

HOW CAN I ENHANCE A RECIPROCAL TEACHING
INTERVENTION TO SUPPORT THE READING
COMPREHENSION SKILLS OF TWO CHILDREN
WITH ASC?

AN ACTION RESEARCH STUDY

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April 2014

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Research thesis submitted in part requirement for the

Doctor of Educational and Child Psychology

ABSTRACT

Children on the autism spectrum commonly display a reading profile characterised by strengths in decoding alongside weaknesses in reading comprehension (Nation et al., 2006). Reciprocal Teaching (RT; Palinscar & Brown, 1984) is an evidence-based instructional approach for supporting reading comprehension skills based on cooperative learning principles and endorsed by National Reading Panel (NRP; NICHD, 2000) research; however there is little evidence around the use of RT with children with Autism Spectrum Condition (ASC).

Using an action research methodology, I sought to develop my knowledge as a practitioner by exploring how I could make adjustments within the context of delivering a group-based RT intervention to enhance its application for two children (aged 8-9) with diagnoses of Asperger's Syndrome. A key feature of the research was eliciting the views of participating children and using these to inform the ongoing planning and delivery of the intervention.

Qualitative data including feedback from participants, session records and a bespoke assessment of RT strategy-use (alongside my own reflective records) contributed to two cycles of action research in which my learning informed my subsequent actions. Within smaller micro-cycles of action and reflection, I made four adjustments to RT involving visual aids to activate children's prior knowledge and support them to ask questions about text and summarise non-fiction passages. I discuss my findings with reference to theoretical models of comprehension and ASC and generate my own living theory of practice.

The study addresses a gap in the literature and has direct implications for educational professionals and for the practice of Educational Psychologists (EPs) who frequently support children with ASC but often do not feel skilled in supporting reading comprehension (Greenway, 2002). Throughout my inquiry, I highlight questions for further research and future practice.

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CHAPTER 1: INTRODUCTION

Positionality

It is seldom about 'me', more about 'I in relation to you'.

McNiff (2013, p.120)

Within this piece of action research, I view myself as a 'complete participant' in the process of inquiry; I recognise that my learning and actions in conjunction with others draw upon my framework for understanding the world and my previous experiences.

My Background

Prior to training to become an Educational Psychologist (EP), I was involved in intervention research and a particular project (Clarke, Snowling, Truelove & Hulme, 2010) ignited my interest in supporting reading comprehension. My role at the time involved designing intervention materials and supporting twenty Teaching Assistants (TAs) to deliver three intervention programmes to children aged 8-10 years; however, I had not previously taught nor had experience of delivering interventions myself.

Whilst my previous experience in the area of reading comprehension spans a number of years, my involvement in supporting children with ASC is more recent. Within my placement as a Trainee Educational Psychologist (TEP), I work with an Enhanced Resource Provision for secondary-age adolescents on the autism spectrum and have done so for eighteen months. I also support a number of children with ASC in primary mainstream education.

My Position in the Current Study

As a TEP embarking on the present study, I was keen to combine my previous research experience with a closer focus on my own developing practice. In doing so, I engaged in a 'paradigm shift' (Kuhn, 1970) in my approach to research, moving from the positivist position of being involved in a large Randomised Controlled Trial (RCT) to my current pragmatic position in which I seek to explore and address complex issues of practice in a small research context.

Taking a reflexive stance, this shift in my position can be seen to reflect the shift in my professional role from researcher to researcher-practitioner. During the study, I was involved in co-authoring a book for practitioners on supporting reading comprehension (Clarke, Truelove, Hulme & Snowling, 2013) and this attention to the practical applications of the RCT complemented my research journey.

My Values

The reason that values are fundamental to educational theory is that education is a value-laden practical activity. We cannot distinguish a process as education without making a value-judgement.

Whitehead (1989, p.59)

Two of my core values are central to this piece of research and underpin my process of inquiry: inclusion and the voice of the child. I feel that these core values have become more salient following my move into the EP profession and strengthened through my developing experience as a practitioner.

Inclusion

Meeting the individual needs of children and young people with Special Educational Needs (SEN) is a key objective within my practice as a TEP and aligns with the values and ethos of inclusive education. This value is also prominent in shaping the current study as I engage with children with ASC as a researcher-practitioner.

Lynch and Irvine (2009) posit that there is substantial overlap between the principles of inclusion and recommendations of best practice in supporting children with ASC in terms of equal opportunities and the individualisation of educational programmes.

Without a needs-based focus in educational programme planning, 'inclusion' is nothing more than another label and students will continue to experience exclusion...

Lynch and Irvine (2009, p.846)

Within the current study, I hope to live in accordance with my value of inclusion by supporting children with ASC to access educational opportunities associated with reading for meaning alongside their peers.

Voice of the Child

Listening to and acting upon the voices and views of children and young people is an aspect of inclusion and represents a central value in my role as a TEP. The current shift in policy and practice realised through the upcoming Children and Families Bill in September 2014 and the Draft SEN code of Practice (DfE, 2013) places a statutory obligation on services in Education, Health and Social Care to involve young people and their families in decisions about their lives. I feel strongly that research should reflect this shift in policy and practice.

As in practice, upholding this value in research is a continual challenge in terms of increasing the level of involvement of children and moving up the 'ladder of participation' (Hart, 1992) concerning the extent to which children's views are influenced by adult agendas and actions. Tangen (2008) suggests that a shift in societal views of childhood means that children are recognised as 'being' rather than 'becoming' and hence have valuable views to share on all aspects of their lives.

Acknowledging this core value and addressing this challenge is an integral feature of my research design as I seek methods of involving the views of children in cycles of action research and grapple with the challenges of eliciting the voices of children with ASC.

Overview of Thesis

In writing this thesis, I intend to provide an unfolding account of my action research inquiry. I begin by undertaking a critical review of the literature (Chapter 2) incorporating studies in the areas of reading comprehension, ASC and intervention many of which are based within the cognitive psychology paradigm. I culminate the chapter by identifying a gap in the literature around supporting children with ASC to read for meaning and outline my aims and research questions for the current study.

In Chapter 3, I present my rationale for using action research alongside a discussion of the key principles of the approach. Following consideration of issues relating to ontology and epistemology, I briefly outline the design of my study, which features two macro-cycles of action and reflection. By providing a concise 'organiser' in terms of design, I seek to avoid duplication as the detail of my procedure, intervention delivery, data collection, analysis and interpretation are provided in integrated chapters for each macro-cycle: Phase 1 (Chapter 4) and Phase 2 (Chapter 5).

Following an outline of piloting activities and participant selection at the end of Chapter 3, the organisation of integrated chapters is intended to reflect the nature of action research as an organic and iterative process. In order to explain how my learning arising through my action was fed into my practice, a chronological organisation felt most apt; I thereby hope to share my research journey as it occurred in time and supplement my account with reflective boxes (containing extracts from my learning journal) and my retrospective thoughts once the two phases were complete.

I synthesise my findings and questions for future research and practice in Chapter 6 and make a 'claim to knowledge' based on my living theory of practice. I seek to validate this claim and identify the limitations of the study before concluding the thesis by outlining implications for practice.

CHAPTER 2: CRITICAL LITERATURE REVIEW

In this chapter, I consider a range of evidence from the fields of psychology, linguistics and education from a pragmatic stance as I explore the ways in which children with ASC might be supported to read for meaning. To set the context, I offer a critical overview of models of reading comprehension and outline a reading profile in the wider population, which is commonly found in children with ASC. This reading profile encapsulates strengths in decoding alongside difficulties in comprehension. As a means of informing an evidence-based approach to intervention and identifying additional needs worthy of support, I discuss relevant explanatory frameworks for the comprehension difficulties experienced by some children with ASC. Finally, I consider a small body of evidence reporting interventions developed to support comprehension for children with ASC and highlight gaps in the literature. Due to the limited number of studies conducted in this area, I refer back to the field of research on interventions for children in the wider population who have relative weaknesses in understanding what they read. I conclude by drawing together the findings in the literature to inform my research aims and research questions.

Theoretical Models of Reading Comprehension

Language is central to human nature and provides a medium through which we are able to share our experiences and understand those of others. In the modern world, the further capacity to understand and express oneself through written communication has become a fundamental and highly valued skill that is required for access to a vast range of opportunities.

In development, oral language skills provide the foundations for later literacy (Bishop & Snowling, 2004). Early skills in the phonological, semantic, syntactic and pragmatic areas of language provide the basis upon which children learn to read and thus through which they are able to access meaning in new and varied ways. According to Alexander (2012), reading is multidimensional, developmental, dynamic and goal-directed. Nevertheless, in the early years of

schooling, reading instruction is often focused on the acquisition of skills in phonological decoding and sight word reading and this is evident in UK government research and policy, which places substantial emphasis on synthetic phonics (Rose, 2006; Torgeson et al., 2006). As children progress from learning to read to 'reading to learn', the purpose of reading as a means of meaning-making becomes more focal and yet this is not reflected as strongly in policy and practice.

The Simple View of reading (Gough & Tunmer, 1986; Hoover & Gough, 1990), also known as the 'simple model', posits that successful reading for meaning comprises both word recognition and language comprehension skills (see Figure 1).

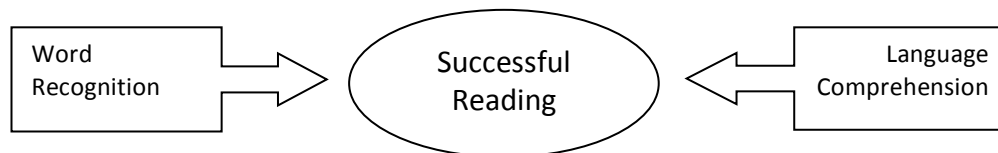


Figure 1. An Illustration of the Simple View of Reading (Gough & Tunmer, 1986).

Although the model acknowledges that the two component processes are strongly interrelated (García & Cain, 2014), it also suggests that these are independent skills as evidenced by children who display discrepant reading profiles. For example, a dyslexic profile is characterised by difficulties in phonological decoding but relative strengths in comprehension (Catts, Adlof & Weismer, 2006). In this way, the simple model has been used as a framework upon which to seat reading skills along these two continuous dimensions (see Figure 2).

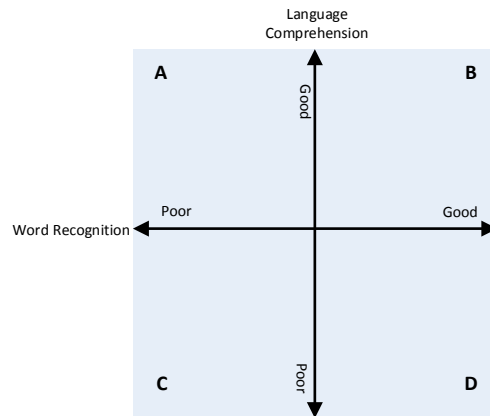


Figure 2. The Simple View of Reading (Gough & Tunmer, 1986) Presenting Reading Profiles Along Two Continuous Dimensions. Adapted from Rose (2009, p.40).

A profile which is conceptualised in the opposite quadrant to a dyslexic profile (quadrant A) is the poor comprehender profile (quadrant D). Children with this profile are described as displaying strengths in decoding and discrepant difficulties in comprehension (Catts et al., 2006). In practice, children with this reading profile are more likely to go unnoticed in the classroom due to their competencies in reading accurately and fluently (Clarke et al., 2010).

Given the complex and multiple processes involved in comprehension, it is unsurprising that research in the field of poor comprehenders has generally concluded that comprehension can break down for a number of reasons; this questions whether or not the label 'poor comprehender' meaningfully describes a group of children who find reading challenging in similar ways (see Spencer, Quinn & Wagner, 2014). Across the literature, a within-child deficit model is apparent and children are reported to have difficulties on a range of measures of literacy and cognition including verbal working memory (Cain & Oakhill, 2006), comprehension monitoring (Oakhill, Hartt & Samols, 2005), inferencing (Cain & Oakhill, 1999) and developing a standard of coherence (Perfetti, Landi & Oakhill, 2005; van den Broek et al., 1995). The term 'standard of coherence' refers to the reader's threshold for establishing that a text makes sense and

includes their capacity to self-monitor understanding and initiate repair strategies. Repair strategies can *“include rereading, changing the pace of reading, using context clues, and cross-checking cueing systems”* (McLaughlin, 2012, p.433).

In addition to higher-order processes, a building field of research has made links with a wider profile of language difficulties including vocabulary, oral expression, figurative language, verbal reasoning and grammatical development (Nation, Clarke, Marshall & Durand, 2004). A longitudinal study by Nation, Cocksey, Wilson and Bishop (2010) found that oral language difficulties in non-phonological domains were evident prior to the development of later reading comprehension difficulties in children with a poor comprehender profile. The authors suggested therefore that oral language plays a causal role in later reading comprehension; however, the implication of causation can be seen as contentious given the complex processes involved in comprehension and the implicit proposal of a single truth for all.

For some, the Simple View of reading offers a useful means of emphasising the contribution of language comprehension to the reading process and identifying the needs of children who require additional support. However, the model has a number of limitations and significantly oversimplifies the reading process (Hoffman, 2009). Hulme and Snowling (2009) suggest that the model fails to acknowledge other key contributors to successful reading including motivation and metacognitive skills. Furthermore, Vellutino and colleagues (2007) criticise the model for failing to acknowledge the relative contributions of different factors across development.

The reductionism inherent to the simple model has not only resulted in an oversimplification of reading profiles, it also offers little elaboration on the component processes which may require support in practice. The Construction-Integration (CI) model (Kintsch & Rawson, 2005) offers more detail around these processes within a psycholinguistic framework (see Figure 3).

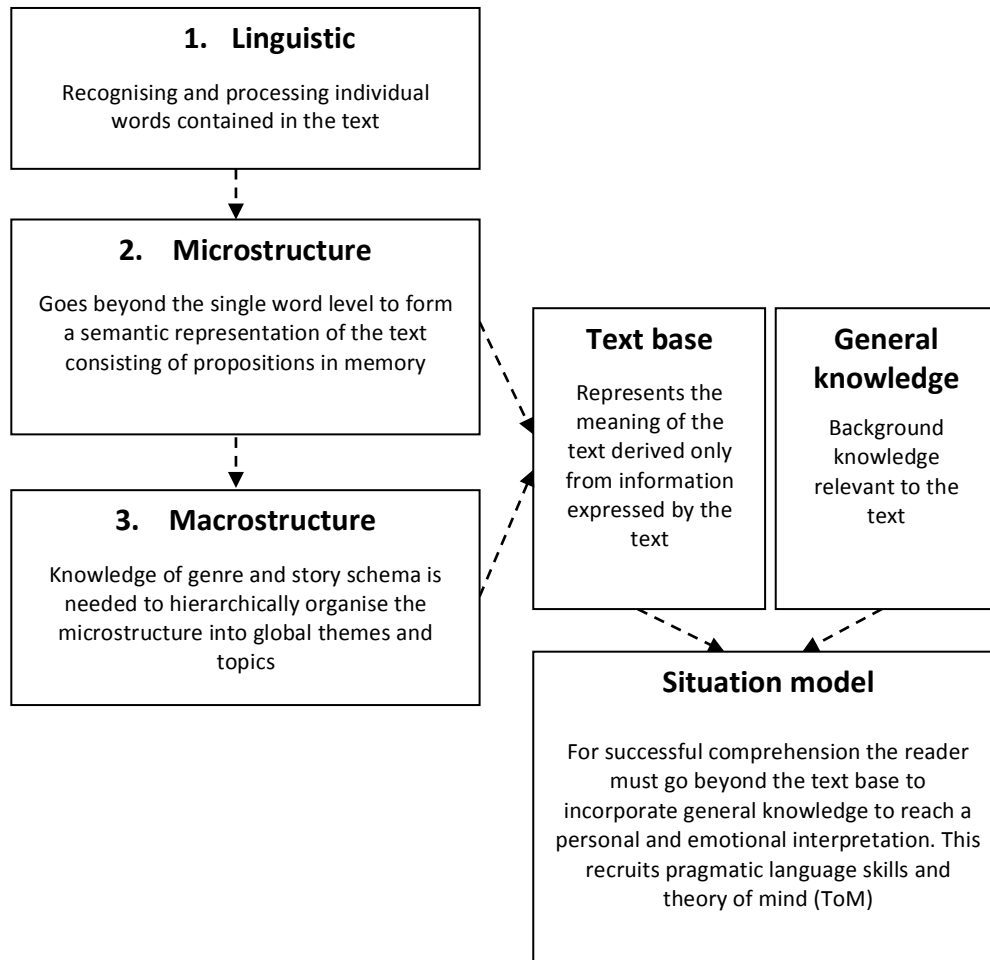


Figure 3. Levels of the Construction Integration (CI) Model (Kintsch & Rawson, 2005). Source: Clarke, Henderson & Truelove (2010, p.84).

Central to the CI model are the interactions between processes at different levels. The model accounts for fundamental micro processes at the word level and suggests that semantic representations at this level are combined with knowledge of themes at the macro level to form the 'text base'. The text base refers to meaning that can be accessed through the information provided in the text only. Beyond this, the model incorporates background knowledge, which combines with the text base to form the 'situation model'. In this way, the situation model represents successful reading for meaning; it acknowledges the reader's emotional response to the text, the need to make inferences beyond its literal meaning and the capacity to adopt alternative points of view.

The CI model is more successful than the simple model at accounting for the complexity of reading comprehension because it highlights the interactive and personal nature of meaningful reading. The model suggests that oral language skills might be influential in the processes leading to the development of the text base whereas higher order processes such as inferencing, comprehension monitoring and drawing on personal experience might facilitate the formation of a rich situation model. A criticism of the CI model is that it assumes success at the word level and is therefore less useful for children who have difficulties with decoding. Although the model has greater application for children with a poor comprehender profile, it remains constrained as an explanatory framework. Given its basis in the information-processing paradigm, the model can be seen as overemphasising cognitive factors and failing to account for important motivational and sociocontextual factors including what, where, how, why and with whom children read (Alexander, 2012).

Reading Profiles in Children on the Autism Spectrum

She read excellently... but was unable to reproduce from memory anything she had read.

Kanner (1943, p.229)

Despite its reductionist approach, a body of research has used the simple model as a basis for developing understanding about the nature of reading in children with developmental disorders such as ASC (Ricketts, 2011). Indeed, the simplicity of the model appeals to researchers who seek to develop theory around the cognitive processes of reading by studying atypical profiles. Under this agenda, the dissociation between reading competencies is considered a useful means of testing hypotheses about typical and atypical development.

Autism spectrum disorders represent a cluster of neurodevelopmental disorders in which individuals show marked and persistent difficulties in the areas of communication and social interaction alongside repetitive behaviours or narrow areas of interest (DSM-5; APA, 2013). Although previously described

as an umbrella term for four separate disorders (DSM-IV; APA, 2000) including Asperger's Syndrome, a recent revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013) united diagnoses into a single construct of Autism Spectrum Disorder (ASD)¹. This revision therefore emphasises a continuous rather than categorical approach to understanding ASC in which individuals are positioned at the extreme end of a continuum of normal variation in autistic features across the population (Baron-Cohen et al., 2009). Although prevalence is therefore very difficult to ascertain, a study in South Thames by Baird and colleagues (2006) suggested that 1% of children aged 9-10 have ASC. In educational contexts in the UK, most children with ASC are considered to have SEN and as such Educational Psychologists (EPs) are frequently involved in supporting them. For this reason, consideration of the research literature around areas of need with links to appropriate interventions has particular relevance to EPs as researcher-practitioners.

The social interaction and behaviour of children on the autism spectrum has received far greater attention in the literature than their wider language and literacy skills and this emphasis seems to be reflected in educational practice. Nevertheless, a developing body of research has considered the reading profiles of children with ASC. A number of studies provide evidence to suggest that children with ASC often display weaknesses in reading comprehension in contrast to strengths in word recognition (Ricketts et al., 2013; Huemer & Mann, 2010; Wilson et al., 2009); however, it should be acknowledged that a range of profiles are evident and no one profile can be considered characteristic (Norbury & Nation, 2011).

Nation, Clarke, Wright and Williams (2006) carried out a highly cited piece of research into the reading skills of a large sample of children with ASC aged 6-15 years. Although as a group their word reading was average for their age, there was wide variation within the sample and nine out of 41 children did not have measurable word reading skills. This demonstrates that strengths in

¹ Due to personal preference I return to using the term autism spectrum 'condition' rather than 'disorder' herewith; however the two terms are considered synonymous.

word recognition are not typical across children and findings should not be overgeneralised. Nevertheless, the majority of children in the sample demonstrated difficulties with reading comprehension and 34% of the sample had a profile consistent with the poor comprehender profile. When compared against the prevalence rates of around 10% of children in the wider population (Nation & Snowling, 1997; Nation et al., 2010), the findings of the study suggest that this may be a particularly common area of difficulty for children with high-functioning ASC and Asperger's Syndrome. Furthermore, some individuals on the spectrum display a 'hyperlexic' profile in which they demonstrate *outstanding* single-word reading skills (often characterised by an obsessive interest in word reading) and relative weaknesses in comprehension (Nation, 1999).

Descriptive research studies such as those described above are common in the literature and a shared critique of all is that findings should be regarded with caution given the wide individual differences between children on the autism spectrum. Research from a positivist position often champions the use of standardised assessment measures, which can only be used with a specific sample of children with ASC at the higher functioning end of the spectrum. Furthermore, these standardised assessment measures lack the capacity to reflect the complexity of component processes of reading comprehension, the changing nature of processes over time and the online processes involved in reading for meaning (Clarke, Henderson and Truelove, 2010; McNamara & Kendeou, 2011).

There are also particular implications for the use of such measures with children on the autism spectrum. This is because the majority of assessments are delivered through a social medium in which questions are asked about a text and verbal responses are required. As such, it is quite possible that children with ASC score poorly on such tests because of the social demands of the testing situation rather than because they have a difficulty in understanding per se. This criticism should be borne in mind, however there are a number of aspects of the comprehension process which are likely to be problematic for children who have

difficulties in communication and social interaction beyond their capacity to 'perform' on an assessment measure, as I will go on to consider.

Understanding Why Comprehension Might Break Down

...Research devoted to understanding the source of the deficits in higher level discourse understanding is important to learning how to help these individuals better function in society.

Wahlberg and Magliano (2004, p.120)

From a pragmatic stance, the interest in why comprehension might break down for some children with ASC is only of use in the extent to which it informs how we can support these individuals most effectively. A number of explanations attempt to explain the comprehension difficulties experienced by individuals with ASC; however, there is still insufficient evidence for any consensus to have formed in the literature (Saldaña & Frith, 2007). Explanations for comprehension difficulties in the otherwise typically developing population (as discussed above) have application for children with ASC. Beyond this, there are more specific accounts that predominantly link to cognitive style. In this section, I give brief consideration to both, culminating in a social constructivist grounded theory approach which attempts to model a more holistic picture of the factors affecting comprehension for children with ASC.

Language Skills

A growing area of research has highlighted the importance of oral language skills in later reading comprehension (Spencer et al., 2014; Clarke, Snowling, Truelove & Hulme, 2010; Nation et al., 2010). In line with the diagnostic criteria for ASC, these children are often characterised by delays or differences in their language development (Eigsti et al., 2011; Boucher, 2012). Norbury and Nation (2011) emphasised the role of oral language skills in the development of reading comprehension skills in their study involving 26 male adolescents with ASC. They found that individuals with structural language

difficulties also had poorer comprehension skills. This finding was corroborated by Ricketts and colleagues (2013) who attempted to explain what factors might constrain reading comprehension *within* a group of 100 adolescents with ASC. In support of the simple model, they found that word recognition and oral language were both significant predictors of reading comprehension skill; however they also found that social impairments explained unique variance in the data once these factors were controlled. Although this study was very much confirmatory rather than exploratory, it corroborates criticisms of the simple model as failing to account for a range of influences and suggests that factors beyond language competence have relevance.

Indeed, not all studies of comprehension in ASC have highlighted the role of underlying language skills. In Scandinavia, Åsberg (2010) found that sixteen children with ASC demonstrated significant weaknesses in discourse level comprehension skills compared to typically developing peers despite there being no differences in performance on oral vocabulary and grammatical tasks. Åsberg (2010) concluded that whilst the data did not dismiss the role of basic language comprehension, it could not provide a complete explanation. Contradictory findings regarding the role of language may to a large extent be attributed to differences in the groups studied.

It is important then to consider a number of factors which might together provide a flexible explanatory framework which does not seek to uncover a universal truth.

Activating Prior Knowledge

Within the CI model, language factors might be influential in the early processes involved in developing the text base whereas higher-level factors may be more influential for children who have secure language skills. The model highlights the importance of drawing on background knowledge and memories of previous experiences in the development of a situation model. Given evidence suggesting that children with ASC have difficulties in drawing on autobiographical memory (Losh & Capps, 2003) and understanding the self

(Lind, 2010), it is perhaps unsurprising that this skill has been investigated. Walhberg and Magliano (2004) found that readers with ASC were unable to use background knowledge to interpret the meaning of ambiguous texts. However, Saldaña & Frith (2007) contradicted this finding. They conducted an experimental priming study that considered the role of world knowledge in making appropriate inferences and found that adolescents with autism were no different to their peers in their activation prior knowledge. Again, contradictory findings may be ascribed to variability across groups and it remains unclear how the ability to activate prior knowledge links with the likelihood that children with ASC have more limited life experiences.

Cognitive Theories of ASC

Going beyond the CI model, three cognitive theories have been most salient in the field of autism research; namely, Theory of Mind (ToM; Happé, 1994; Baron-Cohen, Leslie & Frith, 1985), Weak Central Coherence (WCC; Frith, 2003) and Executive Functioning (EF; Ozonoff & Miller, 1996). In depth consideration and critique of these theories is beyond the remit of this literature review; however, the links between such theories and reading comprehension are considered in brief.

Theory of Mind (ToM)

Ricketts and colleagues (2013) highlighted the role of social skills in comprehension and difficulties in social interaction can be explained most readily by ToM. ToM refers to the ability to understand the mental states and perspectives of others (Baron-Cohen et al., 1985). Difficulties in ToM may mean that children with ASC have a rigid and literal understanding of the world that is reflected in the way they understand text (Carnahan & Williamson, 2010). This can impact on reading for meaning as children may find it difficult to make inferences about the motives and emotions of characters (Carnahan et al., 2011). Walhberg and Magliano (2004) propose that deficits in ToM may lead to difficulties in understanding the intention of the writer and thus the purpose of the message communicated by the text. A lack of understanding about the true

purpose of reading in this way can plausibly link to difficulties with motivation to understand and may over time result in a lower standard of coherence.

Although there is a focus in the literature on the impact of ToM on higher-level understanding, ToM may also affect interactive language learning experiences which impact on more fundamental comprehension processes.

Weak Central Coherence (WCC)

WCC theory (Frith, 2003) proposes that individuals with ASC have a general difficulty in semantic integration such that they attend more closely to the details than to the gestalt whole. In this way, they may struggle to make links across contexts and draw upon surrounding context to facilitate understanding. Using an online methodology, Saldaña and Frith (2007) found evidence to dispute this theory as adolescents with ASC were able to use relevant information from the text to support inferencing. Nevertheless, WCC can offer some explanation for both the relative strengths and weaknesses often seen in reading profiles in ASC.

Firstly, attention to visual details supports the development of orthographic knowledge and so evidence of visual strengths in ASC (Shah & Frith, 1983), including personal accounts from individuals (Grandin, 1995; Tammet, 2009), might explain why several children have strengths in word reading. Conversely, an emphasis on, or preference for, visual details and individual words could also provide an explanation for why comprehension breaks down; less attention may be given to connecting the meanings of individual words to gather the gist of connected text (Happé & Frith, 2006). In reading, this theory is supported by evidence that children with ASC often have difficulties in summarising text and identifying a purpose for reading (Carnahan et al., 2011).

Executive Functioning (EF)

A further explanatory framework is provided by EF theory (Ozonoff & Miller, 1996), which relates to planning, organising and monitoring skills. With regards to the reading process, EF reflects the capacity to direct attention to

appropriate parts of the text and integrate relevant information (Carnahan et al., 2011). In this way, it refers to goal-directed behaviour and metacognitive aspects of reading for meaning such as comprehension monitoring and standards of coherence. Such processes are essential for self-awareness of when comprehension is breaking down and the initiation of appropriate repair strategies.

Understanding Reading Comprehension Difficulties in ASC

Although only briefly outlined here, much of the literature outlining possible explanations for comprehension weaknesses in children with ASC relates back to these cognitive theories. The cognitive nature of the reading process leads to a skew in the research conducted in this area with an emphasis on positivist studies with experimental designs and a growing use of neuroimaging techniques. Furthermore, positivist studies are more publishable than small qualitative studies with heterogeneous samples. Consequently, few studies reported in peer-reviewed journals have adopted a qualitative approach to exploring the comprehension of children with ASC. This represents a gap in the literature of studies which empower those taking part in the research and value personal experiences.

A recent study to address this issue was conducted by Williamson, Carnahan and Jacobs (2012). They used social constructivist grounded theory (Charmaz, 2000) to explore the reading comprehension profiles of 13 children with high-functioning ASC aged 7-13 years. Children read a variety of texts and were asked to describe their thought processes to the researcher either verbally, in written form or by drawing a picture. The researchers asked questions to establish children's access to relevant background knowledge and passage comprehension for both literal and inferential information. Through grounded theory, the authors developed a comprehensive model to represent the theoretical constructs that are involved in comprehension in ASC via an approach that promoted the voice of the child (see Figure 4).

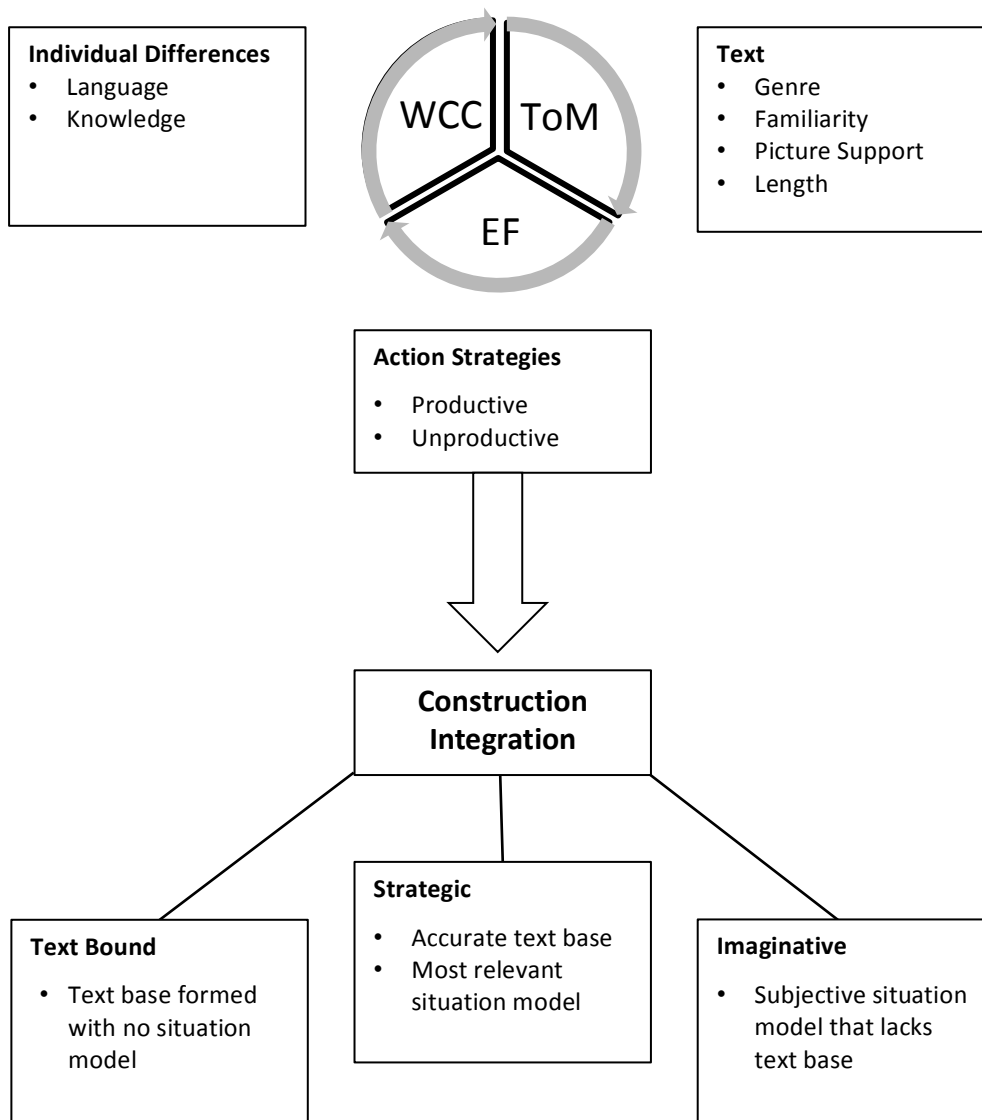


Figure 4. Grounded Theory of the Comprehension of Text of High Functioning Individuals on the Autism Spectrum. Adapted from: Williamson, Carnahan & Jacobs (2012, p.460).

Extending the CI model, Williamson and colleagues (2012) account for the interaction between text characteristics (genre, familiarity, picture support and length), reader characteristics (language skills and conceptual knowledge) and action strategies (inference making and strategy-use). Furthermore, they acknowledge the influence of ToM, WCC and EF. As outcomes, Williamson and colleagues (2012) found evidence of three reading profiles within their sample referred to as ‘text bound’, ‘strategic’ and ‘imaginative’ comprehenders. Text bound comprehenders tended to have language difficulties and were often tied

to the literal information provided in the text base. This group displayed language difficulties, struggled with unfamiliar texts and often gave very brief responses to questions. In contrast, strategic comprehenders offered elaborated answers and were able to answer both literal and inferential questions (indicating creation of a situation model). They demonstrated proactive reading behaviours such as integrating prior knowledge, asking questions and creating visual images in their minds but found prediction difficult. Strategic comprehenders also struggled to understand the motives and emotional states of characters which the authors interpreted as difficulties with ToM. Finally, imaginative comprehenders reported using visual strategies to support their understanding and performed better when texts were supplemented with pictures. Children in this group demonstrated the ability to draw on background knowledge to support elaborative inferencing; however, they tended to produce highly individualised situation models which bore limited resemblance to the text base.

The model produced by Williamson and colleagues (2012) represents a useful start to improving our understanding of comprehension profiles in children with ASC. It attempts to account for motivational and socio-contextual factors; however, it does not outline such influences in detail beyond the descriptive accounts of the three profiles. Additionally, the influence of language skills is represented very simply without specifying the ways in which oral language processes might impact on reading comprehension. The grounded theory method adopted in the study provides a beneficial and alternative approach to many cognitive studies in the literature; however it can also be criticised for its assumption that the 'think aloud' procedure was able to provide a clear window on the thought processes of children with ASC. This criticism could be made regardless of the participant group; however, children with ASC may well have struggled to communicate their thoughts even more so due to the social medium of data collection. Nevertheless, the model may have particular implications for intervention because it is able to outline areas of strength and difficulty to inform the development of a personalised intervention

approach. This aligns with conclusions and recommendations in the wider literature on children with the poor comprehender profile:

For the practitioner... findings highlight the need to tailor intervention programmes to the specific weaknesses presented by each child. For the theorist, they indicate that reading comprehension level can be determined by many different language and cognitive factors.

Cain and Oakhill (2006, p.692)

The need to tailor intervention to the individual seems even more pertinent for children with ASC due to the complexity of their developmental profiles. Furthermore, given the negative long-term outcomes of comprehension difficulties outlined in the poor comprehender literature (Cain & Oakhill, 2006), there is a need to consider how these skills might best be promoted for children on the autism spectrum to support their educational progress and enhance their quality of life.

Approaches to Comprehension Intervention for Children with ASC

In light of... growing awareness of the need for evidence-based practices... school psychologists can expect to be involved in the educational programming of students with ASCs and should be knowledgeable about empirically supported strategies relevant to the inclusive education of these children.

Williams, Johnson & Sukhodolsky (2005, p.117)

As a profession, EPs are involved in the implementation and evaluation of interventions to support children with ASC. In an international review of best practice in educational provision for children with ASC, Parsons et al. (2011) found that no single type of intervention approach was favourable. Williams and colleagues (2005) suggest that interventions for children and young people with ASC involve strategies to support 1) challenging behaviour, 2) academic skills and 3) social interaction. In the UK, there appears to be greater emphasis on,

and access to, interventions to support behaviour and social skills for children with ASC than on interventions for supporting specific aspects of learning.

With reference to reading skills, few interventions have been reported in the literature and only a small number within this attempt to evaluate approaches to supporting comprehension for children with ASC. Many comprehension interventions in the wider population are based on the advice of a large meta-analysis by the National Reading Panel (NICHD, 2000), which identified effective evidence-based strategies to support comprehension alongside other aspects of reading. The NRP proposed that *all* children, including those with reading difficulties, should be supported in comprehension monitoring, co-operative learning, graphic organisers, narrative structure, asking and answering questions and summarisation. Despite this, no evidence specific to children with ASC was provided. Furthermore, the rigorous inclusion criteria would have dismissed the few small-scale studies that have sought to identify ‘what works’ in reading comprehension intervention for children with ASC since this time. I will go on to consider this handful of studies; however it is first relevant to consider intervention research in the wider poor comprehender literature:

Given the wide variety of strengths and weaknesses exhibited by children on the spectrum, it seems reasonable that reading comprehension interventions targeted for typically developing children who struggle with the complexities of reading comprehension may also benefit children with ASCs.

Randi, Newman & Grigorenko (2010, p.897)

McMaster, Espin & van den Broek (2014) highlight the need for stronger links between theory and practice in this area. Indeed, the majority of intervention studies for children with specific comprehension difficulties focus on intensive teaching of strategies which have little ecological validity in educational settings (Oakhill & Patel, 1991; McGee & Johnson, 2003; Johnson-Glenberg, 2000). A large-scale study (Clarke et al., 2010; Clarke et al., 2013) that

I was involved in attempted to develop comprehensive packages of intervention, which built upon NRP recommendations and emphasised the connections between component skills in comprehension. In this school-based study, three approaches were contrasted: an oral language programme, a text-based programme and a combined programme.

Children aged 8-10 with specific comprehension difficulties received twenty weeks of intervention in pairs and 1:1 with a TA and their progress was monitored over time. All teaching approaches were based on sociocultural theory (Vygotsky, 1978) and centred around a Reciprocal Teaching approach (RT; Palinscar & Brown, 1984), which places an emphasis on rich dialogue and peer interaction. Around this, different strategies were taught dependent on the overall approach. Children in the oral language group received teaching in 1) vocabulary, 2) RT with spoken language, 3) figurative language and 4) spoken narrative. In contrast, children in the text-based group worked on 1) metacognitive strategies, 2) RT with written language, 3) inferencing and 4) written narrative. Our findings provided support for the benefits of all three approaches and particularly implicated the importance of supporting oral language skills as a means of promoting and sustaining gains in reading comprehension. Yet, the use of packages of strategies also prevented us from establishing which particular aspects of the intervention were most effective for which children. Due to the RCT design, the study was not set up to take in-depth account of children's views or consider which approach might be most appropriate for a particular child given their individual profile.

Given the paucity of similar studies with children on the spectrum and the aforementioned similarities in reading profiles, the study has implications for developing research and practice for children with ASC. In their review of reading intervention studies for children with ASC, Whalon, Otaiba and Delano (2009) outlined only five studies that focused on meaning-making and, at that time, only two were described as targeting comprehension (Whalon & Hanline, 2008; O'Connor & Klein, 2004).

Whalon and Hanline (2008) evaluated an intervention that ran in schools and used a multiple baseline design to teach direct comprehension strategy instruction. Akin to the teaching principles underpinning interventions in our study (Clarke et al., 2010), Whalon and Hanline (2008) used a reciprocal questioning approach and coupled this with visual prompts and comprehension-monitoring to support the comprehension skills of three boys aged 7-8 with ASC. These pupils worked in pairs with typically developing peers and teaching was carried out in 30-40 minute sessions by the researcher. Whalon and Hanline (2008) reported improvements in both unprompted question generating and answering about texts; however they did not investigate wider implications or the experiences of participating children.

In a more recent study in Sweden, Åsberg and Sandberg (2010) implemented an intervention in schools for 12 older children with high-functioning ASC (aged 10-15 years) which was based on the Question Answer Relations (QAR; Raphael et al., 2006) strategy. Drawing on the principles of Vygotsky's (1978) zone of proximal development, these researchers developed the QAR intervention alongside teachers and investigated outcomes in terms of test scores (in comparison to a control group) alongside accounts from teachers and students. Sessions were carried out 2-3 times a week for four weeks and each lasted 20-30 minutes. Despite its Vygotskian basis, Åsberg and Sandberg (2010) claimed that QAR does not demand advanced social skills in the way that RT does; however, my own consideration of the procedure and materials suggested few differences. The findings of this study revealed significant gains in reading comprehension such that children with ASC were no longer performing significantly below the level of typically developing peers. Furthermore, reports from teachers and pupils generally supported the benefits of the approach.

A paper by Whalon and Hart (2011) similarly discusses how QAR might be adapted to successfully meet the needs of children with ASC. They suggest that strategy teaching could be supported with visual prompts, such as story cards, and that intervention approaches might structure the transition from literal questions to inferential questions more gradually with the aim of

removing scaffolding over time. Whalon and Hart (2011) identify the need for further research around implementing cooperative learning interventions to support children with ASC. In contrast to this recommendation, a body of studies have investigated how computer software packages might be used to support children with ASC given their difficulties with social interaction. Although there is understandable growth in the application of computer-assisted intervention to enhance social interaction, language and communication (see Ploog et al, 2012), there remain unaddressed questions around more traditional Vygotskian approaches to working with individuals with ASC. Furthermore, studies such as Ramdoss et al. (2011) suggest that, although computer-based interventions for teaching language skills show a degree of promise, the research field is still in its infancy and has not yet provided a strong evidence base (under positivist criteria) to support its use in education.

Relating the intervention literature more closely to the EP role, Greenway (2002) discusses the implementation of a RT intervention with children with learning difficulties from an EP perspective. She suggests that supporting comprehension skills is not an area in which many EPs engage or feel skilled. This account identifies a gap in EP practice which links to the paucity of research studies in this area. Alongside highlighting the need to evaluate such interventions, Greenway (2002) draws attention to the role of consultation and the need to account for teachers' espoused beliefs about pupils' capacity to change before embarking on a RT intervention. In this way, Greenway's paper provides a basis for considering the advantages and 'potential pitfalls' for an EP implementing such an intervention.

Summary of Literature Review

The Simple View of reading (Gough and Tunmer, 1986) provides a useful framework for conceptualising discrepancies between decoding and language comprehension. In my review of the literature, I highlighted a common 'poor comprehender' profile in children with ASC in which relative strengths in decoding contrast with weaknesses in comprehension. A number of positivist

studies provide some insight into the nature and prevalence of this reading profile in children with ASC; however I found little qualitative evidence of the views and experiences of children, parents and practitioners.

Williamson and colleagues (2012) contributed to the development of theory around reading profiles in ASC using a grounded theory approach which incorporated the CI model (Kintsch & Rawson, 2005) alongside cognitive theories of autism including ToM, WCC and EF theory. Models of comprehension and consideration of why comprehension might break down for children with ASC can be helpful for informing intervention approaches; yet, few intervention studies consider how children with ASC can be supported to read for meaning. Furthermore, despite their role in supporting children on the autism spectrum, EPs often do not feel upskilled in this area (Greenway, 2002). Therefore, many questions relating to both theory and practice remain unaddressed. Reference to the wider intervention literature on supporting children with a poor comprehender profile is consequently necessary and useful in developing the field and enhancing practice.

Research Aims

In this study, I aim to explore the gap identified in the literature and in practice regarding how to support children with ASC to read for meaning. I feel well placed to address my research aim due to the combination of my past experience in reading comprehension intervention research and my unfolding practice as a TEP. Given that reading comprehension is a multi-faceted and complex process, an inevitable challenge in undertaking research in this area is to establish a clear focus and a targeted set of objectives. Within the field of intervention research, I decided that RT (Palinscar & Brown, 1984) would provide a clear, bounded and evidence-based approach to supporting reading comprehension within which to situate my research.

Reciprocal Teaching (RT)

RT is an instructional approach based on principles of cooperative learning that centres around four key cognitive strategies (predicting, clarifying, questioning and summarising) that is used with small groups of individuals. These strategies are usually used in a routine format in relation to sections of text and aim to foster comprehension skills.

Children are encouraged to read proactively and with purpose and develop skills in thinking about their own thinking (metacognition). In addition to supporting a dialogue around text in relation to the four strategies, the approach also encourages children to lead the RT process. RT is therefore not a published intervention package but rather a multi-strategy approach with an underlying ethos that can be applied to a range of texts.

As outlined in my review of the literature, there is insufficient evidence with regard to the use of RT with children with ASC and this is of particular research interest given its basis in the principles of cooperative learning and reliance on social interactions between pupils. Nevertheless, RT has a strong evidence base for improving reading comprehension in the wider population (Rosenshine & Meister, 1994) and is recommended by the NRP (NICHD, 2000) and Brooks (2013) in his influential report ‘What works for children and young people with literacy difficulties?’

With reference to all children with comprehension weaknesses, McNamara and Kendeou (2011) attempted to translate the research evidence regarding what is known about reading comprehension into educational practice. Among their recommendations they highlight the need to “*design interventions that influence the actual comprehension process.*” (McNamara & Kendeou, 2011, p.38). By this, they refer to supporting the unfolding reading *process* rather than the *product* of reading (comprehension of text). They suggest that a focus on the product does not facilitate tutors’ understanding of how best to support reading comprehension. This links with a common observation that in practice teachers often *test* comprehension rather than

teaching comprehension; that is, they ask questions to assess the product but often do not effectively support the process. This may be one reason why the involvement of an EP may be sought to support learners with SEN whose reading comprehension skills are not progressing within the context of typical classroom practice.

As is evident from the description of RT above, this method of teaching does focus on the unfolding process of reading, further justifying my rationale for situating my research within the RT approach. Furthermore, RT strategies would conceivably align with the ‘productive strategies’ aspect of Williamson et al.’s (2012) model (see Figure 4 in Chapter 2).

My intention within the current study was not to assess the efficacy of a RT intervention with a group of children with ASC (although I feel this would be a worthwhile research endeavour), rather my interests resided around how I could make adjustments within the context of a RT intervention to enhance its application for learners with ASC. Such an investigation and exploration of practice would enable me to utilise and develop my knowledge and skills as a practitioner.

In line with my values, both inclusion and eliciting children’s views were key research objectives. Lipsky & Gartner (1997) identified the use of educational approaches, such as cooperative learning, within the context of personalised instruction as a key element of effective inclusion. As such, my aim to make adjustments to RT to meet the needs of children with ASC aligned with a fundamental principle of inclusion. Furthermore, this approach accords with the concept of ‘noticing and adjusting’ (British Psychological Society, 1999; DfE, 2013), which also links to inclusion.

...relevant adjustments and monitoring that demonstrate progress may be most effective in promoting a learner’s sense of belonging to a school community.

Barrett et al. (2002, p. 308)

‘Noticing and adjusting’ refers to the close monitoring of children’s individual progress to inform teaching practice. Barrett and colleagues (2002)

refer to its utility in EP practice as a means of assisting educational professionals to individualise assessment and teaching approaches to support children's literacy skills.

In line with my values around the voice of the child, a central aim was to gather the views of children with ASC on the intervention and the adjustments I introduced to inform the ongoing planning and delivery of the intervention.

By undertaking a practice-based research study I therefore hoped to address a significant gap in research and practice around supporting children with ASC (Parsons et al., 2013).

My research interests and intentions led me to one over-arching research question with two sub-questions as detailed below.

Research Questions

1. **How can I enhance² a Reciprocal Teaching intervention to support the reading comprehension skills of children with ASC³ who have difficulties in understanding what they read?**
 - a. *What additional supports and resources can I introduce to enhance the content and process of a Reciprocal Teaching intervention for children with ASC?*
 - b. *How can I gather the views of children with ASC on the intervention and use these to inform intervention planning and evaluation?*

² The meaning of the word 'enhance' is operationalised through the two sub-questions. Consequently, by 'enhance' I mean supplement RT with additional resources and procedures and thereby develop a tailored intervention in response to ongoing feedback from the children involved.

³ Although both participating children have diagnoses of Asperger's Syndrome, I chose to use the broad term 'ASC' within this study in line with the recent revisions to the DSM-5 (APA, 2013). Nevertheless, I recognise that the children involved are at the higher-functioning end of the autism spectrum.

CHAPTER 3: RESEARCH DESIGN AND ORIENTATION

In this chapter, I set out my rationale for my chosen methodology and seek to address issues of ontology and epistemology before providing a brief overview of the design. My intention is to provide a concise section outlining the main design features of the study here to minimise overlap with Chapters 4 and 5, in which I provide detailed, integrated accounts of the two action research cycles. In the latter half of the current chapter, I discuss piloting activities, participant selection and sample characteristics. I conclude the chapter by outlining ethical considerations.

Why Action Research?

Given the number of positivist studies in the literature, I felt it important to consider an experimental, quantitative study in the first instance and subsequently be clear about my rationale for discounting this methodology and the associated assumptions about ontology and epistemology.

Practical concerns about the scope and timescale of the study were a consideration in moving away from an experimental research design in which I might have attempted to demonstrate that the implementation of an intervention led to significant improvements in reading comprehension in a group of children with ASC. The heterogeneity and size of the participant group required to establish the power to test the statistical significance of any outcomes would undoubtedly be challenging with the resources and time at my disposal. Nevertheless, such issues of feasibility were not at the heart of my decision to discard research questions that aimed to ascertain cause and effect within the context of an intervention.

More central to my decision to explore other methodologies was the shift in my own thinking about the underpinning philosophy of research and my desire to focus on the complexities inherent to practice. Grappling with complexity is key to the EP role and as such I felt that the control and objectivity required of an experimental study was not reflective of my professional role.

Furthermore, with regard to axiology, eliciting children's voices was a key value underpinning my research and I felt that the confirmatory nature of an experimental study would not provide the context for incorporating participants' views in a high-quality manner. In this way, the process of the research was as important to me as any outcomes and this aligns with the importance McNamara and Kendeou (2011) placed on the process as well as the product of comprehension.

I therefore sought a methodology in which I could recognise the part I played within the research and broaden my knowledge base as a research-practitioner. By bringing past knowledge and skills to bear within the context of practice, I hoped to conduct a study that was both deductive and exploratory, the outcome of which was likely to be further questions rather than neat solutions.

Action research rejects the notion of an objective, value-free approach to knowledge generation in favor of an explicitly political, socially engaged, and democratic practice.

Brydon-Miller, Greenwood & Maguire (2003, p.13)

Action research provided a framework within which to address my research questions and thereby develop my own practice and understanding whilst responding to the views of participating children. Reason and Bradbury (2008) offer the following working definition of action research:

Action research is a participatory process concerned with developing practical knowing in the pursuit of worthwhile human purposes. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people...

Reason and Bradbury (2008, p.4)

Also referred to as ‘practitioner’ or ‘practice-based’ research (McNiff, 2013), action research can be seen as a research orientation in addition to a distinct methodology; action research seeks to address questions of practice through an emphasis on participation, action and inquiry and therefore encapsulates an approach to research that diverges from dominant research orientations within the social sciences (Reason & Bradbury, 2008). Perhaps this view of action research is due in part to its emergence from a range of disciplines (including education and psychology) over time (Brydon-Miller et al., 2003).

McNiff and Whitehead (2010, p.17) identify several key characteristics of action research, most significant of which “...are that it:

- *is practice based, and practice is understood as action and research;*
- *is about improving practice (both action and research), creating knowledge, and generating living theories of practice;*
- *focuses on improving learning, not improving behaviours; ”*

All of these points have relevance to my study, however the final point speaks to my selection of action research over experimental research. Although in answering my research questions I incorporate data on behavioural outcomes and seek to support the reading comprehension skills of children with ASC, I give particular focus to the improvements in my own learning as a practitioner engaging in intervention delivery. Furthermore, by creating new knowledge about my practice I seek to develop theoretical understanding around how to support children with ASC to read for meaning.

Ontology and Epistemology

Action researchers propose that one can come to ‘know’ through iterative cycles of action and reflection. In a spoken book edited by Bell, Gaventa

and Peters (1990), Myles Horton and Paulo Freire discuss fundamental concepts of participation and emancipation drawing on their lived experiences of pedagogy and education. A quote from this meeting of minds, became the title of the publication:

...we make the road by walking.

Paulo Friere in Bell, Gaventa and Peters (1990, p.6)

This quote has been linked to the organic, evolving nature of action research (Reason & Bradbury, 2008) and speaks directly to the current study. The notion that our actions dictate the direction of our path reflects the positioning of myself, the action researcher, at the centre of the research. In this way, the richness of human experience is embraced and theorised to give rise to 'living theories of practice' (Whitehead, 1989). According to Whitehead, accounts of the lived experience of improving practice (that have been subject to the public criticism of others) give rise to living educational theories. For Whitehead (1989), such theories are not of the traditional propositional form but rather they are living dialogues that involve ongoing questioning and answering and make reference to the lives of individuals and the contexts of their practice. This is not to reject the value of propositional theory but rather to place this as a contributor to the claim to knowledge that is established through cycles of action and reflection. In this way, theories of reading comprehension and ASC can be seen to contribute to a living theory of my practice in this study.

The clear emphasis on *action* within the methodology is key and, for me, resonates with a pragmatic epistemological stance.

Knowledge comes from doing.

Brydon-Miller, Greenwood & Maguire (2003, p.14)

Pragmatism values the overlaps and distinctions of quantitative and qualitative approaches to research. This ethos maps closely to the applied work

of EPs due to the focus on solving complex problems in context and the need for accountability around evidence-based practice (Nastasi, 2009). Onwuegbuzie and Teddlie (2003) call for recognition of the value of pragmatism and a concurrent shift away from conceptualising research as quantitative or qualitative in preference for an approach which recognises the values of exploratory (inductive) and confirmatory (deductive) research tools when addressing a research question. According to Morgan (2007), 'abduction' refers to a movement back and forth between deductive (theory driven) reasoning and inductive (data-driven) reasoning in which, from a pragmatic stance, the only means of testing theories is through action.

The principles of pragmatism and the associated implications for data collection and analysis are reflective of my own positioning within this piece of action research; I value all data that speak to my research question and move fluidly between induction and deduction through my cycles of action and reflection.

Design

Overview of Action Research Cycles

In line with the unfolding organisation of this thesis outlined in Chapter 1, I provide a brief overview of my design here as a concise precursor to the detailed discussion of the procedure, intervention delivery, data collection, analysis and interpretation presented in integrated chapters for Phase 1 (Chapter 4) and Phase 2 (Chapter 5).

My phased inquiry involved two 'macro-cycles' of action research (see Figure 5). The first macro-cycle, Phase 1, represented a 'trailing' phase in which I sought to tailor the intervention to the children involved and develop my learning as a means of informing and improving my actions and my practice in Phase 2. The second macro-cycle, Phase 2, represented an 'intensive intervention' phase in which I made adjustments to RT in conjunction with others with the educational intent of supplementing the intervention for children with ASC.

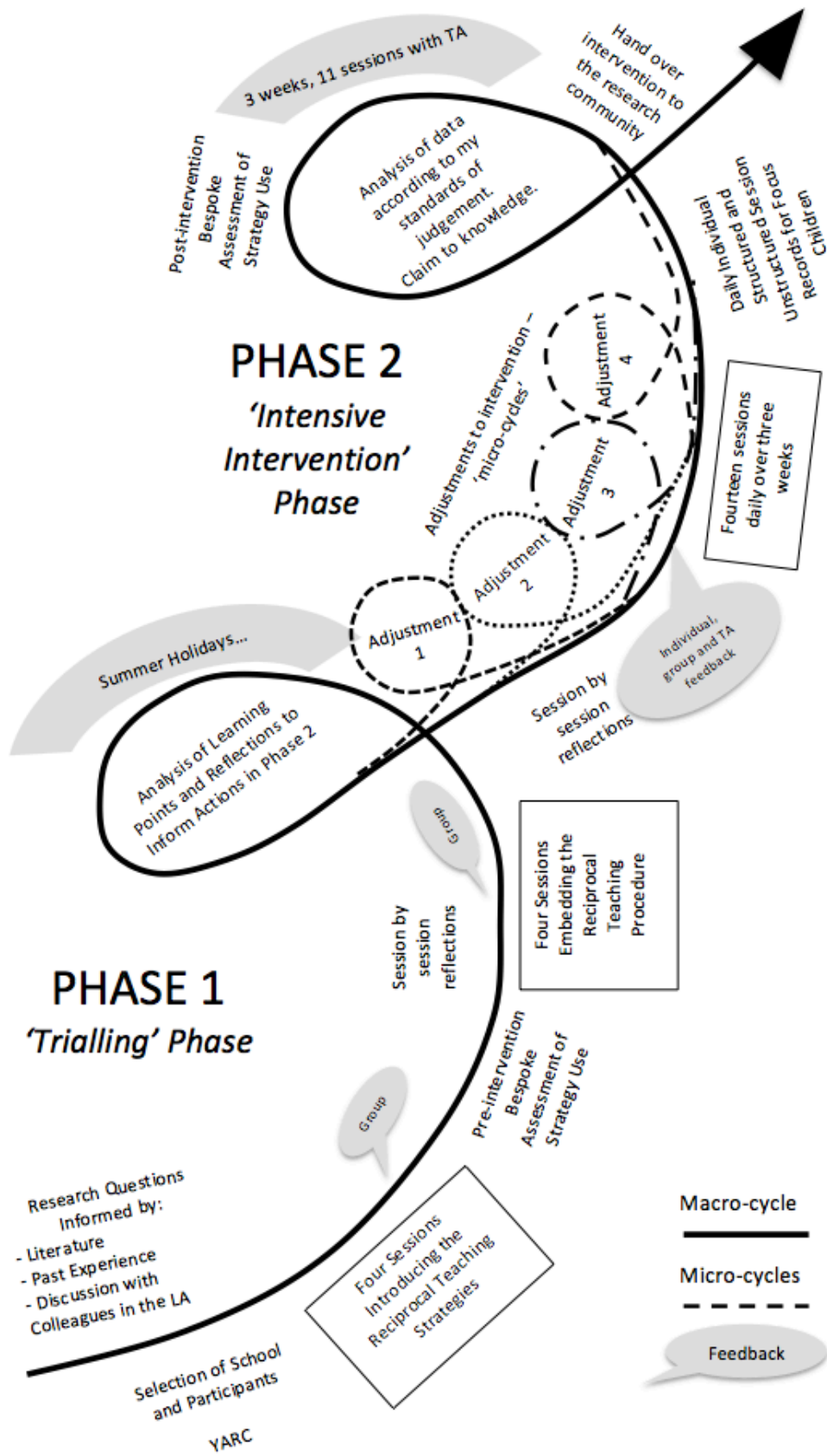


Figure 5. A Diagrammatic Overview of my Action Research Cycles

Two children aged 8-9 with diagnoses of Asperger's Syndrome, Jack and Amy⁴, were the focus of the research. In line with the nature of RT as a group-based intervention and in accordance with my values around inclusion, four children without ASC also took part in the intervention sessions (see 'Participants' section for details and rationale). These children displayed a poor comprehender profile akin to Jack and Amy but were not the focus of data collection, analysis or interpretation. All children attended the same primary school and I did not work directly with this school in my role as a TEP.

Across the two phases, I delivered twenty-two intervention sessions based around the RT intervention approach. I collected data across a range of sources as a means of triangulating evidence linked to my research questions:

- Reflective records (Phase 1 and 2)
- Bespoke assessment of RT strategy-use (Phase 1 and 2)
- Feedback from the group (Phase 1 and 2)
- Individual structured and unstructured feedback from Jack and Amy (Phase 2)
- Individual observation records for Jack and Amy (Phase 2)
- Feedback from TA (Phase 2)
- Conversations with critical friends (Phase 2)

My action to collect additional data in Phase 2 was informed by my learning in Phase 1, akin to the wider issues of practice that I addressed through the same iterative process.

Similarly, my analytic strategy developed across the two phases. Initially, I organised my learning in Phase 1 according to my research questions as a means of informing my actions in Phase 2. In Phase 2, I developed my analysis and structured the first research sub-question (RQ1a) in accordance with four key adjustments to the RT process that I explored in the 'intensive intervention'

⁴ The names of children have been altered to preserve their anonymity.

phase. I conceptualised these four adjustments as ‘micro-cycles’ of action within my wider inquiry. To increase the rigour of the study, I identified standards of judgement taking into account confirming and disconfirming evidence against identified criteria of what I expected to see if the adjustments enhanced RT for Amy and Jack.

Throughout my inquiry I sought to elicit and act upon the views of Amy and Jack and incorporate these into my interpretation of the data; I spoke to this aspect of the design in connection with my second research sub-question (RQ1b).

Across the study, I placed an emphasis on generating questions for further research and practice. Following the completion of two cycles of action research I synthesised my learning to make a claim to educational knowledge on the basis of my living theory of practice.

Early Piloting Activities

I considered a discrete pilot study to be inappropriate due to the need to tailor the intervention to the children involved; I therefore awaited ethical approval and consent to work directly with the participant group. Once achieved, Phase 1 provided an extended trialling phase in which some pilot work was conducted (see Chapter 4). Nevertheless, my activities prior to that time guided my early thinking and planning and I consider these briefly here.

Initially, conversations with specialist teachers for ASC and EPs in my Local Authority (LA) verified the gap I had identified in research and practice and supported the shaping of my research design. Undoubtedly, my past experience informed my thinking around intervention development. Nevertheless, to update my training I attended a one-day course run by the Fischer Trust on ‘Reciprocal Reading’ (see Brooks 2013; and http://www.literacy.fischertrust.org/pages/School_PD_Day_Training_id86, last accessed 16.02.14). The course encouraged me to consider how the four RT strategies could be used with a focus on routine and repetition, which might suit learners with ASC. I also gained an insight into how school staff might

understand the principles, format and application of RT given that representatives from most schools in the LA have attended this training course in recent years.

Participants

Selection of Participants

Through discussions with a specialist teacher, I identified a primary school with the highest number of children in the LA who met the following criteria:

1. They were in Year 4 (aged 8-9) during the summer term of 2013
2. They had a diagnosis of ASC or Asperger's Syndrome
3. They displayed a 'poor comprehender' reading profile

Following a meeting with the Special Educational Needs Co-ordinator (SENCo) and school EP, I obtained fully-informed consent for the study from the head teacher via an information sheet and consent form (Appendix 1). These documents outlined the need for further informed consent from parents and pupils in order for the project to proceed. In addition, I drew up a research-school agreement (Appendix 2) to avoid foreseeable obstacles to the research agenda.

The SENCo liaised with class teachers to identify children who met my initial criteria for involvement in the study:

- Three children aged 8-9 *with* ASC or Asperger's Syndrome and a poor comprehender reading profile
- Three children aged 8-9 *without* ASC and a poor comprehender reading profile

There were a number of reasons for involving children without ASC in my research design:

1. To support children with ASC in engaging in the cooperative learning principles of RT in a group context
2. To meet group-size recommendations of 6-8 for RT (Oczkus, 2010)
3. To ensure the research was inclusive in line with my values
4. To support the reading comprehension needs of a wider group of children

It is noteworthy that Whalon and Hanline (2008) similarly included typically developing peers in their intervention study with three boys aged 7-8 with ASC. It was desirable for children without ASC to display age-appropriate social skills in order to support the social interactions inherent to the RT intervention; however, in line with my principles of inclusion, potential participants were not excluded on this criterion.

The sample was recruited via purposive sampling in which the SENCo and I discussed and agreed upon children who would benefit from involvement. The names of children have been altered to preserve their anonymity.

Although three children with diagnoses of ASC or Asperger's Syndrome were discussed, one of these children was discounted because he did not display a poor comprehender profile. The SENCo suggested that another child, Bradley, who at the time was being assessed for ASC, was a more appropriate choice because he had a distinct poor comprehender profile. Nevertheless, no diagnosis was given to this child, which was consistent with my observations that he did not display significant social communication difficulties.

Reflection from Session 3, Phase 1

Bradley who has been very quiet and shy in the sessions thus far, blossomed in confidence [today] and... asked if he could perform a 'rap' to the group. This was an unexpected display of self-confidence and confirmed my building understanding that Bradley does not meet the criteria of having social communication difficulties commensurate with ASC.

As a result, Bradley was considered as a fourth child without ASC and two children with a diagnosis of Asperger's Syndrome, Jack and Amy, became the focus of my research. In addition, three children, Kamil, Zoe and Adam, were put forward as meeting the criteria for children without ASC.

I therefore sought parental consent for two 'focus children' with Asperger's Syndrome and four 'non-focus children' without ASC⁵. I successfully gathered parental consent for all six children to take part via an information sheet and consent form (Appendix 3). At this stage, non-focus children were only guaranteed to take part in Phase 1 of the intervention to allow my learning to guide my decision-making around group size in Phase 2.

Having gathered parental consent, I met individually with each child to obtain informed consent for the study and talk through the information sheet (Appendix 4) and consent form (Appendix 5). To supplement all children's understanding of research, I used an unpublished information sheet on research for children with ASC developed by colleagues at the University of Leeds (Appendix 6). I also took this opportunity to build rapport and ask children about their reading preferences to inform my early intervention planning.

I successfully gathered direct consent from five out of the six prospective participants. Initially, Adam (a non-focus child) was unsure whether to take part; however, following an observation of the first session he subsequently gave consent for the study.

I administered the York Assessment of Reading for Comprehension (YARC; Snowling et al., 2009) with all children except Adam prior to beginning the intervention. The rationale for administering this standardised assessment of reading comprehension was to provide further information about children's reading profiles to supplement the information provided by school staff and

⁵ I use the terms 'focus' and 'non-focus' hereafter in the absence of a more pleasing means of distinguishing between those children with ASC with whom the research is focussed and those children who were central to the study but not the focus of my research questions.

thereby confirm the selection of participants and inform intervention planning (see details below).

Sample Characteristics

The School

The school in which the research was situated is the largest primary school in the LA and has approximately 550 pupils on the roll. The school is located in a relatively socio-economically deprived area of the city.

A member of school staff attended the Fischer Trust training course over a year prior to the study but subsequently left the school. The SENCo informed me that no teachers were using RT at the time of the study.

The Children

Table 1 provides information about the demographic characteristics and reading profiles of the children participating in the study.

Table 1. Participant Information including Standardised Scores on the Single Word Reading Test (SWRT) and the York Assessment of Reading for Comprehension (YARC)

Child	Gender	Research category	Age	Std. Score on SWRT	Standard Scores on YARC		
					Accuracy	Rate	Comp.
Jack	Male	Focus	8;11	107	114	114	104
Amy	Female	Focus	9;2	112	107	110	78
Bradley	Male	Non-focus	9;5	101	103	95	88
Kamil	Male	Non-focus	9;5	104	108	103	76
Zoe	Female	Non-focus	8;10	95	95	87	95
Adam	Male	Non-focus	8;11	-	-	-	-

The YARC provided some baseline information about children's reading profiles. The assessment involves children reading aloud a fiction and a non-fiction passage and answering eight comprehension questions about each text. In line with manual instructions, I opted to base the selection of the two passages on children's scores on the Single Word Reading Test (SWRT; Foster, 2007) rather than on their chronological age. The SWRT requires children to read aloud single words of increasing difficulty and I therefore considered this to be a more accurate indicator of the appropriate difficulty level of the passages.

As shown in Table 1, four children (Jack, Amy, Bradley and Kamil) displayed strong discrepancies between their YARC reading accuracy and reading comprehension scores (10-32 standard score points); for these children, the YARC data confirmed the reports of class teachers. Furthermore, the reading accuracy levels of these four children were similar suggesting that they would be able to access similar texts.

Zoe's reading profile was not as congruent with that of other group members; her SWRT and YARC reading accuracy scores were lower and as a result her YARC comprehension scores were based on easier passages. Being fully aware of the numerous disadvantages of standardised measures of reading comprehension (see Clark, Henderson & Truelove, 2010; McNamara & Kendeou, 2011), I decided that the importance I place on inclusion superseded the numeric scores provided by the measure. Zoe's comprehension was not greater than her accuracy score and this, together with teacher recommendations, informed my decision to include Zoe in the group. Similarly, although I did not collect baseline YARC data with Adam, I included him in the intervention on the recommendations of school staff.

Five children were from a white British ethnic background and spoke English as their first language. One non-focus child, Kamil, was born in Poland and spoke English as an Additional Language. Kamil received reading comprehension support from a peripatetic teacher with whom I liaised during

the intervention. No other children were receiving a structured programme of additional reading support during the study.

Although non-focus children contributed significantly to the study, my research aims necessitated that I concentrate on the two focus children. Therefore, despite many interesting questions arising regarding the experiences of non-focus children, these are beyond the remit of this thesis and I herewith concentrate my discussion on Jack and Amy.

Pen portraits of Amy and Jack (see Appendices 7 and 8) were based on a number of information-gathering exercises including discussions with school staff and observations in class. Due to the inherent complexity of reading comprehension and ASC, it may have been considered 'ideal' if the two children only exhibited the profiles stipulated in the criteria for participant selection. However, in reality children cannot be reduced to neat profiles and the two focus children were described in other ways in addition to their diagnoses of Asperger's Syndrome. Jack was also diagnosed with Attention Deficit Hyperactivity Disorder during Phase 1 and displayed behavioural difficulties characteristic of an inattentive and impulsive child. Background information regarding Amy suggested that she had some difficulties relating to sensory processing, motor speed and verbal/physical tics.

The severity of the two children's difficulties is perhaps indicated by the support packages they received at school at the time. Jack had a statement of SEN and received full-time support from a TA, whom I refer to using the pseudonym 'Mrs. Wilson'. Amy on the other hand, did not have a statement of SEN and received fifteen hours of support per week.

With regards to their reading profiles, it can be seen from Table 1 that Jack and Amy also differed in the severity of their reading comprehension difficulties and this finding was supported by reports from class teachers. Amy displayed significant weaknesses in comprehension that were categorised as a 'severe difficulty' on the YARC assessment. Several of her answers involved repeating sections of the text verbatim, often involving unrelated sections of the

text indicating a lack of metacognitive awareness. Jack, conversely scored in the average range for comprehension, answered several questions correctly without looking back at the text and made some inferences about the text. Despite their differences, item analysis of their responses across all the passages of the YARC suggested that both children displayed difficulties in answering questions involving vocabulary items, emotional states and knowledge-based inferences. Similarly, both children scored highest on literal questions with Jack scoring 92% correct (11 out of 12) and Amy scoring 58% correct (7 out of 12).

In relation to the three profiles theorised in Williamson and colleagues' (2012) model, I felt that both Amy and Jack fit most closely with the description of 'text bound' comprehenders due to their difficulties in forming an accurate text base and incorporating background knowledge to develop a rich situation model.

It is clear that whilst Jack and Amy share a number of commonalities including their diagnosis of Asperger's Syndrome (i.e. their age, school, reading accuracy levels, some of their comprehension difficulties), they are different from each other in many ways (gender, reading comprehension scores, additional diagnoses etc). I therefore do not make a claim to homogeneity within this small group, rather I value the different skills, characteristics and viewpoints both children bring to the research and feel this complexity adds breadth to my learning as an action researcher.

The TA (Mrs. Wilson)

Mrs. Wilson attended 19 out of 22 sessions and became increasingly involved in the study over time. She had no prior training or experience in delivering comprehension interventions.

Mrs. Wilson provided full-time 1:1 support for Jack and did not have responsibility for running any intervention groups at the time.

I sought her consent to take part in the study using the information sheet and consent form provided in Appendix 9.

Ethical Considerations

The study was approved by the University Ethics Committee. Nineteen out of 22 intervention sessions were scheduled at a time when children would usually engage in guided reading⁶ sessions and therefore they did not consistently miss other educational input.

The intervention activities were similar to other school-based activities and took place in a safe, familiar environment; I therefore did not anticipate any potential for physical harm to participants. I was aware, however, that children with ASC might become distressed due to lack of routine or structure and this contributed to my rationale for Phase 1; this trialling phase enabled me to build rapport, tailor the intervention and establish a routine structure. Furthermore, a familiar adult (Mrs. Wilson) was present in most sessions and this helped participants to feel safe. Mrs. Wilson's familiarity in working with Jack was important at times when he displayed signs of distress.

There is potential for researcher bias given my in-depth involvement in the intervention delivery and data collection. Within an experimental framework, my involvement would be seen as a threat to objectivity and reliability; however, in an action research framework, I maintained the quality of my inquiry through reflexivity around my practice. I attempted to avoid a positive bias in the feedback from participants by fully informing them of the purposes of research and actively seeking positive and negative feedback. I also reflected on the potential influence of my verbal and non-verbal actions in my learning journal to support my interpretations.

⁶ Guided reading was recommended as a model of good teaching practice in the National Literacy Strategy (DfEE, 1998) and involves a teacher and a small group of children reading together with purpose often on a daily basis.

CHAPTER 4: PHASE ONE - The 'Trialling' Phase

In the current integrated chapter, I describe, justify and critically analyse my actions in Phase 1. Following an overview, I consider the presiding set up of the intervention and my actions during four introductory sessions. In accordance with the chronological organisation of this thesis, I go on to consider the development, administration and baseline findings of a bespoke assessment of RT strategy-use which I completed mid-way through Phase 1. I consider how the assessment informed four further sessions of intervention in which I sought to embed the RT process. Following this, I outline the data I collected in Phase 1 and conclude the chapter with a discussion of how my learning informed my planned actions for Phase 2.

Overview of Phase 1

Phase 1 of the study is represented graphically in Figure 6.

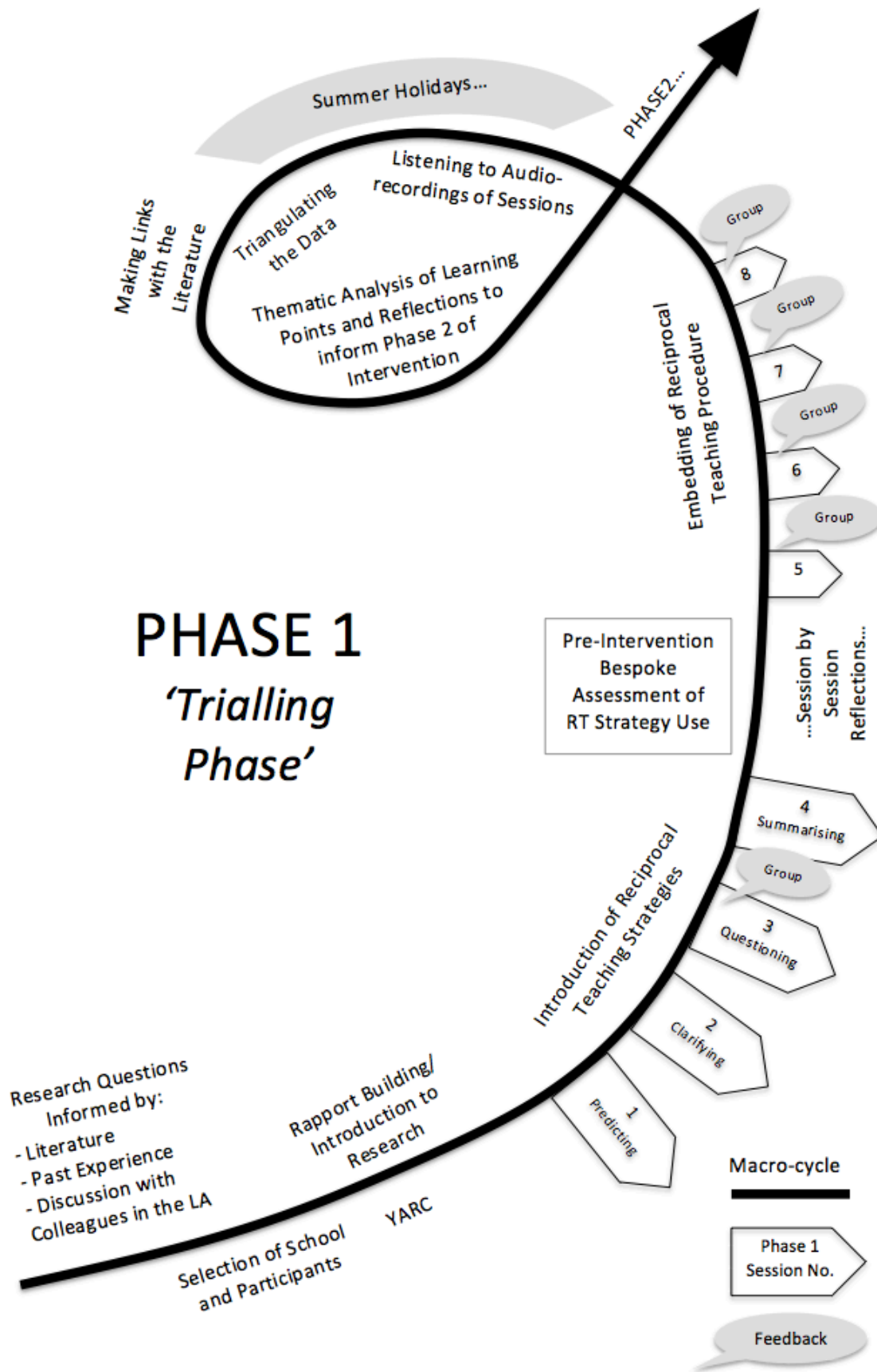


Figure 6. A Diagrammatic Overview of my Actions in Phase 1

As depicted in Figure 6, a number of actions took place in Phase 1; however, the key focus during this period was on introducing and embedding the RT procedure and feeding my learning across the first macro-cycle into my actions in Phase 2. Thus there was reduced emphasis on making changes at this stage in comparison to Phase 2 where this was my main focus. As indicated in Figure 6, I delivered four sessions in which I introduced the RT strategies prior to conducting a bespoke assessment of strategy-use. Following this, I carried out four further sessions in which group members engaged in a routine procedure for using the strategies around a piece of text. These activities took place within a three-week period toward the end of the summer term. The diagram indicates at what stages I gathered and trialled group feedback on the intervention during this time. I placed an emphasis throughout on generating questions around my practice.

During the summer break, I analysed the data from session-by-session reflective records in my learning journal alongside feedback from the children. I also listened back to audio-recorded sessions and feedback. Across the data sources, I drew out confirming and disconfirming evidence for those learning points identified in my reflective records which linked directly to my research questions. These learning points determined which actions I changed, introduced and kept the same in Phase 2.

The Presiding Reciprocal Teaching Intervention

Practicalities

I provided a description of RT in Chapter 2 alongside my rationale for using the approach. Here, I give a brief overview of the presiding set up of the RT intervention placing emphasis on practicalities.

In line with the principles of distributed practice (see Seabrook et al., 2005), other intervention studies in the literature (Clarke et al., 2010; Whalon & Hanline, 2008) and the recommendations for RT in guided reading groups (Oczkus, 2010), all intervention sessions were planned to last for 30 minutes. In

Phase 1, I delivered three sessions in week one, two sessions and the group-administered bespoke assessment in week two and three sessions in week three. An outline of the sessions is provided in Appendix 10 and the details of each session are included in Table 2 and Table 3. Every session included a short introduction and plenary to support consolidation.

Before each session I completed a planning sheet detailing my activities, timings and objectives (Appendix 11). I also kept a RT planner that included prompts for each strategy in relation to sections of each text (Appendix 12). I completed all planning sheets the day before each session to enable me to be flexible in response to feedback and my learning.

My Role as Group Facilitator

The teacher's role in the reading process is to create experiences and environments that introduce, nurture, or extend students' abilities to engage with text.

McLaughlin (2012, p. 434)

As group facilitator, my role in the sessions involved a number of different skills, including modelling strategy-use, scaffolding children's contributions and encouraging active participation.

Establishing a Safe Space and Group Identity

All intervention sessions took place in the same room across both phases. To support group cohesion and positive behaviour, group rules were jointly devised at the outset and children voted on a group name ('Rocket Readers'). Subsequently, I created a logo and referred to RT as 'rocket reading' to increase accessibility and specificity to the sessions. Developing a group identity was intended to support cooperative learning.

Text Characteristics

McNamara and Kendeou (2011) emphasise the importance of text characteristics. I chose to use non-fiction passages for a number of reasons:

- Children with ASC tend to favour non-fiction, expository texts possibly due to reduced social reasoning demands (Randi et al., 2010).
- Four out of five children (including Jack and Amy) expressed a liking for fact/information books pre-intervention.
- Non-fiction texts present fewer demands in relation to ToM/social skills thus reducing the complexity within the reading comprehension process and enabling me to make more robust inferences from the data.

Initially, I selected newspaper articles from popular children’s websites such as ‘CBBC newsround’ (<http://www.bbc.co.uk/newsround/> last accessed 21.02.14) and I linked these by a common theme of ‘animals’. Where necessary, I adapted the grammar and vocabulary to ensure appropriate decoding difficulty level. Pitching the texts for the group was an important aspect of the trialling phase and informed by participants’ performance on the YARC alongside my observations in the sessions.

After three sessions, I was concerned that short newspaper articles did not allow opportunities for children to engage with the text beyond the surface level. I therefore introduced extracts from a non-fiction book⁷ in sessions 4-8 to ensure continuity in the passage content whilst RT was embedded.

Visual Supports

As discussed in Chapter 2, children with ASC typically have difficulties processing language, which may contribute to weaknesses in reading comprehension. Studies suggest that individuals with ASC process visual information more readily than auditory information (Tissot & Evans, 2003; Hermelin & O’Connor, 1970) and hyperlexia is often cited as evidence of visual strengths in learners with ASC (Quill, 1995). As a means of building on areas of strength, it is considered good practice to use non-transient visual aids to supplement transient verbal information through the use of picture cards, visual

⁷ The book was based on a news story about a whale and so was in keeping with the animal theme and linked to the genre of news articles.

timetables, written prompts and so on (The National Institute for Health and Care Excellence, 2013; Quill, 1995). Tissot and Evans (2003, p. 426) define visual supports as “...two-dimensional or three-dimensional representations of a particular concept used to communicate and teach that idea or concept.”

Peeters (1997) suggests that visual supports assist children with ASC by:

- Providing concrete aids to support understanding of abstract concepts
- Supporting transitions between activities
- Increasing independence skills

In line with this, visual timetables (or schedules) are commonly used with children with ASC in educational settings and are considered an effective behavioural support (Mesibov et al., 2002).

Given this evidence base, I consistently used visual supports to assist learners to engage with the predominantly verbal process of RT. Gately (2008) recommends colour-coding RT strategies to facilitate recall for learners with ASC and so I created four colour-coded strategy cards featuring visual symbols and written words (see Figure 7).



Figure 7. Strategy Cards Incorporating Visual Symbols from ‘Communicate: In Print 2’ (Widgit Symbols (c) Widgit Software 2002-2014 www.widgit.com)

Strategy cards formed part of the visual timetable used in every session (Appendix 13) and were displayed across a number of resources including the prompt sheet shown in Figure 8.





Our Four Strategies		
	Predict	What do we expect we are going to read about next?
	Clarify	Which words and phrases do we need to find out about?
	Question	What questions can we ask to help us understand more the text?
	Summarise	What are the main ideas in the text?

Figure 8. Personalised RT Strategy Prompt Sheet Incorporating Visual Symbols from 'Communicate: In Print 2' (Widgit Symbols (c) Widgit Software 2002-2014 www.widgit.com)

These visual aids can be considered an enhancement of the basic RT process. I also introduced visual aids to support the content covered in Phase 1 including photographs and maps. I discuss my findings regarding these visual adjustments later in the chapter.

Introducing the Four Reciprocal Teaching Strategies (Sessions 1-4)

I anticipated that four sessions would be sufficient to introduce the RT strategies before we practised using them all together in a single session (from Session 5 onwards). I also felt that an introduction was necessary prior to administering the bespoke pre-intervention assessment of strategy-use because children needed to understand the demands and terminology to access the assessment.

In accordance with 'Multiple Context Learning' (Beck, McKeown & Kucan, 2002), meaning-making around the strategies was based in familiar contexts, for example, a summary was linked to the idea of telling the class teacher the key points.

Table 2 provides details of the four introductory sessions I delivered, including information about attendance, session objectives, resources and activities.

Table 2. *Details of the Intervention Delivery for the Four Introductory Sessions of Phase 1*

No.	When	Attendance	Objectives	Resources	Activities and planned timings
1	Wed, week 1 12.00-12.30pm	Present: Jack, Amy, Bradley, Kamil, Adam, Mrs. Wilson Absent: Zoe	To build group cohesion and establish jointly constructed rules for the sessions To introduce the prediction and clarification strategies To develop turn taking skills and build relationships	Planning sheet Visual timetable Whiteboard Strategy cards Passage x 8 (newsround article 'Top teachers must crack jokes') Exercise books Dictionaries Highlighters Jokes	12.00-12.05 – Introduction and project overview. 12.05-12.10 – Thought shower group rules and possible group names. 12.10-12.15 – Read title of article and introduce the prediction strategy. I asked children to make predictions about what they were going to read about and write the definition of 'prediction' in their own words in their exercise book. 12.15-12.25 – Read article silently and introduce clarification strategy. I asked children to write the definition of 'clarification' in their own words in their exercise book. Children re-read the passage and highlighted tricky words. Children worked in pairs to look up one tricky word in the dictionary and shared it with the group. 12.25-12.28 – Each child was given a simple joke based on word play to share with a partner. 12.28 -12.30 – Plenary to consolidate content covered.
2	Thurs, week 1 12.00-12.30pm	Present: Jack, Amy, Bradley, Kamil, Zoe, Mrs. Wilson Absent: Adam	To build group cohesion and establish jointly constructed rules for the sessions To recap the prediction and clarification strategies To develop turn taking skills and build relationships	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards Passage x 8 Exercise books Dictionaries Highlighters Jokes	12.00-12.10 – Introduction, review ground rules and vote on group name (Rocket Readers). 12.10-12.18 – Re-read the article "Top teachers must crack jokes" silently. Re-cap the predictions children made and discuss whether they came true. 12.18-12.25 - Recap the clarification strategy and consider methods of clarifying including using the dictionary, asking a partner, discussing with the group. Highlight tricky words and select one to explore using one of the methods discussed. 12.25-12.28 – Children who did not have time to tell their jokes yesterday were given the opportunity to tell it today. Brief discussion about the meanings of the jokes. 12.28 -12.30 – Plenary to consolidate content covered.

No.	When	Attendance	Objectives	Resources	Activities and planned timings
3	Fri, week 1 9.00-9.30am	Present: Amy, Bradley, Kamil, Zoe, Adam Absent: Jack, Mrs. Wilson	To remind children of the session objectives and group rules To recap the prediction and clarification strategies with a new text To introduce the summarisation strategy To trial methods of gathering pupil voice	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards Passage x 8 (newsround article 'Cuddly toy sparks sick dog panic') Exercise books Dictionaries Highlighters Map of London	9.00-9.05am – Introduction and review of the ground rules. 9.05-9.10am - Read title of the article "Cuddly toy sparks sick dog panic" and children make predictions. 9.10-9.15am - Read the article silently and highlight any difficult words. Children clarify one tricky word each. 9.15-9.20am – Introduce the summarisation strategy. I asked children to write the definition of 'summarisation' in their own words in their exercise book. 9.20-9.25am – Role play activity to support children in summarising the text by providing a verbal summary in role as one of the characters in the article. 9.25-9.30am – Plenary to consolidate content covered. 9.30-9.40 – Group feedback Today I used 'round the circle' verbal feedback with all group members and Mrs. Wilson. Question posed: 'Has reading group been worse, the same or better than you expected - why?'

No.	When	Attendance	Objectives	Resources	Activities and planned timings
4	Wed, week 2 12.00- 12.30pm	All present	To remind children of the session objectives and group rules To recap the prediction strategy with a new text To introduce the questioning strategy	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards Passage x 8 ('Making a Splash' p.2 & 3) Exercise books Dictionaries Highlighters Questioning game sheet and dice	12.00-12.05am – Introduction and review of the ground rules. 12.05-12.10am - Read title of the book "Making a Splash" and children make predictions. Then read the article silently. 12.10-12.15am – Introduce the questioning strategy. I asked children to write the definition of 'questioning' in their own words in their exercise book. 12.15-12.25am – Use of game called 'Quality Question Street' (see Clarke et al. 2013, p.79) to promote question generation skills. 12.25-12.30am – Plenary to consolidate content covered.

Bespoke Assessment of RT Strategy-use

I created and carried out a bespoke assessment of RT strategy-use with all group members following the four introductory sessions (Appendix 14). Details of the development, administration and findings (for focus children) are discussed in this section. I repeated the bespoke assessment using a parallel form three weeks post-intervention (Appendix 15). I discuss the parallel development and administration of this form below and consider Jack and Amy's performance post-intervention in Chapter 5 as part of my triangulation of the data relating to my research questions⁸.

Developing the Bespoke Assessment

The purpose of the bespoke assessment was to provide pre- and post-intervention data that was closely tailored to the intervention content and the needs of the children (in line with my values). Development of this summative assessment was a key objective of the trialling phase and intended to complement the formative assessment that took place in the sessions through cycles of 'noticing and adjusting'. Assessment development was based on my information-gathering activities regarding children's profiles; this aligns with McLaughlin's (2012) recommendations around effective teaching practice for supporting reading comprehension.

I was aware from class observations and reports from school staff that all group members were able and accustomed to communicating in writing. I therefore constructed two parallel written versions of RT which incorporated visual prompts from the intervention sessions. Mimicking the verbal RT process without the supportive group context, the assessment was intended to provide an insight into independent RT strategy-use in a way that I could not observe in the sessions.

⁸ Due to the need to narrow the focus of this thesis, only data from the post-intervention bespoke assessment that are *directly* related to my research questions are triangulated with other data in Phase 2 and discussed in my analysis in Chapter 5.

It was not feasible to pilot the assessment because it was tailored to the group; I pitched the decoding level according to the YARC data and my observations and wrote newspaper articles akin to those encountered in the intervention.

To ensure that the pre- and post-intervention assessments were parallel, I used a Fog Index (<http://www.panix.com/~dhf/fog.html> last accessed 21.02.14) as a means of matching the passages on key indices. A Fog Index provides an indication of the difficulty level of a piece of text. Both bespoke assessment passages had a Fog Index of 10.96 and had the same number of words (189), sentences (12), average words per sentence (15.8) and percentage of complex words (11.6). To increase their comparability, I based both passages on unusual festivals in distant countries. I anticipated (and confirmed) that children did not have prior knowledge of the passage content, which could skew their responses.

Administering the Bespoke Assessment

Children were provided with the title alongside written instructions to write and draw a prediction about the article. They then read the text silently and followed sequential written instructions requiring them to clarify words, ask questions and provide a summary. Lastly, they marked on a 10cm line how well they had understood the text.

Children worked through the assessment at their own pace and took 25-30 minutes to complete the task. I made clear records of the verbal support I provided and was careful to assist only with clarificatory issues relating to the instructions, encouraging them to pass if unsure.

Baseline Data from the Bespoke Assessment

I discuss data collection and analysis of other data gathered in Phase 1 later in this chapter, however I here discuss the baseline data from the bespoke assessment⁹ because, in line with the principles of ‘assessment for learning’

⁹ Although data for all group members was informative, I restrict my discussion here to Amy and Jack’s responses.

(DCSF, 2008), it informed my practice in tailoring the intervention to children's needs.

Prediction

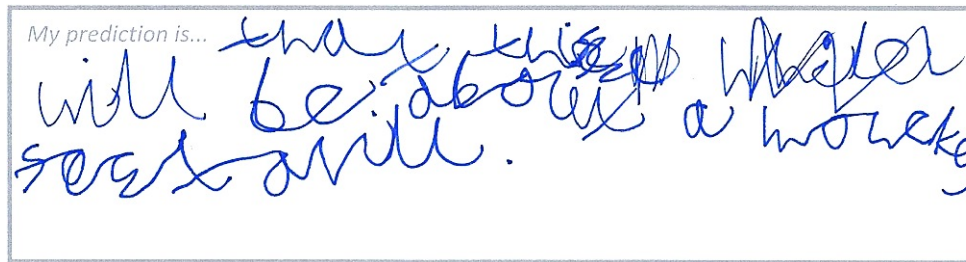
Amy provided an extended written prediction based on the title 'Monkey Buffet Festival' which included the location of the event, reference to food and a link to monkeys eating the food.

My prediction is... I think this article will be about monkeys having a buffet festival at they house they will be a lot of food at the buffet festival so the monkeys can have something to eat

Her prediction picture included three relevant points including an array of food, a banner saying 'buffet festival' and a monkey.

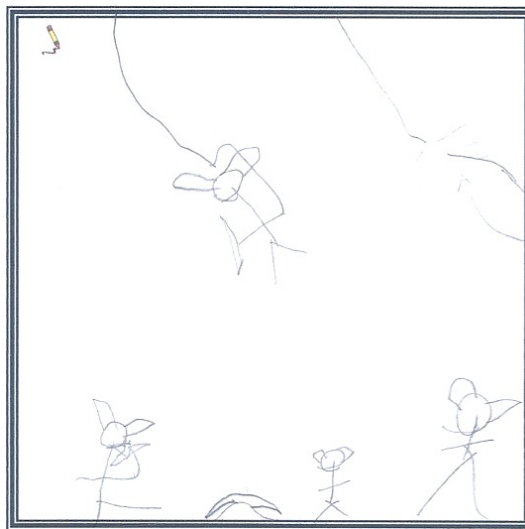


In contrast, Jack did not include any key points in his written prediction beyond restating the words in the title.



['That this will be about a monkey festival']

His prediction picture contained more information, of which two points were relevant to the title; four monkeys and food were represented pictorially.



When I asked, Jack explained that the monkey was holding a banana and that there was a 'splatted' banana below. Without further questioning (which was not part of my procedure), it was difficult to establish whether the presence of bananas was based on a prediction from the word 'buffet' or whether they were simply associated with monkeys. If this were the case, the picture appeared to be based on the word 'monkey' and did not represent the ideas of a 'buffet' or a 'festival'.

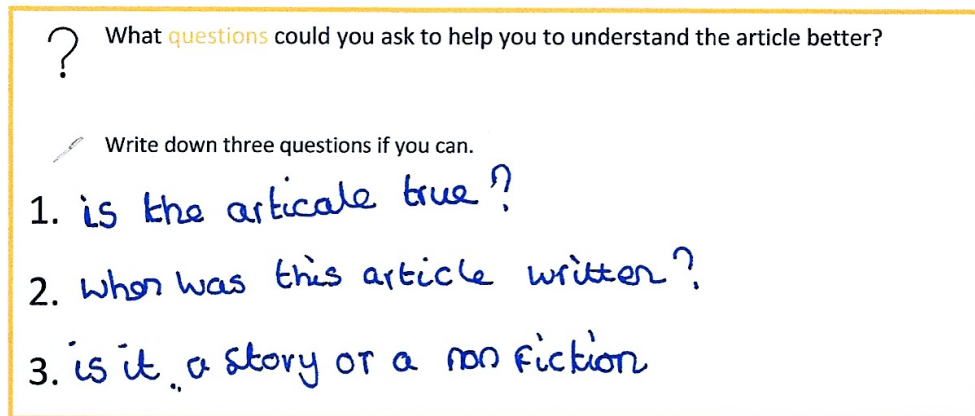
Clarification

I gathered little useful data from the clarification section of the assessment beyond the words that each child highlighted. Both Amy and Jack highlighted relevant, challenging words in the passage but neither directly answered the question intended to assess how the one word they looked-up in the dictionary supported their understanding of the passage. Furthermore, the

words they clarified ('population' for Amy and 'primates' for Jack) were not used in any later responses.

Question Generation

Amy asked three questions which were related to the nature of the passage rather than to specific aspects of its content.



? What **questions** could you ask to help you to understand the article better?

✍ Write down three questions if you can.

1. is the article true?
2. who was this article written?
3. is it a story or a non fiction

Nevertheless, her questions indicated a curiosity about the article and Amy was able to generate three questions as requested (though two overlapped substantially). Jack, on the other hand, generated just one question:

'Why do the people call monkeys for the festival?'

His question was very broad and the use of the verb 'call' indicated a possible misunderstanding of the text base. Furthermore, the potential answer required rested on the premise of the whole passage. Jack's performance indicated that he found it difficult to generate questions; however it may also have been influenced by the length of time spent working independently given his reported attention difficulties. Despite this, my behavioural observations indicated that Jack sat quietly and engaged with the assessment throughout.

Summarisation

Despite Jack having missed the introductory session in which we focussed on the 'summarisation' strategy, he produced a written summary that included some main points.

Write a short **summary** of the newspaper article.

The main points are...

that ^{there} a festival that ^{monkeys} has monkeys ^{not} people celebrating and people lay out food for the monkeys and something they stole food that was laid down.

[...that this a festival that has monkeys not people celebrating and people lay out food for the monkeys and something they steele food that was layed down.]

Overall, Jack demonstrated an awareness of the gist of the passage and included the following key points:

- There was a festival
- Monkeys attended the festival
- There was a celebration
- People provided food for the monkeys

Jack also included ideas that indicated a partial misunderstanding of aspects of the passage:

- People did not celebrate
- Some food is stolen if not laid down

Amy also communicated the gist of the passage in her summary.



Write a short **summary** of the newspaper article.

The main points are...

the monkey buffet festival is on the third thursday in november
its a time when monkeys get a big buffet all to there selves ..

Although she included a peripheral point regarding the timing of the festival, Amy's summary included reference to the festival and the monkeys being the recipients of the buffet.

Rating their Understanding

Speaking to their standard of coherence, Jack and Amy both rated their understanding of the passage very highly; Jack rated it as 9.4 and Amy as 9.1 by marking a 10cm line (from 0 'I did not understand anything' to 10 'I understood everything'). Comparing their responses to their performance, I felt that Jack and Amy were filtering out aspects of the passage they did not understand which indicates a low standard of coherence.

My Learning from the Pre-intervention Bespoke Assessment

I found the baseline data from this assessment very useful in my subsequent planning and actions not least because it challenged some of my building tacit knowledge about the two children.

With regard to Jack, I expected that he would use the strategies more successfully than he did (based on his YARC scores and participation in sessions

1-3). This finding may have been a product of the different conditions within which he was asked to display his understanding; however, I nevertheless took away a few learning points in relation to my practice:

Learning points:

- *RT strategies need further modelling and explanation as part of the subsequent embedding process (sessions 5-8)*
- *Drawing pictures may be a useful tool in the sessions*

For Amy, I had anticipated that she would find the assessment more challenging than her performance indicated. I wondered whether the written modality suited her more than the verbal exchanges inherent to the intervention sessions and the YARC assessment. Based on her performance in verbal domains, I had felt unsure about the extent to which Amy had understood the introduction to the strategies and how quickly she would be able to apply them; however the findings of the bespoke assessment suggested the following learning points:

Learning points:

- *Amy's verbal responses may be an underestimate of her comprehension*
- *Use of writing may be a helpful tool for Amy as she is able to write at speed and communicate a number of ideas via this modality*

For Jack and Amy, the results of the pre-intervention bespoke assessment indicated that 'questioning' was the most difficult strategy. This raised the following questions for my practice:

- ⇒ *What aspects of 'questioning' do children find particularly challenging?*
- ⇒ *How can I support children to generate questions in sessions 5-8?*
- ⇒ *Might I make an adjustment to the 'questioning' strategy in Phase 2?*

Embedding the Reciprocal Teaching Process (Sessions 5-8)

Following the bespoke assessment, I completed four further sessions with the group in which we practised the RT process (Appendix 10). In line with the guidance provided by the Fischer Trust, I opted to use the four strategies in a routine order around a short piece of text (see Figure 9).

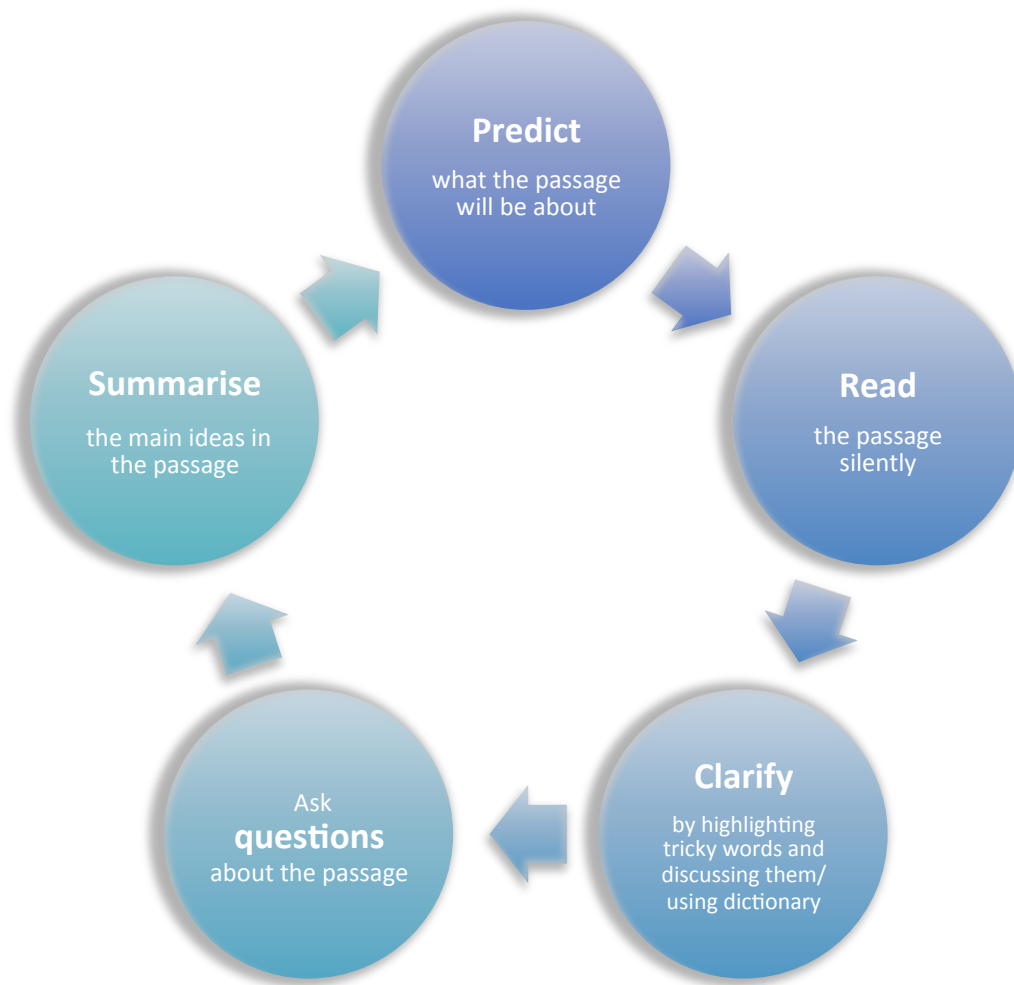


Figure 9. The Routine Reciprocal Teaching Process

In line with the principles of RT and social constructivist theory, the routine process involved in-depth discussion around the strategies within the group context.

The social constructivist nature of comprehension suggests that readers refine their understanding by negotiating meaning with others. This typically occurs through discussion.

McLaughlin (2012, p. 433)

Table 3 provides details of intervention delivery for sessions 5-8, including information about attendance, session objectives, resources and activities. The number of RT rounds within a 30-minute session varied between one and three dependent on the passage length and supporting activities. I introduced a tailored reward system in Session 5 (Appendix 16) and children received a coloured-coded star relating to their strategy-use.

Table 3. *Details of the Intervention Delivery for Sessions 5-8 of Phase 1*

No.	When	Attendance	Objectives	Resources	Activities and planned timings
5	Fri, week 2 9.00- 9.30am	All present	<p>To recap the text and activities covered so far</p> <p>To model the routine process of RT as it will run in the intervention sessions</p> <p>To support the consolidation of RT strategies</p> <p>To build self-esteem and awareness of strategy-use through a personalised reward system</p> <p>To trial a new method of gathering pupil voice</p>	<p>Planning sheet</p> <p>Visual timetable</p> <p>Group rules poster</p> <p>Whiteboard</p> <p>Strategy cards</p> <p>RT planner</p> <p>Small strategy card key ring x 6</p> <p>“Our Four Strategies” poster</p> <p>Passage x 8 (‘Making a Splash’ p.4)</p> <p>Dictionaries</p> <p>Highlighters</p> <p>Reward chart</p> <p>Map</p> <p>Object to pass around</p>	<p>9.00-9.05 – Introduction and review of the ground rules.</p> <p>9.05-9.10 – Recap the four RT strategies through group discussion and introduce the ‘Our Four Strategies’ poster (Figure 8) as a visual reminder. Introduce the personalised key ring alongside the cyclical RT process outlined in Figure 9 (and practise as follows). Introduce reward system linked to each of the strategies (stickers given at the end of the session).</p> <p>9.10-9.13 – Read title of article and children predict what they will read about in the text.</p> <p>9.13-9.18 – Read article silently and then re-read the passage highlighting tricky words. Children work in pairs to look up one tricky word in the dictionary and share with the group.</p> <p>9.18 -9.22 – Children are encouraged to ask questions about the text at the group level. Myself and Mrs. Wilson model some simple questions and encourage children to answer.</p> <p>9.22-9.25 – I recap the requirements of a verbal summary and model one for the group.</p> <p>9.25-9.30 – Plenary and rewards linked to strategy-use.</p> <p>9.30-9.35 - Group feedback</p> <p>I passed an object around the circle and each group member had the opportunity to answer two questions separately - 1) ‘What was good?’ and 2) ‘What was not-so-good?’ Mrs. Wilson and myself joined in the activity and children were reassured that they could pass if they wished.</p>

No.	When	Attendance	Objectives	Resources	Activities and planned timings
6	Wed, week 3 12.00-12.30pm	Present: Bradley, Kamil, Zoe, Jack (left for timeout with Mrs. Wilson part way through the session) Absent: Amy, Adam	To recap the text and activities covered so far To model the routine process of RT around sections of text To support the consolidation of RT strategies To build self-esteem and awareness of strategy-use through a personalised reward system To trial a new method of gathering pupil voice	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards RT planner Small strategy card key ring x 6 "Our Four Strategies" poster Passage x 8 ('Making a Splash' p.8 & 9) Dictionaries Highlighters Reward chart Map of Thames	12.00-12.05 – Introduction and recap previous session, ground rules and reward system. 12.05-12.15 – Practise one round of RT in relation to a section of text. I continued to provide modelling around the questioning and summarising aspects of the RT process. 12.15-12.25 – Practice a second round of RT. 12.25-12.30 – Plenary and rewards linked to strategy-use. 12.30-12.35 – Group feedback I asked children to use a rating scale in relation to specific activities in the session using their fingers (1 = "Did not help me to understand", 5 = "Helped me to understand a lot").

No.	When	Attendance	Objectives	Resources	Activities and planned timings
7	Thurs, week 3 12.00- 12.30pm	Present: Jack, Bradley, Kamil, Adam, Mrs. Wilson Absent: Amy, Zoe	To recap the text and activities covered so far To practise the routine RT process around a section of text To support the consolidation of RT strategies To build self-esteem and awareness of strategy-use through a personalised reward system To trial a new method of gathering pupil voice	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards RT planner Small strategy card key ring x 6 "Our Four Strategies" poster Passage x 8 ('Making a Splash' p.20) Dictionaries Highlighters Reward chart Blob tree x 8	12.00-12.05 – Introduction and recap previous session, ground rules and reward system. 12.05-12.25 – Practise one round of RT in relation to a section of text. I continued to provide modelling around the questioning and summarising aspects of the RT process. To support summarisation, I asked children to think of a short summary of the passage, which included the main ideas they had read about. Volunteers were chosen to provide their verbal summaries for the group and children commented on the quality of the summary provided. 12.25-12.30 – Plenary and rewards linked to strategy-use. 12.30-12.35 – Group feedback. I used the blob tree alongside solution-focussed questioning to support children in thinking about which blob represented them in the group and which blob they would like to be with reference to their reading.

No.	When	Attendance	Objectives	Resources	Activities and planned timings
8	Fri, week 3 9.00- 9.30am	Present: Bradley, Kamil, Absent: Jack, Amy, Zoe, Adam, Mrs. Wilson	To recap the text and activities covered so far To practise the routine RT process around a section of text To support the consolidation of RT strategies To build self-esteem and awareness of strategy-use through a personalised reward system To trial a new method of gathering pupil voice	Planning sheet Visual timetable Group rules poster Whiteboard Strategy cards RT planner Small strategy card key ring x 6 "Our Four Strategies" poster Passage x 8 ('Making a Splash' p.21, 24, 30) Dictionaries Highlighters Reward chart Object to pass around	9.00-9.05 – Introduction and recap previous session, ground rules and reward system. 9.05-9.25 – Practise three rounds of RT in relation to sections of the end of the text for this term. 9.25-9.30 – Plenary and rewards linked to strategy-use. 9.30-9.35 – Group feedback. I passed an object around the circle and each group member had the opportunity to answer two questions separately - 1) 'What have I enjoyed about reading group?' and 2) 'What do I hope for next term?'

Having provided brief procedural details regarding intervention delivery, I now consider the data collected in Phase 1 and subsequently analyse that data with reference to my learning and planned actions for Phase 2.

Data Collected in Phase 1

In addition to the pre-intervention bespoke assessment, I also collected qualitative data that spoke to my research questions.

Reflective Records

A key source of data were my session-by-session reflective records (extracts of which are presented in 'reflective boxes' in this thesis). These records formed a reflective and reflexive learning journal, which supported both my practice and research activities. I structured the reflective accounts around the following four questions proposed by Shepherd (2006) to develop insight into the practitioner-researcher role:

1. How do I feel about this?
2. What do I think about this?
3. What have I learned from this?
4. What action will I take as a result of my lessons learned?

According to Shepherd, the data created in a learning journal speak to issues of practice in relation to the self and others. The focus on generating learning points and linking these to subsequent actions in my learning journal facilitated my action research cycles and provided thick descriptive data whilst acknowledging my position within the generation and analysis of the data. Within the macro-cycle of Phase 1, I conceived there to be session-by-session micro-cycles of action in which my reflections were triangulated with group feedback in iterative cycles and my learning informed my planning from one session to the next.

The structured nature of the reflective accounts supported my criticality during intervention delivery whilst also providing data to return to

retrospectively and reflect on further. Shepherd (2006) suggests that the framework of questions promotes double-loop reflection akin to Argyris and Schön's (1974) concept of 'double-loop learning' in which reflections move beyond the surface level. I felt that returning to the audio-recordings between the two phases facilitated a deeper engagement with the data that was more aligned with double-loop reflection. For sessions 5-8, I completed retrospective records using this structure to increase rigour and criticality of my data analysis. From a more distanced perspective, I sought to interrogate my own thinking to a greater degree than was possible within the time constraints of intervention delivery.

Group Feedback

During Phase 1, I trialled various formats for eliciting pupils' views at the group level. I anticipated that gathering views would be challenging because:

1. In order to reflect on the intervention, children would be required to think about their own thinking (metacognition) which was an area of difficulty linked to their reading profiles.
2. Difficulties with working memory are associated with reading comprehension difficulties (Cain & Oakhill, 2006) and therefore children might struggle to remember aspects of the sessions on which to feedback.
3. I expected it would be difficult to distinguish between children's views on what was positive/negative about the intervention generally and what was positive/negative with regards to supporting comprehension.

I was also aware that the relationship between the skills needed to provide reflective feedback and the skills I was attempting to foster in the intervention sessions (metacognition) might mean that children became more skilled in providing feedback over time.

In addition, I anticipated that the difficulties experienced by children with ASC could add further challenges because feedback at the group level involved social demands and verbal contribution in front of others.

Despite these challenges, I felt it was paramount to gather this data due to my values around the voice of the child. Tangen (2008, p.158-9) identifies three levels of the term “listening to children’s voices”:

1. Strategies and methods for gathering voice in educational research and practice
2. Children’s experiences and views on particular activities and issues
3. Reference to those who are listened to as well as those who are listening

My focus in Phase 1 was mainly concerned with level 1 (how I could elicit children’s views) and level 2 (what children’s views were regarding the intervention). In terms of level 3, the subjects were children with ASC and I was the person listening to their voice and co-constructing meaning with them as someone who shared the intervention experience. For this reason, I consider the contributions of focus children to group feedback in sessions three, five and seven when one or both of them attended. Nevertheless, as recognised in Figure 6, group feedback also took place in sessions six and eight with non-focus children.

I gathered group feedback for around five minutes at the end of the sessions using different tools and questions. In sessions three and five, we engaged in a ‘round the circle’ feedback activity in which we passed round an object and answered questions (or passed). In session three, I asked: “Has the first week been better, worse or just as you expected and why?”

In session five, I simplified the questions and completed two rounds to avoid a bias towards positive answers; I asked a) “What was good?” b) “What was not-so-good?” I asked these questions with a view to increasing the

specificity to the comprehension aspects of the sessions as children became more accustomed to providing feedback.

In session seven, I used a projection technique known as a 'blob tree' (Wilson & Long, 2009) to reduce verbal demands. Using this pictorial resource, I asked questions akin to those I would use in my practice as a TEP such as:

- "Which one is your reading blob?"
- "Has your reading blob changed since you started reading group or is it the same?"
- "What do you think we could do in reading group next term to get to the top of the tree?"

Feedback relevant to my research questions is provided later in this chapter.

Standards for Judging the Quality of Data Collection in Phase 1

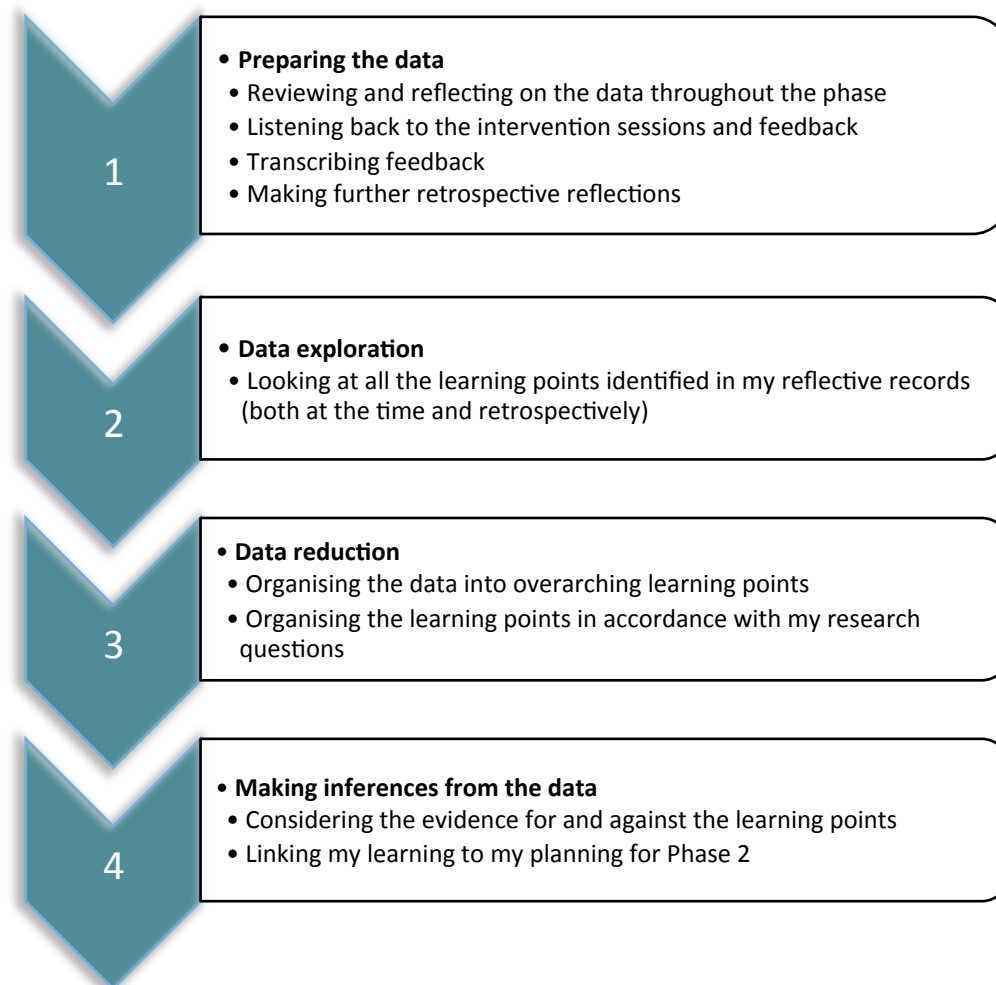
It is widely recognised that traditional positivist criteria for establishing quality are not applicable in action research (McNiff & Whitehead, 2010). Guba and Lincoln (1989) reconceptualised quantitative markers of quality around reliability, validity and objectivity by developing the qualitative proxies of dependability, credibility and confirmability. Recognising my influence on the data collection and the context-specific nature of the findings, I sought to ensure the quality of my data by addressing each of these proxies and taking steps to improve the quality of data collection in Phase 2 (see Appendix 17).

Furthermore, Whitehead (1989) encourages action researchers to be clear about their own living criteria and standards of judgement linked to their values. The quality of my Phase 1 data is therefore also indicated by the extent to which it attends to my values around inclusion and the voice of the child (see Appendix 18).

Learning from Phase 1 to Inform my Actions in Phase 2

As a ‘complete participant’ in the data collection and intervention delivery, my interpretation of the data was inevitably strongly influenced by my experiences prior to and within the study. As shown in Figure 10, my analytic strategy involved a mixture of deductive and inductive approaches across the time course of the study.

Figure 10. My Analytic Strategy for Processing the Phase 1 Data



Appendices 19 and 20 provide a detailed account of the processed data from Phase 1 in relation to my two research sub-questions. I summarise my findings very succinctly here recognising that my focus was on ‘trailing’ in the

first macro-cycle and that my learning points were subsequently tentative in nature¹⁰.

Research Question 1a (RQ1a)

What additional supports and resources can I introduce to enhance the content and process of a Reciprocal Teaching intervention for children with ASC?

Appendix 19 outlines in detail my learning points related to RQ1a including the available confirming and disconfirming evidence and my associated planned actions for Phase 2.

Early evidence from Phase 1 led me to identify the utility of visual supports linked to the content of texts such as pictures, photographs and maps. Pictures and photographs connected to news articles seemed to be particularly helpful for activating background knowledge and increasing children's engagement with the text when they depicted situations with which children were less familiar (for example, a picture of London from the opening credits of a popular television programme). Linked to this, I identified maps as a helpful tool for supporting children to think about where events were taking place. My observations and (retrospective) reflections about sessions five and seven supported this tentative learning point. Nevertheless, I noted some disconfirming evidence whilst listening back to the sessions; for example, Jack became quite pre-occupied with symbols on the map, which may have detracted from him making links with the text.

In addition to supplementing the *content* of the intervention, I was also interested in supports and resources that might facilitate the *process* of RT for Jack and Amy. I felt that strategy cards and the visual timetable supported both children to engage with and participate in the RT process whilst also facilitating my practice; the children and I frequently made reference to this visual aid. Although there was some disconfirming evidence to suggest that Jack was occasionally distracted by the visual timetable, there was more convincing

¹⁰ Phase 2 involved much more substantial data analysis and this is reflected in the depth of discussion provided.

evidence indicating that the visual supports served to build his anticipation and proactive engagement with RT.

Based on the limited evidence available, I felt it would be beneficial to continue using visual supports to enhance the content and process of RT in Phase 2 but in doing so to address questions around the specific objectives of these adjustments and gather more direct feedback from Jack and Amy about their usefulness.

Beyond concrete visual supports, I considered visualisation and role-play techniques as potential adjustments based on short activities that I spontaneously tried within the sessions. Given that these ideas arose from 'practitioner intuition', I felt it important to consider more structured and planned use of visualisation and role-play activities in Phase 1 in conjunction with the literature and feedback from the children.

On the basis of the drawings produced in the bespoke assessment, I considered that children creating their own external visual representations of texts might be a useful adjustment for Phase 2.

Learning point: Drawing a picture might be helpful in facilitating prediction and summarisation skills.

Planned Action: Trial the use of drawings in Phase 2 to support summarisation skills in light of the learning point that suggests that children find summarisation more challenging than prediction.

Here, I linked my planned action to another learning point from session seven which identified 'summarisation' and 'questioning' as the most challenging strategies for the whole group based on my observations and discussions with Mrs. Wilson.

Finally, with regard to text characteristics, my experiences in Phase 1 provided both confirming and disconfirming evidence around the appropriate

text length to facilitate RT. I found that short texts did not provide opportunities to explore concepts in depth yet longer texts could be problematic when children missed a session. I therefore planned to incorporate short texts in the early stages of Phase 2 and subsequently follow two longer texts over time.

Research Question 1b (RQ1b)

How can I gather the views of children with ASC on the intervention and use these to inform intervention planning and evaluation?

As is evident from Appendix 20, the overarching learning point from Phase 1 in relation to RQ1b was that gathering informative feedback from Jack and Amy on the intervention sessions (and moreover what facilitated their understanding) was very challenging. Given the focus of Phase 1 on trialling approaches, I learned a great deal about these challenges and very little about children's views. Nevertheless, in line with the principles of action research, I was able to make changes in Phase 2 based on this learning. That is, by taking steps to increase the quality of the research I concurrently took positive action in relation to my practice.

I identified a number of challenges around eliciting children's views. Firstly, I found that I did not allow enough time for feedback and that this time could easily be overtaken by other activities. This learning point links to several others in which I reflected on the difficulty of fulfilling the objectives of the sessions within the allocated time.

Reflections from Session 7, Phase 1

I think the sessions have gone very quickly this term and in many ways I have not progressed as far with the RT process as I had anticipated at the start.

However, within my reflective records, issues of time were not nearly as prevalent in relation to gathering feedback as they were to covering the session content. This indicates that my focus at the time was more concerned with practical aims than research aims.

Despite this, evidence to suggest that children provided quite limited responses within the unstructured format of the group feedback activities would suggest that time was not the only factor. Furthermore, the responses that I did gather often revealed conformity across group members.

Group Feedback Session 5

Bradley: *"I liked reading about the whale."*

Amy: *"I liked reading the article."*

Kamil: *"I liked reading the article because it was really interesting."*

Adam: *"I liked reading about the whale."*

Zoe: *"I liked reading about the whales and dolphins."*

Jack: *"I liked reading the whole story."*

Although these responses are not all the same, given the wide variety of activities undertaken, this feedback provided limited insight into children's views of the intervention process at large. Nevertheless, I planned to continue using non-fiction texts in Phase 2 and also decided that continuing with the topic of the news would provide some consistency across the phases.

Two learning points around the process of gathering children's views linked to general issues and concerns that I reflected on during Phase 1. Firstly, I reflected extensively on the dilemmas of balancing the research and practice elements of my role (see Appendix 21). Secondly, I subsequently felt that I had not gathered Jack and Amy's views sufficiently to speak to my research questions and planned the following action for Phase 2:

Planned Action: Plan three individual feedback sessions with Jack and Amy during Phase 2 and use a mixture of structured and unstructured activities. Include concrete visual aids and questions that distinguish positive and negative feedback about the intervention generally from positive and negative feedback about what supports comprehension.

I justified my decision to incorporate visual prompts by the apparent utility of visual aids in relation to the intervention and as a means of encouraging broad and balanced feedback about a number of intervention features.

My Overarching Research Question

How can I enhance a Reciprocal Teaching intervention to support the reading comprehension skills of children with ASC who have difficulties in understanding what they read?

Drawing together my learning across one macro-cycle of action research, I felt I might enhance the RT process by continuing to use visual supports to facilitate the process and content of the sessions including pictures, photographs, maps, strategy cards and a visual timetable. My learning from Phase 1 generated a number of further specific questions, which I posed for Phase 2 regarding how I might enhance RT to support Jack and Amy's comprehension skills. McNiff and Whitehead (2010, p.37) suggest that '*action research questions can take a variety of forms, such as:*

- *I wonder what would happen if...? ...*
- *How about trying...?'*

These action researchers uphold the importance of '*...holding ideas lightly and provisionally*' (Whitehead & McNiff, 2010, p.37) in the early stages of acting with educational intent and seeking to improve one's own learning. In line with this ethos, I posed the following questions for Phase 2:

- ⇒ *I wonder what would happen if I used visual supports to activate children's prior knowledge?*
- ⇒ *How about trying an adjustment where children draw pictures to support their use of certain RT strategies?*
- ⇒ *I wonder what would happen if I incorporated visualisation and/or role-play activities into the intervention sessions?*

In seeking to answer these questions, I thought it would be most helpful to make adjustments to the 'questioning' and 'summarising' strategies as I interpreted these to be the most challenging strategies for all group members. This interpretation is supported by reference to cognitive theories of ASC because asking questions draws on ToM skills and summarising requires children to gather gist (linking to WCC theory). In addition, I felt that adjustments to support the activation of prior knowledge would support the whole RT process rather than targeting any specific RT strategies.

A key learning point from Phase 1 was that I needed to attend more to the focus children and improve my methods of gathering their views. Thus I planned to include opportunities for structured individual feedback with Jack and Amy using visual supports. In Chapter 3, I referred to Paulo Friere's quote '*...we make the road by walking*' (Bell, Gaventa and Peters, 1990, p.6) and its resonance with the action research process. For me, the emphasis here on 'we' was under threat as I embarked on the next cycle of action research. In order to remain true to my values around involving the focus children in shaping the path of the research, I decided to seek their retrospective feedback on Phase 1 to allow their views to influence my actual actions in Phase 2 and move more closely to an ideal in which we walked the path together.

CHAPTER 5: PHASE 2 - The 'Intensive Intervention' Phase

As discussed in Chapter 4, I planned to make a number of changes in the intensive intervention phase based on my actions and learning from Phase 1. In the current integrated chapter, I provide an overview of Phase 2 followed by a discussion of the broader range of data collected during this macro-cycle. I go on to consider how my learning from Phase 1, alongside individual feedback from focus children at the beginning of Phase 2, informed intervention features that remained the same, changed or were not implemented in Phase 2. The most substantive section of the chapter details my analysis of the data in relation to my two research sub-questions and with reference to four key adjustments made during the wider macro-cycle. I conclude the chapter with an outline of how I left the intervention with the community and synthesise my findings with regard to my overarching research question in the following chapter (Chapter 6).

Overview of Phase 2

Phase 2 of the study is represented graphically in Figure 11.

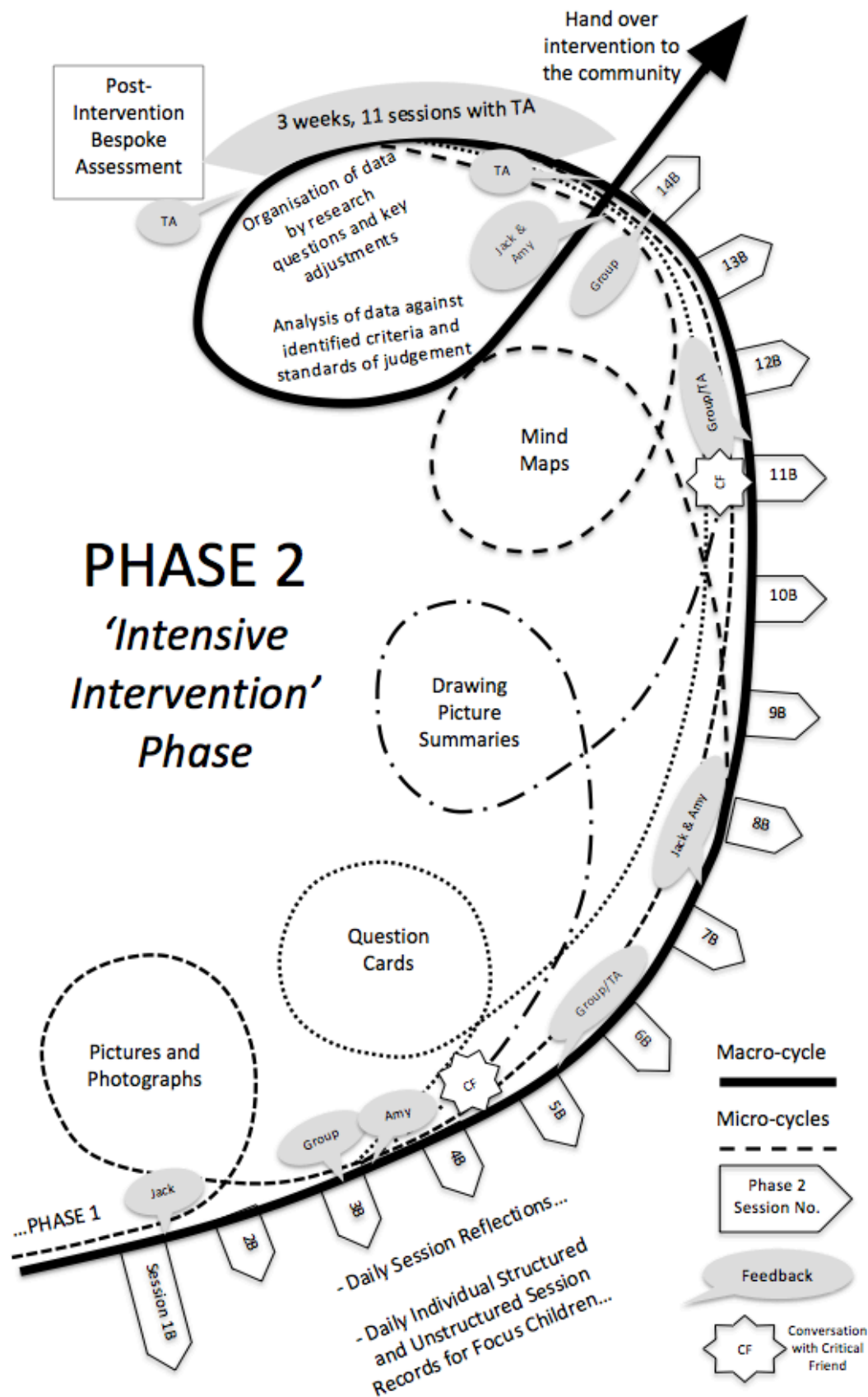


Figure 11. A Diagrammatic Overview of my Actions in Phase 2

Figure 11 details my actions across the macro-cycle of Phase 2. During this phase, I delivered fourteen intervention sessions¹¹ over three weeks and gathered a broader range of feedback including three individual feedback sessions with Jack and Amy and regular audio-recorded conversations with Mrs. Wilson. I also sought to increase the credibility and confirmability of the study by having conversations with critical friends. In addition to daily reflective records in my learning journal, I wrote session-by-session observation records for Jack and Amy and sought to triangulate this information with other data sources to inform my data analysis.

Session-by-session micro-cycles of action could be conceived in Phase 2 (as in Phase 1) whereby I reflected on my learning following each session and fed this learning into my subsequent actions; however I found it more helpful to conceptualise micro-cycles of action by the introduction of adjustments to the RT process and therefore consider four micro-cycles across Phase 2:

1. Pictures and photographs
2. Question cards
3. Drawing picture summaries
4. Mind maps

In order to draw more robust inferences from the data, I adjusted my analytic strategy. I structured my analysis around my two research sub-questions as before, however for RQ1a I organised my data in relation to the four micro-cycles. In line with the recommendations of key action research texts (McNiff, 2013; McNiff & Whitehead, 2010) I identified criteria for what I expected to find and standards of judgement against which to consider confirmatory and disconfirmatory evidence indicating the extent to which my criteria were fulfilled. This analytic strategy (detailed in Figure 14) facilitated me in developing claims to knowledge about my practice. In the next chapter, I seek to draw together and validate those claims, synthesising data across the course of the study and giving rise to my living educational theory.

¹¹ Labelled 'B' to denote Phase 2

To the extent that the values underpinning the practices, the dialogues of question and answer and the systematic form of action/reflection cycle, are shared assumptions within this research community, then we are constructing an educational theory with some potential for generalisability. The 'general' in a living theory still refers to 'all' but instead of being represented in a linguistic concept, 'all' refers to the shared form of life between the individuals constituting the theory.

Whitehead (1989, p.62)

Following my involvement in the sessions, I handed over the intervention to the community and Mrs. Wilson continued to run the intervention four days per week. I returned to observe the group on two occasions and completed the post-intervention bespoke assessment three weeks after my withdrawal from the sessions. By this point, children had received a maximum of 33 intervention sessions (eight in Phase 1, fourteen in Phase 2 and eleven with Mrs. Wilson).

Data Collected in Phase 2

Reflections and Learning Points

I continued to complete structured session-by-session reflective records in my learning journal. To promote deeper reflection, I listened back to audio-recorded sessions following every session in Phase 2. At the end of the intervention phase, I made further retrospective reflective records over time as I explored my data and listened back to the sessions again. I took this action to increase the rigour of my investigation and to support a critical synthesis of the data which recognised the wider context in which my 'online' analysis and subsequent action took place.

Individual Observation Records

I completed written individual observation records for Amy and Jack following each session (after listening to the audio-recordings) using a proforma with structured and unstructured components. As shown in Appendix 22, I completed the individual observation records by drawing together excerpts of

children's verbal contributions and interactions with others, any visual data they produced and my own observations and interpretations.

These records represented a formative assessment tool and supported my cycles of 'noticing and adjusting' within my practice.

Formative assessment presents a natural, viable, and continuous means for teachers to learn about what students understand. It occurs every day and provides quality information about student learning that can be used to inform and differentiate instruction.

McLaughlin (2012, p. 438)

Feedback

Group

I gathered feedback from all group members on four occasions in Phase 2 at the end of sessions 3B, 5B, 11B and 14B. Alongside this, I gathered children's feedback on particular activities during the sessions using a range of methods, including:

- 'Round-the-circle' verbal responses to questions
- Rating scales for scoring adjustments
- Written feedback using a notelet shaped like a smartphone

Focus Children

For individual feedback sessions, I used two formats for gathering Amy and Jack's views. At the beginning and end of Phase 2, I used a card-sort activity which included a series of cards (22 initially and 28 at the end) featuring written words and visual prompts intended to represent all aspects of the intervention. I included blank cards to reduce my influence on the data and asked Jack and Amy to sort the card set three times in each session according to:

1. What was good/what was not so good?

2. What helped you to understand/what did not help you to understand?
3. What could we do differently?

As displayed in the photograph of Jack's initial card-sort in Figure 12, both children often placed cards in the middle of the printed question sheets thereby developing a continuum of responses.



Figure 12. Jack's Individual Structured Feedback using the Card-sort Activity

During the activities, I asked open follow up questions to prompt discussion and elicit the rationale behind children's placement of the cards. By including a distinction between 'what was good' and 'what helped you to understand' and their opposite counterparts I hoped to support children in differentiating between these two aspects of feedback. In addition, I was keen to find out what ideas Jack and Amy had about what we could do differently. Here, the cards were used as prompts for aspects of the intervention for which we could engage in more or less.

I also gathered individual feedback using 'blob' resources (see www.blobtree.com, last accessed 16.02.14) mid-way through the intervention and provided Jack and Amy with the blank question prompt sheets (used in the

card-sort activity) to write or draw on freely. My intention in using these less-structured activities was to gather feedback in a more inductive manner to complement the card-sort activities.

I discuss the data from these feedback activities where it provides confirming or disconfirming evidence in relation to my learning about what additional supports and resources facilitate the process and content of the RT intervention for Jack and Amy (RQ1a) later in this chapter. Following this, I consider my learning around the process of gathering children's views to inform my planning and evaluation of the intervention (RQ1b).

Mrs. Wilson

A clear action point from Phase 1 was to involve Mrs. Wilson more in both the practice and research elements of the study. With regard to feedback, we engaged in naturalistic audio-recorded conversations for 20-30 minutes following sessions 5B and 11B and three weeks after the intervention. I made efforts to strike a balance between allowing her views to emerge unprompted and asking her opinions on particular adjustments or planned actions. These conversations facilitated my triangulation of the evidence for RQ1a.

Before going on to discuss my findings from Phase 2, I first discuss aspects of intervention delivery to provide an overview of my practice in the intensive intervention phase.

The Intervention Sessions

The structure of the fourteen intervention sessions delivered in Phase 2 aligned with those delivered in sessions 5-8 of Phase 1 (detailed in Table 3); each session was planned to last for thirty minutes and included an introduction and plenary alongside use of the routine RT process (see Figure 9) around either one or two sections of text. An overview of the sessions I delivered in Phase 2,

including information about attendance¹², session content and feedback, is provided in Appendix 23. Details of the enhancements I made to the routine elements of the sessions are provided in relation to each of the four micro-cycles later in this chapter.

Based on individual feedback from Jack and Amy and my findings from Phase 1, the following features changed and remained the same in Phase 2.

Features that Remained the Same

Practical Set Up

Practical aspects of the intervention remained largely the same in Phase 2 including the set-up, visual timetable, planning procedures and group rules.

Group Size

I continued to offer the intervention to all group members despite having only committed to providing sessions in Phase 1 for non-focus children. This decision was based on reflections in my learning journal and discussions with school staff. Furthermore, Jack and Amy supported this decision placing 'being in a group of six' in the 'what was good' section of the card-sort activity early in Phase 2, with Jack commenting: "...'cause you're in a group you can talk to each other to get ideas."

Texts

In line with my learning from Phase 1 and supported by feedback from Jack and Amy early in Phase 2, I continued to use newspaper articles and information texts. All texts were linked together by an overarching theme ('record breakers') and I selected texts flexibly during the phase in order to respond to the interests of the group.

¹² Attendance figures were much higher for the whole group in Phase 2 in comparison to Phase 1. Amy's attendance increased from 63% in Phase 1 to 86% in Phase 2. Jack's attendance increased from 69% in Phase 1 to 100% in Phase 2.

Pictures and Photographs

A key continuing adjustment in Phase 2 was the use of pictures and photographs to support children's activation of prior knowledge. This adjustment is considered in depth in the next section as a micro-cycle of action research.

Features that Changed

Changes took the form of introducing, adapting or removing intervention features on the basis of my learning and feedback from others.

Maps

Despite my reflections in Phase 1 indicating that maps were a helpful adjustment, individual feedback from Jack and Amy early in Phase 2 suggested they did not agree. Both children expressed views that maps were neither 'good' nor helpful in supporting their understanding. Furthermore, when asked about what we could do differently, Amy suggested we could stop using maps. Given that children gave predominantly positive feedback about the sessions, it felt particularly important to respond to this negative feedback and I therefore discontinued using maps in Phase 2.

Children Leading the RT Process

A significant intervention feature that was introduced in Phase 2 was the involvement of children in leading the RT process. I did not conceptualise this as a micro-cycle of action because this feature is an established tenet of RT rather than an additional support.

In Session 5B, I introduced the role of the leader alongside a concrete visual aid referred to as the 'leader card' (see Figure 13). To scaffold the role from myself to the children, I asked Mrs. Wilson to take on the role first and together we modelled the process of facilitating the group discussion around the RT strategies.

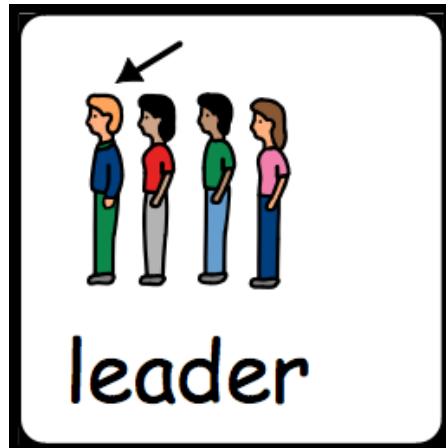


Figure 13. The Leader Card Incorporating Visual Symbols From 'Communicate: In Print 2' (Widgit Symbols (c) Widgit Software 2002-2014 www.widgit.com)

Following Session 5B, all children expressed a desire to be the leader and from this session onwards the role circulated around the group (Appendix 23). The introduction of this aspect of the RT process resulted in some emotional and behavioural issues with Jack who on occasions became very distressed when he was not chosen to lead.

Reflections from Session 7B, Phase 2:

The session today was emotionally charged due to Jack's reaction to not being chosen to be the leader... Jack quickly became quite distraught. He cried briefly, protested that he was desperate to be the leader and lay his body across his chair. I felt surprised by the extreme nature of his reaction. Although I am told that he commonly becomes distressed in the classroom, we have rarely witnessed such a high level of emotion in our sessions. The other children in the group responded with laughter as I think they were surprised too ... As the group facilitator I felt... concern and empathy for Jack and a sense of dissonance between his emotional state and that of the group which made me feel under pressure to try and regulate the various emotions that ran high...

I continued to pass over the leadership role despite Jack's emotional response because school staff recommended this action and Mrs. Wilson provided support within and outside the sessions around the issue.

Overall, children responded more positively to this role than I had anticipated; they demonstrated their growing familiarity with RT and developing skills in supporting the cooperative learning process. Importantly, this process marked the beginning of the pass over of the intervention to the community and the gradual fading out of my central role over time.

Potential Adjustments I Did Not Implement

In addition to features that changed, there were also some planned intervention adjustments that I ultimately did not implement in Phase 2.

Role Play

I decided not to pursue an adjustment involving role play based on individual feedback from Amy after Session 3B in which she categorised role play as 'not-so-good' and explained:

"It was not-so-good because like I had no idea what to like say or something. It was a bit tricky."

Amy's feedback supported my reflections at the time in which I expressed concern about whether she felt comfortable during the role play activity. Although the adjustment could have been a useful enhancement to the RT process, it felt important to act upon to Amy's negative feedback and I therefore did not trial role play thereafter.

Visualisation

Conversely, I did not trial a visualisation adjustment as planned, despite Jack's feedback that this was something 'good' that we could engage in more. My action was based on my concerns about the abstract nature of this

adjustment following a conversation with a critical friend and my reflections around trialling too many adjustments at one time.

Reflections from Session 2B, Phase 2:

Although I am enthused about trying out methods of enhancing the RT process, I think it is important to maintain my own reflexivity around how many strategies I am using and try to introduce them in a more systematic way.

Phase 2 Data Analysis

As in Phase 1, my analysis of the data in Phase 2 was integrated into the session-by-session learning process I engaged in and supplemented by further data analysis after the intervention was complete. I altered my analytic strategy at the end of Phase 2 because my objectives for the two phases differed. At the end of Phase 1, I sought to inform my practice in Phase 2 in relation to my research questions whereas, following the completion of Phase 2, I sought to make a claim to knowledge based on my process of inquiry.

When you have learned something, you are making a claim that you know something now that was not known before. This is your original claim to knowledge.

McNiff and Whitehead (2010, p.187)

My analytic strategy (outlined in Figure 14 below) therefore shared some features of that used previously in relation to my preparation, exploration and reduction of the data; however, it differed in relation to the way in which I organised and made inferences from the data. In writing about action research data analysis, McNiff suggests:

Analysing data qualitatively involves:

- *Identifying criteria for what you expect to happen, and standards to show the extent to which it is happening;*
- *Analysing and interpreting your data in terms of criteria and standards;*
- *Coming to a conclusion about how well this has been done...*

McNiff (2013, p.111)

In line with these recommendations, I identified criteria for what I expected to see (linked to my research questions) and, alongside this, identified standards of judgement by which I triangulated confirming and disconfirming evidence across all my data sources to make a judgement about the extent to which my identified criteria had been met. This consideration of confirmatory and disconfirmatory evidence, akin to Phase 1, added rigour to my analytic strategy. Yin (2009) suggests that the consideration of rival explanations is a general analytic strategy which, combined with a focus on the research questions, enables researchers to *“treat the evidence fairly, produce compelling analytic conclusions, and rule out alternative explanations.”* (Yin, 2009, p.130). This approach therefore supported me in developing subsequent claims to knowledge and generating further questions for research and practice.

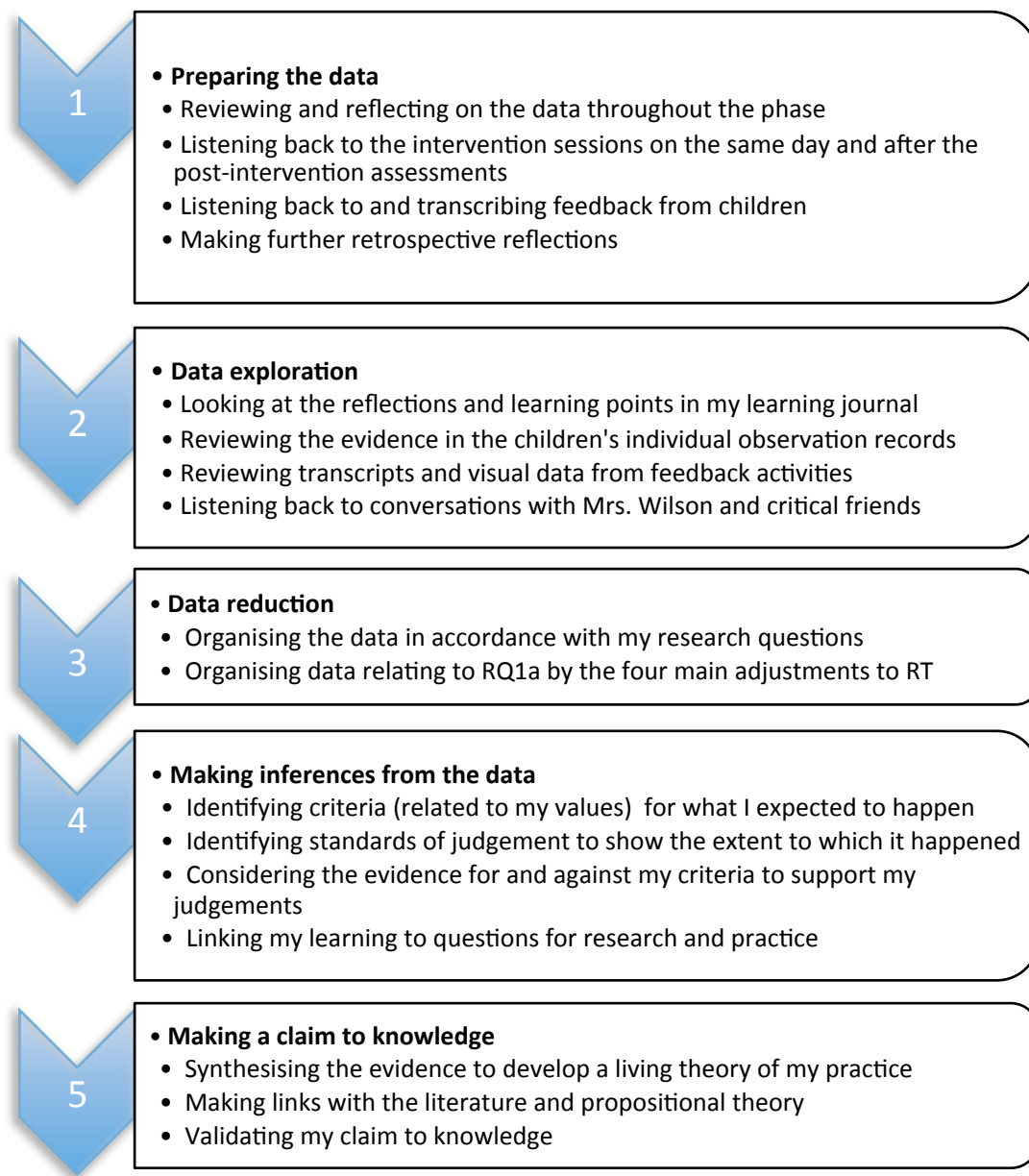


Figure 14. My Analytic Strategy for Processing the Phase 2 Data

I summarise my findings here with reference to illuminating data excerpts that speak to my two research sub-questions. In the next chapter, I synthesise my learning across the two phases to make a claim to knowledge and address my overarching research question.

Research Question 1a (RQ1a)

In Phase 2, I sought to build on my developing understanding from Phase 1 and speak more substantively to my first research sub-question, which was linked to my values around inclusive education:

What additional supports and resources can I introduce to enhance the content and process of a Reciprocal Teaching intervention for children with ASC?

As explained above, I structured my analysis around the four micro-cycles of action reflecting the main adjustments I made to RT:

1. Pictures and Photographs
2. Question Cards
3. Drawing Picture Summaries
4. Mind Maps

To avoid duplication, I will discuss the following in relation to each of the micro-cycles:

- a) Brief procedural details of my actions (with justification) including how the adjustment was used over time
- b) My educational intent for introducing the adjustment and the source of the idea
- c) Consideration of the processed data having followed the analytic strategy in Figure 14
- d) Further questions for research and practice

I discuss the four adjustments in the order they were introduced chronologically with acknowledgement that the adjustments carried varying degrees of emphasis with the unfolding of my inquiry.

Micro-cycle 1: Pictures and Photographs

My use of pictures and photographs to support RT was a consistent but peripheral adjustment across the two phases. Although I often incorporated pictures and photographs into the sessions, my educational intent for using them differed across the intervention in terms of purpose and focus. I often provided pictures alongside the text as they appeared in news articles and at these times did not consider them a core adjustment.

On less frequent occasions, I used pictures and photographs more purposefully to activate children's background knowledge of the text as a means of supporting them to develop a rich situation model.

At the end of Phase 1, I asked the question:

⇒ *I wonder what would happen if I used visual supports to activate children's prior knowledge?*

My use of pictures and photographs provided some data to speak to this question and I also used mind maps as a means of addressing this question (discussed later in micro-cycle 4).

Given the centrality of my role in generating data for subsequent analysis, my reduced focus on this adjustment in practice meant that I gathered less data on the 'pictures and photographs' adjustment than the other three adjustments. This underscores the importance of remaining reflective and reflexive throughout about my findings and I hope that through the comparatively brief exploration of this adjustment here I can helpfully identify questions for future research and practice as the key outcome of this micro-cycle.

My identified criteria regarding what I expected to see if pictures and photographs activated prior knowledge and supplemented the RT process for Jack and Amy were:

My Identified Criteria	a.	Jack and Amy make reference to background knowledge relevant to the text following use of pictures and photographs.
	b.	I make reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and link this to my use of pictures and photographs as a practitioner.
	c.	Amy and Jack provide positive feedback about the use of pictures and photographs in the intervention sessions.
	d.	Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and links this to the use of pictures and photographs.

Appendix 24 provides details of the confirming and disconfirming evidence in relation to the extent to which my identified criteria were fulfilled.

A number of observation records at regular intervals across Phase 2 (Session 2B, 4B, 5B, 10B and 13B) provided confirming evidence to suggest that pictures and photographs supported Jack in bringing his background knowledge to the text. The data excerpt below refers to a session in which I introduced a prompt sheet featuring a series of photographs of creatures alongside their 'top speed' to activate prior knowledge before reading news articles about sprinters and record breakers.

Jack's Individual Observation Record 10B

Whilst looking at the information picture, Jack exclaimed excitedly "*Falcon, two hundred miles an hour!*" He then said: "*The fastest animal in the world is the falcon, two hundred miles an hour. That's faster than a car.*" Here is evidence that Jack linked his background knowledge about cars to the information provided in the picture.

Feedback at the end of the intervention with Jack suggested that he found the particular activity above useful but did not consider other occasions

when we used pictures and photographs to be either 'good' or supportive of his understanding.

Jack's Individual Structured Feedback after 14B

Jack put pictures and photographs in the 'what-was-not-so-good' and 'what did not help me to understand' sections.

Jack: *"'cause that blue picture's good because it's a speedo one but that one's not so good 'cause pictures don't give you much do they?"*

Yet it was noteworthy that I made links between pictures and photographs and the wider RT process and found occasions when they seemed to support Jack's use of the RT strategies, namely prediction and questioning.

Jack's Individual Observation Record 4B

The inclusion of a picture alongside the article seemed to support his prediction and anticipation of the text. Jack incorporated aspects of the picture and linked this to information he had already read about the text.

I found evidence of positive feedback about the adjustment from Amy; however there was a lack of either confirming or disconfirming evidence regarding the fulfilment of the criteria with regard to supporting her comprehension. I interpreted the lack of evidence as an indication that the adjustment did not supplement the content of the RT intervention for her; however this developing claim to knowledge does not accord with her expressed views. It is possible that my lack of focus on the adjustment meant that I missed opportunities to explore this adjustment and in Session 13B my reflections suggest that the children perceived themselves as benefiting from pictures and photographs in ways which were not directly observable in the intervention.

Reflections from Session 13B, Phase 2:

Interestingly, all children commented on the lack of picture when I handed out the article today. This made me consider how much pictures have been supporting their understanding so far. It seemed from their immediate surprise that picture cues were an early support to comprehension. This was not a focal adjustment but did provide some interesting data and surprised me a little.

In summary, there was some confirming evidence to support the idea that pictures and photographs might be a helpful adjustment to the content and process of the RT intervention for one of the focus children but not sufficient evidence to meet my standards of judgement. I found little evidence from Mrs. Wilson to triangulate my developing knowledge about my practice in using the adjustment; nevertheless, during our conversation three weeks after the intervention she reported that she had not used pictures and photographs very often in her own practice which might suggest that for her, like me, the adjustment was not focal in terms of supplementing RT.

Following my exploration of the data, I generated a number of questions for research and practice around the use of the adjustment:

⇒ *How might pictures and photographs support children with ASC to generate predictions and questions as part of a RT intervention?*

⇒ *How is the utility of pictures and photographs for supporting comprehension altered by the practitioner's educational intent?*

⇒ *To what extent do children with ASC rely on cues from pictures and photographs to support their comprehension of texts?*

Micro-cycle 2: Question Cards

Unlike pictures and photographs, the second adjustment to RT was the most substantial micro-cycle of action within the study. My decision to focus on 'questioning' was supported by my observations and links to ToM (discussed in Chapter 4). Furthermore, approaches to support question generation and answering are recommended by the NRP (NICHD, 2000) and reported as the most well-evidenced approach to supporting reading comprehension skills.

The source of the idea to introduce question cards arose in Session 2B following my reflections on the 'questioning' strategy:

Reflections from Session 2B, Phase 2:

I feel like the questioning part of the sessions falls quite flat and children are unsure where to start in generating a question... As a practitioner, I feel under pressure to engage children with this strategy and modelling the process does not seem to be assisting with this so far...

I think the questioning strategy might be particularly challenging for children on the autism spectrum because it is so broad and amorphous. As I have reflected before, questioning and summarising are both challenging for all members of the group and I think I need to introduce some concrete aids to support these strategies.

Associated Learning Point:

More concrete visual cues may be useful to support the questioning strategy.

Associated Action:

Introduce cards featuring question stem words into the next session. Colour-code these cards to align with the colouring of the questioning strategy.

I therefore produced six cards (see Figure 15) featuring the question words 'who', 'what', 'when', 'where', 'how' and 'why'. This adjustment is supported by intervention studies in the literature such as Whalon and Hanline (2008) and Whalon and Hart (2011) who propose that visual cues support children with ASC to ask questions within a RT framework.



Figure 15. Question Cards to Support the 'Questioning' Strategy

In the 'questioning' section of each session from 3B onwards, I dealt the cards face down on the table, selected a child to pick a card and then encouraged all children to generate a question using the stem. Children shared their questions with the group and I asked for volunteers to answer the questions posed.

By introducing question cards my educational intent in relation to RQ1a was to:

- i. Increase Jack and Amy's motivation and engagement with the 'questioning' strategy
- ii. Enhance my practice in supporting Jack and Amy's questioning skills

I identified a set of criteria for what I expected to see if my educational intent was fulfilled. These criteria are outlined below and in Appendix 25, which provides details of the confirmatory and disconfirmatory evidence to address my standards of judgement.

Increasing Jack and Amy’s Motivation and Engagement with the ‘Questioning’ Strategy

Supporting motivation and engagement was outlined as one of the ten principles of effective reading comprehension instruction (McLaughlin, 2012). My identified criteria in relation to increasing motivation and engagement with ‘questioning’ were as follows:

My Identified Criteria	a.	Amy and Jack are more motivated and engaged during the questioning section of the sessions following the introduction of question cards. Motivation and engagement is shown through: <ul style="list-style-type: none"> • Their eagerness to ask questions • An increase in the number of questions they ask • Their readiness to ask a question even when it is not their turn
	b.	Amy and Jack provide positive feedback about the use of the questioning strategy and question cards in response to the card-sort on ‘What was good/not-so-good’

From the outset of introducing the adjustment, I was particularly aware of the confirming evidence regarding the utility of question cards for supporting motivation and engagement.

Reflections from Session 3B, Phase 2:

I think the question cards really worked well today. In the first instance they increased engagement and motivation to ask a question which was somewhat lacking in yesterday's session. Today, every child raised their hand to ask a question and, as I requested, thought of their own question linked to the card when it was not their turn.

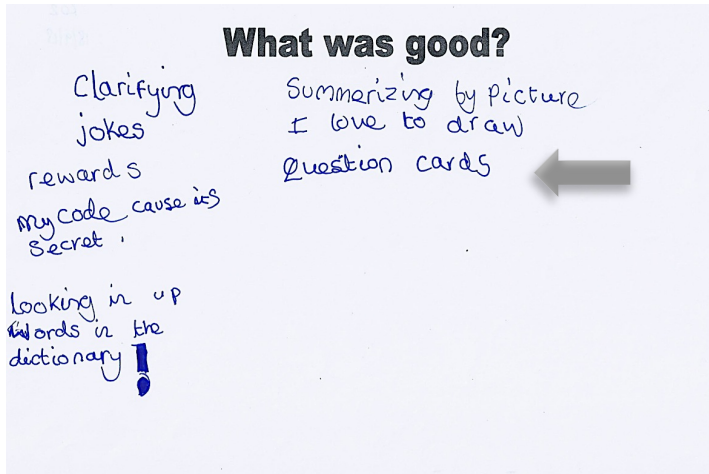
This reflective record provides some confirming evidence that my criteria were fulfilled initially with regard to children displaying an eagerness to respond and being prepared to ask a question when it was not their turn. More specifically, I noted:

Jack's Individual Observation Record 3B

Jack complained that he did not have the opportunity to select a question card today. The concrete tool appears to motivate and engage him for example he responded very positively from the initial introduction of the cards exclaiming "Got it!" to indicate he had thought of a question in response to someone else's card selection.

Jack's eagerness to respond to questions is demonstrated above yet, in Session 5B, I noticed that his enthusiasm for the adjustment could easily switch from mild disappointment when not chosen to select a question card to quite significant distress which resulted in his attention being drawn away from questioning. This observation indicates disconfirming evidence with regard to how the adjustment could lead Jack to disengage from components of RT. Despite my concerns about his variable response to the question cards, I gathered positive feedback from both Amy and Jack mid- and post-intervention regarding their liking for the cards.

Amy's Feedback after Session 7B



Jack's Individual Structured Feedback after 14B

Me: "Can you tell me about why question cards were good? ... Why did you put it [the card] there?"

Jack: "Because they were really helpful."

In response to the 'What could we do differently?' question, Jack suggested: "Get more question cards!"

Given that my initial educational intent was to facilitate their interest in the questioning process, this feedback indicated that I was achieving this in my practice.

I expressed this developing claim to knowledge in my conversation with a critical friend after Session 11B. Nonetheless, as she pointed out: "It does seem like there's a large amount about liking things and engaging with things...". This comment drew my attention to my own acceptance of confirming evidence for the way in which question cards supported engagement and also made me aware of the potential for me to perceive an increase in motivation as fulfilling my more in-depth educational aims of supporting children to ask more complex, inferential questions over time. It was therefore important to look at the evidence more closely relating to my broader educational intentions and ask further questions of my data:

⇒ *I wonder if my perception that question cards were a useful adjustment was mostly due to the children’s eagerness to use them and the relief I felt as a practitioner that they engaged with questioning?*

⇒ *How might the perceived value of question cards change over time in terms of supporting motivation and engagement when they are less novel?*

Enhancing my Practice in Supporting Jack and Amy’s Questioning Skills

To analyse my findings beyond motivation and engagement, I identified the following criteria around my role in supporting Jack and Amy’s questioning skills over time:

My Identified Criteria	a.	There is a noticeable positive change in the quality of questions Amy and Jack ask, demonstrating progression from simple, literal questions to more complex questions involving inference.
	b.	Amy and Jack perceive improvements in their questioning skills over time.
	c.	Jack and Amy are more aware of the types of questions they are asking and the perceived difficulty level of them.
	d.	I make reference to perceived improvements in Jack and Amy’s skills in asking questions and link this to my use of question cards as a practitioner.
	e.	Amy and Jack provide positive feedback that question cards helped them to understand.
	f.	Mrs. Wilson makes reference to perceived improvements in Jack and Amy’s skills in asking questions and links this to the use of question cards.

By organising the data according to criteria A-C and D-F separately (as in Appendix 25) I sought to first make a judgement regarding the extent to which

Jack and Amy's questioning skills improved and then move on to consider the evidence connecting any changes in their questioning skills with the introduction of question cards.

Consideration of the data provided a body of confirming evidence that Jack's questioning skills improved over time whereas the evidence regarding developments in Amy's questioning skills was more inconsistent. Several data excerpts made reference to an increase in the quality and complexity of Jack's questions although these were mostly located in my observation records and therefore not strongly triangulated with other data sources. In Session 2B, Jack asked a simple decontextualised question "*How did he do it?*" which lacked specificity and assumed that respondents would know to whom and what he was referring. In this way, his response indicated a lack of ToM regarding the needs of the other group members. Over time, I noted improvements in the complexity of Jack's questioning in terms of specificity and content as well as his regard for the perspectives of other group members.

Jack's Individual Observation Record 8B

During his conversation with Amy, Jack asked the question "*How many miles does Usain Bolt total if you add all of his 2013's together?*" This question took literal information from the text and used it imaginatively to take into account a wider perspective... The question showed curiosity about the distance Usain Bolt has accumulated across his performances. At the time, this struck me as the most advanced question Jack (or anyone) had asked in the group.

He then asked Amy "*Is that what you were thinking?*" showing awareness that her question might or might not be the same as his and indicating developing skills in ToM. This in itself is a progression as in the early sessions of Phase 2 he seemed to react as though someone had stolen his idea if they shared the same question.

I found little confirming evidence that Mrs. Wilson agreed with my developing claim to knowledge about Jack's skills in questioning.

Conversation with Mrs. Wilson, after Session 5B

"He's not particularly good at the questioning, I'm not sure his questioning is relevant all the time but that's just 'cause he thinks on a different level... you've got to think 'will they find it interesting?', 'will they know the answer?'..."

Here, Mrs. Wilson expresses an opinion that Jack finds questioning difficult due the demands placed on ToM which may be viewed as disconfirming evidence to my developing claim to knowledge. Yet, the timing of her comment does not disconfirm the interpretation that Jack's questioning skills may have improved over the course of the intervention. Furthermore, I found evidence that Jack demonstrated some skills in considering the needs of others and was aware of the difficulty level of his questions for others to answer.

Jack's Individual Observation Record 10B

I asked children to find a tricky 'who' question when Jack selected the 'who' card. Moments later, he said aloud *"I've got one but it's not that hard."*

Data indicating Jack's developing skills in questioning was supported by comparison of the questions he generated in the pre- and post-intervention bespoke assessments. Pre-intervention, Jack asked a single broad question that rested on the premise of the whole passage (see Chapter 4). In contrast, post-intervention, he generated three questions using question words from the question cards:

1. 'How do people make ice sculptures without breaking them?'
2. 'How do they stand tall for a while?'
3. 'Why do people make ice sculptures?'

Jack's questions post-intervention indicated a curiosity about the text and required answers, which were not literally based in the passage. Indeed, elaborative inferences would be required to answer the questions posed and

Jack's summary on the bespoke assessment suggested that he could answer the final question.

Unlike Amy, I did not find any evidence confirming that Jack perceived an improvement in his own questioning skills. Nevertheless, Amy twice reported to be good at asking questions during feedback sessions at the beginning and end of Phase 2. For example, she commented: *"Asking questions, I'm good at asking questions. That was good!"*.

Despite Amy's apparent confidence in questioning, I found a number of pieces of disconfirming evidence in relation to my identified criteria around her questioning skills. Across Phase 2, Amy mostly continued to ask quite basic questions, which lacked specificity and an understanding of the potential answers or the needs of respondents.

Amy's Individual Observation Record 9B

Amy... very quickly asked the question *"Where did he run?"* This question involved little time for consideration and was quite simple in content and structure... I tried to build on this and encourage Amy to be more specific. In response, she instead came up with a different question *"Where does he keep his medals?"* Amy did not seem able to elaborate on the initial question without further scaffolding and so opted to change the question. Her follow up question did not have an answer which was literally based in the text and so would have required an elaborative inference, however Amy did not indicate that she had an answer rather it appeared that she had only devised the question.

Furthermore, I found it challenging to scaffold and support her skills within the group context.

Reflections from Session 11B, Phase 2:

I felt quite disheartened when Amy offered a question that did not make much sense and had little relevance to the passage. The other group members commented that it didn't really make sense and I felt uncomfortable that there was also a moment of amusement in which the other group members shared smiles about this.

Despite this disconfirming evidence, there was confirming evidence in Session 13B and from the findings of the bespoke assessment of questioning which indicated some improvement in Amy's questioning skills at the end of the intervention.

Amy's Individual Observation Record 13B

Amy asked "Why was wonder horse Frankel thought to be one of the best racehorses?"

...this is an appropriate question. It combines a question word that she has not been prompted with and two separate sections of the text. Amy has made the cohesive inference that 'wonder horse Frankel' is the 'he' referred to in the next section. This is a much more relevant and complex question than Amy has produced in previous sessions.

In the post-intervention bespoke assessment, Amy used three different question words (from the question cards) and asked about a range of information whereas pre-intervention her questions centred on the article rather than its content.

<u>Pre-intervention</u>	<u>Post-intervention</u>
1. Is the article true?	1. Where is the snow festival held?
2. When was this article written?	2. What will the festival celebrate next year?
3. Is it a story or a non-fiction?	3. When does the snow and harben festival take place?

Having considered the evidence regarding whether Jack and Amy's questioning skills changed positively over time, I then looked for confirming and disconfirming evidence in relation to criteria d-f to make a judgement as to whether there was evidence linking the question cards to any improvements observed. I found that my own reflections following sessions 3B, 7B and 8B made connections between questioning skills and my use of question cards. In addition, in my retrospective reflections I noted how question cards had supported my practice:

Retrospective Reflections:
The use of concrete visual prompts supported me as a practitioner and I felt that it assisted Mrs. Wilson and I in modelling questions that were more closely linked to those children were thinking of because we all were using the same question word.

Yet, there were occasions when I felt that question cards actively impeded the questioning and RT processes. I recorded observations in which Amy seemed to have paired information in the text arbitrarily with the question word showing little awareness of the subsequent lack of cohesion in her questioning:

Amy's Individual Observation Record 11B

When asked to share her 'why' question Amy asked... *"Why was the cheetah eleven years old?"* A couple of members of the group giggled in response to this and Kamil said: *"There's no answer"*. I tried to reduce any embarrassment Amy might feel due to her willingness to please whilst unpicking her question. We talked about her age and when I asked *"Why are you nine years old?"* she replied *"I don't know."* I think she had not considered the answer to the question and simply paired the question card stem with a literal excerpt from the text. This might be an indication that question cards did not assist her learning as the prompt did not accord with the content of her question.

Disconfirming evidence for the usefulness of question cards in supporting Jack's skills centred more around his disengagement when not chosen to select a card and I wondered whether the value of the adjustment may have reduced over time for Jack.

Jack's Individual Observation Record 11B

When the next child picked a 'what' card, Jack commented: *"Now its a 'what' question... I've only got a 'why' that's forcing any other question out of my mind."* This was interesting as it made me wonder if the question cards were assisting Jack in this instance or limiting the stem word he felt he could use.

It seemed possible to me that concrete visual supports to facilitate questioning could have been less useful to Jack as his questioning skills improved because they could have constrained his thinking. In contrast to this interpretation, Jack provided positive feedback at the end of the intervention on whether question cards facilitated his understanding whereas Amy suggested that questioning was easier without the adjustment, concluding: *"so I think it was what did not help me understand."*

It is difficult to draw together the range of evidence from different data sources to make a clear claim to knowledge regarding the utility of this adjustment for supporting the questioning skills of both focus children and indeed McNiff (2013) cautions against the illusion of 'happy endings' in action research. Although in my reflections after the intervention I felt the adjustment had facilitated my practice, a number of further questions arose from my inquiry in micro-cycle 2 which might usefully inform future research and practice and I prefer to outline these (below) as a key outcome of the micro-cycle. It was notable nonetheless that Mrs. Wilson expressed agreement with my retrospective reflections:

Conversation with Mrs. Wilson, three weeks after the intervention

Mrs. Wilson: *"Oh we use those... yes they use them every day. Oh no, we've got to have question cards! Got to be dealt face down. A whole ritual goes on!"*

Her response to the adjustment indicated a confidence about the usefulness and importance of question cards, which she did not convey in relation to other adjustments. The comment also speaks to my earlier question around whether the novelty of this adjustment would wear off, suggesting that she and the group still considered it central to RT after 23 sessions.

The following questions arose from micro-cycle 2 which may have relevance for future research and practice:

- ⇒ *Might it have been helpful to introduce different question cards gradually over time?*

- ⇒ *Could I have used the question cards in different ways to explore their flexibility as an adjustment to RT?*

- ⇒ *I wonder if Jack and Amy's questioning skills would have improved regardless of the concrete visual support?*

- ⇒ *How did Jack and Amy's broader profiles (e.g. attention and concentration) impact on the usefulness of question cards in supporting their questioning skills?*
- ⇒ *Could any improvements in questioning skills due to the implementation of this adjustment be linked to wider improvements in comprehension?*
- ⇒ *Are question cards more or less useful for children on the autism spectrum than they are for other children with a poor comprehender profile?*

Question Answering

Although my educational intent around introducing question cards focussed on the process of children *generating* questions, I also found evidence in the data set around how the adjustment linked to question *answering*. I therefore identified the following criteria, indicating what I might have expected to find if question cards supported question answering:

My Identified Criteria	a.	Jack and Amy provide more accurate and elaborated answers to questions posed by other group members.
	b.	Amy and Jack are able to accept and reflect on the answers provided by group members to their own questions to decide whether or not the response given to them is 'correct'.

Particularly in the earlier sessions in Phase 2, I found a body of disconfirming evidence against these criteria. It seemed that children were so focused on asking their question using the question word on the card, that they paid little attention to the questions posed by other group members.

Jack's Individual Observation Record 4B

Jack was keen to question in today's session but needed a lot of scaffolding to answer questions. He seemed focused on his own question and own answer rather than those of other group members.

When asked to help a group member improve his question, Jack did not show any awareness of having listened to the question and instead offered his own question.

In this way, the adjustment could be seen as detracting from the cooperative learning principles of RT. The following interaction between Jack and Amy at the end of Phase 2 provides some confirming evidence of Amy's developing skills in answering questions; however Jack continues to demonstrate some difficulties in accepting answers from other group members:

Jack and Amy's Individual Observation Records 14B

In answer to Jack's question *"How does the horse eat up to 35000 calories per day?"*, Amy responded correctly *"Erm I think it's because he ate a lot of food like oats, hay and carrots."* Amy's answer... made direct links to the information provided in the text.

Jack: *"Well you're nearly there but you missed a word out, Adam?"*

Adam: *"Snuffling"*

Jack: *"That's the missing word but where's the rest?"*

These interactions indicated that Jack had quite a clear answer in mind and also an expectation that Adam would respond with a sentence... however Jack showed little awareness of Adam's feelings... *"Adam's struggling."*

Mrs. Wilson: *"No, no, wait, give him a chance. He's a bit shy."*

Jack then waited and when Adam (with support) read some of the text verbatim, Jack exclaimed: *"That's the answer! You got it wrong Amy!"*...

Given that my educational intent was not to support question answering it is perhaps unsurprising that I did not find a wide range of evidence in relation to this issue. Furthermore, intervention approaches such as QAR (Raphael et al.,

2006) that explicitly teach children about how to answer literal and inferential questions may have been more suited to supporting this aspect of the RT process. Indeed, Whalon and Hanline (2008) found that the use of QAR with visual cues and self-questioning supports increased unprompted question answering for children with ASC.

Nevertheless, my exploration of the mixed data related to question answering gave rise to further questions for research and practice:

⇒ *Might question cards support question answering over time if children became more skilled in generating their own questions?*

⇒ *I wonder if children's skills in answering questions would be supported by a different concrete visual support such as 'sentence starters'?*

Micro-cycle 3: Drawing Picture Summaries

My third and fourth micro-cycles of action feature adjustments that I included with the aim of supporting children to summarise pieces of text. Akin to 'questioning', summarisation is also recommended by the NRP (NICHD, 2000) as an effective means of fostering reading comprehension skills.

Here, I discuss my practice in terms of using drawing as a tool for supporting summarisation; in the next section I consider the utility of mind maps for this purpose as well as for activating prior knowledge.

The idea for drawing picture summaries arose in Phase 1, prompting me to ask:

⇒ *How about trying an adjustment where children draw pictures to support their use of certain RT strategies?*

The question was supported by reference to the literature in which there is little evidence of the utility of these supports for children on the autism

spectrum; yet Whalon and Hart (2011) recommend drawing a picture summary and telling someone else about it as a part of a package-based approach to supporting the comprehension and social skills of children with ASC.

I implemented the adjustment in sessions in 3B, 7B and 11B during the 'summarisation' section of RT. I asked children to create a sketch which included the main points in the text and encouraged them to place a focus on including these rather than creating a detailed, aesthetically pleasing picture. I gave children 3-4 minutes to work on their pictures and then asked them to use the drawing as a stimulus for producing a verbal summary (either for the group or in pairs).

In identifying criteria around my educational intent, I first considered whether there was evidence of an improvement in Jack and Amy's summarisation skills and then looked for evidence linking any improvements to the 'drawing picture summaries' adjustment. The first set of criteria is relevant both here and in relation to the 'mind maps' adjustment in the next section because it refers to any noticeable changes in Jack and Amy's production of verbal summaries:

My Identified Criteria	a.	There is a noticeable positive change in Amy and Jack's ability to provide a verbal summary that includes the main points read in a given piece of text.
	b.	Amy and Jack notice an improvement in their ability to summarise.

In addition, I identified further criteria around what I expected to see if the drawing adjustment enhanced the content and process of the RT intervention for Jack and Amy:

My Identified Criteria	a.	Jack and Amy's drawings include the main points in the text.
	b.	Drawing picture summaries supports Jack and Amy to draw out the main points in a piece of text and provide a verbal summary.
	c.	Amy and Jack provide positive feedback about the use of drawing picture summaries in the intervention sessions.
	d.	I make reference to perceived improvements in Jack and Amy's skills in summarising and link this to my use of picture summaries as a practitioner.
	e.	Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in summarising and links this to the use of drawing picture summaries.

Appendix 26 provides details of the confirmatory and disconfirmatory evidence to address my standards of judgement and outlines my developing claim to knowledge and actions for Phase 2.

As I found in relation to the other micro-cycles, the evidence regarding Jack and Amy differed in terms of their response to the intervention. Although I do not seek to compare and contrast their performance as the focus of my inquiry, I feel it is important to recognise their differing starting points and trajectories in line with my inclusive values. From the introduction of the summarisation strategy, Jack was much more willing to attempt summarising verbally in front of the group, which (1) provided him with more practice and opportunities for scaffolding and (2) enabled me to gather more data on his performance.

Although I found data suggesting that Jack made some successful attempts at summarising during Phase 2, I did not feel there was sufficient evidence to support my criteria around a noticeable improvement in his skills in this area. I triangulated evidence from Jack's post-intervention bespoke assessment responses and found this supported my developing claim to knowledge. Jack's written summary pre-intervention was similar in length,

structure, content and quality (number of main points included) to the one he produced post-intervention.

Consideration of the evidence in relation to Amy's summarisation skills led me to a similar 'conclusion' in terms of change over time; I found no evidence to suggest that Amy's summarisation skills improved and rather noted in two observation records that she particularly struggled to both understand the task and provide a summary of the text.

Amy's Individual Observation Record 6B

Amy's summary was *"This article is about six young men who ran in a race."*

This piece of information was provided verbatim in the first paragraph of the text. It does not represent a main point of the passage and as such constitutes a weak summary. I asked what the group thought of Amy's summary and Jack suggested that we rate it with the rating scale cards: Jack = 2/5, Bradley & Zoe = 4/5, Amy & Kamil = 5/5

In the above excerpt, both the summary itself and Amy's rating of her summary indicate that she continued to find summarising challenging mid-way through the intervention. It is interesting though that Jack showed awareness that the summary did not fulfil the brief of including the gist of the passage. These data can be linked to WCC theory as it seemed as though Amy was struggling to form a coherent representation of the gist whereas Jack was demonstrating some skills in this area both in relation to his own summarising skills and those of others.

Feedback from Amy supported my interpretation of the data as she expressed confusion and a lack of proficiency in using the strategy both at the beginning and end of the intervention:

Amy's Structured Feedback after Session 3B

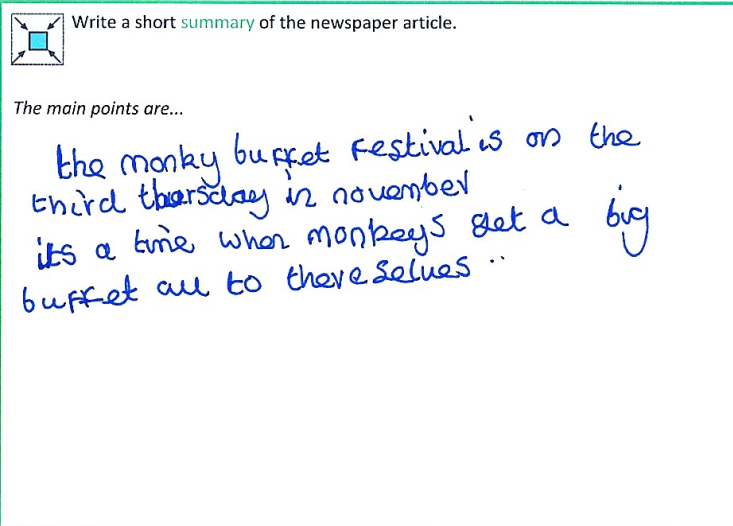
*"Summarise. It's in the middle... [between 'what was good' and 'not-so-good']
I'm not so good at it..."*

Amy's Structured Feedback after Session 14B

"... I'm gon'na put it in the middle because sometimes I do understand it and less of the time I understand it, most of the time I don't understand."

Furthermore, comparison of her performance pre- and post-intervention on the bespoke assessment indicated that she altered her approach to summarising from providing a short paragraph to listing a number of points without making connections between them or encapsulating the gist.

Pre-intervention:

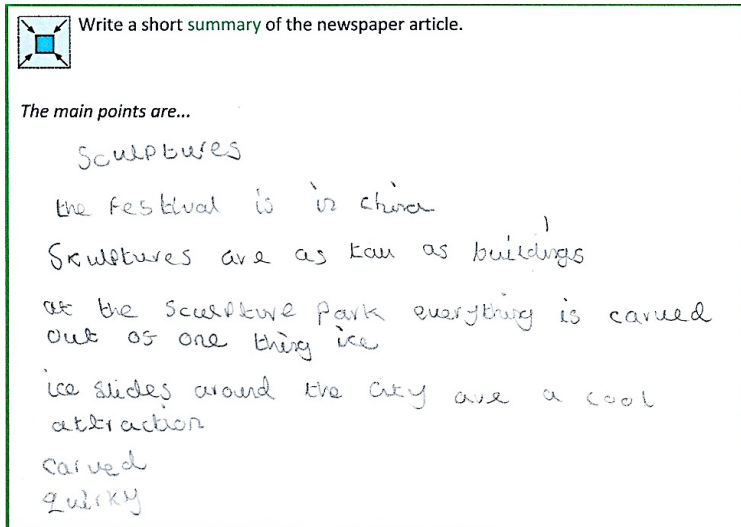


Write a short **summary** of the newspaper article.

The main points are...

the monkey buffet festival is on the third ~~thursday~~ in november
its a time when monkeys get a big buffet all to there selves ..

Post-intervention:



Write a short summary of the newspaper article.

The main points are...

Sculptures
the festival is in china
Sculptures are as tall as buildings
at the sculpture park everything is carved
out of one thing ice
ice slides around the city are a cool
attraction
carved
quirky

Interpreting Amy's response post-intervention led me to draw parallels between her response and the mind maps she created as I discuss later.

In relation to the use of drawing picture summaries, I began to find disconfirming evidence in relation to my criteria around the utility of the adjustment from the outset.

Reflections from Session 3B, Phase 2:

I felt quite unsure about the value of drawing summary pictures today as time was short and I don't think all the group members fully understood the point of the process. In retrospect, it would have been better to save this adjustment for a day when I was not also introducing another adjustment (question cards)...

I was aware of how influenced the drawings were by the children's exposure to the... photographs provided to supplement the text. In this way, I wonder what value the exercise had and whether it might be more valid if used in relation to a section of the text, which had not already been presented pictorially.

In contrast to the disconfirming picture I began to build in practice, Jack and Amy generally provided positive feedback about the adjustment.

Group Feedback Session 3B

Using scoring paddles (1= not helpful for summarising, 5 = really helpful for summarising) most group members rating drawing picture summaries favourably. Amy = 5/5. Jack = 4/5.

Me: *"Why was it four out of five?"*

Jack: *"Because I like drawing pictures."*

Me: *"...did it help you to think about what you'd read?"*

Jack: *"Yes."*

Although in the data excerpt above Jack provides an affirmative response to the link between the adjustment and my educational intent, I did not feel convinced that positive feedback on this occasion and others was clearly linked to supporting summarisation. Rather, there was an indication that both Jack and Amy liked to draw and this motivation accounted for some of their positive feedback. Nevertheless, Amy did compare the adjustment with providing a verbal summary suggesting it was easier for her, although she struggled to provide a rationale.

Amy Structured Feedback after Session 3B

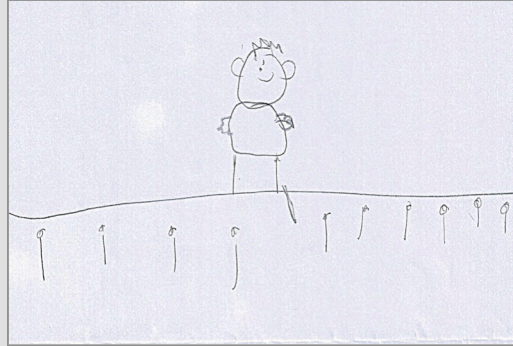
Amy categorised the adjustment as 'good', explaining: *"It was easier because... its better than telling a short sentence. It's easier."*

Examination of the pictures Amy and Jack produced supported my developing claim to knowledge that the adjustment was not fulfilling my criteria in terms of assisting them to identify main points in the picture nor use the picture to scaffold summarising the passage verbally.

Amy's Individual Observation Record 3B

I asked what the main points were and Amy replied:

"The tight rope and the man"



Amy only included two main points and the weights hanging down are likely to be taken from the photos shown in Session 1B. Therefore this adjustment did not seem to supplement her summarising skills or comprehension of the passage.

It was notable here and in other pieces of disconfirming evidence that the use of pictures and photographs (micro-cycle 1) impacted on the usefulness of drawing picture summaries as an aid to my teaching. As in the data excerpt above, it was hard to distinguish the picture drawn from those I provided. As a result, I felt the drawing was less likely to symbolize an external representation of Amy's situation model because of the use of another adjustment. This issue meant that it was important to consider the complementarity of adjustments within and across sessions; I began to feel that adjustments 1 and 3 were not particularly compatible in terms of fulfilling my educational intent or informing my data analysis.

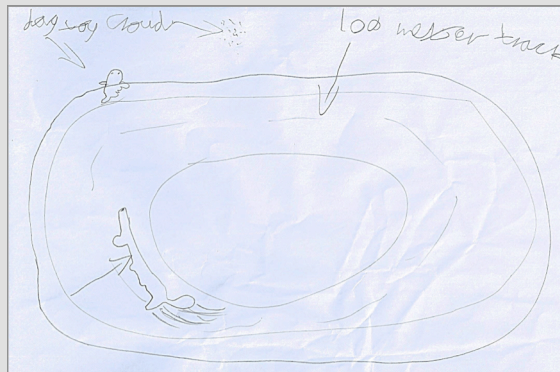
Other issues meant that incorporating drawing was challenging to implement and facilitate as a practitioner, including:

- Using the adjustment in relation to short pieces of text
- Providing enough time to construct a picture
- Encountering behavioural issues with Jack

Akin to micro-cycle 2, Jack expressed some strong negative emotions in relation to this adjustment and these were at times challenging to negotiate as the group facilitator.

Jack's Individual Observation Record 11B

Despite several clear warnings about the time limit of the activity, Jack became very distressed when he ran out of time to complete his picture. He banged his fist on the table and cried briefly. Despite efforts to distract him and build his self-esteem... he... screwed up the picture and threw it on the floor.



Jack's picture included the three main points: (1) 100m track, (2) cheetah, (3) fluffy dog toy. This did not support him to produce a verbal summary and I felt he could have included a much wider range of main points without the adjustment.

Several issues contributed to a feeling of insecurity around my practice in relation to supporting summarisation and to the drawing adjustment in particular.

Session 5B Reflections:

I continue to feel a sense of discomfort when I teach the 'summarising' section and feel I'm not doing this very well. Children don't seem to understand what I am asking of them....I discussed my feelings about summarising with Mrs. Wilson during our feedback session ... however I continue to feel uncertain about how to progress with the teaching in this area. I still feel very unsure about using picture summaries and the discussion with Mrs. Wilson left me pondering the value of this.

Sharing my feelings with Mrs. Wilson helped me to reflect on how to respond to my developing tacit knowledge that the adjustment was not supporting children's summarisation skills or comprehension of the text. Yet, I decided that I had not given the adjustment long enough to embed and therefore continued to use the adjustment until Session 11B at which point I did not use it again. My actions were supported by further conversations with Mrs. Wilson and critical friends. Additionally, at the end of the intervention I found that feedback from Jack and Amy was less positive; Jack expressed a view that although he liked to draw pictures they did not help him to understand and Amy preferred mind maps to drawing picture summaries.

By the end of the micro-cycle I felt confident that my actions and developing claim to knowledge around this adjustment were grounded in evidence. However, in subsequent retrospective reflections I noted that my insecurities and the challenges of supporting Jack's behavioural difficulties might have led me to disregard the adjustment prematurely.

Retrospective Reflections:

Jack's behavioural difficulties linked to the short timescale of 'drawing picture summaries' may have led me to disregard this adjustment too readily. I feel that my decision at the time was linked to a combination of factors, of which the extent to which the adjustment enhanced RT was only one.

Furthermore, although Mrs. Wilson did not express an opinion that the adjustment was a useful teaching aid, she did continue to give children the opportunity to use this tool in sessions following my departure. On this basis, I would not like to strongly refute the usefulness of drawing picture summaries but tentatively suggest that with regard to my identified criteria and my standards of judgement this adjustment did not support children with ASC to engage with the summarisation aspect of the RT.

I identified a number of questions that I would ask in further hypothetical cycles of action research:

⇒ *I wonder if crossing out irrelevant information would have been a more helpful adjustment for summarisation?*

⇒ *Do children need more time to use drawing as a means of supporting skills in summarising?*

Following conversations with Mrs. Wilson I also asked:

⇒ *Would mind maps be more helpful than drawing picture summaries for supporting summarisation?*

I sought to speak to the final question in my last micro-cycle of action research.

Micro-cycle 4: Mind maps

I used mind maps with two specific educational purposes during Phase 2 of the intervention; initially, as a tool used at the group level to activate children's background knowledge prior to reading the text and later to support children in summarising the text at the individual level. Knight and colleagues (2013) suggest that although there is little evidence of effectiveness around the use of mind maps (also known as 'graphic organisers') with learners with ASC,

there is some growing evidence in this field (Zakas et al., 2013) that builds on the endorsement of the NRP (NICHD, 2000).

My identified criteria, standards of judgement, developing claim to knowledge and actions in Phase 2 relating to micro-cycle 4 are detailed in Appendix 27.

Supporting the Activation of Prior Knowledge

Across four consecutive sessions in the second half of Phase 2 (8B-11B) we created two mind maps as a group, each over two sessions (see Figure 16 for example).

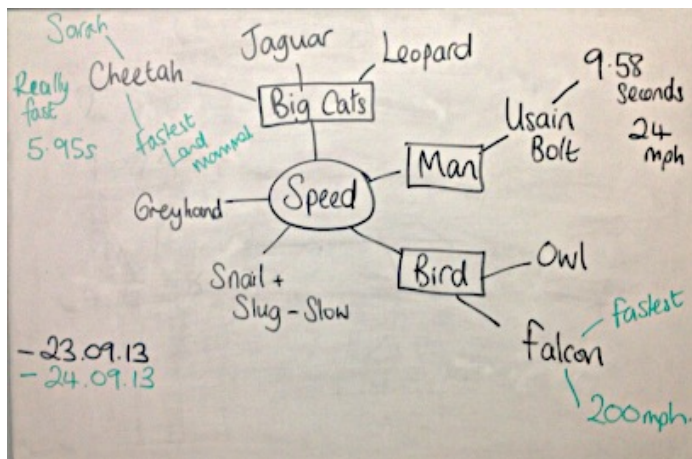


Figure 16. Group Mind Map to Activate Prior Knowledge (Sessions 10-11B)

My educational intent for using mind maps in this way mirrored micro-cycle 1 in which I aimed to enhance the RT process (in general rather than with regard to specific strategies) by encouraging children to bring their general knowledge to the text base. My identified criteria therefore aligned with those identified in connection with the 'pictures and photographs' adjustment.

My Identified Criteria	a.	Jack and Amy make reference to background knowledge relevant to the text following use of mind maps.
	b.	I make reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and link this to my use of mind maps as a practitioner.
	c.	Amy and Jack provide positive feedback about the use of mind maps in the intervention sessions.
	d.	Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and links this to the use of mind maps.

Akin to micro-cycle 1, I did not consider this a focal adjustment to RT in my practice and subsequently did not gather a broad range of evidence to confirm or disconfirm my identified criteria. There was a small amount of evidence to suggest that Jack engaged with the adjustment quite well in terms of volunteering ideas and contributions; however this also resulted in some difficulties transitioning between the adjustment and the RT process, which can be seen as disconfirming evidence.

At the end of the intervention, both children provided positive feedback via the card-sort activity but passed little comment about what in particular made this adjustment 'good' and helpful for understanding. Reflecting back on the intervention at a later date, I did not feel I had fulfilled my values in relation to gathering the views of focus children around this adjustment. Other than the positive feedback received from Amy, I found no evidence to suggest that the adjustment supported her to activate general knowledge or bring this to bear during RT.

Overall, I do not feel there is sufficient data to meet my standards of judgement in relation to this adjustment. As a practitioner, I found it supportive of my practice but not sufficiently for it to feature in my reflective records at the time. Nevertheless, it was compatible with the use of pictures and photographs

and perhaps greater focus on these two methods of supporting the activation of prior knowledge would have yielded more informative data. I would consider the following questions for future research and practice based on my limited experience of using this adjustment:

- ⇒ *How might pictures, photographs and mind maps be used in combination to activate prior knowledge within the content of a RT intervention?*

- ⇒ *Are pictures and photographs or mind maps more useful in supporting children with ASC to draw on their background knowledge to support reading comprehension?*

- ⇒ *How might mind maps be used flexibly to support different aspects of a RT intervention?*

Within the current study, I went some way to addressing the final question as my subsequent action in Phase 2 was to consider how mind maps could be used to support summarisation skills.

Enhancing the 'Summarisation' Strategy

Conversation with Mrs. Wilson, after Session 11B

"Couldn't they just summarise it perhaps in a mind map?... 'cause that is in a way pictorial in a kind of way. It might help them to organise their thoughts..."

Mrs. Wilson suggested using mind maps to support summarisation on at least two occasions and following some reflection I decided to introduce this adjustment in the final three sessions of Phase 2.

Session 11B Reflections:

... I feel this would be a suitable new adjustment however I am beginning to feel concerned about the upcoming end of my involvement...

Associated Learning Point:

Summary mind maps seem to be a sensible adjustment to introduce next and have been put forward by Mrs. Wilson. This may be an adjustment that the TA leads on when she takes over the sessions.

Associated Action Point:

Support Mrs. Wilson to take over the adjustment of summary mind maps.

I had considered mind maps as a formal adjustment during my early intervention planning based on their evidence base in the literature (Nash & Snowling, 2006; Gately, 2008); however due to my concerns around introducing too many adjustments within a short period of time I had not intended to take this adjustment forward. However, following Mrs. Wilson's suggestions I felt it was important to remain true to the organic, evolving ethos of action research and saw this as an opportunity to initiate a micro-cycle of action that Mrs. Wilson could take forward when I passed over the intervention. My decision was also based on my developing claim to knowledge that drawing picture summaries were not supporting summarisation skills, which had generated the question:

⇒ *Would mind maps be more helpful than drawing picture summaries for supporting summarisation?*

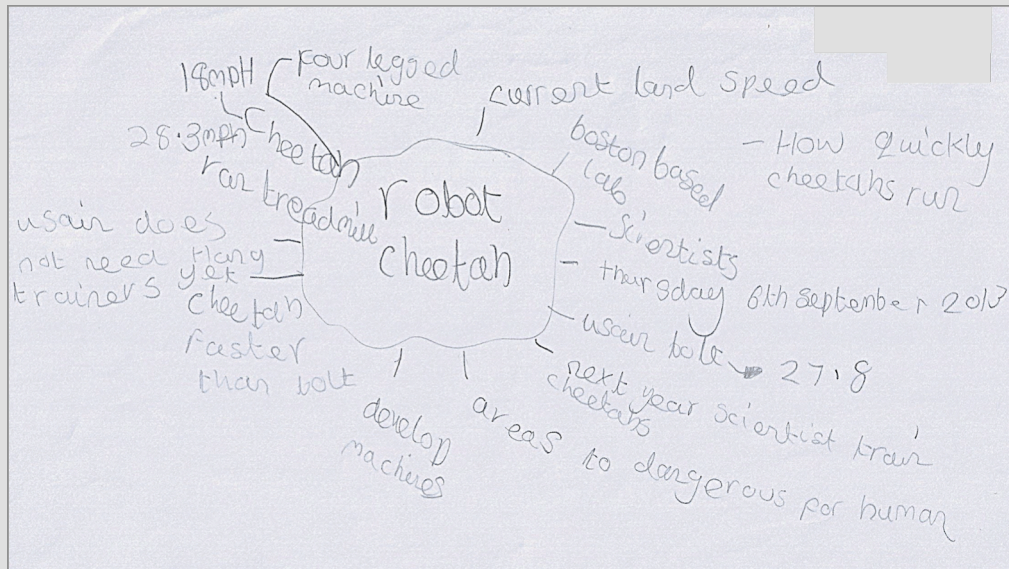
Given that this question arose toward the end of my involvement, it was challenging to respond to it fully, nevertheless I identified a set of criteria around my educational intent, which mirrored that identified for micro-cycle 3 (drawing picture summaries).

My Identified Criteria	a.	Jack and Amy's mind maps include the main points in the text.
	b.	Mind maps support Jack and Amy to draw out the main points in a piece of text and provide a verbal summary.
	c.	Amy and Jack provide positive feedback about the use of mind maps in the intervention sessions.
	d.	I make reference to perceived improvements in Jack and Amy's skills in summarising and link this to my use of mind maps as a practitioner.
	e.	Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in summarising and links this to the use of mind maps.

Initially, I found that Jack and Amy struggled to draw out main points to include in their summary mind maps. Amy, in particular, generated numerous points many of which were taken literally from the text and were not in line with my instructions around identifying the gist of the passage.

Amy's Individual Observation Record 12B

We summarised today using an individual mind map for the first time. Amy put lots of information down... [which] was good to see... however it did not represent just the key ideas and she largely quoted literal information... This indicates that she is struggling to sift out the main ideas and understand what a summary is.



Furthermore, when I asked for a verbal summary, Amy struggled saying "I can't do it!". I gave her the sentence starter "Today I read about..."

She responded: "Cheetah. Usain. 28.3 mph"

In this way, the mind map did not facilitate her verbal summary.

Amy's confusion about the purpose of summarising (considered in the data for micro-cycle 3) seemed at first to be exacerbated by the introduction of the 'mind maps' adjustment and I wondered to what extent her confusion was influenced by the generation of group mind maps which were more like the brainstorm of ideas she had created (and produced in her summary on the post-intervention bespoke assessment). Although this reflection does not relate to my identified criteria, it questioned my assumption that the group mind maps would scaffold children in the production of individual mind maps given that the educational intent behind the two uses differed somewhat.

With regard to my criteria, my observations of both Jack and Amy across the three sessions provided disconfirming evidence to suggest that the adjustment did not support them in producing a verbal summary of the text. However, my reflections around this indicate a feeling that the adjustment would need to be embedded for longer to consider this criterion.

I did begin to observe some progress in terms of my criteria around Amy and Jack using the mind map as a tool for identifying main points in the text. Most notable of these was Amy's mind map in Session 13B as referred to in my reflections on that day.

Session 13B Reflections:

Having felt somewhat dejected about Amy's lack of understanding in previous sessions, today I was elated by her contributions. She produced a summary map mind which more closely focussed on main ideas (in comparison to that produced yesterday).

...

For Amy and all the other group members, I think the mind map summary was more useful today. Children seemed to understand more clearly what was required of them and I gave explicit instructions about only including the key points. We then had only a short amount of time to use them as a prop for a verbal summary... I think this adjustment needs longer to embed to answer the question of whether it supports verbal summarising. I wonder whether Mrs. Wilson will continue with this when she takes over the intervention... and be able to speak to this question to a greater extent than I can.

In feedback at the end of the intervention, Jack commented that mind maps were good "...because they help you to think about things. You think about things and they go on [the mind map]." His comments could be interpreted as implying that mind maps are a helpful metacognitive aid and not necessarily a summarising aid, and I feel this question remains unanswered.

In answer to the question posed above, I am inclined to agree with feedback provided by Amy at the end of the intervention in which she concluded that mind maps were better than drawing picture summaries when it came to summarising. As I considered in the previous section however, this tacit knowledge is likely to be influenced by a number of factors beyond the criteria identified and discussed. For example, Jack did not present with any emotional or behavioural issues during the use of mind maps, which may have made them feel more facilitative in practice.

An action arising from this micro-cycle was to support Mrs. Wilson to use mind maps in her practice. I therefore considered the following questions relevant to the ongoing life of the intervention:

⇒ *I wonder if creating mind maps to summarise information in the text will support Jack and Amy in producing a verbal summary once they become more familiar with this adjustment?*

⇒ *Which of the adjustments to summarising would Jack and Amy choose if given the opportunity to decide?*

Jack's feedback also raised the following question for research and practice:

⇒ *Are mind maps a useful tool for supporting metacognition in children with ASC?*

Research Question 1b (RQ1b)

How can I gather the views of children with ASC on the intervention and use these to inform intervention planning and evaluation?

My learning from Phase 1 informed my second research sub-question and in response I gathered Jack and Amy's views individually using structured and unstructured formats at regular intervals during Phase 2.

I identified two key criteria relating to the extent to which I fulfilled my values around including and acting upon the voices of the focus children in Phase 2. If I were meeting my standards of judgement, I expected to see the following:

My Identified Criteria	a.	I altered my planned actions in response to Jack and Amy’s feedback and included their views in my intervention planning.
	b.	I considered Amy and Jack’s views in relation to each of the micro-cycles and represented their views in my interpretations and developing claims to knowledge.

In attempting to fulfil these criteria, I encountered a number of challenges and made efforts to address these through my reflective records and conversations with Mrs. Wilson and critical friends. From my initial rapport building activities with Amy, I felt she was keen to please me and I addressed this through adapting my procedure of gathering focus children’s views (e.g. including explicit prompts for sharing negative views) and via extensive reflections in my learning journal.

Session 6B Reflections:
I feel very aware of how Amy is also quite different to Jack in the extent to which she takes cues from me. In this example her answer seemed to be based on reading my facial expression and trying to ‘get it right’. I feel it will be important to continue to bear this in mind during feedback activities and whilst interpreting the data.

I explored the idea that Amy was reading my facial expressions with a critical friend, particularly because this behaviour is not commonly associated with children on the autism spectrum. I sought to meet my criteria through these reflective conversations and by recognising the influences of my actions

on my interpretation of the feedback data as a means of supporting both my intervention planning and data analysis.

During Phase 2 there were a number of instances whereby I fulfilled the first criterion. My decision to seek feedback from the focus children prior to carrying out planned actions arising from my learning in Phase 1 demonstrated a commitment to acting upon children's voices. In relation to this, I discontinued planned adjustments including maps and role play. In addition, I responded to Jack's suggestion about what we could do differently by adapting the reward chart to include rewards for recapping skills which he noticed and commented upon.

Jack's Individual Feedback after 14B

Jack: *"And I see that that [recap card] used to not have the blue stars when we did it first but now you've changed it!"*

Me: *"I did, I changed it 'cause you suggested changing it, didn't you?"*

Jack: *"Yeah I suggested putting a recap star on and you listened."*

There were times when children's views confirmed my decision-making process, for example when I opted to keep all six children in the group. However, I am not sure in retrospect whether I would have altered this decision had Jack and/or Amy expressed a negative view about this decision. In this way, my triangulation of a number of different views and influences on decision-making processes within my intervention planning meant that ultimately I retained the power in terms of which of children's expressed views I acted upon and which I did not.

Whitehead (1989) proposes that action researchers inevitably experience themselves as living contradictions when they examine their own practices. That is, they find that in attempting to fulfil their values, they concurrently flout them. Whitehead therefore advocates the importance of looking back at one's own practice and I did so by listening back to my audio-recorded sessions during the data exploration phase. Indeed, I was aware of instances in which I was a

living contradiction in my practice. For example, I discontinued using role play on the basis of Amy's feedback but did not trial the use of visualisation despite Jack proposing that this might be useful. In this way, I incorporated children's views as one part of the wider context of intervention planning and although I attempted to reduce the power imbalances within the group, I do not claim to have negated these in practice.

I feel that my values around the voice of the child refer to a continual striving within my practice. My actions in Phase 2, supplemented by my efforts to maintain transparency, criticality and reflexivity, represent a small step towards fulfilment of an ideal in which children's voices are heard and hold power. In relation to my identified criteria, this small step is, on balance, enough to meet my own personal standards of judgement recognising the numerous challenges presented in eliciting the focus children's views within the remit of this piece of research (discussed in Chapter 4).

Consideration of my discussion in relation to RQ1a alongside the detailed evidence contained Appendices 24-27 speaks to my second criterion regarding the extent to which I incorporated the views of focus children in my analysis and evaluation of the data. In line with my hopes and expectations, data from both Jack and Amy's individual structured feedback sessions (supplemented by a small amount of feedback at the group level) featured in the weighing up of confirming and disconfirming evidence for each of the four micro-cycles.

The frequency with which Amy and Jack's responses during the card-sort activities were referenced indicates that this deductive method of feedback was the most informative in terms of eliciting their views. Within this, I recognise the subsequently strong influence I had on both the generation and interpretation of the meaning inferred by their sorting of the cards and concurrent discussion of the intervention features. In particular, I recognise that my interest in certain aspects of the intervention led me to ask follow-up questions which I did not do in relation to every card they sorted. In this way, this bias was reflected in my

evaluation of the adjustments because I found that I had less data on intervention features that I did not consider focal within my research agenda.

In summary, I do not suggest that the methods I used to gather Jack and Amy's views provided a 'window' on their inner thoughts nor deny that my voice is inherent within my representation of their views but rather hope that, from a pragmatic perspective, I developed activities that enabled them to express opinions linked to their experiences of the intervention and see a tangible response following the sharing of some of their views.

Leaving the Intervention with the Community

For me, a significant success of the intervention was the decision made by school staff to continue running the group following my departure.

Reflections from Session 9B:

I feel really positive about the news that Mrs. Wilson will continue the sessions when the research phase is over. Despite initial feedback that this would not be possible due to resources, ...I feel really encouraged that school staff have valued the intervention enough to find a way to continue implementing it. From an action research perspective, I feel relieved that the cycles will not end with my removal from the setting but rather that the community will take the work forward. This feels 'right' and ... accords with my EP role in which I facilitate change without fostering a dependency on my own skill set.

The involvement of children in leading the sessions marked the beginning of the 'handing over' process; Mrs. Wilson gradually took on more of a facilitation role and I tried to scaffold a sense of group ownership in which I was increasingly less salient over time. I was keen to encourage the generalisation of skills taught in the intervention sessions to other contexts, despite this being beyond the remit of my research questions. I therefore introduced visual supports to encourage this generalisation including a small key ring of the strategy cards and a bookmark (Appendix 28).

Related to this, I would ask the following questions for any further hypothetical cycles of action in this research context:

- ⇒ *Can children generalise and apply the RT strategies in other contexts e.g. the classroom?*
- ⇒ *Which adjustments, if any, support the generalisation of RT to other contexts?*
- ⇒ *Does a key ring of RT strategy cards and/or a bookmark containing visual supports facilitate the generalisation of RT to other contexts?*

Although the community took over the intervention, I did not attempt to hand over the research process and subsequently these questions cannot be answered through further cycles of action research. Therefore I present the questions as a springboard for future research and practice and in recognition of the limitations of the current study.

At the time of writing (five months after my involvement in the sessions), Mrs. Wilson continues to run the intervention group for four days each week, which I feel is testament to the success of the intervention. I have enjoyed returning to visit the group and observing how the intervention has evolved to incorporate fiction texts as well as remaining true to RT and involving many of the adjustments I introduced (including question cards in every session and a choice to use picture summaries and mind maps for summarising in some sessions). I continue to take part in ongoing discussions about supporting Mrs. Wilson to set up similar groups for others in school and train up the wider staff team.

CHAPTER 6: SYNTHESIS AND CONCLUSIONS

Your living theory is created from within your work and represents your present best thinking. It is always developing because you are always in process of development.

McNiff and Whitehead (2010, p.47)

In presenting my best current thinking following two cycles of action research, I synthesise my findings here to make a claim to knowledge on the basis of my living theory of practice. I then seek to validate this claim with reference to a series of questions posed by Whitehead (1989). Following this, I recognise the broader context of the intervention study by reflecting on my learning beyond the claim to knowledge and acknowledging my tacit knowledge in terms of the wider outcomes of the research. Finally, I conclude the chapter and thesis by considering the limitations of the study and implications for practice.

The Claim to Knowledge Regarding my Overarching Research Question

How can I enhance a Reciprocal Teaching intervention to support the reading comprehension skills of children with ASC who have difficulties in understanding what they read?

At the outset of the study, I held a multitude of ideas about how I might enhance RT (Palinscar & Brown, 1984) to support children with ASC who display a common profile of strengths in decoding alongside difficulties in reading comprehension (Nation et al., 2006). I sought to explore my overarching research question through a combination of inductive and deductive processes, allowing the path of my phased inquiry to be shaped by feedback from children with ASC and my iterative cycles of 'noticing and adjusting' as a practitioner-researcher. Using an action research methodology, I hoped to address a gap in

the literature and in practice around adjusting reading comprehension interventions to support the needs of children with ASC (Whalon et al., 2009).

Within the two macro-cycles of action and reflection considered in the current study, a number of avenues for improving my practice opened up, some of which I followed and some of which I did not. In synthesising the findings of my inquiry, I seek to make a claim to knowledge around those adjustments to RT that I explored in my particular practice context; I therefore do not disregard the potential usefulness of other adjustments, supports and resources either for the children with whom I worked or the wider population of children with ASC. Indeed, during the course of the study I identified a number of further questions for research and practice, which I view as key outcomes of the research, given my understanding as an action researcher that:

Improvement does not imply an end-point where everything will be perfect. This is an assumption of traditional research, which suggests that (1) there is an answer for everything; (2) the answer can be found; and (3) everyone will agree on the answer... everything [is] in the process of coming into being...

McNiff and Whitehead (2010, p.35)

Following a trialling phase in which I introduced and embedded a RT intervention based on cooperative learning principles, I engaged in an intensive intervention phase whereby I explored four key adjustments to RT: (1) pictures and photographs, (2) question cards, (3) drawing picture summaries and (4) mind maps. The exploration of adjustments to tailor the intervention to meet the needs of children with ASC reflects my value of inclusion and was directly linked to my first research sub-question. The key adjustments, explored as micro-cycles of action within the current study, arose organically from my previous experience, my conversations with children and school staff, my observations and reflections and my consultation with the literature.

The four adjustments explored in this action research study can be seen to share a common attribute; they all involved visual supports. Visual supports

are widely recommended (NICHE, 2013) and commonly used with children on the autism spectrum as a means of supporting communication (e.g Bondy & Frost, 1994) and reducing the complexity of social rules and environments (Devlin, 2009). The use of visual supports is also often used to promote inclusion (Quill, 1997) and access pupil voice (Murphy, 1998). In my practice, I found that the use of some visual supports enhanced both the content and process of a RT intervention for children with ASC and also supported their participation in shaping the intervention to meet their needs.

Within this broad claim around my living theory of practice, only one specific visual support, question cards, met my standards of judgement related to my values and identified criteria. Using question cards (featuring visual symbols and written question words) seemed to improve my practice by increasing focus children's engagement with and use of the RT 'questioning' strategy. Although there was a greater body of evidence to suggest that question cards supported Jack's questioning skills in contrast to Amy's, overall I concluded that the provision of visual prompts supported both children to ask more advanced questions about texts and engage in proactive strategy-use by the end of the intervention. This claim to knowledge is underpinned by consistently positive feedback from Amy and Jack who reported that the adjustment was enjoyable and facilitated their understanding. Furthermore, the claim aligns with the findings of Whalon and Haline (2008) who carried out an experimental intervention study using the RT 'questioning' strategy with three boys aged 7-8 with ASC. They supplemented 'questioning' with visual cues and self-questioning approaches and found improvements in question generating and answering.

Given the nature of the current study, I did not attempt to demonstrate that the use of 'question cards' improved children's reading comprehension; however, a strong evidence base suggests that questioning approaches assist children to read for meaning (NICHD, 2000; Rosenshine et al., 1996). Furthermore, in Williamson and colleagues' (2012) model of reading comprehension processes for high functioning individuals with ASC (see Figure

4), the use of productive strategies, such as asking questions about texts, is considered to support the situation model of children with ASC in line with the propositions of the CI model of reading comprehension (Kintsch & Rawson, 2005; see Figure 3). Therefore it seems that further research would be worthwhile as a means of considering the extent to which visual supports to facilitate question generation impact on the reading comprehension skills of children with ASC.

Williamson and colleagues' (2012) also theorise the links between the CI model and theories of ASC including ToM (Happé, 1994; Baron-Cohen, Leslie & Frith, 1985), EF (Ozonoff & Miller, 1996) and WCC (Frith, 2003). In my discussion of the 'question cards' adjustment, I considered that this visual support might have assisted in making abstract strategy-use more concrete and supported children to generate ideas about the perspectives of others. This interpretation links to ToM and there was some evidence to suggest that the adjustment supported Jack to take into account other people's perspectives whilst questioning. Nevertheless, unlike Whalon and Hanline (2008) I did not find that the visual adjustment I introduced facilitated question *answering*; this is perhaps unsurprising given that this was not my educational intent and that Whalon and Hanline incorporated different adjustments to the RT 'questioning' strategy.

Despite its use in my practice, I recognise that the 'question cards' adjustment was relatively limited in scope and other studies have considered more in-depth approaches to supporting question generating and answering such as QAR (Raphael et al., 2006). QAR involves more detailed teaching of questioning and explicitly teaches a distinction between literal and inferential questions. In adapting QAR for children with ASC, Whalon and Hart (2011) suggest that visual cues are a useful means of encouraging children to participate in activities by making social rules and expectations explicit. They also suggest that such additional supports should be reduced over time as children become more independent and spontaneous in their strategy-use. This recommendation links to my observation that Jack appeared to become more constrained by the 'question cards' adjustment as he asked more advanced

questions over time. This finding indicates the potentially time-limited nature of visual supports and raises questions around when might be an appropriate time to fade out adjustments, which I did not address in the current study.

Furthermore, it was apparent and anticipated that the two children with ASC would respond differently given their differing starting points, strengths and areas of difficulty. With reference to children with ASC, Tissot and Evans (2003, p.426) suggest that *“no one particular approach is right for every child... alternative types of visual strategies may need to be tried before a ‘best’ approach is discovered for any one individual child.”* This recommendation poses a challenge within the context of a group-administered intervention. For example, my findings indicated that Amy needed longer for the adjustment to embed than Jack and that over time Jack may have started to become constrained by the use of question cards. Further action research focusing on the flexible use of visual supports to facilitate the RT ‘questioning’ strategy for individual children within a group context might address this challenge in practice and further inform the research literature in this area.

...further research is needed to better understand the instructional conditions under which questioning approaches are most beneficial, and whether the effects of instruction are moderated by reader characteristics, including subgroup status.

McMaster, Espin & van den Broek (2014, p.22)

In addition to ‘questioning’, I also identified ‘summarising’ as a RT strategy around which to make adjustments to enhance RT for children with ASC. My rationale for focussing my action in these areas was based on my observation that the two strategies were the most challenging for the focus children and represented an opportunity to tailor the intervention to meet their needs. Although I found some evidence supporting the idea that mind maps were a useful visual support to aid my practice in teaching children with ASC to identify main ideas, there was insufficient evidence to meet my standards of

judgement regarding this visual support. Nevertheless, given that children with ASC typically find it difficult to establish gist (WCC theory, Frith, 2003) I feel that further research in this area would be beneficial.

In contrast, encouraging children to create an external visual representation of the text by drawing a 'picture summary' did not support my practice in enhancing the RT 'summarisation' strategy for focus children. Although there was some evidence that Amy and Jack enjoyed drawing, there was not convincing evidence to suggest that the adjustment assisted them to summarise text nor that their summarisation skills changed over time. Both the pictures created and the verbal summaries subsequently produced indicated that this adjustment did not enhance the RT 'summarisation' strategy in terms of content or process. Furthermore, I did not find the adjustment helpful in my practice; I found it challenging to use within the timeframe of a RT session and difficult to fulfil my educational intent of supporting the links between drawing and verbalising. In this way, producing a visual support in the form of drawing a picture did not seem to have as much potential for enhancing 'summarisation' as using a mind map for this purpose; this claim to knowledge triangulated with the expressed views of Amy at the end of the intervention.

Despite my claim that this adjustment did not facilitate my practice, I recognise that a number of challenges and a lack of opportunities to embed the adjustment over time may have led me to disregard the adjustment prematurely. Further research is therefore needed to establish whether drawing facilitates summarisation skills and furthermore whether the drawing produced can be used as a visual support for producing a verbal summary in children with ASC. In addition, issues around the complementarity of this adjustment with other approaches to supporting RT need to be considered given my observation that the use of pictures and photographs connected to texts could undermine its application.

Beyond the implementation of adjustments to support particular RT strategies, I also used two adjustments to activate children's prior knowledge as

a means of supporting the whole RT process. My educational intent in using visual supports to activate background knowledge was based on the CI model which proposes that a rich situation model results from the combination of background knowledge with the understanding taken directly from the text base. I therefore wondered whether adjustments to support the activation of prior knowledge would assist children to engage in the content and process of RT. I explored 'pictures and photographs' and 'mind maps' across two micro-cycles in relation to this educational intent but recognised that the reduced emphasis on these adjustments within my practice contributed to lack of either confirming or disconfirming evidence around whether these adjustments enhanced RT for children with ASC. Although there was an indication that the use of visual supports to invoke and organise ideas seemed promising in this regard, I did not gather sufficient feedback from focus children around these adjustments; therefore further evidence and embedding of these approaches was needed to make a clear claim to knowledge. Instead, I identified a number of questions around how visual supports such as pictures, photographs and mind maps might be used together to support the activation of prior knowledge for children with ASC (see Chapter 5).

Across the two phases of this inquiry, a number of different adjustments could have been introduced to explore my overarching research question. Nevertheless, through an organic and unfolding process, visual supports became a cornerstone of my practice in addressing my research aims. Beyond the four adjustments considered as micro-cycles of action within the study, other visual supports appeared to support the process of RT including a visual timetable and the use of cards with visual symbols and written prompts to support strategy-use and assist children in taking a leading role in the sessions.

Quill (1997) suggests that visual supports can help children in shifting attention and this links to EF theory because visual supports can be seen as directing attention to support processing. In terms of my practice, visual supports could be seen as facilitative of the transitions between the four strategies which are fundamental to RT. Furthermore, I found visual supports

helpful in facilitating the transitions between group members when engaging in the more advanced tenet of RT whereby children led the sessions. These tentative claims to knowledge were not the focus of my inquiry nor subject to rigorous data analysis in Phase 2, however they indicate a need for wider exploration of a range of visual supports in enhancing RT for children with ASC.

The active participation in learning encouraged by the RT approach was reflected in my attempts to engage children as active participants in the research process. Eliciting the views of children with ASC was a key feature of the study as it was based on my values around the voice of the child and formed a specific sub-research question within my design. This question in relation to my practice addressed the practical issue of how I could access children's views on the intervention and incorporate these into my planning and evaluation. My claim to knowledge with regard to this aspect of my practice mirrored that developed through the exploration of adjustments to RT in conjunction with the focus children; the use of visual supports assisted me in gathering the voices of children with ASC. Although I trialled a number of approaches to gathering focus children's views and improved my practice in this regard from Phase 1 to Phase 2, I found that using a structured individual card-sort activity incorporating visual prompts and written words, was the most productive means of gathering children's views on the broad range of activities undertaken in the sessions. This approach shares similarities with an approach known as Talking Mats™ (Murphy, 1998), which consists of a picture-based approach for accessing the views of children and young people with SEN and has been used by an EP to gather the views of children with ASC on their school experiences (Dann, 2011).

Although I found that paper-based visual supports facilitated my research and practice with children with ASC, Hayes et al. (2010) suggests that such visual supports are not always ideal for children, parents and practitioners as they can be time-consuming to develop and inflexible to use. These researchers promote the use of digital, interactive visual aids as a means of supporting children with ASC. As I discussed in Chapter 2, my rationale for the current study was based around a gap in the research considering more

traditional approaches to supporting children with ASC to read for meaning based on sociocultural theory (Vygotsky, 1978). Nevertheless, I feel that research around using digital tools, both in addition to and in place of more traditional intervention approaches, is worthwhile and timely.

Despite my broad claim to knowledge regarding the use of visual supports to enhance RT for, and in conjunction with, children with ASC, I recognise that visual supports are not exclusively beneficial for this group. Furthermore, I acknowledge that, although it was beyond the remit of my inquiry, a number of relevant and interesting questions of a comparative nature reside around the responses of children with and without ASC in the intervention context; questions of this nature would be best addressed through an experimental research design.

Reflecting back on the quote featured at the beginning of this chapter, my claim to knowledge represents my best current thinking in response to my overarching research question following two cycles of action research. In this way, my living theory of practice can be seen as dynamic given that my understanding will inevitably evolve as I develop in my role as a practitioner.

Validating the Knowledge Claim

*From an action researcher's perspective, the challenge is to define and meet standards of **appropriate** rigor without sacrificing relevance.*

Argyris and Schön (1989, p. 612)

In designing the current study and responding to my learning from one phase to the next, I hoped to demonstrate appropriate rigour whilst also making a claim to knowledge that had relevance and application for practitioners.

A leader in the field of action research, Whitehead (1989, p.59) proposed a series of questions in relation to judging the validity of a claim to educational knowledge. I will respond to each question in turn as a means of critically considering and evidencing the validity of my own claim to knowledge.

a) *Was the inquiry carried out in a systematic way?*

Over a period of prolonged engagement, the systematicity of the study was improved following my learning in Phase 1. I made changes to my sources of data collection and my analytic strategy to improve the dependability, credibility and confirmability of my subsequent claim to knowledge in Phase 2. In line with the recommendations of key action researchers in the field (McNiff & Whitehead, 2010; McNiff, 2013) I developed a systematic approach to processing my data in Phase 2, which centred around the clear identification of criteria, confirming and disconfirming evidence and standards of judgement to inform my claim to knowledge.

b) *Are the values used to distinguish the claim to knowledge as educational knowledge clearly shown and justified?*

From the outset of my inquiry, I outlined the way in which my values informed my practice and research activities. By delineating my overarching research question into two sub-questions, I clearly demonstrated how my values around inclusive education informed my first research sub-question and how my values around the voice of the child informed my second research sub-question. Structuring my inquiry around these values entails that my subsequent claim to knowledge is rooted in these values. Furthermore, my use of standards of judgement provided my justification for establishing a claim on the basis of confirming and disconfirming evidence.

c) *Does the claim contain evidence of a critical accommodation of propositional contributions from the traditional disciplines of education?*

My claim to knowledge builds on a number of propositional theories which are introduced and considered critically throughout this thesis. The Simple View of Reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) was influential in the selection of the participant group and broadens the application of findings as many studies use this theory as a basis for identifying reading profiles.

By using RT as a context within which to base my inquiry and subsequent claim to knowledge, this traditional educational theory (based on the principles of cooperative learning and sociocultural theory) is strongly evident within my living theory of my practice.

A further significant contribution from propositional theory resides in the use of the CI model (Kintsch & Rawson, 2005) as a means of structuring my observations and interpretations in practice and my subsequent claim to knowledge with regard to my research questions.

Finally, some accommodation of three cognitive explanatory theories of ASC is provided with regards to the interpretation of claims to knowledge within this investigation. My claim can be seen to build on the work of Williamson and colleagues (2012) who incorporated the propositions of theories of ASC along with those of the CI model in a grounded theory of the reading comprehension skills of individuals with high functioning ASC.

By linking my living theory of practice with these propositional theories and the literature I hope to validate my claim to knowledge and subject it to public criticism by comparison with other studies which incorporate these propositions.

d) Are the assertions made in the claim clearly justified?

Phase 1 provided a basis for improving my practice in Phase 2 and further justifies the claims made on the basis of the Phase 2 data. The rigorous approach to data analysis undertaken in Phase 2 provides a clear justification for my claim and this is strengthened by the provision of processed data tables in Appendices 24-27. My triangulation of different data sources and search for both confirming and disconfirming evidence strengthens the justification for my claim. Furthermore, the thick description provided not only justifies my claim but also allows others to judge whether the claim to knowledge has applications for their own practice (Mertens, 2009).

e) Is there evidence of an enquiring and critical approach to an educational problem?

I clearly identified the educational problem of supporting children with ASC to read for meaning by critical review of the literature and through discussions with practitioners specialising in ASC in my local context. I hoped to adopt an enquiring and critical approach to addressing my research questions by identifying questions throughout my inquiry, some of which I was able to answer within further cycles of action and reflection.

I sought to increase my criticality by completing a reflective learning journal throughout the study, which was structured to promote reflexivity around my practice and facilitate cycles of question and answer (Shepherd, 2006).

I recognise that at the time of intervention I did not enquire about aspects of my practice with equal intensity and as a result I did not gather as much data on some adjustments in comparison to others (micro-cycles 1 and 4). This limitation was explored through my reflective and reflexive approach and accounted for within my claim to knowledge.

Finally, I increased my criticality in Phase 2 on the basis of my learning from Phase 1 by incorporating conversations with critical friends during intervention delivery to facilitate my reflections and reflexivity at a time when I could alter my actions. These conversations assisted in the validation of my claim to knowledge.

Beyond The Claim to Knowledge

Having narrowed the focus of this thesis to data that speak directly to my research questions, I now reflect on some of the broader outcomes and learning points arising from the intervention study at large. These reflections are based on my tacit knowledge as a practitioner and acknowledge the broader context within which my research was situated.

Wider Outcomes

Implicit Teaching of Social Communication Skills

In the early stages of embarking on this research project, one of the key interests that motivated me to engage in a reading comprehension intervention with children with ASC centred around a point of intrigue regarding the nature of learning and the need for explicit approaches to supporting social communication skills. In my literature review, I highlight the emphasis in practice on explicit approaches to developing the social skills of children with ASC and a comparative lack of approaches focussing on specific aspects of learning. Delivering an intervention to support learning that was underpinned by the principles of cooperative learning (an essentially social process) raises the interesting question of whether Jack and Amy developed social skills indirectly through participating in the RT intervention. Although the current research study is unable to answer this question, my experience in practice was that I noticed an increase in unprompted positive social behaviours from Jack as the intervention progressed. These behaviours included examples in which Jack sought to share an experience with another group member, used prosocial language (e.g. 'please' and 'thank you') and recognised the needs of another child during the intervention sessions. Whilst I noted and celebrated these examples, I recognise that my role with Jack was restricted to the intervention context and therefore it is difficult to connect the increased frequency of these behaviours over time to his participation in the RT intervention. Furthermore, I did not note a change in the prosocial behaviours displayed by Amy during the intervention. Akin to my claim to knowledge, the most appropriate outcome in terms of acknowledging this aspect of my study is to present this as an ongoing question for practice and research:

⇒ *Can children with ASC develop their social communication skills indirectly through a RT intervention which focuses on supporting reading comprehension skills?*

I feel that this is an important question to answer given that many children with ASC are removed from the classroom to engage in explicit social skills programmes and it is an important task for educators to ascertain whether a more inclusive approach may be as effective in supporting their needs in this area whilst simultaneously developing other skill sets.

The Experiences of Non-Focus Children

The current study was not set up to respond to comparative questions around the experiences of children with ASC versus those without; however, I inevitably developed tacit knowledge about the reading experiences of all six children in line with my responsibilities as a practitioner working with the entire group. Whilst I did not gather or document a range of evidence linked to the experiences of non-focus children, my tacit knowledge was that all members of the group benefitted from involvement in the intervention. This understanding is based on my experiences of delivering (and participating in) the intervention and from my observations and conversations with Mrs. Wilson at regular intervals during and since the intervention. From an ethical standpoint, this wider outcome is implicit in the continuation of the intervention for the group across the months that followed and therefore is noteworthy as an outcome beyond my specific claim to knowledge.

Children as Proactive Readers

Reflecting back across the intervention, I felt that all the group members became more proactive in their approach to the task of reading as they engaged in the cooperative learning process of RT. I perceived a shift in their understanding of the *purpose* of reading as a means of deriving meaning rather than a more superficial task involving the decoding of words and the answering of questions posed by an adult. In this way, the role of the reader as a 'detective' within the unfolding reading process was developing within the group and over time I was able to gradually reduce the scaffolding I provided around this aspect of the intervention. For me, the routine approach to using the RT strategies was essential in terms of enabling children to apply their developing skills with a

reduced amount of prompting and also in terms of giving them a clear structure and format for their 'investigation' of the text. As outlined in my claim to knowledge, I concluded that the visual aids I introduced facilitated RT by making the routine process very literal and concrete and by providing tangible, tailored activities within which to apply the RT strategies.

Mrs. Wilson as a Proactive Teacher

An unexpected and significant outcome of the study was the journey Mrs. Wilson embarked upon across the course of the intervention and, particularly, in taking over the intervention in the months following my departure. In the early sessions of Phase 1, Mrs. Wilson adopted a remote position seating herself in the corner of the room and contributing mainly to discipline Jack. When given a copy of the passage she did not always read it and she appeared to defer to my perceived 'expertise' in the topic area. Over time, I sought to include Mrs. Wilson increasingly in the intervention and felt I was much more successful in doing so in Phase 2 than Phase 1. The introduction of the 'leader' role provided an ideal opportunity to pass over the responsibility of facilitating the group to Mrs. Wilson (prior to passing it over to the children) and here I felt that the visual aids and routine approach were significant in supporting her to lead the RT process as a teacher. Session 5B, in which she took on the leader role for the first time, marked a turning point in Mrs. Wilson's role within the sessions and from this point forward I observed an increase in her confidence and self-esteem around her teaching. She became increasingly proactive in supporting other members of the group to apply the strategies and we began to co-deliver the sessions whilst I retained control of the planning and introduction of adjustments. By the end of my involvement, a key indicator of the increase in Mrs. Wilson's skill set and confidence was the smooth transition that took place when I exited the sessions. On my return visits since that time, it was a pleasure to observe Mrs. Wilson's increased sense of purpose in school and engage in discussions about how she might adapt the intervention for other groups in school.

My Broader Learning Journey

In Relation to My Practice

I can relate to the journey I witnessed in Mrs. Wilson because I too developed my confidence and self-efficacy as a practitioner over the course of the intervention. In the early stages of Phase 1, I had very high expectations of the amount of material I could cover within the allocated time and my disappointment in meeting my self-imposed objectives in those early stages was a strong focus in my learning journal. I felt I was constantly battling with the practical and research aims of the study and explored these dilemmas in my reflective records and conversations with critical friends. Over time, I became more comfortable with the inherent discomfort of delivering an intervention in a real world context in which plans change and unforeseeable events change the direction, atmosphere or content of a given session. I also remained true to the evolving ethos of action research (McNiff & Whitehead, 2010) in which I retained flexibility during intervention delivery to enable me to respond to my learning and feedback from the group.

This experience deviated significantly from my previous research experiences of writing intervention materials in which the planning could not be complemented with practical teaching experience and therefore lacked a depth of understanding about the process of supporting children to read for meaning. My experience in the current study has therefore developed my teaching skills and helped me to ground my expectations within the context in which I was situated. Within this, I have learned a great deal about identifying needs and adapting my practice flexibly ('noticing and adjusting').

I have also learned about the significance of relationships within my role as both a researcher and a practitioner. Within the intervention context, the relationships I built with the children over time were essential to my facilitation of their learning and mediated everything we did within the context of the cooperative learning intervention. I felt that RT provided a strong foundation for building relationships centred around respect for one another's point of view

and reducing the power imbalances of teacher and student through the transition of the leader role to the children. In my opinion, the positive relationships I built with the children were fundamental to their receptiveness to the adjustments I introduced over time. Furthermore, this responsiveness was reflected in their willingness to provide feedback to support the research process that ran alongside the intervention. During the intervention, as I attempted to scaffold the interactions between group members I was also indirectly scaffolding the relationships they built with one another and fostering a supportive, trusting group context. My indirect role in this respect encouraged me to reflect on my work as a trainee EP and the extent to which I consciously consider the role of relationships, especially within the context of a reading intervention. My learning around the criticality of relationships within the teaching process will undoubtedly inform my practice in this area in the future.

The relationship between myself and Mrs. Wilson became increasingly important across the course of Phase 2 and assisted me in achieving a dynamic balance between fulfilling my practical and research-based objectives. I was able to gather more feedback from Mrs. Wilson as a fellow participant in the intervention process, which facilitated my intervention planning and my triangulation of the data to speak to my research questions. In making time to speak to me during her break or organising cover in lesson time whilst we discussed the intervention, Mrs. Wilson engaged in the reciprocal 'give and take' of a positive working relationship in which we increasingly shared a purpose and vision. In return I was able to equip her with content knowledge about supporting reading comprehension and practical tools with which to approach the task.

Looking at the wider schools system, I recognise that my relationships with other members of school staff were restricted and this impacted on the extent to which I was able to share information about the outcomes of the research and support Mrs. Wilson in disseminating the findings to the school community. These dissemination activities represent an ongoing objective within my work; however I consider that the lack of opportunity to build and

sustain relationships is linked to delay in organising information-sharing activities. My failure to build meaningful relationships with members of staff in the wider school system was influenced by a number of factors including the size of the school, the transition in year groups mid-way through the study and my own reticence in approaching members of staff during breaks and lunchtimes. I go on to discuss limitations and implications for practice later in this chapter and subsequently touch on these issues in greater depth; however I recognise that my learning around delivering an intervention within the context of the school system has broad application within my role as a trainee EP.

In Relation to My Approach to the Research

In setting out my positionality at the outset of this study, I recognised the paradigm shift in my research position following my previous involvement in quantitative research and outlined my intention to explore a new research methodology in the current study. Within the context of an action research study, I have grappled with issues of philosophical positioning in terms of data collection and interpretation throughout the study. I have attempted to bring to light and challenge my frameworks for thinking with varying success yet have learned a great deal about the process of inquiry in doing so. In writing this thesis as a culmination of the research journey undertaken, I recognise that I have arrived at a mixed-methods study in which I have valued and incorporated both quantitative and qualitative data across my phased inquiry. At the outset of the study, I found it helpful to triangulate quantitative data from the YARC with qualitative feedback from teachers alongside my own observations as a means of identifying strengths and needs and selecting my participant group. Furthermore, alongside the range of qualitative data I collected throughout phases 1 and 2 (in the form of reflective records and feedback from the children and Mrs. Wilson) there were occasions when it was helpful to quantify assessment data and feedback for example, in developing the bespoke assessment of strategy-use and asking children to rate the usefulness of a particular approach. From this pragmatic position, I have also spoken to behavioural outcomes for the children (in terms of their performance in applying

the RT strategies) which extends beyond my own learning as a practitioner because I recognise that these outcomes underpin the purpose of my practice. In this way, I shaped my own research design and, in line with Paulo Friere's quote (see p.33), I made the road by walking. Through carving this path and navigating the obstacles along the way, I am becoming increasingly comfortable in assuming a philosophical position that values different approaches to the process of inquiry. I look forward to continuing my research journey and developing my thinking in these areas as I step into my future role as an EP and researcher-practitioner.

Limitations

I have considered a number of limitations throughout this thesis and refer to the key issues in brief here.

Firstly, the use of an action research methodology entails that I am not well placed to answer a number of interesting and relevant questions arising from and connected to my inquiry.

Although there were a number of benefits to my position as a complete participant in the study, there were also limitations. I highlighted the challenges of balancing the research aims and practical objectives of the study and found this particularly difficult during Phase 1. The scope of the study required that I focus my research aims around the two focus children; however, within my practice I sought to address learning objectives for all group members. The reflexivity promoted through my learning journal was essential in seeking to achieve this balance and addressing dilemmas that arose when the two sets of aims did not align.

Linked to this, the experiences and voices of children without ASC are not heard within this thesis due to the need to focus my inquiry around my research questions. This calls into question the extent to which I have fulfilled my values in relation my practice with these children. In seeking to live out my values in relation to the focus children I have simultaneously flouted them in relation to

non-focus children who were a significant but unrepresented part of the research process. These children were nevertheless a key focus in my practice and within the intervention sessions their needs were as paramount as those of Jack and Amy. Indeed, I reflected extensively on the dilemmas associated with balancing my research and practice objectives in my reflective learning journal and have commented on my broader learning in relation to this group earlier in this chapter. Further research is needed to explore the experiences and outcomes of adjusting a RT intervention to meet the needs of children with a poor comprehender profile and I hope that the current study will enthruse others to explore and respond to the questions raised in this thesis in relation to this group.

Furthermore, I hope that through the thick description provided around my actions and reflections other practitioners can consider whether my claim to knowledge has application in their practice contexts.

I am aware that aggregating cases must be done with caution and I have sought not to compare and contrast the performance of Jack and Amy whilst representing their experiences and views uniquely. Nevertheless, some comparison was unavoidable within my discussion and my subsequent claim to knowledge. Furthermore, several pieces of data relating to Jack and Amy's performance and feedback were beyond the scope of this thesis due to the need to focus directly on my research questions. As a result, interesting findings including children's responses to all the RT strategies and the details of their performance across the post-intervention bespoke assessment were not explored.

When I embarked on the study I had a clear rationale for using RT as the context for my inquiry. I decided upon this approach prior to my selection of the participant group and with hindsight I wonder whether I could have tailored the intervention approach more closely to the profiles of the children involved. For example, Jack approached many tasks competitively and it is possible that an intervention that relied less heavily on the principles of cooperative learning

would have been more suited to him. I also feel it would have been beneficial to gather more pre-intervention assessment information on children's language profiles given the importance of language in reading comprehension. Future research could usefully explore the links between language skills and intervention approaches to support oral language and reading comprehension in children with ASC.

On reflection, the introduction of adjustments within the sessions could have been more systematic and it would have been beneficial to ensure that no more than one adjustment was introduced per session. This limitation is connected to a wider overarching learning point around my practice, which I sought to address over time; I found that I planned to cover more in each session than was feasible in practice and at times felt that the pace could be too fast for Amy. It would be interesting for future studies to explore the use of RT in the context of smaller groups, which might enable the intervention to be more closely tailored to the needs of individual children with ASC.

Lastly, I recognise that the wider community was not as closely involved in the study as I had hoped or intended. Based on my learning in Phase 1, I involved a TA much more closely in the research and practice elements of the study which facilitated the continuation of the intervention after my departure; however, the participation of the wider school community was limited and I did not attempt to pass over the cycles of action research to the community in the spirit of the methodology. I hope to address some of these limitations through future dissemination activities.

Implications For Practice

Implications of the current study for future research have been highlighted throughout Chapters 4, 5 and 6. Here, I give brief focus to the implications for practice in terms of my own practice and that of others, building on my reflections in the section 'Beyond The Claim to Knowledge' earlier in this chapter.

My Practice

My role in this action research project does not reflect my role as a TEP because I do not have the opportunity to run an intervention group of this nature for an extended length of time. Nevertheless, I anticipate that the in-depth process of learning and interrogation of my practice in the current study will facilitate my future role as an EP in a number of ways. I will be more informed with regard to issues of practice in terms of supporting reading comprehension and working with children and young people with ASC. This educational knowledge should inform my activities in terms of consultation, evaluating interventions and training. Recognising my positionality, I also feel I will be able to empathise with school staff more closely around the issues of running intervention groups.

Session 14B Reflections, Phase 2:

I feel that I can identify on a personal level with the challenges and successes experienced by school staff who run intervention groups. As I do not come from a teaching background (as many EPs do), I hope that this experience will help me to support teachers and teaching assistants more effectively within my professional role.

As EPs have a role in supporting school staff to adapt and monitor their practice to support children with SEN, my experience of ‘noticing and adjusting’ and developing a bespoke assessment tool should assist me in working alongside school staff to improve these aspects of practice and thereby support the inclusion of pupils with SEN. In particular, providing training for school staff around the principles of ‘noticing and adjusting’ would contribute to my professional development and has wide relevance and application beyond the scope of language and literacy.

Furthermore, my learning regarding eliciting pupil voice will support my contribution to the current shift in UK policy and practice realised through the upcoming Children and Families Bill.

The Practice of Educational Professionals

This study has direct implications for education providers as it responds to a pragmatic issue around supporting reading comprehension skills; an area which is generally under-researched and under-resourced, particularly in relation to meeting the needs of children with ASC. The ideas discussed in this inquiry provide a springboard for increasing creativity around how established intervention approaches can be tailored to meet children's needs. In particular, my claim to knowledge regarding the usefulness of visual supports for supporting children with ASC to read for meaning has wide application in educational settings.

The study also addresses a gap in practice and research that is directly relevant to EP practice. Greenway (2002) suggests that EPs often do not feel confident in supporting reading comprehension and indeed there is little research in peer-reviewed journals for the profession around supporting this common area of difficulty for many children with SEN. In light of this, and given that EPs have an increasing role in supporting individuals with ASC, the current study contributes to the knowledge base of the profession and informs EP practice in this area.

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APPENDICES

Appendix 1. Head Teacher Information Sheet and Consent Form

Dear [head teacher],

My name is Emma Truelove and I am a trainee Educational Psychologist in my second year of doctoral training at XXXXX. I am currently based with the Educational Psychology Service at the XXXXX. As part of my training course I am required to carry out a doctoral research project and I am writing to you to request your permission to carry out the project in XXXXX School.

I am very interested in finding out more about how we can support children's reading comprehension. In particular, I am interested in working with children in Y4 and Y5 who teachers report to have the following reading profile:

- strengths in reading out loud
- some difficulties in understanding what they read

Previous research suggests that up to 10% of children display this reading profile; however the profile is more common for children who have a diagnosis of autism spectrum condition (ASC) with up to 34% of children aged 6-15 displaying this profile. For this reason, I would like to explore the process of carrying out an intervention with a group of up to six children. Some of these children will have a diagnosis of ASC and some will not; however all the children would be expected to benefit from additional support with comprehension skills.

As a professional working within the local authority, I have full CRB enhanced disclosure and extensive training to work with children and young people. I also have experience of designing and delivering comprehension interventions over a number of years. I therefore hope the sessions would provide beneficial support for children as well as being fun and enjoyable. Furthermore, I would seek to work alongside school staff to develop approaches which can be transferred into classroom practice and thereby benefit a wider group of children in your school.

The box below outlines the expected time course of the project. I have also enclosed prospective information sheets and consent forms for parents and pupils for your information (Appendix XXXXX).

OVERVIEW OF THE PROJECT:

Stage 1: Gather head teacher consent (completion of this form) and identify key in-school contact (XXXXX, SENCo).

Stage 2: School staff identify children in Y4 and Y5 with the reading profile described above.

Stage 3: Letter sent to parents/carers to seek informed consent for up to six children (including children with and without a diagnosis of ASC) to take part in the project.

Stage 4: Seek informed pupil consent for those children who have parental permission to take part. This would involve an interactive session in which children learn about research.

Stage 5: School staff to sign researcher-school agreement (see Appendix XXXXX) regarding what each party will contribute to the project. School staff to sign individual consent forms to take part in short follow up interviews in October 2013. Head teacher to inform school governor for special educational needs.

Stage 6: If possible, consistent member of school staff identified to observe sessions and undertake some involvement in the trialling and intervention phase.

Stage 7: Trialling phase (second half of summer term 2013) – I will come into school on a basis agreed with school staff to trial the materials, carry out baseline assessments and deliver some intervention sessions.

Stage 8: Intensive intervention phase and ongoing data collection (autumn term 2013) – based on trialling phase children with ASC (and possibly children without ASC) are involved in the implementation and evaluation of a daily two week intervention.

Stage 9: Post-intervention data collection and short interview with particular members of school staff (autumn term 2013).

Stage 10: Dissemination of the findings to school staff, cluster of schools, local authority and academic communities (spring/summer terms 2014).

Please note: I will check whether or not children put forward by class teachers currently display the reading profile described by using the York Assessment of Reading for Comprehension prior to beginning the trialling period. If a child does not have comprehension skills which are below their skills in reading aloud they will not be eligible for the intervention despite my having gathered consent from parents and pupils. This is because the intervention would not be targeting their needs and it would be unfair to withdraw them for additional support. Nevertheless, this is unlikely to be the case as the class teacher will be fully informed about the nature of the reading profile prior to suggesting participants for the intervention.

Practical Considerations

Several practical considerations are included in the researcher-school contract. I would seek to liaise with the class teacher to ensure that children are withdrawn from class at pre-agreed times when children would not miss important classroom activities or consistently miss the same type of activity. One option would be for me to deliver the intervention sessions during the scheduled guided reading sessions.

Data Collection

I intend to collect qualitative and quantitative data across the course of the project. This will include measures of children's literacy skills before, during and after the intervention to find out what changes have occurred over time. I will also ask children to feedback their insights following each session to ensure that their views shape the research. Alongside this I will keep my own records about the sessions and feed these back into the intervention design. To support me in improving the intervention over time I will audio record the sessions for research purposes only. At the end of the project, I will invite school staff to tell me their views in a short interview about the intervention and its impact.

Withdrawal, Data protection and Anonymity

Participants have the right to withdraw from the research at any time. All data collected will be kept strictly confidential. It will be kept locked in a secure place and referred to (anonymously) by a code and not by name. Audio-recordings will only be accessed by the researcher and will be destroyed a year after the end of the project.

If you are happy for your school to take part in the research project please sign the consent form below and return it to me by email [XXXXX] or by post [see address above] by (XXXXX). Your consent at this stage allows the research to progress through stages 1 to 4. Once stage 4 is complete you will then be asked to complete the researcher-school contract. Stage 5 will be dependent upon sufficient numbers of children (who are confirmed to show the poor comprehender profile) agreeing to participate in the project. Signing of the researcher-school contract will represent a commitment to the undertaking stages 6-10 of the project.

If you have any questions or queries please don't hesitate to contact me by email or by telephone XXXXX and I would be very happy to discuss the project with you further. Should you wish to contact my research supervisor at the University of Sheffield you can do so by email XXXXX or by telephone XXXXX. You may also wish to contact the XXXX at [name of LA] by email XXXXX or by telephone XXXXX.

I look forward to hearing from you.

Kind regards,

Emma Truelove

Trainee Educational Psychologist

Research Project: *Supporting Reading for Meaning*

HEAD TEACHER CONSENT FORM

Researcher: Emma Truelove

- I would like my school to take part in the above research study.
- I have been given information about the project and I know who to contact to ask questions.
- I understand that children can choose whether they wish to take part.
- I understand that all data will be treated confidentially, stored securely and referred to by code and not by name.
- I understand that participation is voluntary and that children are free to withdraw at any time without giving any reason and without there being any negative consequences. I understand I can contact Emma Truelove (XXXXX) or [Research Supervisor] (XXXXX) if I wish to withdraw.
- I understand that some activities will be audio-recorded for research purposes only. No other use will be made of them and no-one outside the research project will be allowed to access the original recordings. These recordings will be stored securely and destroyed one year after the project is complete.

[Please complete in block capitals]

School name:

Name of head teacher Date Signature

Person taking consent Date Signature

To be signed and dated in presence of the head teacher

Lead researcher Date Signature

Copies: Once this has been signed by all parties you will receive a copy of the signed and dated consent form/information sheet and any other relevant written information. A copy of the signed and dated consent form will be kept by the researcher in a secure location.

Appendix 2. Research-School Agreement

School Name: XXXXXXXX

Researcher Name: Emma Truelove

Purpose:

- Develop a reciprocal teaching intervention to meet the needs of children with Autism Spectrum Disorder (ASD) and their peers who have difficulties in understanding what they read.

Structure:

- There are three key phases/aspects of the intervention project:

1) The trialling phase

During the summer term of 2013, the researcher will pilot some intervention materials and assessment approaches with the children taking part.

2) The intensive intervention phase

The intervention will take place during an intensive period early in the autumn term of 2013. The details of the intervention period will be finalised with school staff during the summer term and arrangements made for the withdrawal of children from lessons. The involvement of children without ASD in the intervention phase will be informed by the trialling phase.

3) Data collection

Assessment data will be collected during the trialling and intensive intervention phases to inform intervention development. Data will also be collected within one month of intervention completion.

The Researcher will:

Data collection:
<ul style="list-style-type: none">• Have enhanced CRB clearance and awareness of child protection guidance
<ul style="list-style-type: none">• Collect and analyse all data from the project
<ul style="list-style-type: none">• Make audio recordings of the intervention sessions to facilitate data analysis
<ul style="list-style-type: none">• Store all data securely, confidentially and anonymously throughout the course of the project
<ul style="list-style-type: none">• Permanently dispose of audio recordings one year after the completion of the project
Intervention:
<ul style="list-style-type: none">• Gather parental and pupil informed consent for the study
<ul style="list-style-type: none">• Deliver the intervention sessions and respond to feedback from participants and school staff
<ul style="list-style-type: none">• Withdraw children from lessons at the agreement of the class teacher and at times to ensure they do not miss important classroom activities
Resources:
<ul style="list-style-type: none">• Create personalised resources for the intervention based on the reciprocal teaching approach
<ul style="list-style-type: none">• Share materials and resources with school staff
<ul style="list-style-type: none">• Consult with staff about ways in which resources can be used to support other children in the school
Training:
<ul style="list-style-type: none">• Work alongside a key member of staff to share information and disseminate knowledge
<ul style="list-style-type: none">• Support the training of other members of school staff
Communication:
<ul style="list-style-type: none">• Provide regular updates on the progress of the project to school staff and parents
<ul style="list-style-type: none">• Disseminate research findings in the local authority and in academic/research communities

The School will:

Data collection:
<ul style="list-style-type: none">• Allow time for children to be involved in data collection activities
<ul style="list-style-type: none">• Liaise with the researcher to find appropriate dates and times for data collection to take place
<ul style="list-style-type: none">• Encourage key members of school staff to take part in the focus group once the intervention is complete
Intervention:
<ul style="list-style-type: none">• Support the researcher in obtaining parental consent forms
<ul style="list-style-type: none">• Allocate time for the intervention sessions to take place
<ul style="list-style-type: none">• Provide an appropriate area in school for the delivery of the intervention programmes
<ul style="list-style-type: none">• Identify a key member of staff to liaise with the researcher about the intervention
<ul style="list-style-type: none">• Where possible release a member of school staff to observe the intervention and data collection sessions
Resources:
<ul style="list-style-type: none">• Provide photocopying facilities for the intervention materials (in agreement with researcher with regards volume)
Training:
<ul style="list-style-type: none">• Seek to develop the skills of one or more key members of school staff in the areas of reading comprehension and ASD
Communication:
<ul style="list-style-type: none">• Communicate regularly with the researcher regarding the progress of the project
<ul style="list-style-type: none">• Communicate with and involve teachers in all classes that the children will attend throughout the research study
<ul style="list-style-type: none">• Inform the governor for special educational needs of the project
<ul style="list-style-type: none">• To be a point of information for parents/carers seeking more information about the project
<ul style="list-style-type: none">• Allocate time for the researcher to return to feedback the findings of the project to participants

We commit to the research project as detailed above

On behalf of the Researcher:

On behalf of the School:

Principal Researcher (Emma Truelove): _____

Headteacher: _____

Research Supervisor (XXXXXXXXXX): _____

SENCo: _____

Acting Principal Educational Psychologist (XXXXXXXXXX):

Class teachers: _____

Date: _____

Date: _____

Appendix 3. Parent Information Sheet and Consent Form

Dear Parent/Carer,

Project: Supporting Reading for Meaning

My name is Emma Truelove and I am a trainee Educational Psychologist in my second year of doctoral training at XXXXX. I am currently based with the Educational Psychology Service at XXXXX. As part of my training course I am carrying out a research project and the Head Teacher, XXXXX, has kindly agreed for me to carry this out in your child's primary school. [The project has received ethical clearance via the School of Education ethics review procedure.]

I am writing to you with the details of the project to request your consent for your child to take part in the study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Contact details are provided at the end of this letter should you have any questions or wish to find out more information. Please take time to decide whether or not you would like your child to take part.

The Aims and Design of the Project

I am very interested in finding out more about how we can support children's understanding of what they read (reading comprehension). In particular, I am interested in working with children in Y4 and Y5 who teachers report to have the following reading profile:

- strengths in reading out loud
- some difficulties in understanding what they read

Previous research suggests that up to 10% of children display this reading profile; however the profile is more common for children who have a diagnosis of autism spectrum condition (ASC) with up to 34% of children of this age displaying this profile.

For this reason, I am exploring the process of carrying out an intervention to support comprehension skills with a group of up to six children. Some of these children have a diagnosis of ASC and some do not; however all the children who take part are expected to benefit from additional support with comprehension skills. From my research perspective, the purpose of the research project is to find out how children with ASC can be supported most effectively in developing their skills in reading for meaning. I will also be working alongside school staff to develop intervention approaches which can be transferred into classroom practice and therefore benefit a wider group of children in your child's school.

Your child, XXXXX, does/does not have a diagnosis of ASC. His/her class teacher, XXXXX, has suggested that he/she would benefit from involvement in the intervention study.

As a professional working within the local authority, I have full CRB enhanced disclosure and extensive training to work with children and young people. I also have experience of designing and delivering comprehension interventions over a number

of years. I therefore hope the sessions will provide beneficial support for your child as well as being fun and enjoyable.

The Intervention Sessions

I will provide your child with additional support with reading comprehension during the summer term of 2013. This intervention is based around an evidence-based approach to supporting reading comprehension known as Reciprocal Teaching. This approach involves pairs and small groups of readers and involves rich conversations about the meaning of reading materials. Central to the approach are four strategies: clarifying, summarising, predicting and questioning. The content of the sessions will be tailored to the needs of the children taking part and designed to be enjoyable and interactive. I will include feedback from the children in the ongoing development of the intervention to ensure it is as useful and effective as possible.

The details of the dates and times of my work with your child during this period will be negotiated with the class teacher and shared with you via written communication at my earliest convenience. To take part in the sessions, your child would be withdrawn from class at times agreed with the class teacher when he/she would not miss any important classroom activities.

Based on my work during the summer term, some children from the group will be selected to receive a two-week daily intervention programme early in the autumn term (September 2013). This group will include those children with ASC and may include children without a diagnosis of ASC.

Data collection

I will collect data on children's literacy skills before, during and after the intervention to find out what changes have occurred over time. I will also ask children to complete a record sheet following each session to ensure that their views shape the research. Alongside this, I will keep my own records about the sessions and feed this back into the intervention design. To support me in improving the intervention over time I will audio record the sessions for research purposes only. At the end of the project, in October 2013, I will ask the children and teachers to tell me their views about the intervention and its impact.

Data Protection

All data collected will be kept strictly confidential. It will be kept locked in a secure place and referred to (anonymously) by a code and not by name. Audio-recordings will only be accessed by the research team and will be destroyed a year after the end of the project. At the end of the project, I will publish my findings in a thesis and possibly in an academic journal. I will also present the project to professional and academic communities. At no time will your child be identified by name during any of these activities.

Taking Part

If you consent to your child taking part in the research study, I will also seek his/her consent before working with your child. I will then keep seeking his/her agreement to take part throughout the study. You and your child have the right to withdraw from the research at any time without giving a reason and without any negative consequences.

I will also be working alongside school staff to ensure that children's well being is fully protected throughout the study. At any report or sign of distress, I would discontinue working with your child and consult yourself and school staff about next steps.

If you are happy for your child to take part in the research project please sign the consent form below in the presence of a member of school staff by (date). This reply slip confirms that you give permission for your child to take part. In addition, your child will have the opportunity to consent to taking part in the research at a later date.

SUMMARY BOX

- Your child may benefit from additional support with reading comprehension
- I am a trainee educational psychologist and I am carrying out research in school to find out how children can be supported to understand what they read
- I am asking for your permission for your child to take part in the research
- Your child can withdraw at any time without giving a reason. All data will be kept safely and not identified by name.
- If you are happy for your child to take part, please sign the consent form below in the presence of a member of school staff by (date).
- **Thank you!**

XXXXX [role] is the main in-school contact for the project and I am working closely with him/her and other members of staff to plan and deliver the intervention. If you have any questions or wish to find out more about the project, you can contact [school contact] or your child's class teacher. You can also contact me on XXXXXXXX (email) or by telephone XXXXXX and I would be very happy to discuss the project with you further.

Kind regards,

Emma Truelove

Trainee Educational Psychologist

Please note: Should you wish to make a complaint at any time, you can contact my research supervisor, XXXXX, at the University by email XXXXXXXX or by telephone XXXXXXXX. Should you wish to report a serious incident, please contact the XXXX at [name of LA] by email XXXXX or by telephone XXXXX.

Research Project: *Supporting Reading for Meaning*

PARENT/CARER CONSENT FORM

Researcher: Emma Truelove

Please initial
each box

I confirm that I have been given information about the project and I know who to contact to ask questions.

I understand that all data will be treated confidentially, stored securely and referred to by code and not by name (anonymised). I give my permission for members of the research team to have access to my child's anonymised responses.

I understand that participation is voluntary and that my child is free to withdraw at any time without giving any reason and without there being any negative consequences. [Insert researcher name, supervisor name and contact numbers].

I understand that some activities will be audio-recorded for research purposes only. No other use will be made of them and no-one outside the research project will be allowed to access the original recordings. These recordings will be stored securely and destroyed one year after the project is complete.

I give my permission for my child to take part in the above research study and I understand that my child can also choose whether they wish to take part.

Child's name _____

Name of Parent/Carer

Date

Signature

Person taking consent

Date

Signature

To be signed and dated in presence of the parent

Lead researcher

Date

Signature

Copies: Once this has been signed by all parties you will receive a copy of the signed and dated consent form/information sheet and any other relevant written information. A copy of the signed and dated consent form will be kept by the researcher in a secure location.

The Reading Project

With Emma Truelove from XXXXX

Hello! My name is Emma.

[Photo of me]

The Reading Project is a research project and I am a researcher.

Researchers try to find out new things. Have a look at the booklet called “What is a researcher?” to find out more!

I would like to find out what helps children to understand the things they read.

Your class teacher told me that you are very good at reading out loud. This is one of the reasons I am asking you to take part in **The Reading Project**.

I would like to work with you and with some other children in your school on some reading activities. I will try to make our activities as fun as possible!

[Visual Prompt]

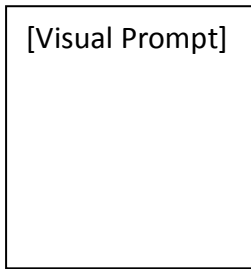
I really want to know what you think about the games and activities we do so I will ask you about them afterwards.

Sometimes, I will also record our voices when we are talking so I can listen back to some of the things we said. But I won't share these recordings with anybody else and I will only use them to help me with my research. After one year I will delete them.

I will come in to school to work with you in the summer term and I might come back and work with you in the autumn term as well.

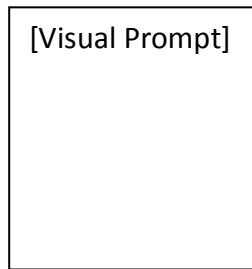
Every time I come to work with you, I will check that you are happy with that.

If you want to stop taking part in **The Reading Project**, you can do that any time. Nobody will tell you off or even ask you why you don't want to do it anymore.



I will keep some of your work in a safe place. It won't have your name on it - it will have a secret code so nobody knows it is yours.

**If you have any questions please ask your class teacher.
Thank you for reading about The Reading Project!**



PUPIL CONSENT FORM



Tick the boxes next to the sentences you agree with.



Cross the boxes next to the sentences that you do not agree with.

I have been told about **The Reading Project** and I know I can speak to my class teacher if I have any questions.

I understand that I will do some reading with Emma outside the classroom.

I understand that I can stop taking part in The Reading Project at any time. I know that I do not have to give a reason and nobody will tell me off.

I understand that all my work will be locked away.

I understand that my work will have a code and my name will not be used.

I understand that some activities will be audio-recorded to help Emma understand what helps children best. I understand that nobody except Emma will be able to listen to the recordings. I know that the recordings will be locked away and destroyed one year after the project is over.

I would like to take part in **The Reading Project**.

My name is _____

The date is _____

Appendix 6. Unpublished Information Booklet on Research for Children with ASC (developed by Dr. Paula Clarke, University of Leeds)

To do this we:

watch how people act

ask more questions

What is a researcher?

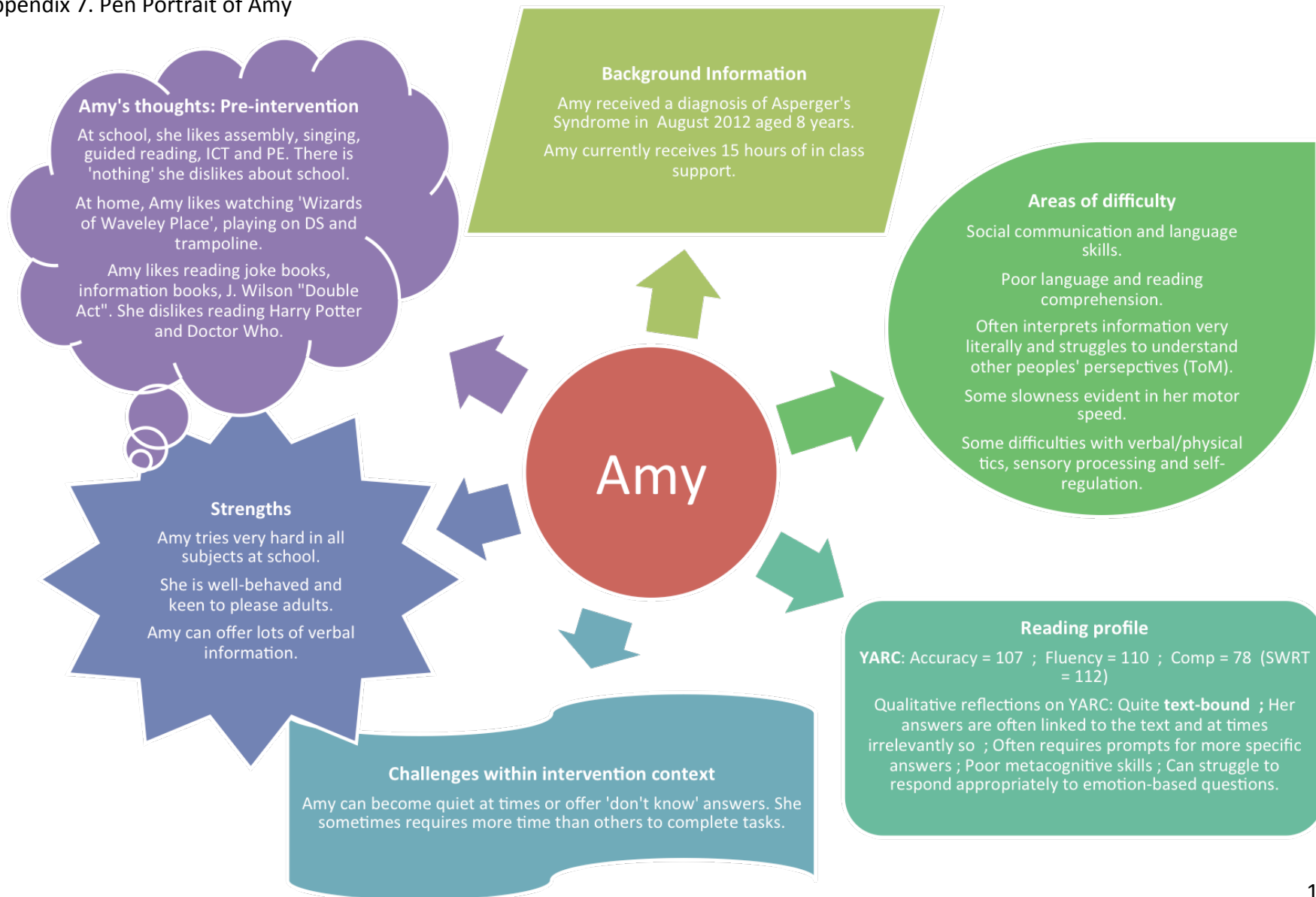
A researcher is someone who finds out new things.

A researcher also tries to find the answers to questions.

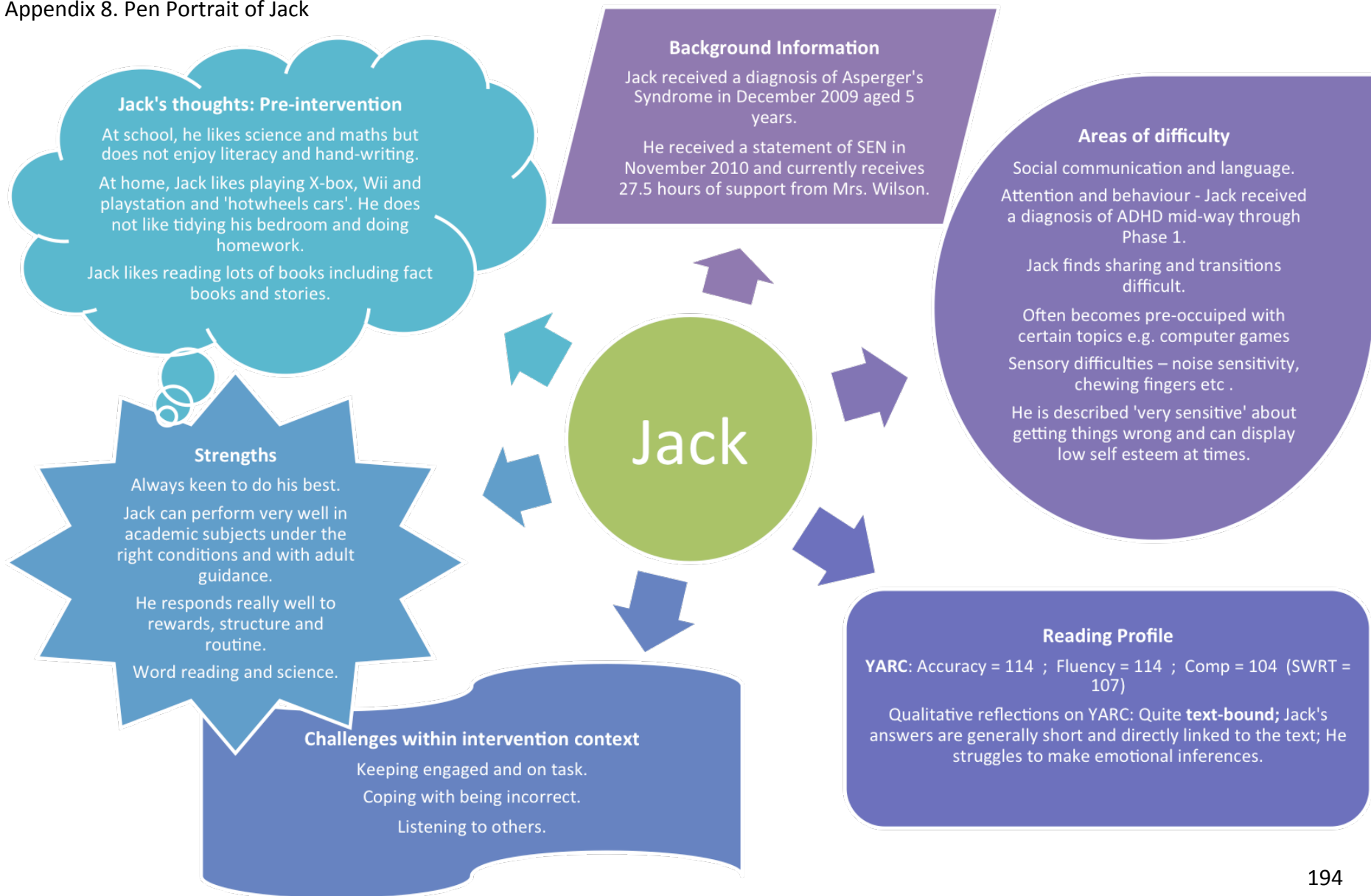
We want to know how children learn to read and which bits are hard.

We will try to make reading easier.

Appendix 7. Pen Portrait of Amy



Appendix 8. Pen Portrait of Jack



Appendix 9. School Staff Information Sheet and Consent Form

Dear [Teaching Assistant],

My name is Emma Truelove and I am a trainee Educational Psychologist in my second year of doctoral training at XXXXX. I am currently based with the Educational Psychology Service at XXXXX. As part of my training course I am required to carry out a doctoral research project and I am writing to you to request your permission to take part in the project in XXXXX School.

I am very interested in finding out more about how we can support children's reading comprehension. In particular, I am interested in working with children in Y4 and Y5 who teachers report to have the following reading profile:

- strengths in reading out loud
- some difficulties in understanding what they read

Previous research suggests that up to 10% of children display this reading profile; however the profile is more common for children who have a diagnosis of autism spectrum condition (ASC) with up to 34% of children aged 6-15 displaying this profile. For this reason, I would like to explore the process of carrying out an intervention with a group of up to six children. Some of these children will have a diagnosis of ASC and some will not; however all the children would be expected to benefit from additional support with comprehension skills.

As a professional working within the local authority, I have full CRB enhanced disclosure and extensive training to work with children and young people. I also have experience of designing and delivering comprehension interventions over a number of years. I therefore hope the sessions will provide beneficial support for children as well as being fun and enjoyable.

The box below outlines the expected time course of the project. The project is currently at Stage 6.

OVERVIEW OF THE PROJECT:

Stage 1: Gather head teacher consent and identify key in-school contact (XXXXX, SENCo).

Stage 2: School staff identify children in Y4 and Y5 with the reading profile described above.

Stage 3: Letter sent to parents/carers to seek informed consent for up to six children (including children with and without a diagnosis of ASC) to take part in the project.

Stage 4: Seek informed pupil consent for those children who have parental permission to take part. This would involve an interactive session in which children learn about research.

Stage 5: School staff to sign researcher-school agreement (see Appendix XXXXX) regarding what each party will contribute to the project. Head teacher to inform school governor for special educational needs.

Stage 6: If possible, consistent member of school staff identified to observe sessions and undertake some involvement in the trialling and intervention phase. Consent to be gathered from this member of school staff to take part in the project.

Stage 7: Trialling phase (second half of summer term 2013) – I will come into school on a basis agreed with school staff to trial the materials, carry out baseline assessments and deliver some intervention sessions.

Stage 8: Intensive intervention phase and ongoing data collection (autumn term 2013) – based on trialling phase. Children with ASC (and possibly children without ASC) are involved in the implementation and evaluation of a daily two week intervention.

Stage 9: Post-intervention data collection (autumn term 2013).

Stage 10: Dissemination of the findings to school staff, cluster of schools, local authority and academic communities (spring and summer terms 2014).

Data Collection

I intend to collect qualitative and quantitative data across the course of the project. This will include measures of children's literacy skills before, during and after the intervention to find out what changes have occurred over time. I will also ask children to feedback their insights following each session to ensure that their views shape the research. Alongside this I will keep my own records about the sessions and feed these back into the intervention design.

To support me in improving the intervention over time I will audio record the sessions for research purposes only. In addition to gathering data from the children taking part, I am also interested in gathering the insights of school staff.

The purpose of the attached consent form is to request your permission to audio record your contributions to the intervention sessions and our discussions about the progress of the intervention. These discussions will provide an opportunity for you to discuss any observations you have noticed in other contexts and any reflections you have on the project. The information collected during these activities will assist my analysis of the data.

Withdrawal, Data protection and Anonymity

You have the right to withdraw from the research at any time. All data collected will be kept strictly confidential. It will be kept locked in a secure place and referred to (anonymously) by code and not by name. Audio-recordings will only be accessed by the research team and will be destroyed a year after the end of the project.

At the end of the project, I will publish my findings in a thesis and possibly in an academic journal. I will also present the project to professional and academic communities. At no time will you be identified by name during any of these activities.

If you are happy to take part please sign the consent form below.

If you have any questions or queries please don't hesitate to contact me by email or by telephone XXXXX and I would be very happy to discuss the project with you further. Should you wish to contact my research supervisor at XXXXX you can do so by email XXXXX or by telephone XXXXX. You may also wish to contact the Acting Principal Educational Psychologist at XXXXX, by email XXXXX or by telephone XXXXX.

Kind regards,



Emma Truelove

Trainee Educational Psychologist

Research Project: *Supporting Reading for Meaning*

SCHOOL STAFF CONSENT FORM

Researcher: Emma Truelove

- I would like to take part in the above research study.
- I have been given information about the project and I know who to contact to ask questions.
- I understand that all data will be treated confidentially, stored securely and referred to by code and not by name.
- I understand that participation is voluntary and that I am free to withdraw at any time without giving any reason and without any negative consequences. [Insert researcher name, supervisor name and contact numbers].
- I understand that intervention sessions and informal discussions will be audio-recorded for research purposes only. No other use will be made of recordings and no-one outside the research project will be allowed to access the original recordings. These recordings will be stored securely and destroyed one year after the project is complete.

[Please complete in block capitals]

School name:

Name

Date

Signature

Person taking consent

Date

Signature

To be signed and dated in presence of [name]

Lead researcher

Date

Signature

Copies: Once this has been signed by all parties you will receive a copy of the signed and dated consent form/information sheet and any other relevant written information. A copy of the signed and dated consent form will be kept by the researcher in a secure location.

Appendix 10. Session Log for Phase 1

	No.	Attendance	Text	Content	Feedback
Week 1	1	Present: Jack, Amy, Bradley, Kamil, Adam, Mrs. Wilson Absent: Zoe	Newsround article 'Top teachers must crack jokes'	Introduction to prediction and clarification strategies	-
	2	Present: Jack, Amy, Bradley, Kamil, Zoe, Mrs. Wilson Absent: Adam	Newsround article 'Top teachers must crack jokes'	Recap prediction and clarification strategies	-
	3	Present: Amy, Bradley, Kamil, Zoe, Adam Absent: Jack, Mrs. Wilson	Newsround article 'Cuddly toy sparks sick dog panic'	Introduction to summarisation strategy	Round the circle – 'Has reading group been worse, the same or better than you expected - why?'
Week 2	4	All present	'Making a Splash' by Chloe Rhodes (p.2 & 3)	Introduction to questioning strategy	-
		All present	'Monkey Buffet Festival'	Bespoke Assessment following the introduction of all four strategies	Question around the novelty of the content
	5	All present	'Making a Splash' by Chloe Rhodes (p.4)	Introduction to the RT process One round of rocket reading	Round the circle – 'What was good?' and 'What was not-so-good?'
Week 3	6	Present: Bradley, Kamil, Zoe, Jack (left for timeout part way through the session with Mrs. Wilson) Absent: Amy, Adam	'Making a Splash' by Chloe Rhodes (p8 &9)	Two rounds of rocket reading	Rating scale (1 is "Did not help me to understand – 5 "Helped me to understand a lot" using fingers
	7	Present: Jack, Bradley, Kamil, Adam, Mrs. Wilson Absent: Amy, Zoe	'Making a Splash' by Chloe Rhodes (p20)	One round of rocket reading	Blob Tree and evaluative/solution focussed questions
	8	Present: Bradley, Kamil, Absent: Jack, Amy, Zoe, Adam, Mrs. Wilson	'Making a Splash' by Chloe Rhodes (p21, 24, 30)	Three rounds of rocket reading	Round the circle - 1. One thing I have enjoyed about the reading group; 2. What I hope for next term

Appendix 11. Example Planning Sheet Completed for Session 5

Time	Activity	Objective	Resources
9.00-9.10	<p>Overview of the session</p> <p>Review the ground rules</p>	<p>Consolidation</p> <p>Remind children of purpose of sessions and group rules</p>	<p>Visual timetable</p> <p>Ground rules poster</p>
9.05-9.10	<p>Recap the names and definitions of the four RT strategies</p> <p>Give out strategy card key rings as personal reminder. Make reference to the 'Our Four Strategies' poster.</p> <p>Introduce reward system</p>	<p>Consolidation</p> <p>Working memory support</p> <p>Motivation</p>	<p>Strategy card key rings x 6</p> <p>"Our Four Strategies" poster</p> <p>Dictionaries</p> <p>Highlighters</p> <p>Reward chart and stickers</p>
9.10 – 9.25	<p>Introduce the RT procedure</p> <p>One cycle of 'rocket reading' – see separate planning sheet. Using the text 'Making a Splash' by Chloe Rhodes.</p>	<p>Introduction to the RT process</p>	<p>Passages x 6</p> <p>RT planner</p> <p>Two maps of London</p>
9.25-9.30	<p>Plenary</p> <p>Recap what we have covered this session</p>	<p>Consolidation</p>	<p>Visual timetable</p>
9.30-9.35	<p>Round the circle – 1 thing that was good, 1 thing that was not so good.</p>	<p>Feedback/Trialling of methods of gathering pupil voice</p>	<p>An object to pass around</p>

Appendix 12. Example of RT planner for Session 5

Text: *'Making a Splash'* by Chloe Rhodes

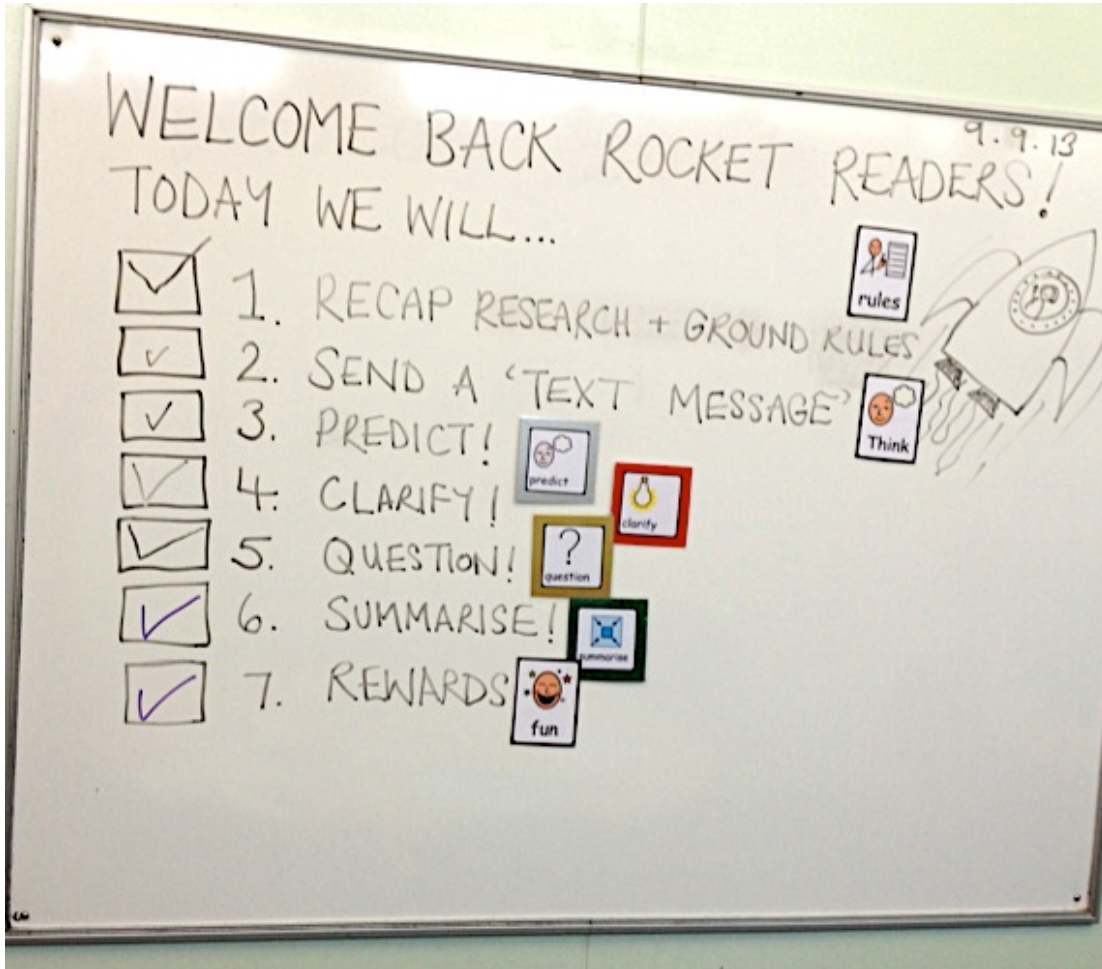
Section 1: p.4 (From 'The' to 'whale')

Predict	Clarify	Question	Summarise
I think this text will be about water or the sea because it talks about a splash. I also think something must 'make' the splash and I predict that could be a human or an animal.	Thames Incredible Headlines	Who is telling us about these events? When did the man spot the whale? How did the man know it was a whale? How did the man feel when he realised it was a whale?	This is about an exciting real-life story of a man who spotted a whale in the river Thames.

Section 2: p.4 (From 'He' to 'whale')

Predict	Clarify	Question	Summarise
I predict the next section will tell us what the man did after he saw the whale.	Organization Marine (life) Specializes Confirmed Creature Bottle-nose whale	How did the whale get there? Who might work for the 'Divers Marine Life Rescue'? What other creatures might they rescue?	The man called a rescue organisation and they confirmed it was a large bottle-nose whale.

Appendix 13. Example of Visual Timetable Incorporating Visual Symbols from 'Communicate: In Print 2' (Widgit Symbols (c) Widgit Software 2002-2014 www.widgit.com)



Appendix 14. Pre-intervention Bespoke Assessment of RT Strategy-use
Incorporating Visual Symbols from 'Communicate: In Print 2' (Widgit Symbols (c)
Widgit Software 2002-2014 www.widgit.com)

NEWS FROM AROUND THE WORLD

The Monkey Buffet Festival!



Predict what you think the newspaper article will be about.




If you would like to, **clarify** any words. You can do so by using the dictionary provided.

My prediction is...

✓ Put a tick in one of the following boxes:

- No, I did not clarify any words
- Yes, I clarified the following word or words

.....
.....



[N.B] actual size of box larger than represented here]

There is a photograph next to the title of this newspaper article.

In the box, draw what you predict the photograph might look like.

When you have completed page 1, give this to Emma and she will give you pages 2 and 3



Read the article...

Buffets can often be found at parties but in Lopburi, Thailand, there is one buffet with an extraordinary guest list. Instead of hungry humans, the people of the city invite the local population of monkeys. Yes, that's right, a bunch of munching monkeys!

The Monkey Buffet Festival is held annually on the third Thursday in November. On this day, a gigantic feast is laid out for the two thousand primates who live in the city. This is one occasion when the monkeys do not need to scavenge through the bins looking for leftovers. Instead, they can take their pick from a magnificent display of fresh fruits and vegetables.

Lopburi is famous for its monkey residents and every year thousands of visitors flock to see them. You might expect the monkeys to be friendly creatures but in fact they can be quite ferocious. Unafraid of humans, they often steal food direct from the hands of unsuspecting holidaymakers. These are no cuddly toys!

Even though the monkeys can cause trouble, the festival is thought to be a way of thanking them for bringing so many tourists to the city each year.



Highlight the words and phrases you would like to clarify



Now, choose one of the highlighted words and look it up in the dictionary.

How did clarifying the word help you to understand the article better?



What **questions** could you ask to help you to understand the article better?



Write down three questions if you can.

1.

2.

3.



Write a short **summary** of the newspaper article.

The main points are...

[N.B size of box larger on original]

Finally, rate your understanding of the newspaper article on the scale below:

Make a mark on the line



I understood everything



I did not understand anything

Well Done!
Thank you for completing this assessment!

Appendix 15. Post-intervention Bespoke Assessment of RT Strategy-use
Incorporating Visual Symbols from 'Communicate: In Print 2' (Widgit Symbols (c)
Widgit Software 2002-2014 www.widgit.com)

NEWS FROM AROUND THE WORLD

'Cool' sculptures in Winter Wonderland!



Predict what you think the newspaper article will be about.




If you would like to, **clarify** any words. You can do so by using the dictionary provided.

My prediction is...

Put a tick in one of the following boxes:

- No, I did not clarify any words
- Yes, I clarified the following word or words

.....
.....



[N.B] actual size of box larger than represented here]

There is a photograph next to the title of this newspaper article.

In the box, draw what you predict the photograph might look like.

When you have completed page 1, give this to Emma and she will give you pages 2 and 3



Read the article...

Sculptures come in all shapes and sizes and often look a bit quirky! Most sculpture parks display sculptures made out of different materials such as stone and wood. But in the world's "coolest" sculpture park everything is carved out of one thing... ice!

The Harbin Ice and Snow Festival in China is held for one month every year. Next year it will celebrate its 30th anniversary. To ensure that conditions are chilly enough, it takes place in January when temperatures fall well below freezing.

You might think the cold would deter visitors; however, they arrive from all over the world to enjoy the winter wonderland that is created there for a short period of time.



Massive sculptures as tall as buildings are carved out of huge blocks of ice. The ice is taken from the nearby Songhua River. Skilled sculptors use a range of tools, from chainsaws to lasers, to create their works of art. What's more, multicoloured lights illuminate the sculptures and give the icy spectacle a warm glow! For those who prefer to play in the snow, the enormous ice slides around the city are a 'cool' attraction.



Highlight the words and phrases you would like to clarify



Now, choose one of the highlighted words and look it up in the dictionary.

How did clarifying the word help you to understand the article better?



What **questions** could you ask to help you to understand the article better?



Write down three questions if you can.

1.

2.

3.



Write a short **summary** of the newspaper article.

The main points are...

[N.B size of box larger on original]

Finally, rate your understanding of the newspaper article on the scale below:

Make a mark on the line



I understood everything
































I did not understand anything

Well Done!
Thank you for completing this assessment!

ROCKET READERS

REWARD CHART



					
					
					
					
					
Jack	Amy	Bradley	Kamil	Zoe	Adam

Appendix 17. Standards for Judging the Quality of Data Collection in Phase 1

Dependability

Aligned with the notion of reliability, dependability refers to the consistency of data collection and the extent to which the data can be depended upon. Within Phase 1, I demonstrated dependability through the use of a consistent structure for recording my reflections. Furthermore, I increased the dependability of my reflections by returning to the raw data of the audio-recordings and checking my initial interpretations. I sought to avoid bias by recognising my positionality and interrogating my own frameworks for thinking. Nevertheless, as Phase 1 was principally concerned with trialling, I did not collect as much data as I would need to establish a dependable claim to knowledge. Based on this learning from Phase 1, I increased the number of data sources in Phase 2 to increase the overall dependability of the study. Within this, I included thicker description around the experiences of the focus children in the intervention context to allow me to speak to my research questions.

Credibility

My systematic and transparent approach to data collection and subsequent action in Phase 1 speaks to both the dependability and credibility of the study. Linked to validity, credibility refers to the trustworthiness of the data and the correspondence between the way in which the researcher represents the views of participants and the constructs of participants themselves (Mertens, 2009). Credibility is demonstrated through my prolonged engagement with participants which laid the foundations for further and much more substantial engagement in Phase 2. My persistent observation of the children involved in the study during the assessment, rapport building and intervention periods also increases the credibility of my learning points and actions. As I will go on to discuss, I sought disconfirming

evidence when analysing my learning points and triangulated the data in my reflective records with feedback from the group. Over the break between the phases I planned conversations with critical friends to increase credibility.

Confirmability

Linked to the positivist notion of objectivity, confirmability takes account of the researcher's influence on the study and refers to whether the data are interpreted in an unbiased way. The use of a research diary across the entire research process and the use of a specific learning journal for the intervention sessions facilitated the confirmability of the study. Both tools helped me to be open and transparent about my decision-making and account for potential alternative interpretations. Seeking disconfirming evidence further increased the confirmability of the study. Finally, the addition of systematic conversations with critical friends was planned as a means of increasing confirmability in Phase 2.

Appendix 18. Standards of Judgement Related to my Values

Inclusion

The pre-intervention data and use of a learning journal supported me in fulfilling my values around inclusion in Phase 1. The use of pre-intervention assessments provided information to facilitate my practice in tailoring the intervention to meet the individual needs of children with ASC. Furthermore, my learning journal provided a structured means of reflecting on the needs of the group through iterative cycles of 'noticing and adjusting'. I aimed to increase the extent to which I fulfilled my values and met my standards of judgement in this regard, by introducing individualised records for the focus children in Phase 2.

Voice of the Child

Given the challenges in eliciting children's views it was difficult to establish the credibility and confirmability of the feedback data in Phase 1. I recognise that by taking children's feedback at face value there is an implicit assumption that it provides a direct 'window' on their thoughts. Furthermore, I acknowledge that in co-constructing feedback with them (through my language and questioning) and interpreting the meaning of the data in context, I am highly influential in the representation of their views. My reflective records helped me to consider how myself and other group members impacted on feedback, as exemplified in the reflective box overleaf.

Reflections from Session 3, Phase 1:

I was pleased to hear that all the children thought the activities across the week had exceeded their expectations. I was however concerned that, despite trying to present the positive, negative and neutral statements in an unbiased way, their positive responses were likely to be affected by my involvement in the process of questioning. I was also aware of conformity in their responses and wondered about how group-level feedback influences individual opinions in the group, especially those of Amy and Jack.

Associated Learning Point:

Children appear to be enjoying the sessions but it is challenging to ascertain individual opinions in the context of group feedback. They find it difficult to feed back on 'why' they like the sessions, which has implications for developing a successful format for gathering their views.

Associated Action Point:

Consider forms of feedback in which group members provide feedback simultaneously e.g. rating scales and so are not as obviously influenced by each other.



Appendix 19. Analysis of Phase 1 Data in Relation to RQ1a.

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
<p>The use of pictures and photographs accompanying the text seemed to assist with engagement and building a situation model that incorporated background knowledge.</p>	<p>Session 6: Use of a picture from the opening credits of ‘Eastenders’ was followed by a number of ‘ahh’s’ from group members including Amy and Jack. This seemed to facilitate their understanding of the location of the Thames and I interpreted this as activating prior knowledge.</p>	<p>Some pictures were more relevant to the texts presented than others. For example, in the first passage ‘Top teachers must crack jokes’ the pictures included images of a secondary school environment. Here the pictures were not commented on and I did not think they assisted comprehension. Perhaps in this case pictures were not salient because the context of a school classroom was readily available to them and was likely to be more easily incorporated into a situation model than a more unfamiliar context. Pictures therefore may not always be facilitative. Nevertheless, I found no evidence to suggest that pictures or photographs led to confusion or disrupted the formation of a situation model.</p>	<p>Increase the use of pictures and photographs and make explicit links with activating prior knowledge. Further investigation of this aid is justified by my observations and reflections in Phase 1 and the lack of evidence to suggest that use of pictures is detrimental to supporting comprehension.</p>
<p>For some texts, maps appeared to be a useful visual aid in helping children to think about where events were taking place.</p>	<p>Session 5: All children appeared animated and engaged when I provided two maps of London for them to discuss in pairs.</p> <p>Retrospective reflections, Session 5: <i>At the time I thought the map worked really well in engaging the children and helping them to situate the information in context. It encouraged them to think about their prior experience of the Thames by the link to Eastenders. Until now, I had not thought of this support as an activating prior knowledge exercise; however, listening back, I can see how it achieves this. The combination of pictures and activation of prior knowledge seemed to assist comprehension and</i></p>	<p>Session 5: Jack’s first comment when given the map of London was “<i>What do these signs mean?</i>” He then became quite pre-occupied with the metro symbols and did not contribute to the conversation around the text. Therefore although this may have engaged him as a resource I am not sure that it facilitated his understanding on this occasion.</p>	<p>Continue to use maps in Phase 2 when appropriate. Further evidence would be useful in confidently drawing any learning points about this visual aid.</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
	<p><i>supported the production of some useful questions.</i></p> <p>Session 7: After I suggested looking at the map to answer Bradley's question "What does 'mouth of the sea' mean?", Jack pointed to the correct place on the map and said "I think that's the mouth of the sea!"</p> <p>Session 7 Reflections: <i>The map has been a good source of support during the sessions and seems to have facilitated their understanding.</i></p>		
<p>The visual timetable worked well in facilitating the process of each session. The structure helped the children and I to navigate the sessions and I found it helpful as a means of keeping Jack on task.</p>	<p>I did not refer to the visual timetable in my initial reflections but when listening back it was apparent that the children and I referred to it frequently. For example, in Session 5 Jack reminded me that we had not ticked off some sections that we had completed.</p> <p>The visual timetable was frequently referred back to by all children and viewed as a reward to 'tick off' an item on the list.</p> <p>In Session 4 when Jack became preoccupied with his folder, I referred to the visual timetable and he read out what he was meant to be doing.</p> <p>There was evidence that the visual timetable served to build anticipation. For example in Session 5 Jack commented on the 'round the circle' item: "Mmm I wonder what this is gon'na be!"</p>	<p>The enthusiasm of the children to tick off the items covered in the sessions may explain the popularity of the visual timetable.</p> <p>In Session 5, Jack's spontaneous reminder to me also involved him ticking off the points: Jack: "Shall I tick off all the things that have gone down to six?"</p> <p>The reminder was mid-way through a discussion indicating that, for Jack, attention to the visual timetable in this instance was a distraction from the RT discussion under way.</p> <p>In Session 5, Amy and Jack shared a positive social interaction around the visual timetable. After ticking off one item, Amy chose Jack and spontaneously thanked her. I interpreted this positive interaction as due to Jack's eagerness to use the whiteboard pen.</p>	<p>Continue to use the same visual timetable. Over time involve children in completing the timetable as a means of consolidating the RT process.</p> <p>Although there was some evidence that Jack became distracted by the visual timetable, this action was justified by the positive response to the visual support by all group members and its utility as a teaching tool for me as a practitioner.</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
<p>Activating prior knowledge and visualisation techniques may be useful adjustments to explore in Phase 2.</p>	<p>In Session 5, I spontaneously asked children to close their eyes and imagine walking past the river in our local area (activating prior knowledge and visualisation) and asked them how they would feel if they saw the fin of a huge whale. The activity appeared to help the other group members to consider their response although there was evidence of conformity in responses when I asked a question about how they would feel in this visualised scenario. All children except Jack offered synonyms of 'afraid' however he responded 'disgust'.</p> <p>The spontaneity of introducing this adjustment within the context of the group suggests it might be a helpful adjustment to explore in Phase 2 however there is little evidence from Phase 1 that it facilitated comprehension for Amy and Jack.</p>	<p>In my retrospective reflections following engagement with the literature over the summer break, I considered that such an adjustment might be too abstract for Jack and Amy: <i>One potential adjustment I have been thinking about since Phase 1 is the use of visualisation techniques following my decision to ask children to imagine seeing a whale in the local river. At the time I was quite enthused about this idea but having read around this approach I am now having doubts as to whether this would in fact be too challenging for Jack and Amy due to its abstract nature and the demands placed on higher-order thinking skills and ToM.</i></p>	<p>Further trial the use of activating prior knowledge with visualisation and directly seek Amy and Jack's views on this approach.</p> <p>There is little evidence to justify the introduction of this strategy but it could be trialled further. The adjustment is not well-supported by the literature however because abstract approaches are commonly challenging for children with ASC.</p>
<p>Role play seemed useful in increasing children's engagement with the text and improving their memory for the text.</p>	<p>Session 3 Reflections: <i>I felt enthused by the response of the children to my spontaneous use of role play to support their understanding of the text. At this stage, I felt I was losing the attention of Adam and Amy and this activity helped them to consider the meaning of the article in a more accessible way.</i></p> <p>I scaffolded the children in making links between the RSPA organisation involved in the role play in Session 3 and an organisation referred to in Session 5. When I asked children if they remembered the RSPCA their facial expressions and responses indicated recognition</p>	<p>Jack was not present in the session when we used role play and Amy opted not to take part in the activity; therefore with regards to the focus children there is no evidence to support this from the Phase 1 data. Furthermore, Amy's decision not to take part was not typical and suggests that she may not have felt comfortable with the activity.</p> <p>Session 3 Reflections: <i>It was notable however that although Amy appeared engaged, she opted not to take part in the role play and I was unsure from her facial expression at the time whether or not she felt comfortable.</i></p>	<p>Before trying this activity again, I will seek individual feedback from Amy to help me to decide whether or not to include role play as an adjustment in Phase 2.</p> <p>This action is justified due to the lack of evidence around the usefulness of this activity for Jack and Amy and an indication that Amy in particular did not</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
	and enthusiasm. I felt that this was largely due to the role play as many of the details of the text were not remembered from one session to the next whereas all children who had attended the role play session indicated they remembered the RSPCA.		feel comfortable with role play.
Summarising and questioning strategies are challenging to teach and also for children to use and understand.	<p>Session 4 Reflections: <i>When one person asked a question, the rest of the group did not engage with the text seemingly because they did not think it was their turn.</i></p> <p>Discussion in Session 5: Me: <i>"What makes a question good or not-so-good?"</i> Amy: <i>"Having a go at it."</i> Here, Amy struggled to understand and express what factors were involved in producing a good question. During feedback on what was not-so-good in Session 5, Amy said: <i>"Erm... I didn't like the summarising."</i> Me: <i>"You're not so keen on summarising ok. Is that because it's a bit tricky sometimes?"</i> Amy: <i>"Yeah"</i></p> <p>However, the robustness of this evidence is questionable given that I interpreted her meaning in context and did not ask an open question about why.</p> <p>Session 7 Reflections: <i>I am generally learning that children find this [RT] process difficult and particularly struggle to ask questions about what they have read. Summarising is also hard, although Jack offered a very good summary</i></p>	<p>Jack demonstrated some understanding of questioning but still struggled to ask a question that another person would find challenging.</p> <p>Session 4: Me: <i>"What makes a question good or not-so-good?"</i> ... Jack: <i>"Sometimes it means you ask a question to say what... to see if you can get a person to say what's happening..."</i> Me: <i>"Yeah you might ask a question to get some information about what is happening."</i> Jack: <i>"You would say 'What's happening here?' and the person would be able to answer."</i> Me: <i>"And how would that be helpful?"</i> Jack: <i>"It would be helpful to learn more info about what's happening like if you know a bit but not all you can ask someone else."</i></p> <p>Jack's summary in Session 7 included the main points and encapsulated the gist of the passage: <i>"I would summarise... I would say the excellent experts were trying to help the whale get back to Tha... get out of the Thames and back to the ocean but none of their plans worked so then they tried to get it into a barge and carry it all the way to sea."</i></p>	<p>When trialling adjustments in Phase 2 focus on supporting children's skills in summarising and questioning.</p> <p>Justification for this action lies in my reflections and is supported by the literature. Although there is evidence that Jack had a better concept of the purpose of questioning than Amy, both children struggled to produce questions and summaries in the sessions. Nevertheless, due to poor attendance in the final week I did not have enough evidence of Amy's skills across the four strategies.</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
	<i>today.</i>	Despite him having been absent when ‘summarisation’ was introduced Jack is demonstrating skills in using the strategy.	
Drawing a picture might be helpful in facilitating prediction and summarisation skills.	<p>During the bespoke assessment, Jack and Amy responded well to the request to draw a prediction picture. Both pictures included some detail as shown below (predictions based on title ‘Monkey Buffet Festival’):</p> <p>Jack  Amy </p> <p>During feedback in Session 5, I asked “<i>So would you like more opportunities to do some of the drawings again?</i>” All group members raised their hands to indicate that they would like to do more of this.</p>	As I did not try the adjustment in Phase 1 there was no evidence available to disconfirm the suggestion that this support might be helpful to try. Following retrospective reflections over the summer and engagement with the literature, I felt less sure given the mixed evidence base for its value in supporting comprehension (van Meter and Garner, 2005)	<p>Trial the use of drawings in Phase 2 to support summarisation skills in light of the learning point that suggests that children find summarisation more challenging than prediction.</p> <p>Further exploration of this support is justified by the enthusiasm shown by children for drawing and the interesting data produced using this method in the bespoke assessment.</p>
Short texts did not seem to allow for in-depth engagement and inferencing across passages to build up a situation model.	<p>Learning point from Session 3, based on my observations across sessions 1-3: <i>Short texts have not really allowed for the in-depth engagement with the content that I had hoped for.</i></p> <p>[This led to action within Phase 1 where I then introduced a longer text for sessions 4-8.]</p>	<p>However, I also noted in Session 7 that a longer text was problematic when children were absent from sessions. Session 7 Action Point: <i>Avoid using one text throughout the whole of the second cycle of intervention.</i></p> <p>The use of a longer text appeared to support children to bring their prior knowledge to the text and build a</p>	<p>Use a couple of short extracts in the refresher sessions of Phase 2 and then follow two texts over time.</p> <p>Justified by balancing the evidence both for and against the original learning</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
		situation model over time (evidenced by their contributions to sessions 4-8). Although a number of factors are involved in creating a situation model, longer texts may facilitate this process.	point to achieve a balance between the two.
<p>Rewards seemed to work well and appeared particularly motivating for Jack; however I found it difficult to facilitate the process and give them out in a timely manner.</p>	<p>All children smiled when rewards were given out and made comments suggesting they looked forward to this aspect of the session.</p> <p>In Session 5, I decided to listen back to the session directly afterwards and give the rewards the following day because I did not feel able to facilitate the session and give out strategy rewards at the same time. In Session 6 I asked Mrs. Wilson to give them out however she removed Jack for 'timeout' which meant she did not complete the task.</p> <p>In Session 5, Jack spontaneously asked: <i>"Where's the new reward chart 'cause my area is full."</i> His comment indicated that he was motivated by the reward chart and monitoring his performance in terms of strategy-use through the number of stars he had received.</p>	<p>Although children appeared to enjoy receiving rewards it is hard to know if they were able to relate them directly to the strategy they used well due to the time lapse between using the strategy in the session and being rewarded either at the end of the session or the next day.</p> <p>I have little evidence on Amy's response to the reward chart, especially as she was absent for the final week of the intervention sessions.</p> <p>Jack's comment on the reward chart in the middle of the session might suggest that he was distracted by thinking about rewards rather than focusing on the session content.</p>	<p>Continue to use with the reward chart in Phase 2. Encourage children to reflect on their own use of the strategies to increase self-reflection and relieve the demands placed on me whilst facilitating the session.</p> <p>This action is justified by the generally positive response to rewards from all the children and the evidence base relating to good practice in this area. Adjustments to the way in which rewards are given out would be more beneficial for the children's learning and for my needs as a practitioner.</p>

Appendix 20. Analysis of Phase 1 Data in Relation to **RQ1b**.

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
<p>I did not allow enough time for group feedback within the sessions and this time was easily overtaken by other activities.</p>	<p>I have a very limited body of evidence on Jack and Amy's views and retrospectively felt that the group feedback methods elicited a surface level of feedback from the children.</p> <p>Reflections on the time pressures of covering the material in the intervention sessions dominated my reflections across Phase 1. Every session includes some reflection on this issue, which suggests that I prioritised intervention content over feedback activities.</p> <p>In Session 3 the time allocated to feedback was overtaken by Bradley performing a rap and Kamil and Jack telling jokes. At the time I considered that these short child-initiated activities were demonstrative of children feeling at ease in the group and I wanted to encourage their participation; however, subsequent reflection would suggest that I did not prioritise feedback activities despite my strong values around pupil voice.</p>	<p>Although I planned for a five-minute slot on feedback, often the amount of information children offered was very brief and so children did not use all the time I had allocated. Therefore, other factors such as the unstructured nature of the group feedback may also have been responsible for the brevity of feedback responses.</p> <p>Evidence of brief, limited responses is provided below.</p>	<p>Negotiate with school staff to withdraw Jack and Amy for individual feedback sessions separate to the intervention sessions.</p> <p>This action is justified as a means of ensuring that I speak to my research aims and do not miss the opportunity to explore the experiences of the focus children.</p>
<p>The use of group-based feedback methods resulted in children giving responses that were strongly influenced by the contributions of other group members.</p>	<p>During group feedback in Session 5, all group members offered very similar responses to my question about what was good about the intervention sessions:</p> <p>Bradley: <i>"I liked reading about the whale."</i></p> <p>Amy: <i>"I liked reading the article"</i></p> <p>Kamil: <i>"I liked reading the article because it was really interesting."</i></p> <p>Adam: <i>"I liked reading about the whale."</i></p>	<p>In Session 5, Jack's response to what was not-so-good contradicted the response he gave about what was good and also disagreed with the majority view about the text:</p> <p>Jack: <i>"I didn't like the first part because it really spoils the whole thing."</i></p> <p>Me: <i>"Which first part do you mean? The first part of the text?"</i></p>	<p>Include individual structured feedback opportunities using visual supports alongside the unstructured feedback opportunities for Jack and Amy.</p> <p>Given the propensity for</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
	<p>Zoe: <i>"I liked reading about the whales and dolphins."</i> Jack: <i>"I liked reading the whole story."</i></p>	<p>Jack: <i>"The whale because it's really easy. Its not very impressive. It doesn't give very much expression."</i> Similarly, in Session 7 when I asked a solution-focussed question around what we could do to get to the blob at the top of the tree, Jack offered a different suggestion to both Kamil and Bradley who responded before him. Kamil and Bradley suggested that we do more questioning, whereas Jack said: <i>"My idea is to help us read more."</i> Mrs. Wilson: <i>"How are you going to do that? How are you going to get to the top of the tree?"</i> Jack: <i>"Well, by getting more info about things..."</i></p>	<p>children to provide quite limited responses which can be strongly influenced by other group members, the inclusion of some structured feedback sessions may elicit more detailed accounts of their personal views and experiences.</p>
<p>By using only group level feedback I did not gather the views of Jack and Amy sufficiently to speak to my research questions.</p>	<p>Group feedback generated little data on Jack and Amy's views. Session 2 Reflections: <i>I feel a slight dissonance between my role as a practitioner and my role as a researcher. I think in these early stages, the practitioner role feels very much dominant. This may be due to a number of factors including, my own need to feel competent in the teaching role, an 'ethical' obligation to support the comprehension skills of all members of the group at a practitioner level and a need to build quality teacher-learner relationships with all children.</i></p>	<p>Jack generally offers more elaborated responses in both intervention and feedback sessions than Amy and therefore his voice is more present in the feedback than Amy's voice. For example, Amy often offers an opinion without explanation: <i>"I liked reading the article"</i> <i>"I didn't like the summarising."</i></p> <p>Whereas, Jack often offers an opinion alongside an explanation and can elaborate further when questioned: Jack: <i>"I didn't like the first part because it really spoils the whole thing."</i> Me: <i>"Which first part do you mean? The first part of the text?"</i> Jack: <i>"The whale because it's really easy. Its not very impressive. It doesn't give very much expression."</i></p>	<p>Plan three individual feedback sessions with Jack and Amy during Phase 2 and use a mixture of structured and unstructured activities. Include concrete visual aids within the structured feedback and questions, which distinguish positive and negative feedback about the intervention generally from positive and negative feedback about what supports comprehension. Plan the first feedback session for the beginning on Phase 2 to seek retrospective</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
			<p>feedback on Phase 1. The first three learning points that I have identified around the challenges of eliciting pupil's views justify this extensive planned action.</p>
<p>A high-level of absence during Phase 1 reduced the amount of data I gathered on pupil views and limited the trialling of a range of approaches with focus children.</p>	<p>Session 8 Reflections: <i>I think the absence of Amy and Jack from this session will detract from my research aims. This is because I had hoped to gather more of their views individually following the session but I was unable to do this. I think however that I will have sufficient data to make adjustments next term which are interesting and informed by pupil voice.</i></p> <p>My reflections here are somewhat contradicting as I recognise that absence is an issue but at the same time consider that I am still making decisions that take account of children's views.</p>	<p>Jack and Amy did both contribute to 3 out of 5 feedback sessions. Therefore, absence from feedback sessions is only a contributing factor to the lack of data gathered on pupil views.</p> <p>At the time my reflections suggested that my decisions were informed by pupil voice but retrospectively I reflected on this and considered how my close involvement in the sessions and data gathering exercises may have made it difficult to step back from my influence in interpreting children's views and acknowledge how little data I had gathered on Jack and Amy's views. Indeed my reflections across Phase 1 highlight my strong focus on practice rather than research aims at the time.</p>	<p>Contact the new class teachers outlining the details of the research and reiterating the importance of children attending the sessions. As part of my ethics application I had outlined the importance of communicating information with new class teachers prior to the autumn term. I felt that given the attendance levels of the group during Phase 1, I was justified in emphasising the importance of attendance in this communication.</p>
<p>Children reported that they enjoyed the non-fiction topic of the news and the texts we covered.</p>	<p><u>Group Feedback Session 5</u> Bradley: "I liked reading about the whale." Amy: "I liked reading the article." Kamil: "I liked reading the article because it was really</p>	<p>As discussed below in relation to learning points around process, Amy's feedback may have been influenced by the feedback from another group member which preceded it. It is therefore unclear whether this contribution represents an expression of her opinion.</p>	<p>Continue to use non-fiction texts in Phase 2 and continue with the theme of the news to maintain consistency and act as a reminder of our work in</p>

Learning Point from Phase 1	Confirming Evidence	Disconfirming Evidence	Subsequent Action in Phase 2 with Justification
	<p><i>interesting.”</i></p> <p>Adam: <i>“I liked reading about the whale.”</i></p> <p>Zoe: <i>“I liked reading about the whales and dolphins.”</i></p> <p>Jack: <i>“I liked reading the whole story.”</i></p>	<p>Feedback in Session 5, about what was not-so-good: Jack (referring to the ‘Making a Splash’ text): Jack: <i>“I didn’t like the first part because it really spoils the whole thing.”</i> Me: <i>“Which first part do you mean? The first part of the text?”</i> Jack: <i>“The whale because it’s really easy, its not very impressive it doesn’t give very much expression.”</i></p>	<p>Phase 1. Justified by the positive feedback received from children and my observations that they all appeared engaged with the material.</p>

Appendix 21. Reflections on the Dilemmas of Balancing Practitioner and Researcher Roles

Reflections from Session 2, Phase 1:

I feel a slight dissonance between my role as a practitioner and my role as a researcher. I think in these early stages, the practitioner role feels very much dominant. This may be due to a number of factors including my own need to feel competent in the teaching role, an 'ethical' obligation to support the comprehension skills of all members of the group and a need to build quality teacher-learner relationships with all children.

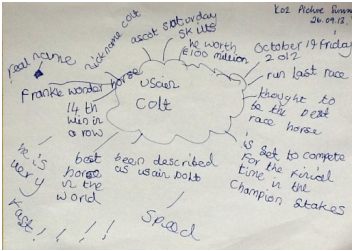
Associated Learning Point:

I need to keep revisiting the research aims of the work and refocus on the research perspective at a conscious level. I found supervision last week a very useful way of doing this.

Associated Action:

I will continue to be reflexive about my roles as a practitioner and a researcher and my goal to be a researcher-practitioner.

Appendix 22. An Example of a Completed Individual Observation Record for Amy Session 13B

		Session: 13B Date: 26 th September 2013	
		Text: Usain Colt	
	Predict	Clarify	Question
Observations and Reflections	Amy did not predict at the group level today.	<p>Even though someone else found the word 'Colt' in the dictionary early on, Amy was determined to find it herself. She also looked up the word 'stallion' which indicates the first time I have seen her take the initiative to look up a word that is not in the text.</p> <p>Amy clarified the word 'stake' using the dictionary. Today she read aloud the three possible definitions and (with Mrs. Wilson's prompt about which she had decided was the most relevant) Amy answered correctly. This represents a big step forward for Amy though I am unsure to what extent Mrs. Wilson scaffolded the discussion around this word.</p>	<p>When somebody chose a 'when' question, Amy said "My question is a 'why'". This suggests that the question card is not providing the prompt but she is thinking of her own question independently. "Why was wonder horse Frankel thought to be one of the best racehorses?"</p> <p>This is an appropriate question. It combines a question word that she has not been prompted with and two separate sections of the text. Amy has made the cohesive inference that 'wonder horse Frankel' is the 'he' referred to in the next section.</p> <p>This is a much more relevant and complex question than Amy has produced in previous sessions.</p>
			Summarise
			<p>Amy created an individual mind map today. Again, she included a lot of information but, in line with my instruction to only include the main ideas and key points, it was really pleasing to see that the ideas on the mind map were more relevant to the passage than previously.</p> 
Unstructured Comments	<p>During the recapping stage, I asked about articles we have previously read. Amy recalled reading about Sarah the cheetah. I remember in the early stages of the intervention she often responded 'don't know' during the recapping stages. She also recalled reading 'on your marks get set go' which is a text from quite a few sessions ago.</p> <p>After Kamil and Jack commented on the lack of picture, Amy said "That's strange there's no picture!"</p>		

Appendix 23. Session Log for Phase 2

	No.	Attendance	Text	Content	Feedback	Additional Information
Week 1	1B	Present: Jack, Amy, Bradley, Kamil, Adam, Mrs. Wilson Absent: Zoe	Newspaper article 'Don't look down!'	Refresher session One round of rocket reading	Individual structured feedback with Jack after the session using visual prompts and questions.	To recap, children wrote down one thing they remembered from Phase 1 on 'smart phone' notelet.
	2B	Present: Jack, Bradley, Kamil, Adam, Mrs. Wilson Absent: Amy, Zoe	Newspaper article 'Don't look down!'	One round of rocket reading	-	Extra time spent on questioning
	3B	All present	Newspaper article 'Don't look down!'	One round of rocket reading Adjustments: Q – Question cards S – Drawing a picture	Group feedback using scoring paddles to rate (1) four RT strategies (2) question cards (3) drawing summaries Individual structured feedback with Amy after the session using visual prompts and questions (as above)	-
	4B	All present	Newspaper article 'Don't look down!'	Two rounds of rocket reading Adjustment: Q – Question cards	Conversation with critical friend (Specialist Teacher for ASC) later that day	-
	5B	Present: Jack, Bradley, Kamil, Zoe, Adam, Mrs. Wilson Absent: Amy	'Nik Wallenda Fact File'	Two rounds of rocket reading Adjustment: Q – Question cards	Group feedback: round-the-circle 1. One thing that has been good about reading group this term Feedback with Mrs. Wilson	Passed on the leader role to Mrs. Wilson

	No.	Attendance	Text	Content	Feedback	Additional Information
Week 2	6B	Present: Jack, Amy, Bradley, Kamil, Zoe, Mrs. Wilson Absent: Adam	Extract from 'Top Speed' book by John Malam subtitled 'Superhumans'	Two rounds of rocket reading Adjustment: Q – Question cards	-	First child to take on the leader role: Kamil = leader
	7B	All present	Extract from 'Top Speed' book by John Malam subtitled 'On your marks, get set, go!'	One round of rocket reading Adjustments: Q – Question cards S – Drawing a picture	Individual feedback from Amy and Jack using blob trees and questions.	Bradley = leader
	8B	All present	Newspaper article 'Incredible Bolt!'	One round of rocket reading Adjustments: Q – Question cards Activating prior knowledge - Mind map (Olympics)	-	Jack = leader
	9B	All present	Newspaper article 'Incredible Bolt!'	One round of rocket reading Adjustments: Q – Question cards Activating prior knowledge - Mind map (added to previous)	-	Zoe = leader

	No.	Attendance	Text	Content	Feedback	Additional Information
Week 3	10B	All present	Newspaper article 'Move over Usain' Passage chosen based on Jack's feedback	One round of rocket reading Adjustments: Q – Question cards Activating prior knowledge - Mind map & Picture (Animals)	[Ran out of time for group feedback]	Amy = leader
	11B	All present	Newspaper article 'Move over Usain'	One round of rocket reading Adjustments: Q – Question cards S – Drawing a picture Activating prior knowledge - Mind map (added to previous)	Group feedback: Round-the-circle 1. One thing that helped you to understand what we read 2. Anything you did not like Feedback with Mrs. Wilson Conversation with critical friend	Adam = leader
	12B	All present	Newspaper article 'Meet cheetah – the robot faster than Usain Bolt'	One round of rocket reading Adjustments: Q – Question cards S – Mind map	-	Mrs. Wilson = leader
	13B	All present	Newspaper article 'Usain Colt'	One round of rocket reading Adjustments: Q – Question cards S – Mind map	-	Bradley = leader
	14B	Present: Jack, Amy, Bradley, Zoe, Adam, Mrs. Wilson Absent: Kamil	Newspaper article 'Usain Colt'	One round of rocket reading Adjustments: Q – Question cards S – Mind map	Unstructured group feedback whilst decorating bookmarks Repeated individual structured feedback with Amy and Jack	Zoe = leader Created personalised bookmarks to support generalisation

Appendix 24. Analysis of Phase 2 Data in Relation to the ‘Pictures and Photographs’ adjustment (Micro-cycle 1)

My Identified Criteria (what I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action during Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
<p>Jack and Amy make reference to background knowledge relevant to the text following use of pictures and photographs.</p> <p>I make reference to perceived improvements in Jack and Amy’s skills in drawing on background knowledge and link this to my use of pictures and photographs as a practitioner.</p> <p>Amy and Jack provide positive feedback about the use of pictures</p>	<p><u>Jack’s Individual Observation Record 2B:</u> Jack asked a spontaneous and relevant follow up question when I used the picture to facilitate his comprehension of how far the tightrope walk was. Jack: <i>“Was there any rest areas on there?”</i> This may indicate that Jack is considering the needs of the tightrope walker when walking such a long distance and has made the inference using background knowledge that he might need a rest along the way.</p> <p><u>Amy’s Structured Feedback after Session 3B:</u> Me: <i>“Did having pictures of what’s happening help?”</i> Amy: <i>“It helped me to understand.”</i></p> <p><u>Jack’s Individual Observation Record 4B:</u> The inclusion of a picture alongside the article seemed to support his prediction and anticipation of the text. Jack incorporated aspects of the picture and linked this to information he had already read about the text.</p> <p><u>Session 5B Reflections:</u> The picture of an eight-person pyramid stimulated comments, questions and peer interactions and appeared to engage children with the passage</p>	<p><u>Session 1B Reflections:</u> <i>I did not think that children got as much out of the pictures linked to the passage as I had expected. I wonder if this is because I have seen the motion picture news clip and they have not.</i> The picture for the ‘Don’t look down!’ article did not seem to facilitate understanding in the way that I expected based on my tentative findings in Phase 1.</p> <p><u>Session 2B Reflections:</u> <i>I feel excited that within two sessions I have been able to make and plan adjustments based on my learning already. Following the structured feedback session with Jack yesterday afternoon, I now feel a little confused about how much to focus on using picture supports (a learning cycle from Phase 1) as his views seemed to endow much less importance to this aid.</i></p> <p><u>Jack’s Individual Structured Feedback after 14B:</u> Jack put pictures and photographs in the ‘what-was-not-so-good’ and ‘what did not help me to understand’ sections. Jack: <i>“‘cause that blue picture’s good because it’s a speedo one but that one’s not so good ‘cause pictures don’t give you much do they?”</i></p>	<p>Pictures and photographs seemed to assist Jack’s comprehension of text through the activation of prior knowledge; however there is insufficient evidence to meet my identified criteria with regards to supporting Amy’s understanding.</p>	<p>Continue to use pictures and photographs throughout Phase 2 both as supplements to the text and as supports for activating prior knowledge before the introduction of the text.</p> <p>This action is justified by the body of confirming evidence available and the need to implement adjustments over time.</p>

My Identified Criteria (what I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action during Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
<p>and photographs in the intervention sessions.</p> <p>Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and links this to the use of pictures and photographs.</p>	<p>content. It was also useful to contrast the picture with pictures shown in previous sessions. Jack's comments in connection with this picture suggested that he was linking the picture content to the text base of the passage and his prediction about what the eight-person pyramid would look like.</p> <p><u>Jack's Individual Observation Record 10B, Unstructured Comments:</u> Whilst looking at the information picture, Jack exclaimed excitedly "<i>Falcon, two hundred miles an hour!</i>". He then said: "<i>The fastest animal in the world is the falcon, two hundred miles an hour. That's faster than a car.</i>" Here is evidence that Jack linked his background knowledge about cars to the information provided in the picture.</p> <p><u>Jack's Individual Observation Record 13B:</u> When I gave out the passage, a few members of the group commented that there were no pictures. Jack commented "<i>How are you supposed to know what it is then?</i>" indicating he relies on pictures to a greater extent than I realised.</p> <p><u>Amy's Individual Observation Record 13B:</u> After Kamil and Jack commented on the lack of picture, Amy said "<i>That's strange there's no picture!</i>"</p>	<p><u>Conversation with Mrs. Wilson three weeks after the 'intensive intervention' phase:</u> She reports that she has not used pictures very much and there involvement in the intervention has been more incidental than planned.</p>		

My Identified Criteria (what I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action during Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
	<p><u>Session 13B Reflections:</u> <i>Interestingly, all children commented on the lack of picture when I handed out the article today. This made me consider how much pictures have been supporting their understanding so far. It seemed from their immediate surprise that picture cues were an early support to comprehension. This was not a focal adjustment but did provide some interesting data and surprised me a little.</i></p> <p><u>Amy's Individual Structured Feedback after 14B:</u> <i>"Pictures are good because they are interesting to look at."</i></p>			

Appendix 25. Analysis of Phase 2 Data in Relation to the ‘Question Cards’ adjustment (Micro-cycle 2)

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
<p>Amy and Jack are more motivated and engaged during the questioning section of the sessions following the introduction of question cards. Their motivation and engagement is shown through their eagerness to ask questions, an increase in the number of questions they ask and their readiness to ask questions even when it is not their turn to select a card.</p>	<p><u>Jack’s Individual Structured Feedback after Session 1B:</u> Initially Jack indicated some mixed feelings about questioning and... placed ‘questioning’ in between ‘what-was-good’ and ‘what-was-not-so-good’. This was before question cards had been introduced.</p> <p><u>Jack’s Individual Observation Record 3B:</u> Jack complained that he did not have the opportunity to select a question card today. The concrete tool appears to motivate and engage him for example he responded very positively from the initial introduction of the cards exclaiming ‘got it!’ to indicate he had thought of a question in response to someone else’s card selection.</p> <p><u>Session 3B Reflections:</u> <i>I think the question cards really worked well today. In the first instance they increased engagement and motivation to ask a question which was somewhat lacking in yesterday’s session. Today, every child raised their hand to ask a question and, as I requested, thought of their own question linked to the card when it was not their turn.</i></p>	<p><u>Jack’s Individual Observation Record 5B:</u> When Kamil asked the question “<i>Who was born in 1979?</i>”, Jack said very loudly “<i>Ahh that was mine, ahh!</i>” and seemed set to become quite upset.</p> <p><u>Conversation with Critical Friend, after Session 11B:</u> CF: “<i>It does seem like there’s a large amount about liking things and engaging with things... That things do have to be more tailored to children’s needs if they’ve got quite sort of concrete perceptions of what they like and don’t like. And I suppose... what you’re saying is its not a one-size-fits-all approach so it might be more of a one-size-fits-all approach in children who don’t have autism... so you’re just sort of making that awareness... so I suppose you’re adding caution...</i>”</p>	<p>Questioning was more enjoyable for Jack and Amy in Phase 2 and this seemed to be facilitated by the question cards which appeared to motivate and engage them.</p> <p>Motivation and engagement seemed account for some of the perceived utility of question cards both in terms of supporting my practice, supplementing the RT process and scaffolding the questioning skills of Jack and Amy.</p>	<p>I continued to use question cards in every session throughout Phase 2.</p> <p>My justification for this action was the range of confirming evidence from the introduction of the adjustment and the need to trial any changes over a number of sessions. Critical friends validated my actions and justification.</p>

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
Amy and Jack provide positive feedback about the use of the questioning strategy and question cards in response to the card-sort on 'What was good/not-so-good'.	<p><u>Jack's Individual Observation Record 6B:</u> Jack responded well to the challenge of looking quickly for a 'why' question when Bradley picked out a 'why' card. Again, Jack commented on how his question was similar to the one given by Amy: <i>"My question is a little similar but it is not that sort."</i></p> <p><u>Session 7B Reflections:</u> <i>On the contrary, question cards seem to be working really well. Children continue to be more engaged and ask questions...</i></p> <p><u>Amy and Jack's Individual Feedback after Session 7B:</u> During a partially structured feedback activity, when I asked about question cards separately, Amy and Jack both wrote it down on the blank piece of paper entitled 'What was good?'</p> <p><u>Session 8B Reflections:</u> <i>I think that the participation levels are high now and reflecting back on the early sessions of Phase 2, the engagement of all group members has increased. I wonder if this is related to the desire to be chosen for certain activities such as... picking a question card.</i></p> <p><u>Conversation with Critical Friend after Session 11B:</u> Me: <i>"Asking questions at first they were like 'I don't know' and quite disengaged. It was almost like... 'why</i></p>			

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
	<p><i>would you ask me to ask a question about this?’ so I introduced question cards and now they are all like [raise hand eagerly]... so the engagement has helped massively... they want to ask a question and whenever anyone gets a card they... all know they’ve got to have one [a question] in their head because that was another problem I felt like I had was that whenever anyone was being spoken to the rest... didn’t feel they should have been doing it too. So their engagement has improved...”</i></p> <p><u>Amy and Jack’s Individual Structured Feedback after 14B:</u> Both Amy and Jack put question cards in the ‘what was good’ section. Me: “Can you tell me about why question cards were good? ... Why did you put it [the card] there?” Jack: “Because they were really helpful.” In response to the ‘What could we do differently?’ question, Jack suggested “Get more question cards!”</p>			

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
<p>There is a noticeable positive change in the quality of questions Amy and Jack ask, demonstrating progression from simple, literal questions to more complex questions involving inference.</p> <p>Amy and Jack notice improvements in their questioning skills over time.</p> <p>Jack and Amy are more aware of the types of questions they are asking and the perceived difficulty level of them.</p>	<p><u>Amy's Individual Observation Record 1B:</u> Amy, like all the children in the group, did not ask a question today and Mrs. Wilson and I modelled the questioning process.</p> <p><u>Jack's Individual Observation Record 2B:</u> Jack asked a simple vague decontextualised question: "How did he do it?" which he struggled to elaborate on when asked to do so by Kamil.</p> <p><u>Amy's Individual Structured Feedback after Session 3B:</u> Me: "Why was asking questions good then?" Amy: "Because I knew a lot."</p> <p><u>Jack's Individual Observation Record 4B:</u> He asked: "Why did 13 million people tune in to watch the walk live?" This was a more advanced question drawing on the text base and requiring an elaborative inference to answer because the answer was not contained in the text.</p> <p><u>Jack's Individual Observation Record 6B:</u> When Jack gave his question... "Why did the timekeeper say the time out loud?" The question was linked to the word 'timekeeper' that he had clarified and built upon my scaffolding and reading the section of the text out loud. Jack appeared to have taken our clarifying conversation a step further</p>	<p><u>Conversation with Mrs. Wilson after Session 5B:</u> Mrs. Wilson's comment regarding Jack: "He's not particularly good at the questioning, I'm not sure his questioning is relevant all the time but that's just 'cause he thinks on a different level... you've got to think 'will they find it interesting?', 'will they know the answer?'..."</p> <p><u>Amy's Individual Observation Record 6B:</u> Amy selected a 'what' question card and asked: "What was the name of the text?" This was a very basic question that children could easily answer because we had discussed the name of the text in the prediction section of the session.</p> <p><u>Amy's Individual Observation Record 9B:</u> Amy selected the 'where' question card and very quickly asked the question "Where did he run?" This question involved little time for consideration and was quite simple in content and structure. In the session I tried to build on this and encourage Amy to be more specific. In response, she instead came up with a different question "Where does he keep his medals?" Amy did not seem able to elaborate on the initial question without further scaffolding and so opted to change the question. Her follow up question did not have an answer which was literally based in the text and so would have required an elaborative</p>	<p>There is a much greater body of confirming evidence for an improvement in Jack's questioning skills than Amy's. Jack demonstrates developing skills in asking more complex questions which go beyond the text base and require inference.</p> <p>Amy does not demonstrate a progression away from basic questions until the very end of the intervention/post-intervention when she uses more advanced questions related to the text.</p> <p>There is little evidence from Jack and Amy on their own perceptions of any improvements in their questioning skills.</p>	<p>I continued to focus on the questioning strategy using the additional adjustment of question cards throughout Phase 2.</p> <p>See justification above.</p>

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
	<p>by anticipating what the reasons for the timekeeper's actions were.</p> <p><u>Jack's Individual Observation Record 7B:</u> Jack's question today was: "How can athletes sprint at top speed in a straight line for 100m?" This question contained more specific information about the conditions being asked about. The source of the information was derived from the text but not all lifted verbatim which indicates that Jack selected the most important information and joined it together to form the question.</p> <p><u>Jack's Individual Observation Record 8B:</u> During his conversation with Amy, Jack asked the question "How many miles does Usain Bolt total if you add all of his 2013's together?" This question took literal information from the text and used it imaginatively to take into account a wider perspective... The question showed curiosity about the distance Usain Bolt has accumulated across his performances. At the time, this struck me as the most advanced question Jack (or anyone) had asked in the group. He then asked Amy "Is that what you were thinking?" showing awareness that her question might or might not be the same as his and indicating developing skills in ToM. This in itself is a progression as in the early sessions of Phase 2 he seemed to react as though</p>	<p>inference, however Amy did not indicate that she had an answer rather it appeared that she had only devised the question.</p> <p><u>Session 10B Reflections:</u> ... I think the complexity of the questions remains quite easy... Today I tried to encourage children to ask a more difficult question but they still seem to go for the easiest or most obvious ones...</p> <p><u>Session 11B Reflections:</u> I felt quite disheartened when Amy offered a question that did not make much sense and had little relevance to the passage. The other group members commented that it didn't really make sense and I felt uncomfortable that there was also a moment of amusement in which the other group members shared smiles about this.</p> <p><u>Jack's Individual Observation Record 11B:</u> Although Mrs. Wilson asked Jack to keep his question in his head, he seemed unable to hold it in and said to her: "I need to whisper it to you otherwise I'll forget it" He proceeded to whisper the question but it was audible to the group: "Why did Sarah want to smash the world record for the fastest land mammal?" ...I tried to unpick whether or not the Cheetah would have wanted to smash the world record or whether a</p>	<p>Jack does not comment on this, whereas Amy expresses a confidence in her questioning skills at the beginning and the end of Phase 2 which does not indicate a change over time.</p>	

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	<p>someone had stolen his idea if they shared the same question.</p> <p><u>Jack's Individual Observation Record 10B:</u> I asked children to find a tricky 'who' question when Jack selected the 'who' card. Moments later, he said aloud <i>"I've got one but it's not that hard."</i> This indicates that Jack is considering the difficulty level of the question for another member of the group. To do so requires him to think about someone else's thinking (ToM).</p> <p><u>Amy's Individual Observation Record 13B:</u> When somebody chose a 'when' question, Amy said <i>"My question is a 'why'"</i>. This suggests that the question card is not providing the prompt but she is thinking of her own question independently. <i>"Why was wonder horse Frankel thought to be one of the best racehorses?"</i> This... appropriate question... combines a question word that she has not been prompted with and two separate sections of the text. Amy has made the cohesive inference that wonder horse Frankel is the 'he' referred to in the next section. This is a much more relevant and complex question than Amy has produced in previous sessions.</p>	<p>person would have held that intention but Jack did not seem to take on board that the animal would not have an intention. Later when I chatted to Mrs. Wilson about the session she talked about how he can struggle to distinguish between fiction and real life.</p>		

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	<p><u>Jack's Individual Observation Record 13B:</u> Jack... understood that his question would not be too tricky to answer.</p> <p>...</p> <p>His question was <i>"Who is set to compete for the final time in the champion stakes at Ascot on Saturday?"</i> The question added the question word with a verbatim section of the passage and did not elaborate on the text.</p> <p>Mrs. Wilson responded: <i>"That's a good question."</i> Jack: <i>"That's not a good question. See what I mean?"</i> (Indicates to other group members putting up their hands immediately).</p> <p><u>Amy's Individual Structured Feedback after Session 14B:</u> Amy: <i>"Asking questions, I'm good at asking questions. That was good!"</i></p> <p><u>Comparison of Amy's pre- and post-intervention bespoke assessment responses - questioning strategy</u></p> <p>Pre-intervention:</p> <ol style="list-style-type: none"> 1. Is the article true? 2. When was this article written? 3. Is it a story or a non-fiction? <p>Post-intervention:</p> <ol style="list-style-type: none"> 1. <i>Where is the snow festival held?</i> 2. <i>What will the festival celebrate next year?</i> 			

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	<p>3. <i>When does the snow and harben festival take place?</i> Amy used three different question words (from the question cards) and asked about a range of information post-intervention. The quality of the questions increased and she made links to the text base. In contrast, pre-intervention her questions centred on the article rather than its content and two questions were very similar.</p> <p><u>Comparison of Jack's pre- and post-intervention bespoke assessment responses - questioning strategy</u> Pre-intervention, Jack generated one question: 1. <i>Why do the people call monkeys for the festival?</i> The question was very broad and the use of the verb 'call' indicated a possible misunderstanding of the text-base. Furthermore, the potential answer required rested on the premise of the whole passage. Post-intervention: 1. <i>How do people make ice sculptures without breaking them?</i> 2. <i>How do they stand tall for a while?</i> 3. <i>Why do people make ice sculptures?</i> These questions (using stem words from the question cards) indicate a curiosity about the text and require elaborative inferences to answer. Jack's summary on the bespoke assessment suggests he can answer the final question.</p>			

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<p>I make reference to perceived improvements in Jack and Amy's skills in asking questions and link this to my use of question cards as a practitioner.</p> <p>Amy and Jack provide positive feedback that question cards helped them to understand.</p> <p>Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in asking questions and links this to the use of question cards.</p>	<p><u>Group Feedback Session 3B:</u> Using scoring paddles (1= not helpful for questioning, 5 = really helpful for questioning) Jack rated question cards as 4/5 and Amy as 5/5. [N.B. When giving instructions I offered a negative example of giving question cards a 1/5 to avoid a positive bias and encouraged children to keep their scores a secret to avoid conformity]</p> <p><u>Session 3B Reflections:</u> <i>The addition of these concrete aids seemed to facilitate the questioning process by giving the child a clearer brief as to which question to ask.</i></p> <p><u>Amy's Individual Structured Feedback after Session 3B:</u> After Amy chose 'questions' as the first card to put in the 'what was good' category we had the following conversation: Me: "Why was asking questions good then?" Amy: "Because I knew a lot." Me: "Because you knew a lot? Ahh, any other reasons why?" Amy: "Erm because do you know today? When we had them like five things like 'how' and 'why' and stuff?" Me: "Yeah, yeah the cards" Amy: "When I picked one out I always got a question... even if it was someone else's card"</p>	<p><u>Amy's Individual Observation Record 4B:</u> Amy asked a question that did not make sense and indicated a possible misunderstanding of the passage. I also felt that she was trying to link the question word on the card she had chosen to a section of the passage and the two did not correspond. In this way, the question card seemed to lead Amy to ask a confused question and she showed limited awareness of this.</p> <p><u>Jack's Individual Observation Record 6B:</u> When Amy selected a 'what' question, Jack became dispirited claiming not to be able to find one and dropped his copy of the passage on the floor. I interpreted this action as linked to disappointment that he was not chosen to pick the question card.</p> <p><u>Session 10B Reflections:</u> <i>I wonder if my encouragement to be quick in looking for a question has resulted in them going for the first question that comes to mind. I think for the current time, asking simple questions is to be expected as this is a challenging skill; however I think it would be good to reduce the emphasis on speed and increase the emphasis on finding a question that will challenge someone else. Today I tried to encourage children to ask a more difficult question but they still seem to go for the easiest or most obvious ones. Perhaps this is a</i></p>	<p>Question cards seemed to support Jack and Amy's questioning by</p> <ul style="list-style-type: none"> – Encouraging them to ask more questions and thereby engage in more practice of questioning – Giving children a starter or prompt to support question generation <p>However, at times the use of question cards and my encouragement for them to search for a question using the stem word at speed may have interfered with the question generating process, leading them to connect a question word with a section of text which was not particularly compatible. In this way, question cards may have limited</p>	<p>I continued to use question cards in every session throughout Phase 2. This action was justified by the confirming evidence I gathered across different sources and the need to implement adjustments for an extended period of time (as validated by conversation with TA and critical friends).</p>

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	<p><u>Conversation with Critical Friend after Session 4B:</u> With reference to question cards – AM: <i>“So its all that thinking things up, that imagination and comprehension.”</i> Me: <i>“Yeah maybe the broadness of not having something to direct them...”</i> AM: <i>“Its too wide... so the cards have worked well.”</i> In reflecting back my comments to me, AM deduced that the question cards had been helpful as a prompt to support children in generating questions.</p> <p><u>Conversation with Mrs. Wilson after Session 5B:</u> Mrs. Wilson: <i>“Yes the question cards, now that was a really good idea yeah definitely... it gives them like a starter.”</i></p> <p><u>Session 7B Reflections:</u> <i>On the contrary, question cards seem to be working really well. Children continue to be more engaged and ask questions. There is evidence that the specificity of questions is improving for some members of the group. I am now trying to scaffold questions by encouraging children to consider how they could improve their questions.</i></p> <p><u>Session 8B Reflections:</u> <i>Beyond the motivational benefits of these activities though I feel they are building metacognitive awareness</i></p>	<p><i>long-term goal and one to discuss this with Mrs. Wilson.</i></p> <p><u>Associated Actions:</u></p> <ul style="list-style-type: none"> - Reduce the emphasis on the speed of finding question and increase the emphasis on finding a question that will challenging someone else. - Discuss long-term goals with Mrs. Wilson such as complex questions and whether they might move on to fiction passages in the future. <p><u>Amy’s Individual Observation Record 11B:</u> When asked to share her ‘why’ question Amy asked the question: <i>“Why was the cheetah eleven years old?”</i> A couple of members of the group giggled in response to this and Kamil said: <i>“There’s no answer”</i>. I tried to reduce any embarrassment Amy might feel due to her willingness to please whilst unpicking her question. We talked about her age and when I asked <i>“Why are you nine years old?”</i> she replied <i>“I don’t know.”</i> I think she had not considered the answer to the question and simply paired the question card stem with a literal excerpt from the text. This might be an indication that question cards did not assist her learning as the prompt did not accord with the content of her question.</p>	<p>the field of questioning too greatly leading children to miss out on naturally occurring lines of questioning.</p>	

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	<p><i>and becoming more skilled at asking relevant questions about the text. The group has a more proactive feel to it and I think this is linked to increased confidence, understanding of the process and use of concrete tools to prompt active engagement with the text.</i></p> <p><u>Amy and Jack's Individual Structured Feedback after 14B:</u> Both Amy and Jack put question cards in the 'what helped me to understand' section.</p> <p><u>Retrospective Reflections:</u> <i>The use of concrete visual prompts supported me as a practitioner and I felt that it assisted modelling questions that were more closely linked to those children were thinking of because we all were using the same 'question word'.</i></p> <p><u>Conversation with Mrs. Wilson three weeks after the 'intensive intervention' phase:</u> Mrs. Wilson: "Oh we use those... yes they use them every day. Oh no we've got to have question cards. Got to be dealt face down. A whole ritual goes on!"</p> <p>During this interaction, Mrs. Wilson referred to question cards as a central component of the RT process, whereas she suggested that the other adjustments were used more intermittently.</p>	<p><u>Jack's Individual Observation Record 11B:</u> When the next child picked a 'what' card, Jack commented: "Now its a 'what' question... I've only got a 'why' that's forcing any other question out of my mind." This was interesting as it made me wonder if the question cards were assisting Jack in this instance or limiting the stem he felt he could use.</p> <p><u>Amy's Individual Structured Feedback after Session 14B:</u> Me: "Did they help you to understand or not?" Amy: "They did but they do feel a bit tricky." Me: "...they're still a bit tricky are they?" Amy: "I'm putting it in the middle." Me: "Do you remember Amy when we did questions but we didn't have question cards? ... What did you think of that?" Amy: "A bit hard." Me: "Was that tricky? and you said this was tricky [using the question cards] so was this the same tricky, more tricky, less tricky?" Amy: "A little bit. Less tricky." Me: "Less tricky so did they help then? So having a question card helped you to ask a question do you think?" Amy: "No." Me: "They didn't ok. So which was easiest then with a question card or without a question card?"</p>		

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		<p>Amy: <i>"Without a question card."</i> Me: <i>"Ahh that was easier. So why did it make it harder then having a question card?"</i> Amy: <i>"Because it was good without them."</i> ... Amy: <i>"So I think it was what did not help me understand."</i></p> <p>There was a sense of confusion of meaning during this interaction that led me to ask quite specific question to decipher Amy's meaning. Nevertheless, by the end of the interaction it seemed clear she was providing negative feedback about the utility of question cards. This contrasted with her having sorted the card in the 'What was good' category in the previous card-sort.</p> <p><u>Retrospective Reflections:</u> <i>I did not consider introducing the question cards in a staged manner and thereby gradually increasing the level of difficulty associated with particular question words e.g. 'Why' is much harder than 'Who?' I wonder whether this would have increased their application further and in retrospect feel this would have been a more valid means of introducing the adjustment over time. Furthermore, by introducing all the question cards together I did not consider the relative value of some cards over others but instead viewed them a single adjustment.</i></p>		

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<p>Jack and Amy provide more accurate and elaborated answers to questions posed by other group members.</p> <p>Amy and Jack are able to accept and reflect on the answers provided by group members to their own questions to decide whether or not the response given to them is 'correct'.</p>	<p><u>Amy's Individual Observation Record 4B:</u> Amy answered Zoe's question "What made him do it?" with the response "He might have dreamed to do it." This links back to information provided in the first paragraph of the text read yesterday (3B) and on Monday (1B). This example indicates an improvement in Amy's question answering.</p> <p><u>Jack's Individual Observation Record 4B:</u> He asked... a more advanced question drawing on the text base and requiring an elaborative inference ...Nevertheless, Jack then supplied an answer ...that indicated some understanding but not did elaborate [further]...</p> <p><u>Jack's Individual Observation Record 8B:</u> When Bradley asked "How fast is Usain Bolt?" Jack commented "That was Amy's question!" showing he had listened to her contribution during the partner conversation. To answer the question he says: "He was the fastest man on earth but it doesn't say how fast he goes." This showed a rich representation of the text as there was no information about the speed Usain Bolt ran just the time he completed it in. Jack continued "I think he's still fast as a rocket. I think if you put him against a greyhound, the greyhound would lose." Again, he is bringing background knowledge about greyhound racing to supplement his understanding of the text. He</p>	<p><u>Jack's Individual Observation Record 2B:</u> Evidence of positive question answering before the introduction of question cards: When prompted by Mrs. Wilson, Jack answered the question posed by Bradley "How dangerous was it?" with "Really, really really, super dangerous." Mrs. Wilson: "How do you know?" Jack: "Because that's death-defying!" Here, Jack referred back to the word he clarified in yesterday's session and used this to help him answer the question.</p> <p><u>Jack's Individual Observation Record 4B:</u> Jack was keen to question in today's session but needed a lot of scaffolding to answer questions. He seemed focused on his own question and own answer rather than those of other group members. When asked to help a group member improve his question, Jack did not show any awareness of having listened to the question and instead offered his own question.</p> <p><u>Jack's Individual Observation Record 5B:</u> When Kamil asked the question "Who was born in 1979?", Jack said very loudly "Ahh that was mine, ahh!" and seemed set to become quite upset. However, I attempted to draw his attention to the fact that sometimes we are all thinking the same</p>	<p>Question cards did not seem to directly support question answering for Amy and Jack as they were often focussed on asking their own questions.</p>	<p>I continued to use question cards throughout Phase 2.</p> <p>Given that my educational intent in introducing question cards was not to support question answering I felt I was justified in continuing this action over time</p>

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	<p>is also using the idea of a rocket to represent speed although it would be incorrect to say he was literally as fast as a rocket. This positive example of question answering occurred whilst question cards were being used.</p> <p><u>Jack's Individual Observation Record 11B:</u> Jack also answered a question posed by Zoe and brought his knowledge of animals in the wild to suggest why her cheetah cousins were in the wild. This was an example of him bringing to bear his understanding of the world to respond to the question and make an elaborative inference/prediction. When I asked follow up questions about 'who' he referring to, Jack was able to elaborate on his prediction about who it could have been and what they might have done. He demonstrated good reasoning skills when engaging in this discussion.</p> <p><u>Jack's Individual Observation Record 12B</u> Jack: "Who built the robot?" Mrs. Wilson: "Which robot?" Jack: "This one" (Points to picture) ... Jack: "Who built the robot cheetah?" This was a good question in which the answer was located in the text. Kamil: "The scientists"</p>	<p>thing and this seemed to placate him. His difficulties in this regard seem to link to ToM and result in him becoming distracted from the process of answering questions.</p> <p><u>Jack's Individual Observation Record 7B:</u> In answer to Jack's question "How can athletes sprint at top speed in a straight line for 100m?", Bradley suggested "they train" and Kamil responded "100m". To Kamil, Jack said "that was NOT the answer I was looking for." Again, showing a lack of social skills to take into account Kamil's feelings or why he might have misunderstood the question.</p> <p><u>Amy's Individual Observation Record 11B:</u> When I asked if she knew what the answer was going to be, Amy confidently said 'yes' but there was no evidence that she had an answer. This may be because she wished to please and I am constantly aware of this behaviour in the sessions and during the feedback.</p> <p><u>Amy's Individual Observation Record 12B:</u> When I asked Amy to answer a very easy question, she at first answered vaguely and then responded incorrectly to my prompt.</p>		

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	<p>Mrs. Wilson: <i>"The scientists where?"</i> Jack: <i>"The answer I was looking... part of the answer I was looking for."</i> Kamil: <i>"The scientists from Boston"</i> Jack: <i>"That's the answer! Anybody else?"</i> Here Jack accepts the answer offered by Kamil and scaffolded by Mrs. Wilson.</p> <p><u>Jack and Amy's Individual Observation Records 14B:</u> In answer to Jack's question <i>"How does the horse eat up to 35000 calories per day?"</i>, Amy responded correctly <i>"Erm I think it's because he ate a lot of food like oats hay and carrots."</i> Amy's answer... made direct links to the information provided in the text. Jack: <i>"Well you're nearly there but you missed a word out, Adam?"</i> Adam: <i>"Snuffling"</i> Jack: <i>"That's the missing word but where's the rest?"</i> These interactions indicated that Jack had quite a clear answer in mind and also an expectation that Adam would respond with a sentence... however Jack showed little awareness of Adam's feelings... <i>"Adam's struggling."</i> Mrs. Wilson: <i>"No, no, wait, give him a chance he's a bit shy."</i> Jack then waited and when Adam (with support) read some of the text verbatim, Jack exclaimed: <i>"That's the answer! You got it wrong Amy"...</i></p>	<p><u>Jack's Individual Observation Record 6B:</u> Despite an improvement in question asking in this session, Jack still struggled to accept the answers of other group members and provide an elaborated answer to his own question. Zoe responded <i>"So people can hear the scores?"</i> and when I asked if was the right answer he replied <i>"Well sort of, I can take the answer but I'm still really looking for another one."</i> When asked his answer, he said <i>"Well if I answer it myself it was because he set a world record."</i> This was interesting as the answers given by his peers took into account the needs of the people attending the event, whereas Jack's answer lacked this social awareness and focused on a fact about the event.</p> <p><u>Jack's Individual Observation Record 13B:</u> Jack rarely responds to questions from other group members without prompting because he is often so keen to share his own question. He does much more frequently answer questions posed by myself and Mrs. Wilson. This observation suggests that Jack does not learn as readily through cooperative learning as he does through scaffolded interactions with adults in the context of the intervention group.</p>		

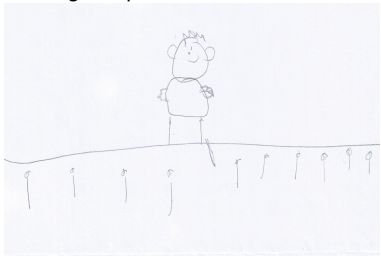
Appendix 26. Analysis of Phase 2 Data in Relation to the ‘Drawing Picture Summaries’ adjustment (Micro-cycle 3)

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<p>There is a noticeable positive change in Amy and Jack’s ability to provide a verbal summary that includes the main points read in a given piece of text.</p> <p>Amy and Jack notice an improvement in their ability to summarise.</p>	<p><u>Jack’s Individual Observation Record 2B:</u> Jack was the only child to have a go at a verbal summary. Jack: <i>“Nik Wallenda attempts another death-defying tight-rope walk!”</i> Following scaffolding and modelling, Jack attempts to improve his summary <i>“... my summary is... Nik Wallenda attempts a huge tight-rope walk over the Little Colorado Gorge with no safety equipment.”</i> Jack brought in information from yesterday’s session and drew out the main points including where it was, how huge it was and the fact that he had no safety equipment. All members of the group scored his summary 5/5.</p> <p><u>Jack’s Individual Observation Record 5B:</u> Unlike other members of the group, Jack understood the idea of crossing out irrelevant parts of the text and used this to provide the following summary <i>“Nik Wallenda was born on 24th January 1979 he became a hire wire artist at thirteen years old and he lives in a famous family called the Flying Wallendas.”</i> When asked to give Jack’s summary a score out of five, three children gave him ten (!) and the other gave him 4/5.</p>	<p><u>Amy’s Structured Feedback after Session 3B:</u> <i>“Summarise. It’s in the middle... [between what was good and not-so-good] I’m not so good at it...”</i></p> <p><u>Amy’s Individual Observation Record 6B:</u> Amy’s summary was <i>“This article is about six young men who ran in a race.”</i> This piece of information was provided verbatim in the first paragraph of the text. It does not represent a main point of the passage and as such constitutes a weak summary. I asked what the group thought of Amy’s summary and Jack suggested that we rate it with the rating scale cards: Jack = 2/5, Bradley & Zoe = 4/5, Amy & Kamil = 5/5 Amy’s score may have suggested a continuing lack of awareness of what makes a good summary, however Jack showed an awareness that the summary did not include the gist of the passage.</p> <p><u>Amy’s Individual Observation Record 8B:</u> Amy’s summary was: <i>“We read about Usain Bolt and erm.....”</i> she trailed off and when I said <i>“We read about Usain Bolt and...”</i> she completed the sentence stem <i>“He won some gold medals.”</i> This verbal summary indicates that Amy is continuing to struggle to draw out the main points and gist of the texts she is</p>	<p>Overall, I did not feel there was a noticeable change in Amy and Jack’s summarising skills. They continued to find it difficult to draw out the main gist of a passage and express this in a verbal summary. Amy in particular found it challenging to both understand the purpose and demands of summarising and produce a verbal summary. For Jack, he demonstrated some developing skills in summarising but these were apparent in the early as well as later stages of the intervention which suggests that no noticeable positive change occurred.</p>	<p>I introduced two adjustments to support summarisation skills:</p> <ul style="list-style-type: none"> - Drawing picture summaries - Mind Maps <p>I justified this action by the disconfirming evidence suggesting that Jack and Amy continued to find summarising very challenging across the intervention. Critical friends validated this action.</p>

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	Confirming Evidence	Disconfirming Evidence		
	<p><u>Jack's Individual Observation Record 6B:</u> At the beginning of the summarising activity, Jack said to me <i>"Oh oh oh oh I've got an idea! I'm gon'na cross out the ones that I don't like."</i> This referred back to last week when I briefly introduced the concept of crossing out less important ideas and seeing what you have left. It was pleasing to see Jack choosing to use this approach and suggested that he was developing some awareness of what helps him to learn more effectively. Interestingly, Jack also whispered to me <i>"Tell that to Kamil!"</i> indicating that he wanted to share the strategy with another group member. This suggestion most likely links to him wanting to succeed and receive credit for his actions but may also indicate building social awareness and a desire to support the learning of another group member. This is in line with the principles of cooperative learning and represents a step towards that which was significant for Jack.</p> <p><u>Session 6B Reflections:</u> <i>I felt quite excited when Jack whispered to me that he was going to cross out parts of the text out to help him summarise. It felt like a break through moment because he had taken a minor adjustment I had made to one session, remembered it and then initiated using it again with little support. This instance indicated to</i></p>	<p>reading. Here she cites two main points hesitantly and struggles to elaborate on these.</p> <p><u>Jack's Individual Observation Record 10B:</u> When I asked if everyone had a summary ready, Jack replied <i>"I don't think I've got one."</i> ... Me (to the group): <i>"What would be the shortest summary you could give 'I read about a...?'"</i> Bradley: <i>"Cheetah"</i> Jack: <i>"You could say I just read about a cheetah that ran a hundred metres in 5.95 seconds."</i> Me: <i>"And that's a summary, so you can do it see?"</i> This instance is an example of me scaffolding the summarising process for Jack and building up his self-esteem. The use of a sentence starter seemed to really help and this was acknowledged by Jack in a follow-up comment to Mrs. Wilson.</p> <p><u>Amy's Structured Feedback after Session 14B:</u> With reference to the 'Summarising' card - Amy: <i>"I think I'll have to put this in the middle because sometimes I'm good at it and sometimes I'm not good at it so I don't know what to put in."</i> Me: <i>"But this isn't 'what are you good at and what are you not good at' this is 'what helped you to understand and what didn't help you to understand' so where does it [the card] go with that then do you think...?"</i></p>		

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	<p><i>me that Jack's metacognitive awareness of what helps him to use a strategy... is developing and he is becoming a more proactive reader. In contrast I feel that Amy still requires a significant amount of scaffolding and support and there are several indicators that she is not thinking about her own thinking.</i></p> <p><u>Jack's Observation Record Session 8B:</u> Although Jack did not summarise in front of the group today, when he was asked to think about what Amy had done well he said 'summarise' which may indicate he was listening to her summary or may just be a recency effect.</p>	<p>Amy: "I mean... I'm gon'na put it in the middle because sometimes I do understand it and less of the time I understand it, most of the time I don't understand."</p> <p><u>Comparison of Amy's pre- and post-intervention bespoke assessment responses - summarisation</u></p> <p>Pre-intervention: "The monkey buffet festival is on the third thursday in november. It's a time when monkeys get a big buffet to thereselves."</p> <p>Post-intervention: <i>Sculptures. The festival is in china. Sculptures are as tall as buildings. At the sculpture park everything is carved out of one thing ice. Ice slides around the city are a cool attraction. Carved. Quirky.</i></p> <p>Amy's summary pre-intervention includes the main points and provides some of the gist of the text in narrative form. In contrast, Amy presents her post-intervention summary as a series of bullet point which does not draw points together to form a cohesive overview of the passage. It appears as though by the end of the intervention Amy has misunderstood the objective of summarising and I wonder if this is linked to her use of the mind map strategy.</p>		

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	Confirming Evidence	Disconfirming Evidence		
		<p><u>Comparison of Jack's pre- and post-intervention bespoke assessment responses - summarisation</u></p> <p>Pre-intervention: <i>That this is a festival that has monkeys not people celebrating and people lay out food for the monkeys and something they steal food that was not laid down.</i></p> <p>Post-intervention: <i>People build ice sculptures in fun parks to attract visitors to the park. Ice sculptures can come in all shapes and sizes.</i></p> <p>Jack's summaries pre- and post-intervention are similar in length and quality. Pre-intervention Jack includes 5 main points and post-intervention he refers to six main points about the passage. In both summaries he expresses an understanding of the gist of the passage.</p> <p><u>Conversation with Mrs. Wilson 3 weeks after the intensive intervention phase:</u></p> <p>Mrs. Wilson: <i>"...they're getting the idea of main points."</i></p> <p>Me: <i>"Are they? Is that starting to come through?"</i></p> <p>This line of conversation seems to confirm the idea that children had not really understood and acquired summarisation skills during my time as the facilitator of the group.</p>		

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	Confirming Evidence	Disconfirming Evidence		
<p>Jack and Amy's drawings include the main points in the text.</p> <p>Drawing picture summaries supports Jack and Amy to draw out the main points in a piece of text and provide a verbal summary.</p> <p>Amy and Jack provide positive feedback about the use of drawing picture summaries in the intervention sessions.</p> <p>I make reference to perceived improvements in Jack and Amy's skills in summarising and</p>	<p><u>Group Feedback Session 3B:</u> Using scoring paddles (1= not helpful for summarising, 5 = really helpful for summarising) most group members rating drawing picture summaries favourably. Amy = 5/5. Jack = 4/5. Me: "Why was it four out of five?" Jack: "Because I like drawing pictures." Me: "...did it help you to think about what you'd read?" Jack: "Yes."</p> <p><u>Amy Structured Feedback after Session 3B:</u> Amy categorised the adjustment as 'good', explaining: "It was easier because... its better than telling a short sentence. It's easier."</p> <p><u>Session 6B Reflections:</u> <i>I had planned to introduce a mind map adjustment to summarising today (based on my conversation with the TA on Friday); however, following my research tutorial yesterday, I reflected that I had not allowed enough time to embed the adjustment of using drawings to supplement the summarising strategy. My intention is to give this approach more time but the drawing strategy does not lend itself to all summaries and so can only be used periodically. I would like to have the time to trial mind maps as well as drawing; however I am at the same time trying to learn from</i></p>	<p><u>Jack's Individual Observation Record 3B:</u> Jack: "I had nearly finished him. That's not a tent, that's the man. I just needed to finish him." Me: "Ok what were these things down here?" Jack: "They are like ropes that hold it up otherwise it would just drop down." This may link to the photos shown to the group and I used this opportunity to explain the weights on the rope. Jack found the time limit on the drawing summary a challenging and did not put in the main points first.</p> <p><u>Amy's Individual Observation Record 3B:</u> I asked what the main points were and Amy replied: "The tight rope and the man"</p>  <p>Amy only included two main points and the weights hanging down are likely to be taken from the photos shown in Session 1B. Therefore this adjustment did not seem to supplement her summarising skills or</p>	<p>Drawing picture summaries did not seem to support the RT process or enhance Jack and Amy's skills in summarising the text. There was little evidence to suggest that the pictures they drew include in key points in the passage or that the picture supported them to produce a verbal summary. Furthermore, drawing summary pictures was influenced by the use of pictures and photographs in the sessions detracting from the representation of the child's understanding of the text base.</p> <p>As a practitioner I did not find that 'drawing picture summaries' facilitated my practice as it led to some behavioural issues with</p>	<p>Initially I intended to discontinue this adjustment after Session 7B however following reflections and discussions with critical friends I decided I should try it for at least one further time. I therefore repeated the adjustment in Session 11B and following further disconfirming evidence against my identified criteria I discontinued using it thereafter.</p> <p>My action was supported by a</p>

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	Confirming Evidence	Disconfirming Evidence		
<p>link this to my use of picture summaries as a practitioner.</p> <p>Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in summarising and links this to the use of drawing picture summaries.</p>	<p><i>previous reflections that it is important not to change too much in one go and to plan my sessions to be completed within the half hour time slot.</i></p> <p><u>Amy's Individual Feedback after Session 7B:</u> On a blank sheet of paper entitled 'What was good?', Amy wrote: 'Summerizing by picture. I love to draw.' I asked: "Why was that good?" Amy: "'cause I like drawing." Me: "Did it help you to summarise?" Amy: "Yeah"</p> <p><u>Reflections from Session 9B:</u> <i>Nevertheless, due to running over we did not have time to draw summary pictures today and I felt concerned about this. I am keen to try this adjustment again and now feel worried that I will run out of time to trial this adjustment sufficiently.</i></p> <p><u>Jack's Individual Feedback after Session 14B:</u> Jack: "Well it's good because you summarise. You see those little lines there showing wobbling cos he did wobble." [refers to his picture on the card] Me: "Yeah so did you think drawing was helpful? Did you like doing that?" Jack: "Yeah 'cause I like drawing." However, in response to 'what helps you to understand', Jack was dismissive of the idea that</p>	<p>comprehension of the passage.</p> <p><u>Conversation with Mrs. Wilson after Session 5B:</u> Mrs. Wilson: "... I mean it is hard but it means they have to think about what they've done. You could say you could label your picture... or a summary brainstorm at the end, mind map whatever you want to call it." Unlike her immediate positive response to the question cards, Mrs. Wilson was more hesitant when commenting on summary pictures and instead suggested a different adjustment to support summarising.</p> <p><u>Session 5B Reflections:</u> <i>I continue to feel a sense of discomfort when I teach the 'summarising' section and feel I'm not doing this very well. Children don't seem to understand what I am asking of them....I discussed my feelings about summarising with Mrs. Wilson during our feedback session ... however I continue to feel uncertain about how to progress with the teaching in this area. I still feel very unsure about using picture summaries and the discussion with Mrs. Wilson left me still pondering the value of this.</i></p> <p><u>Amy's Individual Observation Record 7B:</u> Amy did not give a verbal summary at the group level. When she showed the picture to me, I did not gather</p>	<p>Jack and was challenging to introduce and complete within the short time frame of that section of the sessions. It was also not applicable in all sessions due to the short extracts of text we covered at a time.</p>	<p>number of sources of evidence but not reflected in the children's views. Nevertheless I felt that Jack and Amy's positive feedback was more closely related to the enjoyment of drawing pictures than tied to my educational intent in introducing the adjustment.</p> <p>In line with Mrs. Wilson's suggestion and the evidence base in the literature, I began to trial mind maps for summarising as</p>

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	Confirming Evidence	Disconfirming Evidence		
	<p>drawing pictures facilitates comprehension: Jack: <i>"No, you just draw pictures."</i></p> <p><u>Conversation with Mrs. Wilson three weeks after the 'intensive intervention' phase:</u> Despite my finding that drawing picture summaries was not a particularly useful teaching aid, she continued to give children the opportunity to chose this method of summarising over time.</p> <p>Mrs. Wilson: <i>"The thing about pictures is that their pictures don't show as many details as the mind map does... but it doesn't necessarily mean they haven't remembered as much."</i></p> <p>Me: <i>"No. I think what I felt was when we used pictures we didn't get the chance to then produce a summary from it rather than just describe the picture and I didn't know if it would get there or not."</i></p> <p>Mrs. Wilson: <i>"Yeah. We haven't quite got there yet."</i></p> <p>Nevertheless, she agreed that the pictures were not yet supporting the production of a verbal summary.</p>	<p>many main points. She suggested that she was going to write "The football family" at the top [unrelated to the text]. When I asked how that showed what she had read in the text, she replied <i>"nothing"</i> as if she had only realised this when I asked. Again this made me question the extent to which Amy understands the strategy and my instructions.</p> <p><u>Jack's Individual Observation Record 7B:</u> Jack asked <i>"Are we going to have more time this time 'cause I didn't have time to finish it last time?"</i> Despite several warnings about the time, Jack became very distressed when I said stop and he had not finished... When asked for feedback on whether drawing helped him to summarise he responded: <i>"Well I just made a track, a hundred metre track, and people running on it and the finish line."</i> In this way, Jack had identified three key points however I did not feel the summary picture helped him to do this as I believe he could have included these points in a verbal summary prior to drawing the picture.</p> <p><u>Session 7B Reflections:</u> <i>I think the summary pictures did not work so well again today. Again I think children are struggling to understand the purpose of them and pictures tend to elaborate little on a basic representation of the text. I scaffolded a conversation between Amy and Jack and</i></p>		<p>an alternative to drawing picture summaries.</p>

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		<p><i>felt that their discussion was not facilitated by the adjustment. In fact, it seemed to distract Jack as he again became slightly distressed when he did not have time to finish his picture. Furthermore, Amy talked about putting something in the picture that was unrelated to the text and did not seem to have understood the purpose of the aid. I asked for feedback from the children and they seemed fairly 'on the fence' about it. I think that this strategy may not be the most useful one for supporting summarising but I am unsure how long to trial it for.</i></p> <p><u>Amy's Individual Observation Record 11B:</u> Amy drew a summary picture which seemed to include three key points: (1) A cheetah, (2) Her name is Sarah, (3) Cincinnati zoo I did not feel that this tool assisted her in gathering the gist of the text or scaffolded a verbal summary with her partner.</p> <p><u>Jack's Individual Observation Record 11B:</u> Despite several clear warnings about the time limit of the activity, Jack became very distressed when he ran out of time to complete his picture. He banged his fist on the table and cried briefly. Despite efforts to distract him and build his self-esteem around the picture he had drawn he remained very disparaging of his own attempt and screwed up the picture and</p>		

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		<p>threw it on the floor. In the end, Mrs. Wilson decided to ask him to have a time out and briefly leave the room. He came back a few minutes later and re-joined the session.</p> <p>His picture seemed to include the three main points: (1) A 100m track, (2) A cheetah, (3) Fluffy dog toy. This did not support him to produce a verbal summary and I felt he could have include a much wider range a main points without the use of the adjustment.</p> <p><u>Session 11B Reflections:</u> <i>I felt surprised when Jack had a large outburst because he didn't have time to finish his drawing. Perhaps it was naive of me to be surprised at the extent of his outburst. I had been aware this might happen however I felt I had prepared him well for the time limit and given clear warnings prior to completion of the task. I built in these clear warnings due to previous attempts at this adjustment when Jack found it very difficult to discontinue the activity when he did not consider that he had finished...Despite the behavioural difficulties that have arisen, I nevertheless do not feel the adjustment is supporting the summarising process very much. It has caused disruption to Jack's behaviour thereby distracting him from engaging in the process and Amy so far has not added many points to her drawing. I also feel that the picture summary is not</i></p>		

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		<p><i>supporting the generation of a verbal summary as I had hoped.</i></p> <p><u>Amy's Structured Individual Feedback after Session 14B:</u> Initially Amy puts the 'draw summary pictures' card in the 'good' section explaining "I like drawing pictures." Me: "Did it help you to summarise?" Amy: "Yeah. I think the mind map were better though." Me: "Ok why were the mind maps better?" Amy: "Actually I think its what's not so good 'cause I like the mind maps." [moves card to not-so-good pile] ... Amy: "They weren't as good 'cause they were like a quick drawing and I kept trying to like put all the detail in." Amy's comment however may indicate a lack of understanding of the purpose of summarising. Furthermore, her responses demonstrate how her expressed views are influenced by my questions.</p>		

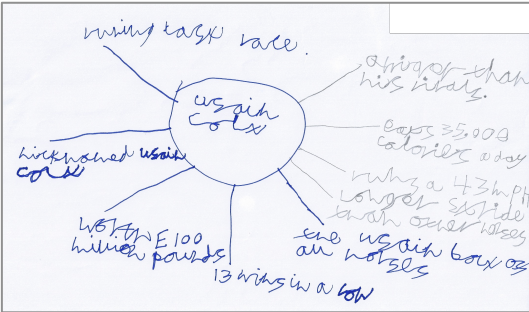
Appendix 27. Analysis of Phase 2 Data in Relation to the ‘Mind Maps’ adjustment (Micro-cycle 4)

My Identified Criteria (What I expected to see if I fulfilled my educational aim)	My Standard of Judgement (The extent to which what I expected to happen happened)		My Developing Claim to Knowledge (Based on the extent to which my standards of judgement were fulfilled)	Subsequent Action in Phase 2 with Justification
	Confirming Evidence	Disconfirming Evidence		
<p>Jack and Amy make reference to background knowledge relevant to the text following use of mind maps.</p> <p>I make reference to perceived improvements in Jack and Amy’s skills in drawing on background knowledge and link this to my use of mind maps as a practitioner.</p> <p>Amy and Jack provide positive feedback about the use of mind maps in the intervention</p>	<p><u>Session 8B Reflections:</u> <i>I decided to use the mind map adjustment today to activate children’s prior knowledge about the Olympics. At first this was met with comments such as Jack saying ‘I have no idea’ and Amy saying ‘I just watched the ceremony’. Nevertheless, following a short conversation with their partners all members of the group had lots to offer. This initial lack of ideas seemed similar to their early approach to the RT process and linked to a lack of confidence and difficulties with metacognition. Children’s confidence built as they made suggestions and seemed to realise that there wasn’t a right and wrong answer and actually there was lots of relevant information that they could add to the group mind map. The vibe in the room at this point was really positive with all children engaged and keen to add their ideas. This activity made me think about Mrs. Wilson’s comments that children, Jack in particular, are becoming more aware of what they do not know/understand. I hope this activity was an antidote to that, as it encouraged them to move from a position of not thinking they knew anything useful to realising they could bring their background knowledge to the table... I would like to use the activity again... it could be useful as a</i></p>	<p><u>Jack’s Individual Observation Record 8B:</u> In fact, it became something of a challenge to stop him talking about what he knew and move on to the next activity.</p>	<p>Using mind maps with the group prior to introducing a text and using the RT process seemed a helpful adjustment however there was little confirming or disconfirming evidence tied closely to my identified criteria. I found some evidence to suggest that Jack contributed to the activity but little evidence linking this to his further use of RT with the text. In searching the data archive I found no references to the utility of the adjustment for supporting Amy except for her placing of the card in the card-sort activity (however this was not supplemented by any expressed views).</p>	<p>During Phase 2 I used group mind maps to activate prior knowledge on four occasions (two mind maps, each developed over two sessions). Based on the suggestions of Mrs. Wilson I then asked children to create their own mind maps to support summarisation in the final three sessions of Phase 2. In this way the group mind maps provided a modelling</p>

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	Confirming Evidence	Disconfirming Evidence		
<p>sessions.</p> <p>Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in drawing on background knowledge and links this to the use of mind maps.</p>	<p><i>summarisation tool.</i></p> <p><u>Jack's Individual Observation Record 8B:</u> Jack started the group mind map activity by commenting "<i>I have no idea</i>" which indicated this was not an area of interest to him and one in which he rated his background knowledge as poor. However, as the activity wore on his contributions increased in complexity and he began to bring some detailed knowledge to bear. In fact, it became something of a challenge to stop him talking about what he knew and move on to the next activity.</p> <p><u>Jack's Individual Observation Record 11B:</u> When clarifying the word 'flexible' Jack discussed how flexible his own spine was and brought this background knowledge to the text. When I asked what other animals might have a flexible spine he relied on the mind map to suggest animals but this largely contained animals... [with] a flexible spine.</p> <p><u>Jack and Amy's Structured Feedback after 14B:</u> Both children put the card ['Remembering what you already know about a topic' with a picture of a group mind map] in both the 'what was good' sections and the 'what helped me to understand' sections. Jack commented: "<i>It helps you to understand about what you said.</i>"</p>		<p>There was also an absence of Mrs. Wilson's views on this adjustment for triangulation.</p>	<p>function but due to the time limits of the sessions I therefore did not have time to use them again.</p>

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	Confirming Evidence	Disconfirming Evidence		
<p>Jack and Amy's mind maps include the main points in the text.</p> <p>Mind maps support Jack and Amy to draw out the main points in a piece of text and provide a verbal summary.</p> <p>Amy and Jack provide positive feedback about the use of mind maps in the intervention sessions.</p> <p>I make reference to perceived improvements in Jack and Amy's skills in summarising and link this to my use</p>	<p><u>Session 12B Reflections:</u> <i>Today I introduced the final new adjustment of the research phase: summarisation mind maps... Children seemed fairly comfortable with the concept of mind mapping and I have used mind maps at the group level in recent sessions which should have helped to familiarise them with the process. Overall it seemed helpful although I think some children (e.g. Amy) are still finding it difficult to sift out the main points and focus on key ideas.</i></p> <p><u>Jack's Individual Observation Record 13B:</u> Jack worked independently on his summary mind map and included several key points. He was disappointed that he did not get the opportunity to share it with the group.</p> <p><u>Amy's Individual Observation Record 13B:</u> Amy created an individual mind map today. Again, she included a lot of information but in line with my instruction to only include the main ideas and key points, it is really pleasing to see that the ideas contained were more relevant to the passage.</p>	<p><u>Amy's Individual Observation Record 12B:</u> We summarised today using an individual mind map for the first time. Amy put lots of information down... [which] was good to see... however it did not represent just the key ideas and she largely quoted literal information... This indicates that she is struggling to sift out the main ideas and understand what a summary is. Furthermore, when I asked for a verbal summary, Amy struggled saying "I can't do it!". I gave her the sentence starter "Today I read about...". She responded: "Cheetah. Usain. 28.3 mph" In this way, the mind map did not facilitate her verbal summary.</p> <p><u>Jack's Individual Observation Record 12B:</u> We summarised today using an individual mind map for the first time. Mrs. Wilson suggested completing the mind map from memory and at first Jack seemed to think he could not remember anything and lacked confidence. However with prompts to remember the questions that had been asked in the group, he soon became engaged in compiling his mind map independently [as shown below]</p>	<p>Given that the adjustment was only in place for a short period of time there was a limited body of evidence (both confirming and disconfirming) that related to my criteria. Overall there were indications in later sessions that Jack and Amy were including main points in their mind maps however, this did not seem to facilitate them in producing a verbal summary. Nevertheless both Jack and Amy provided consistently positive feedback on the adjustment at the end of the intervention. Perhaps surprisingly, I found no evidence from Mrs. Wilson regarding her views on the adjustment given that she suggested it on more than one</p>	<p>There was little time or opportunity for extended action in Phase 2 following the introduction of this adjustment. I therefore implemented mind maps in the three consecutive sessions at the end of the session and scaffolded the use of the adjustment over to Mrs. Wilson.</p>






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	Confirming Evidence	Disconfirming Evidence		
<p>of mind maps as a practitioner.</p> <p>Mrs. Wilson makes reference to perceived improvements in Jack and Amy's skills in summarising and links this to the use of mind maps.</p>	<p>Session 13B Reflections: <i>Having felt somewhat dejected about Amy's lack of understanding in previous sessions, today I was elated by her contributions. She produced a summary map mind which more closely focussed on main ideas (in comparison to that produced yesterday).</i></p> <p>...</p> <p><i>For Amy and all the other group members, I think the mind map summary was more useful today. Children seemed to understand more clearly what was required of them and I gave clear instructions about only including the key points. We then had only a short amount of time to use them as a prop for a verbal summary... I think this adjustment needs longer to</i></p>	<p>Jack's Individual Observation Record 14B: Jack added four relevant points to his mind map and prompted Amy to work with him when I asked them to share ideas with the person sitting next to them. When Amy read out the points on her mind map, Jack responded with a keenness to check that he had the same points as she did. I interpreted this as competition rather than cooperation based on the importance Jack places on getting things right and</p>	<p>occasion.</p>	

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	<p><i>embed to answer the question of whether it supports verbal summarising. I wonder whether Mrs. Wilson will continue with this when she takes over the intervention. I expect that she will as she made the suggestion to me and therefore I think she will have great investment in this adjustment in comparison to some others.</i></p> <p><u>Jack's Individual Structured Feedback after 14B:</u> Jack: "Mind maps... Good!" Me: "Why were they good?" Jack: "Because they help you to think about things. You think about things and they go on." Jack's feedback implies that mind maps are a metacognitive aid though does not make reference to their utility in drawing out the main ideas.</p> <p><u>Amy's Individual Structured Feedback after 14B:</u> Initially Amy reported to like mind maps more than drawing picture summaries as a tool for summarisation. In relation to mind maps she categorises them both as good and as helpful for understanding. Amy: "They helped me to understand." ... Me: "... how did they help you?" Amy: "Mm 'cause they helped me by looking at the info and putting it into a mind map."</p>	<p>outperforming others. Jack then read aloud his points but I did not try to scaffold him to produce a more cohesive verbal summary because we were short on time.</p>  <p>[N.B. notes in pencil represent key points added to a mind map created in the previous session]</p>		

Appendix 28. Bookmark to Promote Generalisation of the RT Strategies

Incorporating Visual Symbols from 'Communicate: In Print 2' (Widgit Symbols (c)

Widgit Software 2002-2014 www.widgit.com)

 <p>When I read, I can...</p> <p>Predict</p>  <p>What might happen next</p> <p>Clarify</p>  <p>Any difficult words</p> <p>Question</p>  <p>Using question words like 'who?', 'what?', 'when?', 'where?', 'why?'</p> <p>Summarise</p>  <p>The main ideas in the text</p>	<p>[Blank side for personalisation and decoration]</p>
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