. Individuals' thinking processes are

connected to participants' previous and evolving thoughts, including thoughts about the social context and their role within it. There are differences in how much focus individuals place on these factors.

To be a catalyst for change in teachers' practice requires that the facilitator responds to participants' needs and individual thought development. The facilitator can do this most effectively by facilitating a transparent, democratic group experience where individuals feel secure and agentic enough to ask questions, be open and support each other. The facilitator also has a role in encouraging teachers to view problems and classroom systems as complex enough that teachers feel empathised with, but not too complex that new interpretations and further internal dialogues cannot occur.

Figure 3: Grounded Theory Model

Facilitator promotes a transparent and democratic process.

The collaborative CPD is evaluated in a helpful, authentic way.

Facilitator checks understandings.

Personal epistemologies about the nature of thinking are supported and enabled.

Participants support each other's thinking processes.

Promotion of agency. Changes to teachers' practice.

Participants choose to take part.

Participants support each other by empathising with problems and contexts.

Facilitator values the social, historical and political constraints and pressures perceived by individuals.

Participants' thought processes are added to rather than completely changed.

6. Limitations and Further Research

My epistemological view influenced the questions I asked, my method and findings (Locke et al., 2013; Postholm & Skrøvset, 2013; Willig, 2001). It is important to remember that there are times in educational psychologists' practice, for example in matters relating to children's safeguarding, where there is a need to challenge others' thinking and action. In this thesis, however, I do not wish to change others' epistemological positions. By reading or talking about them, there are opportunities for individuals to develop their own ongoing understandings or to reach a resolution in their thinking about the area. My own interpretations will evolve as I re read and talk about this research. I am not presenting this thesis as monologic truth.

At the time of writing, I have planned to meet with a senior representative from the Trust of schools to share our findings and to discuss implications for teachers' CPD. It would be worthwhile to trial the changes to teachers' CPD discussed with the senior representative of the Trust and analyse the findings over time with a wider group of participants. Practically, the depth of the action research was reduced because of time constraints, as the result of completing this as part of my doctoral training.

Some may question the small number of participants in the study. However, it is the quality of discussion rather than number of participants which is most important (Cordingley et al., 2005). We also found that voluntary participation was crucial for teachers to feel agentic to change their practice.

Further research might be done, using a discourse analysis approach that could more closely analyse the evolving dialogues taking place for participants. This would allow further analysis of the role of dialogue from both Vygotskian and Bakhtinian perspectives and perhaps highlight more specific ways for facilitators to promote dialogues most befitting individual situations.

7. Implications For Educational Psychologists

Educational psychologists have a unique role in facilitating teachers' collaborative problem solving groups in ways that enable teachers to change

their practice. This is because educational psychologists are skilled at using consultation frameworks. However, rather than applying these skills as if read from a technical 'how to' manual, their facilitation both recognises the complexities of situations and enables others to feel psychologically safe enough to engage in critical thinking and learning (Wagner, 2000).

Educational psychologists are also reflective practitioners who should critically engage with research in areas such as adult learning, and apply this to their practice. They can also be aware of the importance of epistemology to how people think, learn and work (Moore, 2005). I suggest that this awareness is key to how they facilitate and support others' learning and practice changes.

When educational psychologists and teachers work together, in a democratic, thoughtful and purposeful way, teachers can feel reenergised as agentic practitioners. Supported and critical reflection can then lead them to make positive changes to their practice that they believe in.

Educational psychologists also have distinct roles participating in further action research projects with teachers in the area and perhaps facilitating discussions about the role of dialogue and epistemology in their own collaborative learning.

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Appendices

The appendices are intended to serve as an audit trail for the Systematic Review and Empirical Research processes. With the aim of transparency, full transcripts and analyses can be offered on request.

Appendix A: The Search Process

	Participants	Setting	Data	Type of Group 'Search Terms'	Reasons for Developing Criteria
Stage 1 1145 hits	Teachers	Primary or Secondary School	Qualitative and quantitative	"Teacher training", "teacher education", "teacher development", "teacher reflection", "professional development" "teaching" "SEN", "Special Educational Needs"	Due to initial research interests.
Stage 2 8 articles	Teachers	Primary or Secondary School or College (not University)	Could include quantitative data but had to include qualitative data	teach*" AND "collaborative problem solving consultation" OR "group consultation" OR "staff support teams" OR "group peer support systems" OR "staff sharing schemes" Explicitly referred to Hanko's problem solving model Any school – based problem.	Quantitative data in this area tended to be in the format of individuals' numbers on Likert scales and I felt that because these scales measured different criteria in each case, synthesis of this data was meaningless. Quantitative data was rare in the area of research and, furthermore, I felt that qualitative data suited the purpose of the review question. Moved away from an 'expert' model, suggested in 'teacher support teams' (Avramidis, Bayliss, & Burden, 2000), for example. This reduced the hits during searches, making it more manageable. Deciphering whether research subscribed to an 'expert' model was not straight forward. Focusing on the Hanko model meant that papers were less likely to follow an 'expert' model of CPD. Changed the setting to include Colleges after a decision that contexts for group CPD would depend on many factors, rather

					than being related to the age of students. Excluding University settings reduced the number of hits.
Stage 3 5 articles	Teachers. The teachers can be from different schools.	Primary or Secondary School or College (not University)	Could include quantitative data but had to include qualitative data. Qualitative data did not have to include direct quotations from teachers.	Teach*" AND "collaborative problem solving consultation" OR "group consultation" OR "staff support teams" OR "group peer support systems" OR "staff sharing schemes" Explicitly referred to Hanko's problem solving model	It was decided that including teachers from different schools, as was the case in one paper, would not be a problematic factor since the review question is concerned with benefits and challenges for teachers, in general. The qualitative comments about the teachers' experiences do not have to be direct comments from the teachers themselves.

Appendix B: Inclusion Criteria: Further Justification

Participants: teachers, but could also include other teaching staff, such as teaching assistants alongside teachers since they could also be said to have a teaching role and their opinions are also valuable. Not trainee teachers, to limit the number of relevant articles. Teachers in a group could be from different schools. This is because individuals would bring unique experiences whether from the same school or not. This was in keeping with the interpretative epistemological position taken.
Setting: Primary or Secondary Schools, to limit the number of relevant articles.
Data: Qualitative data summarised the benefits and challenges for the teachers. Data could be direct comments by the teachers or from the researchers' explanations. This was in recognition of the interpretative role of any researcher. Even if the comments were directly from the teachers, the researchers still had to make the decision about which comments to include and which line of argument to follow.
Type of Group: the problem solving group had to refer to the key elements outlined by Hanko (see Table 2, Systematic Review). There had to be an external facilitator. It had to take a collaborative view of problem solving where there was no right answer, in keeping with Hanko's objectives. See Appendix A for difficulties with this conceptualisation.
General: Any Empirical Research since 1989. This date was chosen as most journals included articles from this date. Hanko also created her model in 1990, and part of the inclusion criteria was that the researchers explicitly refer to her model.   English language papers only.   Must be published and take place in the United Kingdom, as this review focuses on the political reforms in the United Kingdom.

Appendix C: Questions to Assess Quality

A: Can the study findings be trusted in answering its own study question(s)? (Internal coherence)

B: Is the research design appropriate for addressing the question in the Systematic Review?

C: Is the focus of the study relevant for addressing the question in the Systematic Review?

D: What is the overall weight of evidence this study provides, taking into account A, B and C?

Taken from the EPPI - Centre Weight of Evidence tool for Qualitative Papers (EPPI-Centre, 2007)

Appendix D: Reflection on and Justification For the Assessment of Quality of the Five Papers
'How Are the Benefits and Challenges for Teachers Who Participate in Collaborative Problem Solving Groups Considered in the Literature?'

Author → Weight of Evidence Questions ↓	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	Stringer et al. (1992)
A: Could the study findings be trusted in answering the study question?	More an exploration than absolute findings. They recognised findings were at an early stage in their investigations. (Low - Medium)	22 questionnaires returned – high response rate from 25 participants. Questionnaire given at the end of the process rather than interspersed throughout meetings. (Medium)	There were lots of direct comments from the teachers about general benefits and challenges. They came from the teachers and were not pre – suggested by the researchers. (Medium - High)	A detailed account to answer the research question about: 'the impact of the discussion groups'. One person's view in the main, but some comments from teachers. It focused on benefits in a lot of detail – but not many challenges. (Medium High)	Consistent in terms of addressing their aim. The aim was to "describe and "reflect" on the process, which they did throughout. (High)

Author → Weight of Evidence ↓ Questions	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	(Stringer et al., 1992)
B: How appropriate was the research design and analysis for addressing the Systematic Review question?	It lacked rigorous detail and analysis of the findings. It was also unclear how the data was gathered. (Low)	Closed questions in the questionnaires: "that focused on potential benefits of participation drawn from Hanko's work" (p. 194). Limits teachers' ability to add detail. (Medium)	Focus was on the benefits in terms of children's inclusion. But they included comments on general benefits and challenges for teachers. (Medium)	Research design provided rich detail of findings (long verbatim paragraphs from head teacher and SENCo). Otherwise, based on researcher's assumptions about teachers' understandings of the process. Analysis process and questions given to staff were unclear. (Low – medium)	The details of the method and analysis were included. More details of analysis could be helpful. How were positive statements selected? Researchers suggested contacting them for further information. Also, they wrote that the evaluation process was ongoing. (Medium – high)

Author → Weight of Evidence Questions	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	(Stringer et al., 1992)
C: How relevant was the particular focus of the study (conceptual focus, context, sample and measures) for addressing the review question?	They considered both benefits and challenges for teachers, which fits this review focus. Particularly focused on teachers' becoming more effective at "managing" challenging behaviours and improving teachers' wellbeing with aim of generalising findings to other schools. (Medium)	3 research questions – 1 directly relevant to this review. 2 of the 25 participants were teaching assistants and their feedback was not distinguishable from the teachers'. (Low – medium)	Focused on 'solution circles', but links their use to Hanko's conceptualisation of the model. A realist view of knowledge and solutions? (Low – medium)	Came from a psychoanalytic view point, focusing on therapeutic benefits. A longitudinal study, so a lot of detail. Not many challenges, because there were not any? (Low – medium)	It focused on the training programme for a lot of the article, although it did contain teachers' experiences of the benefits and challenges. Explicit about their conceptualisation about consultation and experienced in using it. One of the team previously worked with Hanko. (Medium – high)

Author Weight of Evidence Questions	Annan and Moore (2012)	Bozic and Carter (2002)	Brown and Henderson (2012)	Jackson (2002)	(Stringer et al., 1992)
D: Taking into account quality of execution, appropriateness of design and relevance of focus, what was the overall weight of evidence this study provides to answer the review question?	Low – medium as it did focus in the right area, but method and data analysis was not explicit. It aimed to be an exploration of the area and was not detailed about specifics. How were generalisations made?	Low – medium as it did focus on benefits and challenges, but only explicitly in one part of the study.	Medium as analysis was quite clear and it fits the review focus – but the exact process of the model used is unclear, given the title 'solution circle'.	Medium as it was detailed and focused on the benefits. But it does not mention challenges. It is theoretically consistent throughout and was transparent about coming from a psychoanalytic framework.	Medium – high as the methodology and internal consistency were convincing. However, it was not entirely focused on the Systematic Review question.
Ethicality?	Is it ethical to come to generalisations without explaining how they were arrived at? Method but not analysis process is transparent. Trustworthy in the sense that researchers said the analysis was at an	Close ended questions for the main. An epistemological/practical choice? Quite detailed information on method but not on analysis of qualitative data. Not transparent about which teachers' comments were chosen in the editing	Lots of direct comments from teachers, suggesting a desire to include their original voices? Method and the psychology underpinning their model were not explicit or transparent. Was it	Aims to really explore the detail of the teachers' experiences. Coherent psychodynamic paradigm. Very clear that it is one person's perspective, gained from spending time with the teachers. Means	The aim of the study was to enable teachers' understandings. Transparent about their understandings of consultation and explicit links with Hanko's conceptualisation. Method was clear.

	initial stage in the project. Coherent sense of a paradigm: refers to solving problems. Not used from a psychodynamic perspective, and explicit about that. Aim was to improve teachers' wellbeing. (Medium)	process. Transparent about the small sample. Clear line of argument between teachers' attributions of a situation and their confidence – with quotations to support. (Medium)	for better understanding of the pupils? Solutions? Both? They wrote about the flexibility of the model, in terms of its timings and the nature of the problem. They may have used it flexibly themselves. (Low – medium)	that a lack of literature is referred to. (Medium – high)	Analysis? The authors wrote that readers could contact them for a detailed evaluation of the project. I did not do this as I could not do this in the case of each paper. Early contribution of 'knowledge' to the area. (Medium - high)

Appendix E: Demographic and Methodology Data

Note: Points in blue are direct quotations from the papers

Authors ⟶ Methods ↓	(Annan & Moore, 2012)	(Brown & Henderson, 2012)	(Bozic & Carter, 2002)	(Jackson, 2002)	(Stringer et al., 1992)
Sample	Schools that were part of the Targeted Mental Health Project. Primary and Secondary Schools.	Secondary School: teachers in their probationary year. Then rolled out to staff in 1 department.	Schools in a Shire county – 4 consultation groups Group 1 = Met 5 times over Spring term 2000. 7 teachers from 2 schools – 4 from a first school and 3 from a middle school. SENCos from both schools participated. Group 2 = Met 4 times through Summer term 2000. 9 teachers from 2 schools – 4 from a first school	Mainstream Secondary school teachers and teaching assistants who volunteered to participate. 2 groups consisting of 8 members each ran fortnightly.	42 teachers from 29 different schools/support services underwent the training (from a variety of contexts).

			and 5 from a first/middle school. 1 Special Educational Needs coordinator (SENCo), 1 teacher of the deaf and 1 specialist Autism Spectrum Disorder (ASD) teacher took part. Group 3 = Met 4 times over Spring and Summer terms 2000. In a school for children with moderate learning difficulties. 4 teachers and 4 teaching assistants. Group 4 = met 6 times during Spring term 2001. 7 teachers from a High School. 1 – SENCo, 2 = heads of year and 4 were subject teachers.		

	(Annan & Moore, 2012)	(Brown & Henderson, 2012)	(Bozic & Carter, 2002)	(Jackson, 2002)	(Stringer et al., 1992)
Research Design	Quasi experiment Findings from 7 problem based discussions were recorded.	Quasi experiment Came from 2 trainee educational psychologists' (EPs') requests for work. Findings came from: Secondary School: Teachers' comments came from "round of words" at end of each session. Primary School: head teacher and EP's discussion. SWOT analysis with all teaching staff (N = 9) EP gave questionnaire to the 9 teachers.	Quasi experiment. EP talked to head teacher in a school about the potential benefits of a consultation group. Then EP addressed whole school staff – asking for volunteers. Findings came from participants' questionnaires. 31 were distributed and 26 were returned. (6 closed questions – Likert scales - and 1 open question). I focused on responses to open question.	Quasi experiment. Findings came from the author's own observations as the facilitator.	Quasi experiment Findings came from post course questionnaires issued to all those involved in consultation groups, 9 months after the training course. 61 returns from 9 of the 16 establishments.

	(Annan & Moore, 2012)	(Brown & Henderson, 2012)	(Bozic & Carter, 2002)	(Jackson, 2002)	(Stringer et al., 1992)
Setting	Within the wider context of the Targeted Mental Health Project in Hackney. It aimed to deliver "evidence-informed interventions"	A mainstream inner city Primary School (who had requested EP support to develop a whole school strategy focusing on dyslexia) and a mainstream rural Secondary School (where staff were keen to promote further inclusion).	Schools in a Shire county – 4 consultation groups	Within context of 'mental health in schools' outreach project set up by Brent Centre for Young People. A mainstream secondary school. School's SENCo was the link person.	Newcastle EPS, where they have supported about 30 consultation groups since 1987 (to the date of this paper). A 5 session workshop to introduce teachers to skills involved with establishing and facilitating school based consultation groups. At the time of completing the questionnaire, seven of the groups had met for 6-12 sessions.

	(Annan & Moore, 2012)	(Brown & Henderson, 2012)	(Bozic & Carter, 2002)	(Jackson, 2002)	(Stringer et al., 1992)
What was the Aim/Research Question?	"To address aspects of teachers' wellbeing allowing them to reflect with colleagues on an identified (behaviour) problem". Other aims = to develop "the abilities and strengths of the staff group to work together to analyse and reflect upon difficult issues in the process of finding solutions" And to "generalise some of the thinking and aspects of the approach to other problems and issues"	"To examine how Solution Circles can be used to promote the inclusion of pupils with a wide range of needs in mainstream schools"	"To what extent do staff who take part in a series of consultation groups feel this has been a good use of their time?" "What do staff perceive as the main effects of their participation in consultation groups?" "To what extent do participants feel that an external consultant is needed to set up and sustain a consultation group?" But one I focus on – the open question: 'how else has participating in consultation groups affected your work?"	"The development and impact of work discussion groups offered on site to secondary school staff".	"Reflect on our work in establishing teacher support groups and in developing the programme for enabling teachers to set up and facilitate their own school groups"

	(Annan & Moore, 2012)	(Brown & Henderson, 2012)	(Bozic & Carter, 2002)	(Jackson, 2002)	(Stringer et al., 1992)
How was the Collaborative Problem Solving Group Conceptualised, Including the Role of the Facilitator?	Staff sharing scheme- updated from Monsen problem solving model. Aimed to follow a consultation approach. Quoted Hanko. Case Presentation (10 minutes) Interactive Factors Framework used as a structure to record information. Anyone in group who has extra information can share it. Consultee rates their level of concern. Group Questioning (10 minutes)	Solution Circles Quoted Hanko. Problem description Brainstorming solutions Problem clarification First steps Roles: problem presenter, facilitator, note taker, brainstorm team. Secondary School- EP was the facilitator, assistant EP was the note taker Primary School- head teacher was the facilitator, EP took an "advisory/consultative role"	Referred to Hanko model: Ground rules Prioritisation of concerns Problem holder outlines issue. EP asks a group member to restate the problem to clarify. The group ask questions to elaborate the concern (20 – 30 minutes). The group discuss possible ways forward (20 – 30 minutes) Process review	'Work discussion groups' "to create a space outside the heat of the classroom setting for teachers to reflect on their work with pupils" Based on the Tavistock model. Teachers took it in turns to bring a problem. Role of psychotherapist = not offering expert solutions or	Service staff consultation groups. Referred to Hanko's model and Caplan's mental health model. EPs- Mixed gender pairs. Single case approach, recommended by Hanko. Ground rules Members state what they want to give to the session. To reflect on their commitment to the group.

	Members of group ask questions to clarify and reflect. Theories and Strategies (10 minutes) Each person writes down a theory and strategy associated with the issue. The group listen to these in turn. Action Planning (10 minutes) The problem owner selects strategies that seem useful and time is taken to devise an action plan. Feedback Session (10 minutes)	Brown and Henderson (2012), seemingly focusing on Hanko's advice that teachers should "build on each others' strengths", may take more of a solution focused approach than Hanko (2002) advocates, since, she states, this way of thinking can reduce complex understandings of a child's behaviour. However, Brown and Henderson wrote that within this psychological understanding of collaborative learning, problems and solutions were still subject to a lot of consideration.	EP = facilitator	behaviour management strategies. Teachers took it in turns to present a problem.	Presentation of a problem. The group asks questions to elaborate the concern. The consultee summarises where they are in their thinking. Review of the process.

	Time is given in the next session to feedback on how things have progressed. Meta evaluation (10 minutes) At the end of each session, the group reflects on the process itself. This provided the comments themed by the authors. Educational psychologist as the facilitator.				

Appendix F: Further Synthesis: Extra Contextual Evidence to Aid Synthesis and Theme Construction

Benefit 1: Time and Space		
Who?	**Extra Support for Synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	Teachers spend time at the end of each group doing a 'meta – evaluation', where they "fine tune" the process (p. 99). The authors suggested that the teachers' wellbeing and ability to solve problems improved as a direct result of participating in collaborative problem solving groups.	Teachers in the group used the interactive factors framework (Monsen & Frederickson, 2008) to record information. They noted that there was not opportunity to know the impact of using this specific addition. Used a strict structure to problem solving. The researchers suggested questions teachers might ask (p. 98). But, there is no mention that they collaborated with the teachers to create these. Teachers wrote down their ideas for strategies or interventions. The aspect of dialogue might be missing. The researchers thought that their "carefully structured intervention package" had well defined impact measures. What were they referring to? The solution focused scaling that they did not include in their paper?

(Brown & Henderson, 2012)	The researchers suggested that it was the structure of the collaborative problem solving group that led to the benefits.	The authors noted that "the role of the facilitator was crucial to the structure of the process being maintained" (p. 181) The head teacher commented that the recorder could have a "more active role in the discussion" (p. 183)
(Bozic & Carter, 2002)	No extra relevant contextual information.	The researchers refer to teacher support teams as influencing their model, whereas I excluded articles on teacher support teams due to their expert model. From the paper, it is hard to know if this expert model was evident in their structure.
(Jackson, 2002)	The structure of the group and the processes within it led to a cohesive group that felt connected to the school.	No extra relevant contextual information
(Stringer et al., 1992)	The authors suggested that they started each group by talking about the process to some extent: teachers tried out different types of questions, for example. They mentioned "ground rules" a number of times, suggesting these were important. The crux of the paper also focused on the importance of training for facilitators.	"Spontaneity is emphasised" (p. 91) in terms of having a rota where people bring concerns.

Benefit 2:
Visual Changes to Practice

Who?	Support for Synthesis	Refutation/Missing from Synthesis
(Annan & Moore, 2012)	Authors wrote that "strategies discussed during a staff sharing session in a Primary school were incorporated into the Annual Review process for the student discussed" (p. 100).	The researchers started the project with the idea that the groups would improve staff wellbeing and reduce school – based problems. Solution focused scaling was used to measure whether actions had "worked". Teachers reported that there was an improvement for 5 of the 7 children discussed. 3/7 were accompanied by very positive feedback. So, were the positives identified by only 3 of the 7 teachers?
(Brown & Henderson, 2012)	No extra relevant contextual information	No extra relevant contextual information
(Bozic & Carter, 2002)	No extra relevant contextual information.	No extra relevant contextual information
(Jackson, 2002)	No extra relevant contextual information.	Suggested that teachers grew in resilience and perseverance as a result of the groups. The group intentionally did not focus on strategies or solutions – but about changes to teachers' understanding as means to improve their wellbeing.
(Stringer et al., 1992)	No extra relevant contextual information.	Changes to practice were hinted at rather than written about explicitly. They focused more on the benefits for teachers' wellbeing, which they suggested then led them to be able to make practical changes.

Benefit 3: Changes to Thought Processes		
Who?	**Support for synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	No extra relevant contextual information	This area was only commented on in relation to the outcomes hoped for by the researchers. There is no explicit evidence that this happened in this article.
(Brown & Henderson, 2012)	No extra relevant contextual information	No extra relevant contextual information
(Bozic & Carter, 2002)	Relevant points were in response to the closed questions on the questionnaire. The researchers suggested that the "time to reflect" (p. 199) was a main effect.	92% of the participants agreed that it "made them think more deeply about individual children". This was in response to a closed question on the questionnaire – but it was the answer that led to the highest agreement. There is nothing about changing thought processes – but this might be because there was not space for this on the questionnaire.
(Jackson, 2002)	This was Jackson's explicit aim (p. 131) and he said that this came from teachers exploring the underlying reasons for children's challenging behaviours. Changes in thought processes came from deeper understanding of the children which seemed to motivate them to make changes in their practice (whether these were conscious or not).	No extra relevant contextual information
(Stringer et al., 1992)	No extra relevant contextual information	No extra relevant contextual information

Benefit 4:		
Changes to Emotions and Feelings		
Who	**Support for Synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	No extra relevant contextual information	This area was only commented on in relation to the outcomes hoped for by the researchers and a general feeling that they got. There was no explicit evidence that this happened in this article for the teachers.
(Brown & Henderson, 2012)	No extra relevant contextual information	There was a particular need for staff emotional support in this particular school, according to the researchers (p. 180).
(Bozic & Carter, 2002)	Sense that teachers' self-blame decreased and led to increased wellbeing, as a result of listening to others' problems, from the comments that the authors included – like: "Strategies don't always work and that isn't necessarily the teacher's fault" (p. 198). Researchers identified it as one of the main effects (p. 199)	56% of participants said that participating in the group led them to "feel more confident about working with children with SEN" (p. 195). This could be seen as refutation for this benefit – or it could be that the methodology in the study meant that participants could not expand on how they felt.

The points that the authors included in the "further effects of participation" focused on positive changes to emotions and feelings (p. 196) |
| (Jackson, 2002) | No extra relevant contextual information | No extra relevant contextual information |
| (Stringer et al., 1992) | No extra relevant contextual information | No extra relevant contextual information |

Challenges:

Challenge 1: Practical Challenges		
Who?	**Support for Synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	No extra relevant contextual information	The authors noted this as a limitation but it is not clear what they based their argument on.
(Brown & Henderson, 2012)	No extra relevant contextual information	The authors noted that "the role of the facilitator was crucial to the structure of the process being maintained" (p. 181) The head teacher seemed particularly supportive in this paper (or at least the head teacher's comments formed a large part of the findings) – and maybe there is a missing theme related to support for the group from Senior Management?
(Bozic & Carter, 2002)	No extra relevant contextual information	No extra relevant contextual information
(Jackson, 2002)	No extra relevant contextual information	Teachers were encouraged to attend the group for at least one or more terms (p. 131). Interestingly, this was not a theme mentioned by Jackson in his paper, and so maybe explicitly mentioning it as an issue increased teachers' reliability. He described the groups as cohesive. They were also supported by the senior management: "their timetable was especially rearranged in order to make it possible for them to attend" (p. 140)
(Stringer et al., 1992)	No extra relevant contextual information	No extra relevant contextual information

Challenge 2: Thinking Challenges		
Who?	**Support for Synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	No extra relevant contextual information	This was not referred to as a theme in this paper.
(Brown & Henderson, 2012)	No extra relevant contextual information	In contrast to other papers, "all teachers had reported they could think of an issue they could bring" (p. 181)
(Bozic & Carter, 2002)	No extra relevant contextual information	No extra relevant contextual information
(Jackson, 2002)	No extra relevant contextual information	No extra relevant contextual information
(Stringer et al., 1992)	No extra relevant contextual information	No extra relevant contextual information

Challenge 3: Emotional Challenges		
Who?	**Support for Synthesis**	**Refutation/Missing from Synthesis**
(Annan & Moore, 2012)	No extra relevant contextual information	Possible suggestion that teachers were stressed because of the time commitment of the group? (p. 100). An interesting and opposing finding to what they suggested?
(Brown & Henderson, 2012)	No extra relevant contextual information	The authors thought that, as teachers built up relationships, fear of ridicule and exposure would diminish" (p. 183)
(Bozic & Carter, 2002)	No extra relevant contextual information	No extra relevant contextual information
(Jackson, 2002)	Jackson felt that senior staff, in particular, felt this exposure.	No extra relevant contextual information
(Stringer et al., 1992)	No extra relevant contextual information	No extra relevant contextual information

Participant Information Sheet

Introduction

I am a third year Trainee Educational Psychologist (TEP) from Newcastle University, currently working on placement in Newcastle Educational Psychology Service. I hope to carry out some research with a group of teachers as part of the wider work I am carrying out in your school. I have provided this information sheet to inform you of all the necessary details regarding my study.

What is the purpose of the research?

My research question is: ''how can participating in a collaborative problem solving group influence practice?'

In a collaborative problem solving group, a small group of teachers and an educational psychologist collaboratively reflect on a school based problem in order to gain a deeper understanding of the factors involved. The aim is that participating in the group facilitates positive change for the teacher and, in turn, his or her pupils. This research also suggests that each of the group and the group as a whole are influenced throughout the process.

I invite you to participate in a piece of action research in this area that explores the influences that occur as the result of being in a collaborative problem solving group.

I hope you feel you will be able to support this.

What will this involve?

The research involves three stages. The time commitment will be between 3 – 5 hours (to be negotiated by the group):

Stage 1: Participating in a collaborative problem solving group (session 1) at a date, time and place negotiated by the group. This will be for 1 hour and will be facilitated by the trainee educational psychologist. During the session - one teacher, who feels comfortable doing so, will bring a school based problem for discussion. The 1 hour time slot will also include a debrief session.

Stage 2: Participating in between 2- 4 further 1 hour collaborative problem solving groups, as detailed below:

Each session will begin by reviewing any changes that have occurred as a result of participating in the previous session. This 10 minute discussion will be tape recorded. The problem solving itself will not be tape recorded.

At the end of each session, I will facilitate a 10 minute focus group with the teachers. This has two purposes: to review the immediate benefits and challenges of being in the collaborative problem solving group that week and to discuss further ideas to changes to the process that can be included the week after.

Stage 3: At the end of the research process, it will be useful for me to discuss any longer term influences of participating in the groups with participants. This can be done in a way that suits the group.

What happens to my information?

All information will remain entirely confidential. Once data has been collected, it will be stored on a password protected computer to ensure confidentiality. Only the TEP will have access to the data. Any personal identifiers will be removed and the audio recording securely destroyed once the data has been transcribed and the report has been written.

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_____

Thank you for reading this information. Please feel free to contact me if you have any further questions and if you would like to participate. My email address is: R.D.Wright@ncl.ac.uk.

You are under no obligation to take part and may withdraw from the study at any point.

If you are happy to continue, please complete the attached consent form and participant data sheet.

Consent form

- Have you read and understood the information pack provided? (please circle where applicable)

  YES / NO

- Have you had an opportunity to ask questions and been given satisfactory responses?

  YES / NO

- Are you aware that at any time, up until the formal report is completed, you can withdraw from this study?

  YES / NO

- Do you give your permission for the two 10 minute review focus groups in each session to be recorded (audio recording only) and be transcribed for the purpose of this study only?

  YES / NO

- Are you happy to take part in this study and give your informed consent?

  YES / NO

Name: _____

Signature: _____

Date: _____

Participant Data Sheet – Taken out as a result of discussion in the group

The following demographic information is required to establish our participant characteristics.

Please circle where applicable:

Role in this school	_____
Gender	M / F

How many years' experience do you have in this role?

Please tell me about any specialist training you have completed:

Please tell me about any additional roles you have within the school:

Collaborative Problem Solving Groups

Background

A 'Collaborative problem solving group' is a joint problem solving, continuing professional development (CPD) approach for teachers. The aim of the groups is to help teachers to positively and practically respond to school based problems they might experience. These problems might relate to difficulties understanding and responding to children's behavioural, emotional and social needs. Or, they might relate to other school based problems. In other research, teachers have brought problems related to lesson planning.

Teachers using the collaborative problem solving approach have described the following benefits:

It provides a time and space for teachers to:

- Implement their own creative solutions in their classrooms
- Gain a sense of power or agency over school based problems
- Feel a reduction in feelings associated with stress as the result of feeling in control of some solutions
- Be with colleagues and share problems in a structured, facilitated and supportive way

Research has described benefits to teachers' practice in their classrooms in both the short term and long term.

The groups usually consist of a group of up to 12 teachers.

The Process

The process of the group has 3 distinct stages:

(1) Case presentation: The teacher describes the school based problem. He or she also describes the solutions that have already been attempted in school, and his or her perceptions of the outcomes of these interventions.

(2) Gathering information: The group ask questions to acquire further details and information about the situation. The teachers practise their own skills at facilitation and questioning as the groups progress.

(3) Joint exploration of the issues: the group use the information they have acquired to consider the implications of alternative approaches to the school based problem.

The problem presenter decides how to change their practice in the classroom based on the understanding he or she has developed.

Action Research

Action research is a participatory, democratic process concerned with developing practical knowledge in the pursuit of worthwhile human purposes.

Research and practice are not separated in action research. Action research focuses on improving local problems. It is concerned with solutions but also with what caused them in the first place.

The aim is that participants feel empowered as they critically reflect, develop and act on new knowledge. The action research process aims to be transparent and each participant is viewed as a valuable contributor.

Accordingly, overarching questions for participatory action researchers are:
- o How have things changed?
- o What has not changed?
- o What has been confirmed?
- o What has been ignored?
- o What has been made problematic?

_____

Thank you very much for your time.

Kindest regards,

Rebecca Wright

Trainee educational psychologist, Newcastle University

If you have any questions/concerns during or after the study, please contact:

Dr Simon Gibbs

Reader in Educational Psychology

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Appendix H: Debrief

Thank you for participating in this research. The aim of this research was to explore the processes of changes for you during three collaborative problem solving groups. I will contact you with some findings when I have written up the research. Please feel free to contact me with any questions or further thoughts about the process before then.

Thank you very much for taking part. Your contributions to the group are valued.

Appendix I: The Research Process

Date or Timeframe	Action
July, 2014	I sent an email to the link person in the Trust of schools I work in, outlining the area of research.
September, 2014	I met with the link person in the Trust of schools and we negotiated that I would attend a staff briefing in the Secondary School, offering access to the largest number of participants, and follow up with an email.
October, 2014	After staff briefing, I followed up interest with some informal conversations and emails. Two staff members wanted to participate.
November, 2014	I discussed the research with teachers in another provision in the Trust. Two further staff members wanted to participate. One participant withdrew due to personal reasons. Three remaining participants and I engaged in email contact to negotiate the time and place for a first meeting. Participants were each given an information pack (see Appendix G). Session 1 (1 hour) I introduced participants to the project and we discussed the concept of action research. We also discussed the Hanko model of collaborative problem solving consultation. Participants gave their written consent for participation and were reminded of their right to withdraw at any point. We discussed ground rules and the group decided that they wanted to add 'respect each other's opinions' to my initial ground rule of confidentiality. We decided against using a scribe. We thought it would be useful to have the Hanko model structure on the wall. We carried out a discussion about one of the participant's school based problems, which I facilitated. We carried out a 10 minute review, which I tape recorded. I used questions from solution focused consultation, narrative consultation and process consultation, as and when seemed appropriate. All of the group members also informally took on the role of facilitator throughout our meetings.

| | We focused on change questions: How have things changed? What has not changed? What has been confirmed? What has been ignored? What has been made problematic? (McTaggart, 1998). There was a focus on the problem bringer's changes to his or her thinking, although we also considered possible change to the research process for next time.

I explained that I would transcribe the review and complete initial tentative codes, email it to the group and bring copies of it with me next time. We discussed the process of constructionist grounded theory (Charmaz, 1990, 1995)

The review session was transcribed and the descriptive and tentative coding was sent to the group.

We negotiated a suitable time and place for the next meeting. |
|---|---|
| **December, 2014** | Session 2 (1 hour). We started by discussing people's feelings about the process, as suggested by Farouk (2004) and the right to withdraw was explained.

We carried out a ten minute review, which was tape recorded, and focused on changes that had occurred after the last session. This included a discussion about the tentative codes from last session.

We followed Hanko's structure and a second participant brought a school based problem.

This was followed by a final ten minute review, which was tape recorded. We focused on any personal changes, possible changes to the processes within the group or the research focus or structure.

I explained that I would complete an initial analysis process, as before.

The review sessions were transcribed after the second session, and further descriptive and tentative codes were emailed to the participants. |

January, 2015	Session 3 (1 hour, 10 minutes). We started with a 25 minute review of the processes and changes to this point. This included the potential for changes within the Trust that could occur as a result of our discussions. This review was tape recorded. We carried out a final collaborative problem solving group, with the third participant as problem bringer. I explained that I would complete the cumulative analysis process, as before and email it to them for any further thoughts. We agreed that we would not meet again for the purposes of the research and that I would feedback findings in informal discussions and through email. We discussed that it would be beneficial to feed these findings back to the link person in the Trust to consider changes to teachers' reflective practice.
January - May	I carried out the further process of constructionist grounded theory until some key themes were constructed.
May - June	Final write up, with refining of themes in Empirical Research.
June/July	I hope to feed back the findings to the participant group and to discuss how we can feed them back to the Trust, with any implications.

Appendix J: Key Principles Kept in Mind during Facilitation of the Three Sessions

Process Consultation (Farouk, 2004; Schein, 1987; Schein, 1995; Schein, 1997):

- Starts with the needs of the teachers. Non expert
- Jointly figure out next steps
- The aim is that the group is empowered
- The teacher is stimulated to tell his or her story with minimal disruption to either the process or the content
- Focus on how the problem is solved as much as the content of the problem
- Engage in genuine exploratory inquiry
- Attend to emotional and interpersonal factors that can interfere with the effective functioning of a group
- Focus on 'task' functions and 'maintenance' functions.
- 'Maintenance' functions address the interpersonal relationships between individual group members. Group maintenance functions consist of: gatekeeping, harmonising, encouraging, compromising, diagnosing, standard setting, and standard testing. Among these the most frequently used maintenance function is that of gatekeeping as it involves ``reducing the activity of overactive members and increasing the activity of overtly passive members'' (Farouk, 2004, p. 213)

Wagner's (2008) Consultation Approach:

- Do not consider myself as an expert in the teachers' lives
- Facilitator facilitates the creative, coping skills of the teachers
- Jointly notice patterns occurring over time, and exceptions to this
- What is the role of the system?
- Questions: What concerns you? What have you tried? What effects have you noticed? How would you like things to change and what would that look like? What is going well at the moment?

Appendix K: Examples of Constructed Grounded Theory Analysis of Data over Time

Although I include a <u>sample</u> of analysis in these appendices for ease of reading, full transcripts and analysis can be provided on request.

1. <u>Example of Line by Line Initial Codes (in red)</u>

RESEARCHER: Press that again. Right, that's recording now then. So we don't have to do anything different, I think last time it just picked up everything, so any sound.

Press record again. It is recording now. We don't have to do anything different. Last time it picked everything up.

JO: Mm.

RESEARCHER: Um so um, what we also thought last time was I had that… that ground rule, um just the confidential, confidentiality within the four walls and then we thought also to add, last week, the 'respect each other's opinions and ideas'.

Last time I added the confidentiality within these four walls ground rule. Last week we also added 'respect each other's opinion and ideas'.

JESSIE: Mm hmm.

RESEARCHER: I don't know if there's anything else that you, either of you thought we could... Idea.

I don't know if you would like to add anything else?

JESSIE: I think those are pretty much cover everything.

I think those two ground rules cover pretty much everything.

2. Example of Tentative Category Construction (in blue)

JO: Mm.

RESEARCHER: And just when (the participant) was sort of saying things like I think they probably do need to make it more personal as to each child, I think looking at the family, investigating, going into that part.

JO: Mm hmm.

RESEARCHER: Just reminding me of that kind of way of thinking.

JO: Sometimes, yeah. Mm hmm.

RESEARCHER: So that it's the kind of the idea of like everything interacts in…

Tentative category 10: participants' interest, engagement. Wanting to be helpful for others. Deepen understanding.

JO: Mm hmm. I'm just wondering is there… like is there, is there, which ways the best way or was it just different, you know, so is it better to think of the child personally or is it better to the child as part of a system, you know? Or is there a norm?

RESEARCHER: By, by personally, do you mean like by…?

Tentative category 9: Role of facilitator? What is it? To build on others' points – to have my own point of view? To review? To clarify? Can I be directive? To be how transparent? Looking to me for 'right' answers?

3. <u>Example of Memo Writing</u>

Completed on Friday 28th November, using handwritten notes completed directly after session 1.

Tentative category 1: Talking as a way of adding depth to my thinking was helpful

Tentative Category 2: Thinking about each child, personally

Tentative Category 3: Seeing the child as part of a system, including family

Tentative Category 4: Adding to practical things already existing in the classroom

Tentative category 5: Still being drawn to initial hypothesis – not changing view – **so not about changing Frankie's way of thinking – but adding to Frankie's original way of thinking**

Tentative category 6: Bridging understanding about Primary/Secondary

Tentative category 7: Empathy within group

Tentative category 8: Relationships within group?

Observations about the process:

o   The intricacies of co construction are interesting. Noting when Frankie had a view and listened – but wanted to stay with original hypothesis. Researcher and Jo coming to their own conclusions. Aim is not to agree the same thing/have the same understanding and this was noticeable here.
o   Positive relationships between everyone. Honest.

Interesting Points to Keep in Mind:

o   All keen to see the process as a non-expert model. This came from noticing the 'participant demographic' sheet and wondering why that was in there if I was taking a non-expert stance. Also, they did not want their colleagues to be able to identify them if they read the paper
o   All new staff in the group. Keen to build new relationships?
o   Next session – share the above with staff and add in their thoughts.
o   Keep more focused on review questions, rather than – what has been helpful in general. For the first session it was most natural to keep it as part of the natural discussion
o   Frankie and Jo asked to add 'respect each other's opinions' to ground rules

Example 4: How Tentative Categories were developed into Focused Codes over Time

From session 1 (in black). Additions in blue after session 2 and in red after session 3.

Changes to themes after Session 2 – part 2. Changes added in red

Tentative category 1: Talking as a way of adding depth to thinking. Also the importance of talking in general. A way of noticing things not previously thought important. Co – construction. Face to face contact. Can then act as motivation to do something as in the case of Jo in session 3. Success measured by whether people are motivated to attend

Tentative Category 2: Thinking about each child, personally. Change to as an individual

Tentative Category 3: Seeing the child as part of a system, including family, **the rest of the classroom**

Tentative Category 4: Adding to practical things already existing in the classroom

Tentative category 5: Still being drawn to initial hypothesis – not changing view – **so not about changing Frankie's way of thinking – but adding to Frankie's original way of thinking**

Tentative category 6: Bridging understanding about Primary/Secondary/different skill areas/departments. Useful having people from different contexts. Less threatening? More objective?

Tentative category 7: empathy within group. Non-judgemental, open minded. Non expert. Not overly opinionated. Reflective practitioner. Need to buy in to it. Needs to be voluntary

Tentative category 8: Relationships within group? Honesty. Able to ask questions. Transparency

Tentative category 9: Role of facilitator? What is it? To build on others' points – to have my own point of view? To review? To clarify? Can I be directive? To be how transparent? Looking to me for 'right' answers? To be practical –i.e. close the door. To promote reflection, to work with two others/in a small group

Tentative category 10: participants' interest, engagement. Wanting to be helpful for others. Deepen understanding. Wanting to change thinking

Tentative category 11: developing understanding of last session's problem through talking about it in the opening review

Tentative category 12: The structure of the problem solving model process is effective. But in third session, participants liked the informal and relaxed nature of our group

Tentative category 13: A transparent process. Asking questions and clarifying the research process as much as the collaborative problem solving consultation process. Hard to distinguish between the two processes. An interest in the research process.

Tentative category 14 – The change process. Immediate changes and changes that need – time or more talking through. **Personal changes/realisations.** Changes to the problem solving groups themselves. How to sustain it? Wanting to change thinking and being confident enough to change thinking process. Wanting to practise reflection skills/skills of a reflective practitioner. Being reflective needs practice

Tentative category 15 - New ways of thinking. New ideas – which can then be thought about over time. And with knowledge of the individual context. Fresh ideas. Being in control of ideas, overall? Agency? Empowerment. Building up individuals' confidence

Tentative category 16 – **Time**. Luxury of time and reflection to think about something in detail is good and enriching. But, practicalities? But, problem owner – worth the time in the long run. A preventative approach. Need to evidence it. Importance to all three of going away and continuing to reflect. Importance of spending time in order to really get to the root of something. Wanting to spend time and wanting to remove psychological barriers to rigid thinking

Tentative category 17 – the purpose of the group and what individuals get from it is up to them – could be solutions or could be deepening understanding, or to develop skills. Need that they are in control of their participation and benefits need to be individual and authentic. Sincere, authentic participation, not a way of working thrust upon them as a new idea in a school (see session 3 – Frankie and Jo). Measuring its success should not be superficial – success in terms of self – development. But recognition that that could be at odds in with organisation's vision. Shouldn't be forced as 'a whole school thing'

Tentative category 18 – a group identity. Intuition amongst members, finishing sentences, co construction of ideas. Not afraid to say that they don't agree/understand. Jo in session 3 more talking in terms of actual solutions rather than just deepening understanding? Or, deepening understanding leading to practical solutions?

Appendix L: Examples of the Theme Construction Process in the Empirical Research Process

1. <u>Example Theme Construction for a Theme Relating Particularly to Research Question 2.</u>

Category	Example from Text	Comments
Other participants taking on role of the participator. On my invitation/encouragement – links to agency in the thinking and learning process.	JO: So you've kind of got to get them to that point. FRANKIE: That's it. JO: But not so like immediate. FRANKIE: Yeah. JO: You've got time, haven't you, to do that? FRANKIE: Yeah. JO: You're going to get there, it's the journey, isn't it? FRANKIE: You've got time to get there	Jo taking on the role of reassuring and summarising. Checking out the reality of the way forward for Jo. (Session 1)
	RESEARCHER: Um but that's, that's, that's fine … JO: I think he was frustrated, wasn't he? In the fact that um other people kind of thought there to be a softly, softly approach … RESEARCHER: Mm.	Session 2, helping me to summarise previous session so I could have some thinking space.
	RESEARCHER: can you um think of anything else, (participant's name), from last time that would be useful for (participant's name) to know	Session 2 – I invited Jo to add to the discussion (he then discussed some research he had been doing about attachment) – increasing his/her agency?

2. <u>Example Memo Writing to Support the Development of the Theme (above) over Time:</u>
   Facilitating a sense of equality/ non-expert (democracy?) in the sense that there are no right or wrong answers
   Leads to agency in the thinking process/problem solving process
   This combines with the process consultation approach
   Also links to the facilitator checking/clarifying understandings
   Also to transparency/honesty between group members – so teachers and I able to ask questions and be curious rather than assuming
   Whilst also recognising my own bias and talking about that openly

3. <u>An Example of Further Theme Development:</u>

Theme 1: Facilitate a Democratic Process By:	Encouraging Others to Share the Facilitator's Role
	FRANKIE: Yeah. JO: So your way is going to have to be that way. FRANKIE: Yeah. JO: So you've kind of got to get them to that point. FRANKIE: That's it. JO: But not so like immediate. (Session 1) JO: You're going to get there; it's the journey, isn't it? FRANKIE: You've got time to get there. (Session 1) JO: I think he was frustrated, wasn't he? In the fact that um other people kind of thought there to be a softly, softly approach… RESEARCHER: Mm. JO: was more like these are the boundaries and we need to… (Session 2) RESEARCHER: can you um think of anything else, (participant's name), from last time that would be useful for (participant's name) to know? JO: Um… I actually… RESEARCHER: In that process. JO: I've um just, just for me own kind of research I think I've been kind of reading this… (Session 2)