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The peer relations of pupils with and without special educational needs in mainstream primary schools: interactions in the playground and in class

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Declaration of own work

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

Signed: J Spence

Abstract

Much research has attempted to investigate the peer relations of pupils with special educational needs (PSEN) and has found that PSEN are typically accepted less and rejected more than their non-SEN (NSEN) peers (e.g. Frederickson, 2010). However, these studies have tended to neglect the types and characteristics of peer relations that take place and have instead focussed on whether or not these relationships exist (Webster & Carter, 2009).

This study builds on previous research by looking beyond classroom contexts to examine the nature of peer interactions within classroom and playground settings. This study explores the relationship between the provisions in place to support PSEN and their subsequent peer relations. The study also aims to gain the voice of the child to provide an in-depth account of the peer relations and breaktime experiences of PSEN compared to their non-SEN peers.

This mixed method study was conducted with Year four and five pupils in two mainstream primary schools. Ten PSEN and ten comparison pupils without SEN, as well as their class teachers and 134 of their classmates took part in the study. This study draws upon information gathered through: systematic observations in the classroom and playground, sociometric rating scales, questionnaires and pupil interviews.

The study found that PSEN engaged in fewer peer interactions in the classroom and in the playground than their NSEN peers and scored less favourably on a range of peer relationship measures. The study indicated that higher levels of peer interactions and fewer interactions with teaching assistants (TAs) in the classroom were powerfully associated with more positive peer relations for the pupils in the study. The study also identified that PSEN engaged in more ‘parallel’ and ‘solitary’ and less ‘social’ interactions at break than NSEN pupils. Whilst PSEN described a range of benefits that breaktimes provide for them, a number of challenges relating to peer relations were identified.

Contents

Glossary of Terms

Behaviour, Emotional and Social Development (BESD)	A main category of SEN in the former SEN CoP (2001). This category has been replaced with SEMH in the updated CoP (2015).
Breaktime	Breaktime, also known as break, recess, or playtime is defined as a period of rest or recreation in the school day (Collins online dictionary, 2016). Breaktimes normally take the form of a morning break, a longer lunch-break and sometimes an afternoon break.
Classroom Observations (CO)	The observations carried out, of the focus pupils in the classroom context, during the data collection phase of the study.
Cognition and Learning (C & L)	A main category of SEN included in the SEN CoP (2015). This category may be used when pupils learn at a slower rate of progress than their peers and covers a wide range of needs including dyslexia, MLD, severe learning difficulties and profound and multiple learning difficulties (PMLD).
Communication and Interaction (C & I)	A main category of SEN included in the SEN CoP (2015). This category may be used when pupils have difficulties in expressing their wants and needs or difficulties in understanding the communication of others. This category includes autistic spectrum disorder (ASD).
Educational Health and Care Plan (EHCP)	An EHCP details the educational, health and social needs that a child or young person has and identifies the additional support that should be put in place to support them. A plan is created by the local authority in collaboration with relevant educational, health and social care professionals as well as the child/young person and their parents or carers.
High attaining (HA)	Pupils who have been assessed by teachers to be achieving academic levels that are higher than the expected level for their age group.
Low attaining (LA)	Pupils who have been assessed by teachers to be achieving academic levels that are lower than the expected level for their age group.

Middle attaining (MA)	Pupils who have been assessed by teachers to be achieving the expected academic levels for a pupil of their age.
Moderate Learning Difficulties (MLD)	A sub-category of SEN classified under the category of C& L in the SEN CoP (2014).
Non-SEN (NSEN)	Pupils who are not on the SEN register and are not receiving SEN support or an EHCP. In the present study, 10 focus pupils without SEN, who were matched by age, gender and academic ability to the SEN focus pupils, formed a central part of this enquiry (see page 40). These participants were selected to take part in the classroom and playground observations and pupil questionnaires.
Playground Observations (PO)	The observations carried out, of the focus pupils in the playground during the data collection phase.
Pupil Questionnaires (PQ)	The questionnaires used in the data collection phase that were completed by pupils.
Pupils with special educational needs (PSEN)	Pupils on the SEN register including those receiving SEN support or an EHCP. In the present study, 10 focus pupils with SEN, who were on the SEN register for social, emotional and mental health or communication and interaction formed a central part of this enquiry. These participants were selected to take part in the classroom and playground observations, pupil interviews and pupil questionnaires (see page 40).
SEN Support	When a child is identified as having SEN, their school should plan to remove any barriers to learning and put in place additional provisions and support. These provisions should be regularly monitored and reviewed, (DfE, 2015).
Sensory and/or physical needs (S & P)	A main category of SEN included in the SEN CoP (2015). This category includes vision impairment, hearing impairment and physical disability.
Social, emotional and mental health (SEMH)	A main category of SEN included in the SEN CoP (2015). This category includes a range of social and emotional difficulties including 'challenging behaviours', anxiety, depression and attention deficit hyperactivity disorder (ADHD).
Socio Cognitive Mapping (SCM)	A tool for understanding the peer groups that exist for a group of participating pupils. In this study, pupils were asked to identify

	the groups of children who play together.
Special Educational Needs (SEN)	A child or young person is considered to have SEN if they have a difficulty or disability with learning that requires special educational provision to be made for them, (DfE, 2015). A school aged child has a learning difficulty or disability if they have a "significantly greater difficulty in learning than the majority of others of the same age", or if they have "a disability which prevents or hinders him or her from making use of the facilities of the kind generally provided for others of the same age in mainstream schools or mainstream post-16 institutions", (DfE, 2015).
Special Educational Needs and Disability Code of Practice (SEN CoP, 2015)	A document outlining the statutory guidance on the policies and procedures relating to the SEN and disability system for children and young people aged 0 to 25,
Teacher Questionnaires (TQ)	The questionnaires used in the data collection phase that were completed by the pupils.

Chapter 1. Introduction

In the UK, current government legislation indicates a distinct drive towards providing an inclusive education for children with SEN. The SEN CoP (DfE, 2015) emphasises the need for an 'inclusive practice' and 'removing barriers to learning' for PSEN, stating that all children should be educated in mainstream schools, unless there are specific extenuating circumstances (DfE, 2015). These circumstances may occur when a mainstream provision goes against the wishes of the young person or their parent, or when educating the child in the mainstream setting would be detrimental to the education of others in the class (DfE, 2015).

This movement towards inclusive education has been driven by concerns over human rights, and specifically, the belief that the human rights of children are compromised in special education, where segregation from mainstream educational practices and typically developing peers are distinguishing features (Lindsay, 2007). Furthermore, it is believed that the benefits of inclusive education are not only experienced by PSEN, but are likely to benefit the entire population by creating a generation that is more accepting of difference (Thomas, 1997).

The promotion of an 'inclusive education' for all children has also been reflected internationally. In 1994, 300 participants from 92 countries met to discuss inclusive practices. The Salamanca agreement was consequently adopted which set out to ensure that; "ordinary schools should accommodate all children, regardless of their physical, intellectual, emotional, social, linguistic or other conditions" (UNESCO, 1994; p5). The Salamanca agreement was based on principles of community and fairness for all, outlining that inclusive approaches were the most effective means of breaking down discriminatory attitudes towards PSEN, (UNESCO, 1994).

Recently, changes to the legislative context in the UK have been made to better promote the effective inclusion of PSEN. Specifically, the SEN CoP places greater responsibility on schools to support PSEN, stating that, "special educational provision is underpinned by high quality teaching and is

compromised by anything less" (DfE, 2015 p25). In addition, the CoP states that PSEN should be encouraged to engage in school activities alongside their typically developing peers and it is proposed that high quality, in-class teaching is preferential to 'additional intervention' or support (e.g. from a TA). EHCP's have also replaced 'statements' of Educational needs, and as a result, the emphasis in the CoP has moved away from the securing of TA hours, towards the desired 'outcomes' for PSEN (DfE, 2015).

Social as well as academic benefits are often cited as reasons in support of inclusion. However, Warnock (2005) suggests that when PSEN are educated in mainstream settings they are often physically included whilst being emotionally excluded. Moreover, the corresponding evidence base presents an inconclusive picture. Research on the social interactions for PSEN in mainstream provisions indicate that PSEN are typically accepted less, rejected more and have lower social status than typically developing classmates (Avramidis, 2013; Frederickson, 2010).

Lindsay (2007) carried out a systematic literature review on the effectiveness of inclusive education between 2001 and 2005. From eight reviewed journals, 14 papers were identified as comparing the educational and social outcomes of pupils with and without SEN, of which some positive effects were noted. For example, Lindsay (2007) reports a study by Baker et al. (1994) who found positive but small effect sizes for the academic and social benefits of inclusion. However, Lindsay (2007) concluded that there was a lack of comparative studies in the field which revealed only marginally positive effects and therefore, there was not enough evidence to endorse the effectiveness of inclusive education for PSEN.

Similarly, Gresham & Macmillan (1997) carried out a review of the literature with a specific focus on the social competence and effective function of pupils with mild disabilities, e.g. those with 'learning disabilities', 'behaviour disorders' and ADHD. It was found that children with disabilities typically faced more peer rejection and had poorer social skills than their mainstream peers. However, it is important to note that a causal relationship between social skills and peer rejection could not be ascertained from the review. Further research

needs to explore this potential causal and explanatory mechanisms so that interventions to promote the social outcomes of PSEN can be most appropriately deployed.

The reviews by Lindsay (2007) and Gresham & Macmillan (1997) indicate that PSEN in mainstream provisions may face distinct challenges during times of the school day in which social interactions play a large role. Breaktimes, which make up approximately 1/5 of the school day (Blatchford & Baines, 2006), represent one such setting in which opportunities for socialising are common, and where the processes and impact of peer acceptance and rejection are most noticeable. It is argued that breaktimes are a useful setting for research as they are one of the few opportunities that children have to interact in a safe environment, where they are able to make their own choices and interact freely with others (Blatchford & Baines, 2010).

Whilst breaktimes are believed to play an important role in the development of peer relations (Blatchford & Baines, 2006), research into the organisation and nature of breaktimes is surprisingly scarce and where examples exist in the literature, these tend to focus on mainstream populations. Although the current literature suggests that the vast majority of children report overwhelmingly positive experiences of breaktime, (Blatchford & Baines, 2006), it is possible that the situation is very different for PSEN, who experience peer rejection more often than their typically developing peers (Frederickson & Furnham, 2004). It is essential that we find out more about the peer relations of PSEN in playground as well as classroom contexts to ensure that these children are socially included in their educational setting, and not just physically included by merely being 'grouped under the same roof' (Warnock, 2005).

1.1 The role of Educational Psychologists

The application of evidence-based practice is often considered to be a primary role of an Educational Psychologist (EP). EPs, who are uniquely positioned across a number of systems including schools and the local authority, are well placed to bridge the gap between research and practice and to ensure that the policies, interventions and strategies that are implemented

within our schools to support PSEN are based on appropriate evidence. Given that inclusive education for PSEN is a central theme in national and international policies, EPs have an important role in examining the evidence base on the effectiveness of inclusion and where necessary, are tasked with challenging the discourses around inclusive education that may be deemed to be inappropriate or ineffective for the children and families with whom we work, (Lindsay, 2007).

EPs have vast knowledge and understanding of child development and have expertise in supporting the social and emotional well-being of pupils with SEN. In addition, EPs have been found to work effectively amongst multi-agency teams (Farrell et al., 2006) and are thus well-placed to support the social inclusion of PSEN in mainstream provisions. Through their consultations and systemic work within schools, EPs have a distinct responsibility to ensure that pupils with SEN are being socially included within their provisions by contributing to the discussions and conceptualisations on the structure, usefulness and effectiveness of educational practices for children with SEN, (Lindsay, 2007).

Chapter 2. Literature review

2.1 Overview

In this chapter, research relevant to the peer relations of PSEN will be critically evaluated. The chapter will begin by the exploring the notion of peer acceptance and friendships for PSEN. Research and theories outlining the possible influential factors for the peer relations of PSEN will then be examined. Following this, research relating to breaktimes will be explored. The chapter concludes with an overview of the aims of the research.

The approach used to collect information for this review is described in Appendix A. Studies conducted in the USA (e.g. Estell et al., 2008; Meyer et al.,1998; Nowicki, 2003) have been included in the review due to similarities in the promotion of inclusive education within these two countries (Lindsay, 2007). Research studies from Europe have also been included in the review (Back, Schmulke & Egloff, 2008; Van Den Berg, & Cillessen, 2015) although where these have been considered in detail, limitations around generalisability to pupils in the UK are discussed.

2.2 The settings for peer interaction in childhood

When examining the notion of peer interaction, it is possible to consider three different, interrelating contexts; peer interaction in the classroom, at breaktime and outside of school. In relation to the latter, it is argued that advancements in technology, increasing parental concerns over safety and an increase in after school clubs have led to reductions in opportunities for face-to-face interactions with friends, (Gill, 2007; Layard & Dunn, 2009). For example, in a recent study by Higley (2016), it was found that for PSEN, opportunities to socialise with friends outside of school were infrequent, with most parents reporting that their children saw their peers outside of school ‘rarely or not at all’ (Higley, 2016). In light of this research, it is easy to speculate that for many children, the school setting provides one of the main or possibly only opportunities to socialise with peers, form friendships and to develop social skills.

2.3 The significance of peer relations for child development

The development of social relationships is considered to be a fundamental and vital component for the healthy functioning and well-being of a child. In the early years, 'play' has been identified as an important facilitator of peer relationships and 'playing' with a social partner has been recognised as the way in which children communicate with each other (Coplan & Arbeau, 2009). The relationship between play and cognitive, social and physical development is well evidenced in the literature, with theorists suggesting that engaging in play leads to increased problem-solving abilities, the development of social skills and the development of sensory-motor skills (Wyver & Spence, 1999).

For school-aged children, peer relations are also considered to be an important context for the development of linguistic, problem-solving and social skills. For example, it is argued that in navigating social relationships, children must learn how to be successful in social interactions by recognising the most effective ways to respond and the most appropriate times to do so (Waters & Sroufe, 1983). According to Maxwell (1990), the peer group provides a highly motivating context for children to learn and develop the necessary social skills to live as an effective member of society in adult life. In addition, friendships during childhood have been found to foster co-operation, mutuality, conflict management, intimacy and commitment (Blatchford & Baines, 2010). Bagwell & Schmidt (2011) suggest that the conflicts that are inevitable within peer relations provide children with an opportunity to develop and practice advanced communication and negotiation skills and helps children to understand that others may hold a different perspective from their own and that the opinions and behaviours of others are also important.

In relation to the emotional benefits of peer relations, it is well documented in the literature that friendships within the school setting can improve children's social and academic adjustment (Ladd, Kochenderfer & Coleman, 1996) and can lead to the development of emotional regulation skills (Walden & Smith, 1997). Friendships are considered to be an important emotional resource for children, and can be seen to facilitate resilience in the face of life stressors and changes, including the transition from primary to

secondary school, (Ladd, 1999). Berndt and Keefe (1992) argue that supportive friendships in school can promote positive behaviour and can lead to improvements in children's perceptions of school. Given the known benefits of peer relations for children's emotional, social and cognitive development, it is extremely important for the concept of 'peer relations' to be explored within any research study that seeks to identify the effectiveness of educational practices for PSEN.

2.4 Peer acceptance for PSEN

Peer acceptance is defined as "an attitudinal construct that ranks children according to the collective sentiment of their peer group towards them" (Doll et al., 2003, page 1). Peer acceptance appears to be one of the most researched areas in children's development (Bagwell & Schmidt, 2011; Ladd, 2006), and is often measured by using sociometric rating scales which require children to rate each classmate according to how much they would like to play with that child. This method produces results that are relatively stable over time and situation (e.g. Hoza et al., 1995; Parker & Asher, 1993). In addition, sociometric rating scales have been successfully adapted and used extensively in previous research with PSEN (e.g. Avramidis, 2013; Frederickson & Furnham 2004).

Several researchers have sought to compare the social experiences of pupils with and without SEN in mainstream schools. Nowicki (2003) aimed to identify the social experiences of children with Learning Difficulties (LD) in mainstream provisions. Nowicki (2003) conducted a meta-analysis which compared the research findings of 32 studies on the social competence of children aged 5-16 with LD between 1990 and 1998, thus producing a comprehensive overview of several factors relating to social competence for children with LD. These included concepts such as: peer preference, global self-worth, and self-perceptions of academic performance. The aims of the report were to explore the social competence of pupils with LD in comparison to two groups; a) MA to HA peers b) LA peers. It was found that in comparison to MA and HA pupils, pupils with LD were rated less favourably by

their peers and were reported by their teachers as lacking in social skills. For both factors, the effect sizes were large.

Despite these findings, children with LD were reported to be largely unaware of their social difficulties. Interestingly, there appeared to be few differences in social competence between children with LD and LA pupils. Whilst teachers appeared to rate children with LD as lower than the LA group, the effect size was small and was substantially lower than for the MA and high achieving group and may have been confounded by one relatively large study (Merrell et al., 1992). It was concluded by Nowicki (2003) that PSEN are not at a greater social risk than their LA peers. However, the author suggests that it is possible that the LA sample may have included pupils with undiagnosed LD which may have biased the results.

More recently, Avramidis (2013) investigated the social position of 161 PSEN and 465 NSEN pupils in Years 5 and 6 in mainstream schools in the North of England. In this study, pupils with any type of SEN and receiving any level of support (school action, school action plus and statemented) were included. Using a combination of sociometric assessments and semi-structured teacher interviews, it was found that PSEN had fewer friendships and were less popular than their NSEN peers. In contrast, the psychometric assessments that were completed by PSEN revealed a positive self-concept and suggested that PSEN felt socially accepted by their peers and positive about their academic performance. This is consistent with Nowicki (2003) who reported that children were unaware of their social difficulties. The Avramidis (2013) study suggests that PSEN may not experience social inclusion in mainstream schools. This is problematic considering that a move towards mainstream schooling for all pupils was also considered to be a move towards a more 'inclusive' educational practice. However, the finding that PSEN reported a positive self-concept suggests that inclusive education may hold a number of positive attributes for PSEN. The fact that both self-perceptions and peer-ratings of friendships were analysed is therefore a clear strength of the study. However, further investigation into the personal views of PSEN is needed to provide a deeper insight into the social experiences of these pupils.

These results are further supported by Frederickson and Furnham (2004) who carried out a large-scale study of 115 PSEN and 867 children without SEN aged 8-12 years old, using sociometric assessments. Participants with SEN in this study were those classified with MLD in receipt of SEN support for their needs. It was found that pupils with MLD spent over a quarter of their school day outside of the classroom and over a quarter of the time in the classroom supported by a TA or specialist teacher. Moreover, it was found that pupils with MLD were accepted less frequently by their peers than comparison pupils, thus highlighting the negative implications that SEN provision may have for those pupils receiving support.

The researchers noted that popular children without SEN were described as having positive attributes, e.g. popular children were co-operative, funny and had good leadership skills. Rejected NSEN pupils were shown to have negative attributes such as being disruptive, or being shy (Frederickson & Furnham, 2004). Interestingly however, for PSEN, pupils did not need to display positive attributes to be accepted and PSEN were only rejected if they showed aggressive behaviours. The authors proposed that pupils used a method of cost-benefit analysis when deciding whether or not to befriend another pupil, i.e. pupils decided whether the benefits of befriending a pupil would outweigh the perceived costs. Moreover, they argued that pupils appeared to adjust their cost/benefit criteria in accordance with their stereotypical views of the social competence of PSEN, thus acting in a more lenient way towards these pupils.

The methods used by the researchers in ascertaining peer acceptance is of particular relevance here. The authors recognised that children may be accepted more or less depending on the specific circumstances they are in. For example, they suggest that PSEN, who 'by definition have very poor academic skills', are likely to be rated more positively in play settings than work settings (Frederickson & Furnham, 2004, p393). Based on this premise, the authors used two measures of peer acceptance, "like to play" and "like to work". In this study, children with MLD received significantly lower scores in both measures compared to their typically developing peers. This finding was replicated in the study by Pinto (2015).

It is important to note that the studies by Avramidis (2013) and Frederickson and Furnham (2004) focused on one specific age range and therefore the results of the study may not be generalisable to children of different age groups.

2.5. Friendships for PSEN

Friendships represent another important component of peer experience which must be considered in any study that seeks to identify the social experiences of PSEN. As such, the notion of 'friendships' has received a significant amount of attention in the literature in relation to typically developing children. Importantly, the development of friendships has been identified as holding significant value for children, with researchers citing benefits such as emotional support, trust, intimacy and fun (Ladd, 1999; Layard & Dunn, 2009). Other researchers have investigated the different developmental stages of friendships and have found that children assume different priorities for friendship over time, moving from shared activities and interests in the early years, towards intimacy in adolescence (Hartup & Stevens, 1997; Newcomb & Bagwell, 1996). Moreover, friendships are considered to be the aspect of development that matters most to children (Layard & Dunn, 2009) and is considered by parents to be the ultimate goal for their child with disabilities, over and above their hopes for academic success (Hamre-Nietupski, 1993). However, in spite of the growing evidence base relating to the ages, stages and aspects of friendships for typically developing children, very little research has been conducted that applies to PSEN. Of the research that has been conducted in this area, this has tended to focus on the existence of friendships using measures of peer acceptance, meaning that important aspects of friendships for PSEN remain absent in the literature (Webster & Carter, 2009).

Bagwell and Schmidt (2011) define friendship as a "mutual affection or reciprocity of liking" and use terms such as "voluntary" and "horizontal" to further emphasise the reciprocal nature inherent in friendships (Bagwell & Schmidt, 2011, page 5). Definitions such as this would indicate that the quality of interactions and levels of peer acceptance may play a distinct role in the development of friendships. As with research on peer acceptance, friendships

are often measured using the sociometric techniques described above. However, as friendships are considered to involve a ‘dyadic’ relationship, friendships are recorded when nominations are reciprocated or mutual ratings are observed (Doll et al., 2003).

Given that the above literature review suggests that PSEN are accepted less often than their NSEN peers, it is reasonable to assume that the friendships of PSEN may also differ from their NSEN peers. There is some evidence to suggest that there are differences in friendships for children with and without SEN. For example, Meyer et al. (1998), aimed to identify the different types of friendships that are experienced in mainstream schools. Eleven students with PMLD, ASD and Down Syndrome (DS) across five schools in the USA formed the focus of the study. Using a mixed method design, Meyer et al. (1998) identified six types of relationship which they describe as ‘frames of friendship’, that existed in the social relationships of students with SEN. Information was gathered from observations of young people in school and community settings, focus group interviews with young people, interviews with parents and friendship surveys. The created ‘frames’ were based on the roles that the young people assumed over the course of the study. These are illustrated in the Table below:

Table 1: Friendship descriptions for PSEN (adapted from Meyer et al., 1998)

Frames of friendship	Description
Ghosts and guests	Where a pupil is seen as a temporary visitor to a group or is invisible to other group members.
Just another student	Where a child, regardless of their level of SEN is treated just the same as everybody else in the group.
Inclusion child	Where a child with SEN is treated differently by their teachers in both positive and negative ways.
I'll help	Where peers take on a caring role towards the child with SEN.
Regular friends	Peers who may see each other after school or spend time with each other at lunch.
Best friends	Described by pupils as 'friends forever'. Those friends that are closer than regular friends.

It is noted by Meyer et al (1998) that it is typical for young people to oscillate between the different frames in different circumstances and with different people and that that there should be a balance between the frames. Meyer et al. (1998) reported that three of these frames are similar to those experienced by typically developing children. These are; *best friend, regular friend* and *just another student*. In contrast, the remaining three; *I'll help, inclusion child* and *ghosts and guests* are more commonly associated with children with disabilities and involve a power imbalance between children with disabilities and their peer groups. These frames of friendship are particularly useful in highlighting the different expectations that teachers and pupils may hold towards PSEN, and the substantial impact that this has on their peer relations.

Parallels can be drawn between the *I'll help* frame presented by Meyer et al. (1998) and 'communal relationships' presented by Clark and Mills (1993). Clark and Mills (1993) theorised that communal relationships, which are characterised by one person taking responsibility for another without expecting anything in exchange, may exist between PSEN and their mainstream peers. Indeed, this type of asymmetrical relationship between

PSEN and their typically developing peers has been identified in several case studies (e.g. Evans, Goldberg-Arnold & Dickson, 1998; Van der Klift & Kunc, 2002).

Whilst the mixed method design of the study by Meyer et al. (1998) allows for an exploration of friendships in greater depth, it is important to note that the study focused solely on secondary aged pupils in the USA and so the results of the study may not be generalisable to children of different age groups or different locations.

Further evidence to suggest that PSEN experience less favourable social interactions and develop fewer friendships comes from Solish, Perry & Minnes (2009) who examined the social experiences of PSEN both inside and outside of school. Using a questionnaire method, Solish et al. (2009) compared the friendships and social participation of children between the ages of 5 and 17 of three key groups; children with ASD (n=65), children with an intellectual disability (n=30) and typically developing children (n=90). Typically developing children were found to have more reciprocal friendships and were more likely to have a best friend than children with ASD or intellectual disabilities. In addition, whilst the frequency of leisure activities (e.g. watching television/going for walks) was similar across the groups, typically developing children were reported to engage in significantly more social activities (e.g. going to friends' houses) and recreational activities (e.g. swimming lessons/playing sports) than children with ASD or intellectual disabilities. Furthermore, the social activities for pupils with ASD and pupils with intellectual difficulties were characterised by more social participation with adults and less social participation with peers.

Nevertheless, in spite of their relatively low social status and differences in friendships, a small number of researchers have demonstrated that PSEN have managed to form and maintain some positive social relationships in mainstream schools and have felt part of the peer group (Meyer, 2001; Pavri & Monda-Amaya, 2001). For example, Estell et al. (2008) conducted a longitudinal study with 1,361 3rd grade students (aged 8-9) with learning difficulties which included pupils with mild C&I and C&L needs. Using

sociometric rating scales and SCM, it was found that despite receiving lower numbers of best friend nominations, PSEN were equally likely to be members of a peer group within their class and were equally central in these groups.

2.6. Factors Influencing Peer Relationships

Having explored the research around levels of peer acceptance and the existence of friendships for PSEN, the following section will consider some of the factors which may be contributing to these differences in peer relations for pupils with and without SEN. In this section, the relationship between the educational provision in place to support PSEN, peer contact, and their subsequent peer relations will be explored.

2.6.1 The Mere Exposure Hypothesis and Contact Theory

Previous research into peer interactions for pupils in mainstream schools have highlighted the importance of physical proximity for peer interactions and subsequent development of social relations (Van Den Berg, & Cillessen, 2015). It has been reasoned that 'mere exposure' to a person can lead to the development of positive beliefs to be held for that person, even without conscious cognition of the exposure (Zajonc, 2001). It is argued that the more people are exposed to this person, the more positive their beliefs will become towards the person (Zajonc, 2001).

The 'mere exposure' hypothesis has also been demonstrated within the classroom setting, with researchers suggesting that students show preference for others that are seated closest to them. For example, Back, Schmulke & Egloff, (2008) using an experimental design, found that physical proximity was sufficient to induce positive affect. However, participants in this study were university pupils in their first year and so it is not possible to generalise these results to a school setting. In addition, not all researchers agree that 'mere exposure' can lead to preference for an individual in this way. 'Contact Theory', originally proposed by Allport, (1954), suggests that it is the degree of interaction or 'contact' and not 'exposure' that produces an increase in preference for a familiar person, (Connolly 2000). In addition, Allport (1954) proposed that it was essential that 4 conditions were met for preference to

occur (Connolly, 2000). These conditions were, equal status, common goals, co-operation and support from authority (Allport, 1954). It is possible that these conditions may be more relevant to the playground setting in which pupils are more able to make their own decisions in a setting relatively free of adult control (Blatchford & Baines, 2010). For example, at breaktime, 'common goals' may relate to the games that children have chosen to play. In contrast, pupils may have little opportunity to engage in 'common goals' within the classroom setting which is characterised by adult-led instructions and independent work (Garton, 2012).

Both contact theory and the mere exposure hypothesis would predict that closer proximity between pupils in the classroom would lead to improved relationships for those pupils. Accordingly, Van Dem Berg & Cillessen (2015) studied the seating arrangements of children aged 11 and 12 in the Netherlands and found that children rated the peers seated closest to them more favourably in terms of preference and popularity. Moreover, when tasked with rearranging seating positions themselves, pupils placed classmates that they personally liked or perceived as popular close to themselves, contributing to a cycle of popularity and contact. However, the study focused on the peer relations of pupils within the classroom setting and therefore it is not known whether these preference effects would have been observed outside of the classroom. That is, it is not known whether seating position in the classroom corresponded with playmate choice at other parts of the school day such as breaktimes. It is important for future research to explore how peer contact in the classroom effects peer relations for pupils in and outside of the classroom setting and particularly in relation to PSEN. In addition, as the study was carried out in the Netherlands, a country in which pupils with learning needs and disabilities are reported to be generally well-accepted (Nakken & Pijl, 2010), it may not be appropriate to generalise the results of the study to pupils within the UK.

2.6.2. Social Exchange Theory

In parallel to the theories above, “social exchange theory” offers another explanation as to how the frequency of peer contact and the quality of interactions may relate to the peer relationships pf pupils. Social Exchange theory posits that children will choose to interact with others where the perceived benefits of the interaction, e.g. enjoyment, access to resources, opportunities for success, are seen to outweigh the perceived costs, e.g. a need to compromise, sharing resources or being exposed to unwanted behaviour, Frederickson (2010). It is possible that children may feel that the benefits of interacting or befriending a pupil with SEN are less appealing than those without SEN, as they may be interested in different games or activities due to their levels of physical, cognitive, social or emotional development. Alternatively, children may perceive there to be fewer benefits of interacting with PSEN given that PSEN are much less likely to spend time with them in the classroom, and the fact that spending time with a pupil with SEN is also likely to involve being accompanied by a TA, (Blatchford et al., 2009; Frederickson & Furnham, 2004; Webster & Blatchford, 2013).

2.6.3 TA provision and peer contact

The relationship between exposure to peers in the classroom and subsequent likeability is somewhat concerning given the current opportunities for PSEN to interact with their peers in the classroom. Previous research has suggested that the provision in place for PSEN is a significant barrier between the pupil, their peers and their class teacher and has been reported to have negative consequences in terms of their academic progress. For example, Blatchford et al., (2009) undertook a large-scale, five-year study of the deployment and impact of support staff in primary and secondary schools (DISS Project, 2009). The study gathered data from pupil observations, staff and pupil interviews and surveys with: pupils, teachers and TAs at 3 different time points. The pupils selected for the study included pupils with and without statements for any type of SEN. A key conclusion from the study was that PSEN were often taught by TAs instead of teachers and pupils with the greatest levels of need were found to have the greatest levels of TA support. In addition, a negative

relationship was found between the amount of support that pupils received and the progress they made in maths and English over the course of the year. This effect was observable even when a range of classroom and pupil factors were controlled for such as prior attainment and level of SEN. The authors suggested that the high levels of support offered to PSEN by TAs may act as a barrier between the pupil and the class teacher, and their NSEN peers which may have been one of the main contributing factors to the poorer attainment outcomes for PSEN.

Following the DISS project, Webster and Blatchford (2013) carried out an extensive investigation into the teaching, support and interactions of 48 PSEN across a number of schools in four London boroughs and two local authorities in the south of England (known as the MAST project). The participants selected for this study were Year 5 pupils with statements of SEN for MLD or BESD. Using systematic observations of pupils over a week-long period, it was found that PSEN spent over a quarter of their time away from the mainstream classroom, their peers and their teachers, supporting the findings from Frederickson & Furnham (2004). A major finding was seen in the way TA's accompanied pupils at all times and in all locations during the school day and it is therefore unsurprising that PSEN were found to have more interactions with adults than with their typically developing peers (59% compared to 41% respectively). Moreover, PSEN had significantly fewer interactions with peers compared to comparison pupils, (18% compared to 32%) and were more likely to be grouped to work with other PSEN. The results of this study are particularly concerning as both contact theory and the 'mere exposure' hypothesis would suggest that these pupils may be less liked by their peers, which may in turn, cause difficulties in friendship formation (Bagwell & Schmidt, 2011).

Whilst the generalisable sample and design of the above studies are a substantial strength of the research, it is important to note that pupils were only observed during lesson time and not breaktime, meaning that many peer interactions may have been missed from the study. It is important for future studies to examine whether pupil experiences at breaktime are characterised by the same level of TA support as in the classroom and whether the reduced

opportunities for peer interaction in the classroom impact upon the breaktime experiences for PSEN. In addition, the study by Webster and Blatchford (2013) focused solely on pupils in Year 5, and so the results of the study may not be generalisable to children in different year groups. This is particularly relevant given research from Hartup and Stevens (1997) who suggest that friendships may change according to the situation, age of the pupil and the developmental tasks associated with that age. For example, it is suggested that whilst friendships are characterised by play and sharing in the early years, adolescent friendships are characterised by intimacy (Hartup & Stevens, 1997).

Research evidence that supports the negative relationship between SEN provision, peer contact and peer relations comes from a recent study by Pinto (2015). Pinto (2015) compared the peer relations of 59 PSEN and 316 NSEN pupils, in Years 5 and 6, using sociometric assessments of acceptance, friendship and group involvement and teacher assessments of behavioural traits (such as aggression, anxiety, prosocialbility and asociability). Results from the study supported the findings from Webster & Blatchford (2013); that PSEN were less likely to be integrated into the class and experienced more frequent contact with other PSEN over children without SEN. It was concluded that peer contact was the best predictor of measures of peer acceptance for PSEN and as such, PSEN, who experienced less contact time with their mainstream peers, were reported to be accepted less often than their typically developing peers.

A strength of the study by Pinto (2015) is that social relationships both inside and outside of the classroom were explored. For example, pupils were asked to rate others on how much they would like to work with peers in class and also how much they would like to play with them at break. For both measures, PSEN scored lower than NSEN pupils. Interestingly, it was also noted that ‘being good at games and sports’ was positively related to both social and work preference, and those who were reported to be good at games and sports held a more central social group position (Pinto, 2015). It is possible that games and sports act as the ‘common goal’ that Allport (1954) describes as being essential for peer ‘preference’ to occur. This finding further

highlights the need to examine the type of interactions when examining the role of contact in the development of peer relations. However, there were also limitations to this study, which relied on pupil ratings to determine levels of peer contact, peer preference and friendships as opposed to direct observations, or qualitative interviews. It is possible that judgements about 'contact' may have reflected peer preference rather than actual contact.

2.6.4. Ability grouping and peer contact

An additional barrier to peer contact for PSEN may be related to the grouping arrangements of pupils within primary school classrooms. Grouping by 'ability' is becoming increasingly common in UK primary schools with the majority of primary schools adopting same-ability grouping arrangements from as young as 4 years old (Bradbury & Holmes, 2017). These trends have continued to persist, even despite evidence to suggest the negative consequences of grouping children by ability (e.g. Ireson & Hallam, 2001; Parsons & Hallam, 2014). It is argued that grouping by ability can 'deepen disadvantage' by restricting access to more difficult content and by limiting the opportunities that LA pupils have to engage with positive social and learning role-models.

Group allocation is not solely based on prior attainment but appears to be influenced by a wide range of social and cultural factors (Jackson & Povey, 2016). For example, Dunne et al. (2007) highlighted SEN as a predictor of group placement whereby PSEN are disproportionately represented within LA sets. In addition, it has been found that once ability groups have been established, movement between groups is rarely experienced (Hallam & Ireson, 2006, 2007; Macintyre & Ireson, 2002).

Contact theory would suggest that as PSEN have less contact with their typically developing MA/HA peers, they are likely to be viewed less favourably by these pupils and are more likely to form friendships and peer groups with other PSEN or LA pupils. Meanwhile, social exchange theory suggests that NSEN pupils may perceive PSEN who are in lower attaining sets as having little to offer in relation to learning interactions, reducing the perceived benefits of befriending such pupils and making friendship formation between these groups less likely.

2.6.5 Other factors that may impact upon peer relations for PSEN

Whilst opportunities for classroom contact have been highlighted as a contributing factor to the peer relations of PSEN, a number of different explanations have been explored in the literature. Guralnick, (1999) suggests that the difficulties in social interactions that are experienced by PSEN can be explained by looking at the processes involved in 'social competence'. Guralnick (1999) reasons that PSEN may experience such difficulties with social relations as aetiological factors such as deficits with emotional understanding, regulation or executive functioning may impact upon higher order processes and may lead to ineffective social strategies being employed. Similarly, Frostad and Pijl (2007) suggest that difficulties in developing age appropriate social skills may hinder PSEN from effectively interacting with their same aged peers.

However, Calder, Hill & Pellicano (2013) in their mixed-method study on the experiences of friendships for children, aged 9-11, with Autism in mainstream primary schools, identify 'motivation' for friendship as the most significant factor in determining the nature and extent of friendship. A major conclusion from this study was the fact that adult beliefs about the importance of having friends and attempts to support children to develop friendships sometimes conflicted with what the children themselves wanted, with one child commenting, "'sometimes I just want to play by myself'. These findings offer a stark reminder as to the importance of gaining the voice of the pupil when carrying out research around inclusion and peer relations. However, as this study focused solely on children with a diagnosis of Autism, it is not possible to generalise the results of the study to children with different types of SEN.

2.7. Breaktimes

Given the above evidence suggesting that PSEN experience less time in the classroom, experience less contact with their peers, and have fewer opportunities to engage with peers outside of the classroom (Frederickson & Furnham, 2004; Higley 2016; Pinto 2015; Webster & Blatchford, 2013), the value of breaktimes for PSEN is of paramount importance, as they may

provide such children with one of the rare opportunities to interact socially with their peers (Blatchford & Baines, 2010). It is argued that breaktimes are closely intertwined with peer social relations and therefore, by observing playground behaviour, it is possible to gain an insight into the dynamic social relations and social structures that are acting upon an individual (Blatchford & Baines, 2010). Moreover, breaktimes take place in an open outdoor setting and represent a significant part of the school day and as such, the playground represents a unique resource in studying a diverse group of children in a relatively naturalistic setting, (Blatchford, Baines & Pellegrini, 2006).

A wealth of benefits associated with breaktimes have been identified in the literature, e.g. benefits related to; physical exercise (Ridgers et al., 2006), engagement in play (Time for play, 2006), improvements in concentration and cognitive performance (Pellegrini & Bohn, 2004), and on the development of social skills and friendships, (Hartup, 1992). Moreover, breaktimes are viewed in an extremely positive light by pupils and represent one of the most favoured parts of the school day by the majority of children, (Blatchford & Baines, 2006). However, it is argued that breaktimes in the UK are also being marginalised and are being reduced in order for schools to respond to the increasing pressures to offer enrichment activities and to improve academic attainment, (Blatchford & Baines, 2006).

Empirical evidence on the reduction of breaktimes comes from Blatchford & Baines (1995; 2006; forthcoming) who carried out three large-scale studies of breaktimes, providing the first systematic evidence of the features and nature of school breaktimes in primary and secondary schools in the UK.

The authors used three large-scale breaktime surveys; a headteacher survey and a pupil questionnaire survey to examine the nature and structure of breaktimes and to explore the range of perspectives on the value and role of breaktimes. It was identified that between 1995 and 2006, breaktimes had reduced by 15 minutes per week in KS1, 30 minutes per week in KS2 and 35 minutes per week in KS3 and there have been further reductions since. It was found that the afternoon break at KS2 and secondary school had been largely

abolished (Blatchford & Baines, 2006). Moreover, it was reported that most primary (82%) and secondary (87%) schools organised clubs and activities for pupils during breaktimes, suggesting that opportunities for autonomous play, socialising and physical activities were being further limited (Blatchford & Baines, 2006).

These findings are problematic considering that pupils' reports of breaktimes were overwhelmingly positive. For example, in Blatchford and Baines (2006), only 6% of all pupils reporting that they disliked breaktime and just 4% reporting a dislike of lunchtimes. Moreover, over half of pupils believed that their lunchbreak was not long enough, and only 2% felt it was too long (Blatchford & Baines, 2006). The fact that the voice of the child is recognised in these studies, in addition to the large sample, are major strengths of the studies by Blatchford and Baines (1995;2006). However, these studies focussed on the general mainstream population, and as such, it was not possible to generalise the results of the study to PSEN. Furthermore, these studies do not provide any information on the voice of those pupils who reported a dislike of breaktimes and it is possible that PSEN, who are known to experience greater levels of peer rejection (e.g. Frederickson & Furnham, 2004) are overrepresented in this minority group. Future research into the experiences of breaktimes, must seek to explore the experiences of PSEN in order to understand the full range of breaktime experiences in the UK.

2.7.1 Breaktime games and activities

Although there are a small number of studies that explore the nature of playground games and activities, these focus almost exclusively on typically developing populations. For example, Blatchford, Baines & Pellegrini (2003) aimed to identify breaktime activities and peer relations of 7-8-year olds using a short-term longitudinal study. Systematic observation and teacher and pupil questionnaires of 129 pupils were collected at the start and end of the year. The researchers identified three main types of activity; conversation; play and; games. It was reported that social activities, e.g. when a child is engaged in physical or social interactions with another pupil, were far more prevalent than parallel interactions, e.g. when a child is engaging a similar activity near to

another pupil, or solitary interactions. In addition, the negative features of breaktimes, such as aggression, teasing or being told off were reported very rarely. The authors refer to contact theory to explain their findings, by suggesting that games can act as the 'subordinate goal' needed to facilitate co-operation and facilitation, (Sabini, 1992).

Additionally, Blatchford & Baines (2010) investigated the range of different roles that primary-aged pupils upheld within their games and play interactions. The researchers conducted a longitudinal study which followed 119 7-8 years olds over the course of a year in classrooms within the UK and USA. Pupils were observed at breaktime over two different time points in order to identify the different roles that emerged within the peer groups. The authors illustrated the roles of pupils in relation to 'game involvement' which refers to the extent to which pupils within the peer group are actively involved in instigating and engaging in games and other breaktime activities. The five game involvement roles that were identified are: 'key players' who are the main instigators and organisers; 'central players' who also play a large role in the organisation of activities and games and are typically friends with key players; 'team players' who are less involved in the organisation of games but still actively engaged in them; 'hoverers' who often leave games to socialise with others and; 'solitary' players who typically play alone or inconsistently with peer groups.

Whilst the study from Blatchford & Baines (2010) provides a unique and informative insight into the differences in levels of engagement and organisation that pupils take up within their breaktimes games, the sample focussed on typically developing pupils. It is important that future research investigates these aspects of peer interactions within the SEN population to ensure that PSEN are effectively included in social school contexts.

Although research into the breaktime experiences of PSEN is sparse, there is some evidence to suggest that the breaktime experiences of PSEN differ to those of their typically developing peers. For example, Boddy et al. (2015) examined the physical activity and breaktime play behaviours of children with intellectual disabilities, aged 5-15 who were attending special

educational needs schools in the UK. Using observational data and personal monitors to measure physical activity, it was found that only 23% of pupils with intellectual difficulties were active enough to have benefits on their physical health. Moreover, pupils spent a significant amount of their time playing alone and no participants engaged in large group play. For example, boys were reported to spend 43% of breaktime alone and girls 27% of breaktime alone. This contrasts with research into mainstream populations in which boys were reported to spend only 8.6% of breaktime alone and girls only 11.6% of breaktime alone, (Blatchford et al., 2003). However, the study focussed solely on PSEN in specialist provisions, and therefore it may not be possible to generalise the results of the study to PSEN in mainstream provisions.

2.7.2 Negative aspects of breaktimes

Although negative experiences of breaktime are reported infrequently by children (Blatchford & Baines, 2006), incidents such as bullying and behavioural difficulties are often reported to be a significant concern for schools and are cited as justification for a reduction in breaktimes (Blatchford & Baines, 2010). Indeed, there is overwhelming evidence to suggest that bullying does occur, and is most likely to occur in the school playground, in which there are opportunities for unstructured activities and a lack of direct supervision, (e.g. Blatchford & Sharp, 1994; Reid, Monsen, & Rivers, 2004).

In addition, there is growing evidence to suggest that PSEN may be particularly vulnerable to victimisation and bullying at breaktime. For example, Thompson, Whitney & Smith (1994) interviewed 93 children between 8 and 16 years who were statemented or in the process of being statemented for any category of SEN and matched controls and their teachers across 8 mainstream schools in the UK. PSEN were much more likely to have reported bullying (two thirds of pupils) than comparison pupils (one quarter of pupils).

Similar conclusions were drawn by Prunty Dupont & Mcdaid (2012) who found that bullying was reported frequently and was a distinct concern of PSEN at school. Moreover, it is possible that children with certain types of special needs may be more at risk than others. For example, Blatchford (1994) suggests that children with poor social skills may display awkward

attempts at initiating conversation with others which may lead to aggressive and unwanted behaviour on one or both sides. Similarly, children who experience emotional difficulties such as poor self-confidence or anxiety are more likely to be rejected by classmates and to be the victim of bullying (Baines & Blatchford, 2010). Given these increased risk-factors for PSEN to experience bullying, combined with the fact that bullying is most likely to occur at breaktime, it is surprising that so little is known about the experiences of breaktime for PSEN. It is essential that these factors are considered by future researchers in the field of peer interaction, to ensure that the full range of experiences of PSEN can be fully understood and to promote the effective inclusion for PSEN.

2.8. Aims of the research

The above literature review draws light on the substantial challenges that may arise for PSEN when they attend mainstream schools. Specifically, the research suggests that PSEN often experience less favourable levels of peer acceptance and friendships than NSEN peers (e.g. Avramidis, 2013). These findings are of significant concern given that a main reason for the movement towards 'inclusive' education for PSEN was born out of a quest to improve the social as well as academic outcomes for PSEN (Frederickson, 2010).

Although previous research has begun to examine the link between the provision in place for PSEN and their peer relations (e.g. Pinto 2015), this research is limited and is restricted to classroom contexts and sociometric peer report measures. Therefore, a main aim of the present study is to provide a deeper understanding of the ways in which SEN provisions may be associated with the development of peer relations for the pupils in the study. Specifically, the study seeks to examine the ways in which levels of peer contact and adult involvement in the classroom are associated with levels of peer acceptance and breaktime interactions for the participants in the study.

In addition, the current study seeks to explore the concept of peer relations in the context of breaktimes. Despite the undeniable value that the breaktime setting holds for the exploration of pupils' social experiences

(Blatchford & Baines, 2010), research examining the nature and provision of breaktimes for PSEN has been largely overlooked in the literature and therefore the views of PSEN, who are known to experience difficulties with social relationships have been widely excluded. Therefore, a second aim of the present study is to explore the experiences of breaktimes for PSEN in mainstream provisions.

The present study also seeks to gain the voice of PSEN by interviewing pupils directly to provide a detailed account of the experiences of individuals within mainstream schools. In relation to the inclusion debate, it is argued that the viewpoints of the affected pupils are of paramount importance, although their voices are vastly underrepresented in recent research (Herz & Haertel, 2016). This study therefore, will add to the existing literature by ensuring the voice of the child is central to the enquiry and this represents a further aim of the study.

In this study, the concept of 'peer relations' will be explored by examining the types of relationship that PSEN engage in at school, as well as acceptance at different levels: acceptance by the whole group, acceptance by a small group and acceptance by one or two individuals. Whilst these distinct components of peer relations have been explored in relation to PSEN (E.g. Avramidis, 2013; Meyer et al., 1998), the present study is able to build on this research by examining these components of peer relations within one study, therefore allowing for the explanatory mechanisms that influence peer relations to be explored.

2.9. Research Questions

Based on this premise, three research questions (RQ) to be answered in the study, are detailed below:

1. What is the relationship between the frequency of peer contact on the playground and in class and peer relations for children with and without SEN?

2. What is the nature of the interactions with peers and adults of pupils with and without SEN during breaktimes and in class? How does this relate to peer relations?

This research question will examine the nature of interactions with peers that take place in the classroom and on the playground to find out about the characteristics of the activity (e.g., type of playful activity, academic) and behaviour (eg., aggression, rough and tumble, affection, on task/off task, distracting, help giving/seeking etc.), along with the identity of those involved in the interaction (e.g. more able, less able peers, SEN, support staff, teachers). The relationship between the contexts of the interactions and measures of peer relations will also be explored.

3. What are the individual views and experiences reported by PSEN about their breaktimes and peer relationships?

This research question will explore how PSEN describe their friendships at school, the extent to which they feel they are accepted by other children, how they describe their peer interactions at breaktime, whether they enjoy breaktimes and the parts of breaktime that they find most/least enjoyable.

Chapter 3. Methodology

In this chapter, information is provided on the research design, the participants involved, the research tools, and the approach to the analysis. There is also a discussion about the activities undertaken to enhance the validity and trustworthiness of the research.

3.1. Research paradigm

The research paradigm adopted is one of pragmatism (Cherryholmes,1992). This approach places the emphasis on the research problem, and is open to any methods which may assist in providing knowledge about the problem (Morgan, 2007). As such, pragmatism does not require a specific approach to be used, and validates the mixing of methods, if appropriate, to the research problem that is presented. In line with the pragmatic worldview, the researcher believes that collecting different types of data, both quantitative and qualitative, is an appropriate choice in gaining a comprehensive understanding of the research area and is thus the chosen methodology of this study.

3.2. Design

Consistent with the pragmatic approach, this study used a sequential, explanatory, mixed-method design, in which the results from the qualitative components primarily seek to explain, elaborate and enhance the results from the quantitative components of the study (Greene,1989). The mixed-methods approach used in this study also allows for data 'expansion', as the quantitative and qualitative methods examine related, but distinct components of a phenomena, in order to provide a fuller understanding of the topic (Greene, 1989).

In the first phase of this research, quantitative data from systematic observations and questionnaires were collected to gather information related to peer interaction, peer relationships and peer contact.

However, as peer relations and the experiences of breaktimes are subjective in nature, it is essential that these experiences are explored in detail using approaches that elicit pupils' perceptions in depth. As outlined by Meyer (2001), a statistical analysis cannot unveil the importance of a given statistic to the relevant stakeholders. For example, a statistical analysis may tell us that a pupil with SEN engages in statistically fewer social interactions on the playground than NSEN pupils, however, it is not able to tell us whether that child views this as a positive result as they may for example, value the fact that they had at least one person to play with (Meyer, 2001), or they may have chosen to play in less sociable contexts (Calder, 2013). Therefore, in the second phase of this research, qualitative data using semi-structured interviews was collected and analysed in order to elaborate and illustrate the results from the quantitative data and to provide a more comprehensive understanding of the peer relations of PSEN in mainstream primary schools relative to their NSEN peers.

3.3. Integration of quantitative and qualitative data

In this study, the second, qualitative phase builds upon the initial quantitative phase in a sequential fashion whereby the data gained from the observations is used to inform the questions asked during the interviews (Creswell & Plano Clark, 2007). The quantitative and qualitative data are then integrated in the results and discussion phase of the research.

3.4. Trustworthiness of the research

Within quantitative research, methods of validity and reliability are used as a tool to demonstrate research quality whereas within qualitative research, these terms are often rejected and replaced with the equivalent terms of credibility and dependability (Robson, 2011). Despite these differences in terms and approaches, the overall goal remains the same; to ensure and/or to check the quality and trustworthiness of the results and the data (Creswell & Plano-Clark, 2007). Therefore, within this study, methods to improve research quality will be collectively referred to as 'trustworthiness'.

Table 2 demonstrates the data collection methods and measures to improve the trustworthiness of the research. The data collection methods will then be described in further detail in the 'Research tools' section below.

Table 2: Data collection methods and measures to improve trustworthiness of the research

Research Tools and Methods	Trustworthiness
Systematic observations in class and at breaktime for 10 PSEN and 10 comparison NSEN pupils.	• Coding categories and behaviours to be coded were clearly defined prior to the systematic observations being carried out. • Observation schedules were piloted prior to data collection. • Observation Schedules were based on established tools developed for previous, similarly focused research (Blatchford, Baines & Pellegrini 2003; Gray, 2016) • Inter-observer reliability was obtained with a second researcher.
Pupil questionnaires including sociometric rating scales with all class pupils.	• The questionnaires used in this study have a long history of use in similar research and have been found to produce results that are relatively stable over time (Frederickson & Furnham, 1998).
Semi-structured interviews with 10 PSEN.	• Interview questions were piloted prior to data collection. • Interviews were transcribed by the researcher to allow for a more comprehensive analysis by promoting familiarisation of the data in the initial stages (Bird, 2005). • Inter-coder comparisons and discussions were carried out with a second researcher in order to deepen analysis of the interview responses and to gain a second perspective on the codes and themes that were identified. • 'Triangulation' of evidence. (Multiple sources of evidence used to investigate the research question). Qualitative data using semi-structured interviews will be used to validate, corroborate and further illustrate the results from the quantitative data. Any key areas of conflict or consistency between the quantitative and qualitative data are highlighted in the results and discussion chapters to allow for valid and well-substantiated conclusions to be drawn (Creswell & Plano Clark, 2007).

3.5. Sample

3.5.1. Schools

The study focuses on pupils within two mainstream primary schools within a Central London borough where the researcher was on placement. The researcher aimed to select two similar schools so that the data could be combined across schools. In addition, the researcher aimed to select schools that reflected a school context that was close to 'typical' for pupils in England. As such, the school selection criteria included; mainstream primary school, having a good or outstanding Ofsted rating, one or two form entry school, access to an outdoor playground on the school site (Oftsed, 2017).

The schools were sent a letter (Appendix B) inviting them to take part in the research which was followed up with a face to face meeting to further discuss the research. The profile of the schools are outlined in Table 3.

Table 3: Key characteristics of participating schools

School	No. of pupils on roll	% eligible for pupil premium funding	% of EAL learners	% of pupils that achieved expected standard in reading, writing and maths	% SEN
School A	240	26	43	90	6
School B	363	30	62	95	14
National average	279	14	20	60	12

Source: Annual London Education Report (2017); Get West London (2018)

It can be seen that both schools have larger than average ratios of pupils who are eligible for pupil premium funding, speak English as an additional language and reach the expected standard in reading, writing and maths. It is acknowledged that this may affect the generalisability of the results and this will be discussed further in the discussion chapter.

There were some variances in the breaktime arrangements for the participating schools. An overview of the breaktime contexts and support provisions are highlighted in Appendix I.

3.5.2. Selection of classes

Year 4 and 5 classes were selected for this study as the researcher hoped that pupils at this age would be able to articulate their thoughts in relation to their experiences of breaktimes and friendships. Although Year 6 pupils would also meet these criteria, this age group was excluded to avoid potentially impacting on Year 6 SATS examinations. Table 4 shows a breakdown of the participants included in the study by: class, school, gender and SEN category. For a more comprehensive gender breakdown for each of the classes and participant groups, please see Appendix D.

Table 4 –Class profile for all pupils included in the study

		School 1	School 2	Total
Total	All pupils	61	94	155
	All focus pupils	12	8	20
Year 5	Total pupils	30	44	74
	Focus SEN pupils	3	2	5
	Focus NSEN pupils	3	2	5
Year 4	Total pupils	31	50	81
	Focus SEN pupils	3	2	5
	Focus NSEN pupils	3	2	5
Gender	Male	34	52	86
	Female	27	42	69
Category	SEN	8	6	14
	NSEN LA	10	12	22
	NSEN MA/HA	43	76	119

3.5.3. Sample size

The information gathered through the questionnaires, observations and interviews were based on 3 different participant samples, each with a different sample size. In total, 154 pupils were recruited to take part in the study. All 154 of these pupils completed the pupil questionnaires. (see section 3.5.4, and Table 4 for a comprehensive breakdown of the participants included in the questionnaire phase of the study and the selection criteria used).

From this sample of 154 pupils, a sub-sample of 20 focus pupils were selected to take part in the classroom and breaktime observations. (See section 3.5.5 and Table 5 for an overview of the participants included in this sub-sample and the selection criteria used).

Finally, 10 of the focus pupils were then selected to take part in the pupil interviews (see section 3.5.5 below for selection criteria).

3.5.4. Selection of pupils for questionnaires

All of the pupils in the Year 4 and 5 classes were recruited to complete the questionnaire phase of the research. In total, 154 pupils completed the questionnaire including PSEN (N=14), NSEN LA (N= 22), NSEN MA and HA (N=119).

3.5.5. Selection of focus pupils for observations

In total, a sub-sample of 20 pupils were selected to be the focus of the observations which included 10 PSEN and 10 comparison NSEN pupils. The 10 focus PSEN were also the focus of the qualitative interviews in phase 2 of the research. Pupils who were identified by the school Special Educational Needs Co-ordinator (SENCO) as being on the SEN register for C&I or SEMH needs were invited to be the focus of the study. These types of SEN were selected because pupils with other types of SEN, e.g. physical or sensory needs or those with severe learning difficulties are more likely to present with additional barriers to inclusion that are beyond the scope of this study. For example, pupils with these types of SEN are more likely to experience barriers due to mobility factors or may display behaviours that are so

markedly different from NSEN pupils that there may be other factors preventing them from being included at breaktime that could not be appropriately explored within this study.

In addition, as researchers have highlighted the influence of academic ability on measures of peer acceptance (e.g. Nowicki, 2003), teachers were asked to identify one child without SEN who was the same gender, age and of similar academic ability so that a comparison group could be established. For one pupil with SEN (Pupil 5 in the Table below), it was not possible to identify an appropriate comparison pupil of the same gender, and thus a pupil with a different gender but same age and similar academic ability was invited to participate.

All of the focus pupils in the study had joined their prospective primary schools in the nursery or reception class and had remained at the school since this time.

Table 5 – Profile of Focus Pupils Included in the Study

SEN Focus pupils							NSEN comparison Focus pupils					
Parti-cipant No.	Class	Gender	SEN type	Ethnicity	EAL	Ability grouping	Parti-cipant No.	Class	Gender	Ethnicity	EAL	Ability grouping
1	5	M	SEMH	White and Asian	n/a	HA	11	5	M	White and Black Caribbean	n/a	HA
2	4	F	C&I	White and Asian	English and Arabic	LA	12	4	F	Asian Indian	English and Arabic	LA
3	5	F	SEMH	White British	n/a	LA	13	5	F	Asian Indian	n/a	MA
4	4	M	C&I	Asian Indian	English and Arabic	LA	14	4	M	Asian Indian	English and Arabic	LA
5	5	M	SEMH	White and Asian	n/a	MA	15	5	F	White Irish	n/a	MA
6	5	M	C&I	White British	n/a	MA	16	5	M	White and Asian	n/a	MA
7	5	F	SEMH	White Irish	n/a	HA	17	5	F	White and Asian	n/a	HA
8	4	M	C&I	White and Asian	n/a	LA	18	4	M	White British	n/a	MA
9	4	M	C&I	White British	n/a	LA	19	4	M	White British	n/a	MA
10	4	F	SEMH	White British	n/a	MA	20	4	F	White British	n/a	MA

3.6. Ethical Considerations

The study was approved by the Faculty Research Ethics Committee at the UCL Institute of Education. Parents of all Year 4 and 5 classes were sent letters outlining the details of the study, including: the aims of the study, the procedure and how the results would remain confidential and anonymous (see Appendix C). Following this, the parents of all participating pupils and the pupils themselves gave their consent to take part in the study. Parents of the 20 focus pupils provided written consent whilst parents of the other pupils in the class were invited to 'opt out' if they did not want their child to participate or be included in the questionnaires. Due to the sensitive nature of the topic, a number of steps were taken to ensure that participating pupils

were adequately informed and supported throughout the study. The ethical considerations that arose from the study and the factors in place to address these are described in Appendix C.

3.7. Research Tools

3.7.1. Pupil Questionnaires

A total of six closed questions were presented to all consenting pupils in the class in the form of a written questionnaire. The questionnaires were adapted for each class to include all the names of the children on the class register.

Consistent with previous literature in the field of peer relations, sociometric rating scales were used within the questionnaires to gain information on a range of peer relations measures (e.g. Frederickson & Furnham, 1998; Pinto, 2015). The sociometric questions used in this study were: (Q1) How much do you like to work with each of these children in your class? and (Q2) How much do you like to play with each of these children at breaktime? As in the studies by Frederickson and Furnham (1998) and Pinto (2015), pupils were asked to respond to the sociometric questions (Q1 and Q2) by selecting from one of three cartoon faces (happy, sad or neutral) to indicate how much they would like to play/work with each pupil (see Appendix G). If pupils were unable to decide a category that was most appropriate, pupils were asked to leave the categories blank.

For question 3 of the questionnaire, pupils were asked to indicate who their 3 closest friends were in the class by placing a tick next to their names. A limit of 3 has been applied successfully in previous research (e.g. Pinto, 2015) and avoids difficulties associated with pupils choosing everyone in the class as their closest friend. In this study, the pupils were not able to select pupils from other classes that they deemed to be their closest friends and it is acknowledged therefore that this may not reflect the full extent to the friendships. In addition, due to unforeseen circumstances, only 93 of the 154 pupils answered this question, meaning that the reciprocal friendship data is

not as substantial as it may have otherwise been. This is explored further in the discussion.

In order to collect information on the pupil perceptions of how frequently they work and play with other pupils in the class, two additional rating scale questions were included in the questionnaires. These questions were: (Q4) How often do you sit next to each of these children in the class? and (Q5) How often do you play with each of these children at breaktime? For these questions, pupils were asked to select from the following responses: *everyday, most days, at least once a week, at least once a term, never.* As this question relies on pupils' self-report data relating to frequency of peer contact, it is anticipated that it may not accurately reflect the frequency of contact, and the data was therefore compared to the contact data from the direct observations of pupils.

Socio-metric rating scales and friendship questionnaires have been used successfully with PSEN in previous studies (e.g. Frederickson and Furnham, 1998; Pinto, 2015). However, as a number of participants in the present study were known to have SEMH (including attention) or C&I needs, it was anticipated that they may find completing the sociometric rating scales and pupil questionnaires challenging. To overcome these potential challenges, the demands of the questionnaires were discussed with the class teachers, and where appropriate, pupils were provided with assistance from a teacher or TA when completing the questionnaires. In addition, the questions were presented both visually and orally in order to reduce the demands on pupils' short-term memory, literacy and language skills.

3.7.2. Socio cognitive mapping (SCM)

Within the literature, peer groups have been analysed using a technique known as SCM (Cairns, Perrin and Cairns, 1985). This technique involves asking people to identify the different groups of children within their class that socialise together. From the wide range of unique perspectives, it is possible to produce a 'social map' of the consensus of the groups of children that play together and it is possible to identify information relating to: the size of the group, the centrality of an individual; and the centrality and

saliency of a group, that is, the number of participants that have identified that group. This technique has been used successfully in previous research with PSEN (e.g. Calder, 2013; Pinto, 2015) and has been found to produce reliable network structures with just over half participation rate (Cairns and Cairns 1994).

In order to produce a 'social map' In the final question of the questionnaire (Q6) pupils were asked: "are there some children here in your class who play together a lot?" Pupils were then asked to write down the names of children in each group, starting with their own group. Pupils were not limited by the number of times they could write a pupil's name or the number of groups they could name. Pupils were also allowed to write down the names of pupils from other classes that were within the peer groups and this information was included in the analysis. In this study, peer group analysis was conducted using the SCM software by Leung (1994). See page 53 for a detailed overview of the SCM data analysis process.

3.7.3. Teacher Questionnaires

To gain the teacher's perspective on the amount of time that pupils with and without SEN spend outside of the main classroom and the levels of in-class adult support that each pupil receives, the class teacher was also asked to complete a short questionnaire containing two questions. For the first question, the class teacher was asked about how often each child in their class spends in the classroom on a weekly basis. They were asked to select from one of the following options: *all the time, most of the time, some of the time, not very often, never*. The second question asked the teacher about the levels of adult support that each pupil receives during 'independent' tasks on a daily basis. The teacher selected one of the following options: *always, nearly always, sometimes, not very often, never*.

3.7.4. Systematic observations

Direct observations are described by Murphy and Dingwall (2007) as the pinnacle of quantitative data collection techniques. They have the capacity to avoid the difficulties associated with self-reported data (Mays & Pope, 1995) and can reveal insights that the participants were themselves unaware of

(Furlong, 2010). A major advantage of direct observations is the way in which they allow for research to take place in naturalistic settings and therefore provide a direct record of the behaviour that occurs from the perspective of a trained observer (Ary, 2014). In this study, systematic observations were used to gain a systematic understanding of the classroom interactions that are taking place (Croll, 1986). Systematic observations can be described as, “procedures in which the observer, deliberately refraining from participation in classroom activities, analyses aspects of these activities through the use of a predetermined set of categories or signs” (McIntyre & MacLeod, 1986).

Systematic observations were selected over unstructured observations as this method allows for the data to be compared quickly and easily, and as such, they are more appropriate to the present study which seeks to compare the levels of peer contact and peer preference for pupils with and without SEN (Given, 2008). The rigorous and quantitative nature associated with undertaking systematic observation is advantageous in its capacity to produce results which are potentially high in validity, reliability and generalisability (Given, 2008). In order to allow for ‘unexpected results’ to be captured in this study, qualitative field notes were also logged alongside the systematic observations. Where appropriate, these field notes were used in conjunction with the other quantitative and qualitative results in the analysis phase of the research.

3.7.5*. Playground Observation Coding Framework*

In this study, the behaviours to be observed in both the classroom and playground were carefully and explicitly defined in advance of the observations taking place. For the playground observations, the schedule developed by Blatchford, Baines & Pellegrini (2003) was adapted for use in the present study. In line with the above literature review, the categories reflect: the level of social interaction (solitary, parallel, social); the nature of the interaction, (games, play, conversation); the behaviour or pupils in the interactions, (onlooker, unoccupied, disruptive, aggressive, positive affection, distressed, disciplined); and the contexts of the interactions (adult led, adult

supported, independent). Consistent with Blatchford, Baines & Pellegrini (2003), a tape recorder with a microphone attached was used to record the observations. This allowed for the researcher to keep watching the playground whilst the observations were being recorded, improving the efficiency of locating the subsequent children to be observed and faster coding. Please see Appendix E for the definitions of the coding categories for the playground observations.

The systematic observations were carried out with the 20 focus pupils in the classroom and playground. Each pupil was observed in class over a period of five days, for around 20 minutes each day. Therefore, each pupil was observed in class for around 100 minutes in total. Furthermore, each child was observed on the playground over a period of 10 days, for six minutes each day. Therefore, each pupil was observed at lunchtime for approximately 60 minutes in total.

A time sampling approach was used whereby each pupil was observed for a period of five minutes with the researcher coding interactions every 20 seconds. For every 20 second time interval, there was a ten second observation period in which the researcher coded the predominant behaviours observed in the first 10 seconds of the 20 second time interval. The order in which pupils were observed was alternated each day. This was achieved by randomly allocating pupils into three columns. On the first breaktime, the researcher observed the pupil at the top of the list in the first column before moving down the list. Then at the start of the second playtime, the researcher observed the pupil at the top of the second column. Once all the columns had been started with, the researcher then started with pupils second on the list then third etc. During the breaktime observations, if the child to be observed was not immediately available, the researcher searched for the child for no longer than one minute before moving on to the next child on the list. The observation schedules were piloted prior to the study being carried out.

3.7.6. Classroom Observation Coding Frameworks

For the classroom observations, the coding framework used by (Gray, 2016) was carefully adapted so as to gain a full picture of the interactions that were taking place. Consistent with the above literature review which highlights the impact of SEN on levels of peer contact and TA support (Pinto, 2015; Webster & Blatchford, 2013), the coding framework provides data on the frequency of peer and adult contact for the 20 focus pupils in the classroom. The identification of the pupils (lower ability, SEN, NSEN) and adults (teacher, TA, other) that the focus pupil was interacting with were also included as part of the coding framework. The coding framework also provided data on: the type of interaction (adult-target, target-adult, peer-target, target-peer), the level of adult support during lessons (TA support, teacher support, no support), and the context of the social interaction, (whole class work, group work, paired work or independent work).

The coding framework provided data on: the nature of the interaction (informative, help-giving, questioning/help-seeking, social/conversational, distracting, aggression, praise, discipline) and their engagement with the learning task (on-task, off-task, intermittently on task).

Fuller details of the definitions for each coding category can be found in Appendix E. For all the sub-categories with the exception of 'aggression', 'teacher support' and 'TA support', an interaction refers to a verbal exchange from one person to another.

The different stages and processes involved in the observations undertaken in the study are outlined in the figures 1 and 2 (below). Steps 1-4 were identical in the classroom and breaktime observations. Differences between the two observation processes are found in steps 5 onwards, where it is shown that the classroom observations were recorded using pencil and paper and the breaktime observations were recorded verbally.

Figure 1: A Flow chart to show the different stages involved in the breaktime observations.

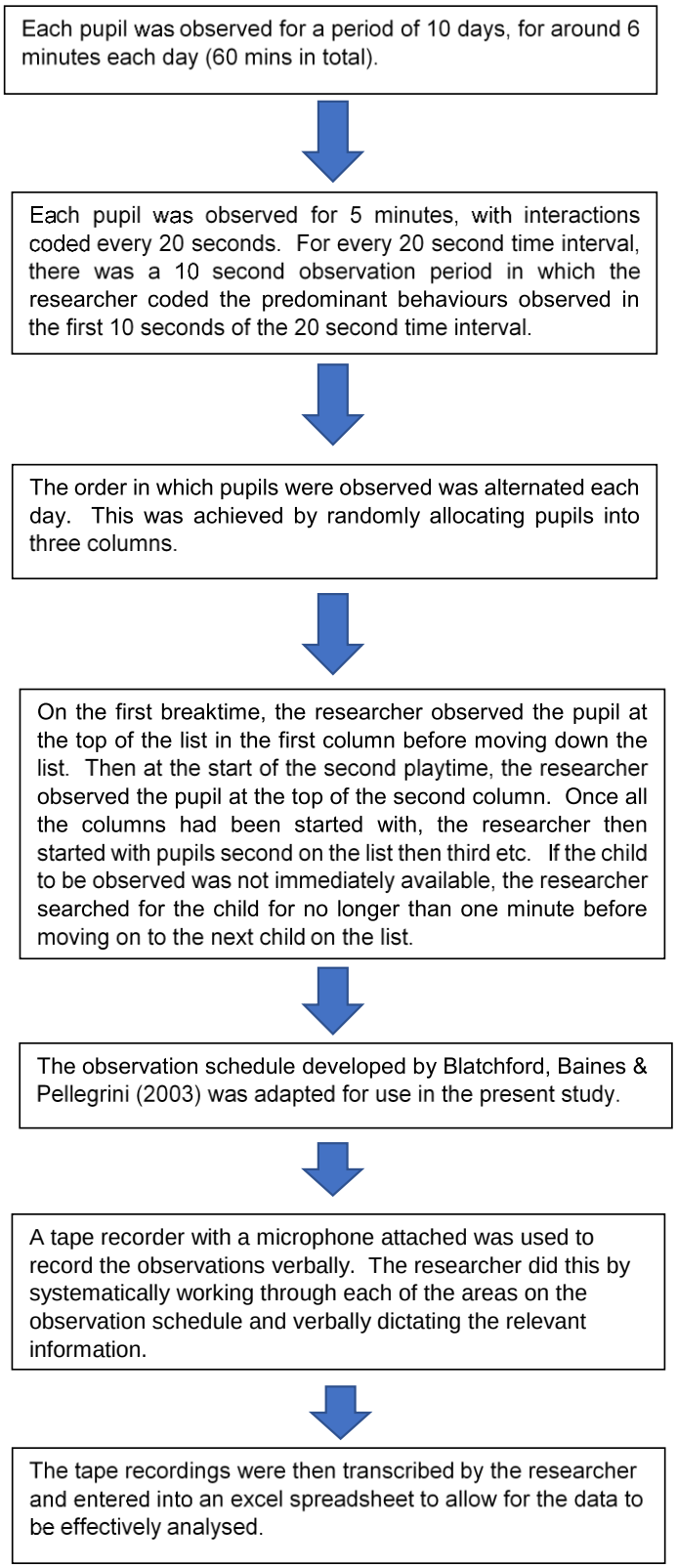
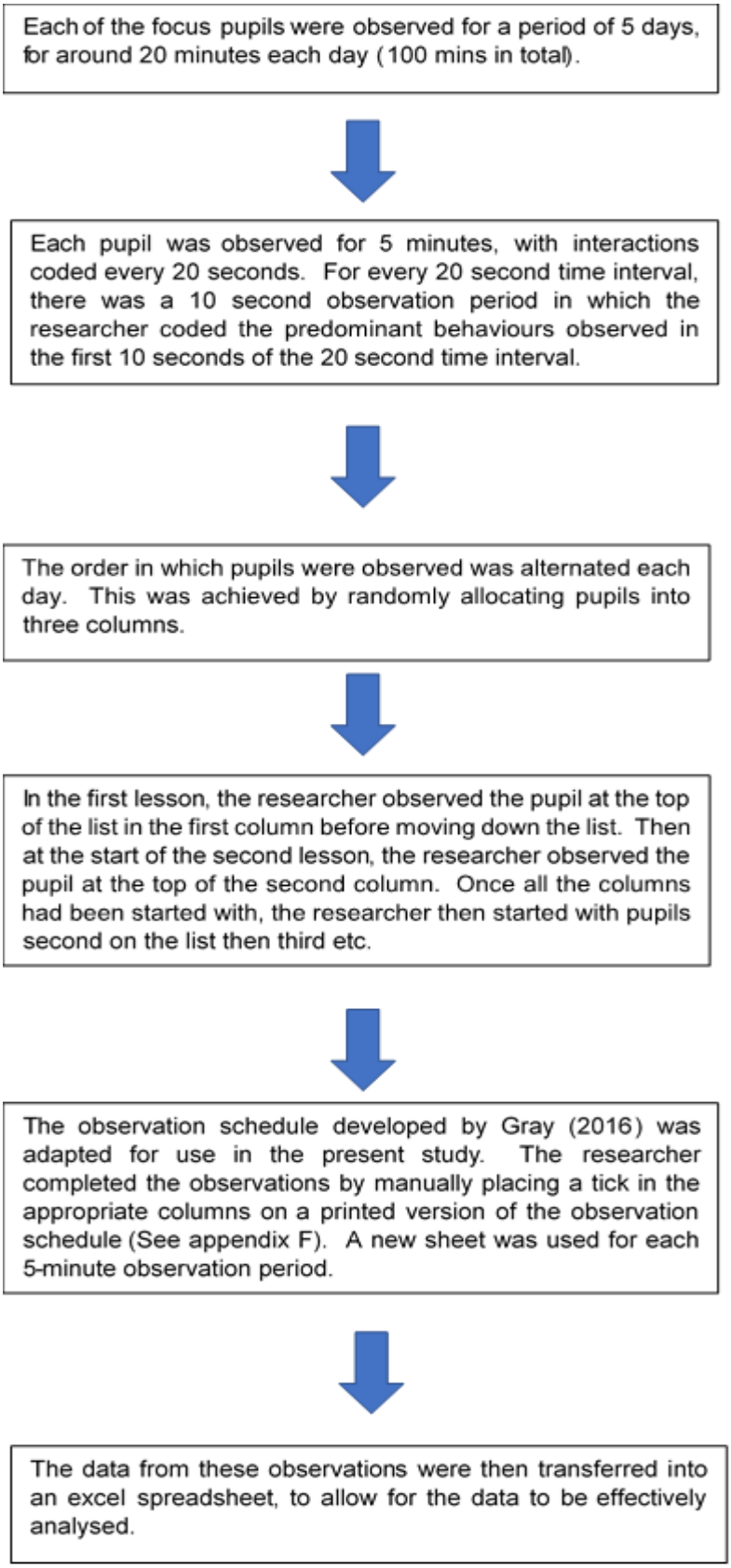


Figure 2: A Flow chart to show the different stages involved in the classroom observations.



3.7.7. Inter-observer reliability

The observation schedules were used by a second observer in coordination with the first observer using video recordings of lessons to enable inter-observer reliability checking. The recordings were watched for a five second period and then the video was paused whilst the coding took place. The second observer carried out 100 scans to become skilled in using the coding framework. Following this, the researcher and second observer completed 100 scans which were then compared for inter-observer reliability. The process was repeated for the breaktime observation schedule with a different observer, using video recordings of breaktimes.

Cohen's Kappa was calculated as a measure of inter-observer reliability. The results suggest that there was a good level of agreement between observers using the classroom (Table 6) and playground (Table 7) observation schedules.

Table 6: Cohen's Kappa calculation of inter-observer reliability for classroom

Observation schedule category	**K**	**Number of observations**
Interaction	0.908	100
Context	1.000	100
Nature	0.886	100
Approach	0.886	100
Support	0.976	100

Table 7: Cohen's Kappa calculation of inter-observer reliability for playground

Observation schedule category	K	Number of observations
Interaction	0.947	100
Type of activity	0.880	100
Behaviour	0.839	100
Context	0.954	100

3.7.8. Interviews

As this study was concerned with exploring the personal experiences of children, it was essential that the research tools allowed for the exploration of the pupil voice in sufficient depth. Conversations are, “a rich and indispensable source of knowledge about personal and social aspects of our lives” (Brinkmann, 2013), making interview methods a suitable choice for this study. All ten of the SEN focus pupils took part in semi-structured interviews to explore their social experiences in greater depth. The benefits of this method are found in the way that pre-determined themes and questions can be used to ensure consistency between interviews. It is also flexible enough to allow adaptations to the responses of the individual participants, (Braun & Clarke 2006).

Following the information gathered from the pilot phase of the study (see following section), pupils were provided with paper and drawing materials and were informed that they could answer the interview questions using written or pictorial methods if they preferred. None of the pupils in the study chose to use these materials in the interviews. Based on the research questions, the interview schedule contained questions which sought to gather information about the following areas (please see Appendix J for interview schedule):

- What friendship means to the pupils
- How satisfied pupils are with their friendships at school
- Self-perceptions of their peer interactions at breaktime
- How satisfied they are with their breaktime experiences
- The parts of breaktime that pupils find most/least enjoyable

3.8. Pilot

To improve the content and construct validity of the research, the observation schedules, questionnaires and interviews were piloted prior to data collection.

The observation schedules were piloted with the Year 4 class in school one for a full day, prior to the data collection phase. A pupil with and

without SEN (C&I) who were not selected as part of the final focus group assisted with the pilot work. The piloting of the observation schedules led to amendments in relation to the observation categories. For example, the 'intermittently on-task' category was added in order to capture a fuller picture relating to pupils' attention and focus in the classroom. In addition, the categories of 'praise' and 'discipline' were added to the classroom observation schedule.

As several participants selected for this study had C&I needs, the questionnaires that were used in the study utilised a symbolic smiley-face response system in order to minimise literacy demands, using a rating scale that has been successfully used with PSEN in previous research (e.g. Frederickson and Furnham, 1998; Gray, 2017; Pinto, 2015). The pupil questionnaires were piloted with a Year 3 class in school 2. This class included pupils with and without SEN, including pupils with SEMH and C&I needs. The pilot study revealed that all pupils had a good understanding of the questions and instructions given and could independently complete the questionnaire. All pupils finished the questionnaires ahead of the scheduled 30 minutes. At several points during the process, pupils were provided with opportunities to ask questions or give comments about the questionnaire. After completing the questionnaires, pupils were then asked if they had any other questions or comments and were asked to indicate any difficulties they encountered when completing the questionnaire. None of the pupils raised concerns and pupils with and without SEN described the questionnaires as 'easy' to complete. In spite of these positive findings, the decision was made for an adult member of staff to be made available to support pupils during the data collection process to add an additional layer of support, where needed.

In order to support the pupils with C&I needs and difficulties with attention during the interview phase of the study, the initial interview schedule included opportunities for participants to articulate their thoughts and feelings using non-verbal methods. It is well understood that children and young people are able to communicate their ideas and interests in a variety of ways and it is argued that methods for eliciting the pupil voice take into account the strengths and needs of the children and young people that we are working

with, (Young Children's voices network, 2011). For example, Young & Barrett, (2001) suggest that drawing allows children the freedom to express their thoughts in an autonomous fashion and is a valuable tool for children who are not proficient in language). As such, within the pilot phase of the research, pupils were asked to carry out a drawing activity as part of the interview process which required them to draw their "ideal playground". Supplementary materials e.g. "the big book of blobs" (Wilson, 2004) were also made available for pupils to facilitate discussion around their friendships and social experiences.

However, the piloting of this interview schedule revealed that the pupil responses during the spoken interview provided information that was much more closely aligned to the research questions and provided more comprehensive data than the drawing activity and supplementary material. As such, it was decided that these techniques would not be necessary as part of the formal interview schedule, but that pupils would have the option of using drawing materials to answer the interview questions if desired.

3.9. Data Collection Procedure

Following ethical approval, the pilot was conducted. Once schools agreed to take part in the study, further details on the study were provided and specific times and dates were agreed with the class teachers. The focus pupils were then identified in collaboration with the school SENCO and consent was obtained for all pupils.

The data were collected from each school simultaneously over the course of approximately 23 research days in total (approximately 11 days in each school). The research days were not carried out over consecutive school days and were spread over a 2-month period. The data collection process began with the classroom and breaktime observations which took approximately 5 and 10 days respectively. Towards the end of the 10-day observation period, the pupil questionnaires were completed by the whole class during class time. This process was co-ordinated by the researcher who explained to the class how to complete the questionnaire and provided

assistance where needed. In all classes, a member of school staff was also available to help. The whole class completed each question together before moving on to the next question. Pupils were reminded not to share their answers with anyone else. The confidentiality of responses was also emphasised. The class teacher also completed the teacher questionnaire at the same time.

After all of the pupil observations were complete, the ten SEN focus pupils were individually interviewed. The interviews took place in a private space during school class time. For school 1, the interviews were completed over two days, whereas for school 2, the interviews were completed in one day.

3.10. Data Analysis

The section details how the quantitative and qualitative data was entered, verified and analysed.

3.10.1. Questionnaires

For the pupil questionnaires, each pupil was asked to indicate the extent to which they would like to work (Q1) and play (Q2) with each of the other pupils in their class using a 3-point scale indicated by a smiley face, neutral face and sad face (see Appendix G). The number of nominations for the most liked category (smiley face) was converted into a proportion by dividing the number of nominations by the number of pupils that completed the questionnaire (excluding the participant) and multiplying by 100. A pupil would receive a score of 100% if they were nominated by every pupil in the class as someone they would 'like to play/work' with. These proportions are referred to as 'work acceptance' and 'social acceptance' for the work and play questions respectively. A corresponding process was followed to achieve 'work rejection' and 'social rejection scores' whereby the least liked nominations (sad face) were added up for each pupil, divided by the number of participants and multiplied by 100.

The decision was made by the researcher to convert the data into proportions in this way, to account for the different class sizes that were used in the study. By converting the data into proportions as opposed to presenting the data as frequencies of responses, it effectively normalises the data, allowing for the 'acceptance' and 'rejection' data for each participant to be compared against pupils from different class sizes in a meaningful way. In addition, this technique has been used in previous research in the field, (e.g. Frederickson and Furnham 2004; Pinto 2015), meaning that the results of the present study are relatable to past research on the peer relations of PSEN. An alternative approach to calculating measures of acceptance and rejection would have been to convert the smiley, neutral and sad faces into a number (e.g. 1-3), before finding the median response given for each participant. However, by finding the median as opposed to the mean, some of the variability between the data would be lost, i.e. the difference between a 1 and 2 and 2 or 3 would not be captured. Therefore, by calculating measures of peer acceptance by using the mean, it allows for greater variability of the data to be captured within the study.

Work and social preference scores were calculated by finding the difference between levels of peer acceptance and peer rejections for all pupils for the 'would like to play with' and 'would like to work with' questions in the peer rating scale questionnaires.

Question 3 of the questionnaires asked pupils to nominate up to 3 pupils that they deemed to be their closest friends. The number of times that each of the focus pupils received a 'closest friend' nomination was totalled to produce a unilateral friendship measure. The literature refers to this measure as another indicator of peer acceptance. A reciprocal friendship score was calculated by finding the number of times that the pupil's nominated friend also nominated them.

For questions 4 and 5 which asked pupils to rate how frequently they worked and played with each of the other pupils in the class, the pupil responses given were converted into the following codes: Everyday= 5, Most days= 4, At least once a week= 3, At least once a term=2, Never= 1. The

codes reported by all participants were then totalled for each pupil so that means and standard deviations for the different groups in the study could be calculated and analysed. This present study uses the terms 'perceived peer contact in class' and 'perceived peer contact at break' to describe these measures of reported peer contact.

For the teacher questionnaires, a similar process was followed whereby the responses given were allocated a numerical code to allow comparisons to be made between pupil groups. For question 1, the codes were: All of the time=5, Most of the time= 4, Some of the time= 3, Not very often= 2, Never= 1, and for question 2, the codes were: Always= 5, Nearly always= 4, Sometimes= 3, Not very often= 2, Never= 1.

3.10.2. Socio cognitive mapping

In this study, peer group analysis was conducted using the SCM software by Leung (1994). Where pupils were identified through the software as being a multi-member, the group to which they said they belonged was prioritised for the analysis. The SCM measures selected for this study were: 'social network size' (measured by the number of members), 'centrality of the group' (as measured by the SCM software) and 2 measures for the individual position of the pupil within the group which are labelled as 'position in group' (measured by the SCM software), and 'nominations' (measured by the number of nominations given to each individual). Only pupils who completed the peer group question (Q3) within the questionnaires were included within the analysis.

The SCM software assigns individuals and peer groups with a label of: nuclear, secondary and peripheral. These labels were converted into the following codes: nuclear = 3, secondary = 2, peripheral = 1. These codes were then totalled for each of the participants to allow for comparisons to be made between the groups.

3.10.3. SPSS Data analysis

The quantitative data was manually entered by the researcher into Excel (2014) spreadsheets before the data was screened and cleaned. Initially, 3

separate data sets were created for: (1) breaktime observation data (2) classroom observation data and (3) teacher and pupil questionnaire data. As the focus pupils were observed several times, the number of observed interactions for each coding sub-category (e.g. help-seeking behaviours) were totalled for each pupil and were converted into a percentage (proportion) of the total interactions for the entire observation category (e.g. playground behaviour). This proportional data from the classroom and breaktime observations were then collated with the teacher and pupil questionnaire data to form an overall 'child level' data set which allowed for cross tabulations. The original observation level data sets were used to generate the descriptive statistics, whereas the child level data set was used to carry out the additional statistical analyses.

Following this, SPSS (version 25) was used to analyse the data. Checks for normality (using Kolmogorov Smirnov) and homogeneity of variance (using Levene's test) were carried out on all variables to help decide the statistical tests to be used. Where parametric tests were deemed to be appropriate, a one-way Analysis of Variance (ANOVA) or t-tests were used. Games Howell post hoc tests were used to further explore the differences when there were unequal variances and the Bonferroni test was used where the variances were equal. Where parametric tests were not appropriate, the Kruksall-Wallis non-parametric test was used to explore the differences between subgroups and where significant, Mann-Whitney tests, were used to further examine the differences.

When non-parametric tests were deemed to be significant, parametric tests were also used in conjunction with these. Where the results of the parametric and non-parametric tests were consistent, parametric results are reported as these are more powerful and make fuller use of the data. Where appropriate, eta squared (η^2) and effect sizes (r) are presented.

3.10.4. Interview Analysis

The qualitative interviews for all of the 10 focus PSEN were analysed together. The interviews were transcribed and analysed thematically because it enables flexibility (Braun & Clarke, 2006). Narrative analysis was

also considered for the present study, however, it was rejected because the present study seeks primarily to use the qualitative interview data to help draw light on the quantitative results as opposed to using the interview data to derive a personal and detailed narrative around the playground experiences of PSEN in mainstream primary schools. Furthermore, Grounded Theory was ruled out because the present study does not seek to derive a theory, but instead seeks to derive a descriptive understanding of the breaktime experiences of PSEN.

The thematic analysis consisted of the following 6 stages:

(1) Familiarisation of the data by examining transcripts,

(2) Coding the data by highlighting points of interest,

(3) Collecting codes into themes and subthemes,

(4) Creating a thematic map to indicate the relationships between the themes,

(5) Naming the themes to best describe the data, and

(6) Reporting the data in a logical and coherent way, (Braun and Clarke 2006).

Nvivo software was used as a tool to code the data and organise the codes into subthemes and themes. The coded transcripts were then shared and discussed during formal supervisions and during peer- supervision with a fellow trainee educational psychologist (TEP). During peer supervision sessions, the peer read and coded a selection of transcripts (10% of total transcripts) which allowed for comparisons to be made between the interpretations of the codes by the 2 different researchers. Overall there was a high level of overlap between the 2 researchers. Where differences were observed between the coded transcripts, this was discussed between the two researchers and this led to some adjustments in relation to the naming of codes and ways in which the codes were grouped into themes.

Chapter 4: Results

4.1 Overview

This chapter describes the results obtained from the observations, questionnaires and interviews. The quantitative results will be described first, followed by the qualitative results.

4.2. Peer relationship measures

The analysis in sections 4.2 to 4.6 is based on the scores of the 154 pupils who completed the questionnaires and their class teachers. Unless otherwise specified, the data in these sections have been divided into 3 groups according to SEN type: MA/HA (NSEN), LA (NSEN) and SEN allowing for comparisons to be made between the 3 groups.

4.2.1. Peer acceptance and rejection scores

Table 8: Peer acceptance and rejection scores by SEN type

SEN type		Work acceptance	Work rejection	Social acceptance	Social rejection	Work preference	Social preference	Unilateral best friend nominations	Reciprocal friendships*
MA/HA	M	42	19	37	26	24	11	2.11	1.13
	SD	18	15	15	15	31	27	1.73	1.04
LA	M	33	23	32	32	10	00	2.68	.86
	SD	19	16	13	17	32	28	2.12	.95
SEN	M	28	37	25	38	-09	-13	1.21	.40
	SD	22	25	15	21	45	34	.67	.520

* N=93

4.2.2. Work acceptance/rejection

Table 8 shows that PSEN scored less favourably than NSEN pupils on a range of sociometric measures. There was a statistically significant difference in peer acceptance scores for the 'like to work with' question for the 3 groups *($F (2, 151) = 5.68$, $p = 0.004$, $\eta^2 = .07$)*. However, despite a clear trend with PSEN least accepted and MA/HA pupils most accepted, post-hoc comparison tests failed to identify significant differences between the 3 groups.

PSEN received more peer rejections than NSEN pupils for the 'like to work with' question. The differences in scores for the 3 groups was found to be statistically significant, (*F(2, 9) = 8.20, p<.05, η^2=.98)* with post-hoc tests suggesting that PSEN (M=37) received a statistically higher number of rejections compared to MA/HA pupils (M=19). However, there were no statistical differences between rejection scores for the 'like to work with' question for LA and SEN pupils or between LA and MA/HA pupils. When the data was grouped into SEN and NSEN pupils, PSEN received statistically higher work rejection scores (M=.37, SD=.25) than NSEN pupils (M= .19, SD=.15), (t (13.95)= -2.6, p=.02,η^2= .09).

4.2.3. Social acceptance/rejection

A similar pattern of results was found with regard to play based measures, in which PSEN received lower peer acceptance scores than NSEN pupils. There was a statistically significant difference in peer acceptance scores for the 3 groups, *(F(2,151)=4.49, p=.13, η^2 =.06)* (Table 8), with PSEN receiving statistically lower peer acceptance scores than MA/HA pupils. The differing levels of peer acceptance for SEN and LA pupils and between the LA and MA/HA pupils did not meet statistical significance. However, when the data was grouped into SEN and NSEN pupils, PSEN received significantly lower social acceptance scores (M=.25, SD=.15) than NSEN pupils (M= .36, SD=.15), (t (152)=2.66, p=.009,η^2= .05).

The peer rejection scores for the 3 groups for the 'like to play with' question, were also found to be statistically different, *(F(2,151) = 4.61, p = .011, η^2=.06).* However, although MA/HA pupils experienced peer rejection much less frequently than LA and SEN pupils, post-hoc comparison tests failed to identify statistically significant differences.

4.2.4. Work and social preference

There was a statistically significant difference in work preference, *(F(2,151) = 7.54, p=.001, η^2 =.09)* and social preference scores for the 3 groups, (F(2,151)=.5399, p-=.005, η^2= .067). Follow-up post-hoc tests showed that there was a statistical difference between PSEN and MA/HA pupils for both

work and social preference scores, with PSEN receiving statistically lower scores for both categories (see Table 8).

When the data was grouped into SEN and NSEN pupils, PSEN received statistically lower work preference (t (14.32)=2.54,p=.02, η^2*=.07)* and social preference scores (t (152) = 2.81, p=.006, η^2*=.05)* than NSEN pupils.

4.2.5. Best friend nominations

PSEN received fewer unilateral best friend nominations (1.21) than LA pupils (2.68) and MA/HA pupils (2.11). These differences were significant *(F(2,151)=3.09, p=.048,* η^2*=.040)*, with PSEN receiving a statistically lower number of best friend nominations than MA/HA and LA pupils.

PSEN also received fewer reciprocal best friend nominations (M = .40) than LA (M = .86) and MA/HA pupils (M = 1.13), although these differences were not found to be significant *(F(2,92)=2.56, p=.08.).* However, when the data was grouped into SEN and NSEN pupils, there was a significant difference between the number of reciprocal friendships between SEN (M= 1.08, SD=1.03) and NSEN pupils (M= .40, SD=.52), (t (93)= 2.07, p=.04, η^2= .04).

4.3. Peer group organisations

Table 9: Peer group measure by SEN type

	Social network size			Position in Group			Centrality of Group			Nominations		
	Mean	**SD**	**t-test**	**Mean**	**SD**	**t-test**	**Mean**	**SD**	**t-test**	**Mean**	**SD**	**t-test**
NSEN	8.70	3.08	t (18) = .42, p = .68	2.70	0.48	t (18) = 1.52, p = .14	2.70	0.48	t (18) = -.49, p = .62	12.80	7.45	t (18) = .49, p = .63
SEN	8.00	4.40		2.30	0.67		2.80	0.42		11.30	6.03	

The results shown in Table 9 indicate that PSEN and NSEN pupils had similar peer group experiences on the playground in relation to the size of the network, position in group and centrality of group. There were no statistical differences found between the SEN and NSEN pupils for any of the categories explored using the SCM software (see Table 9). It is possible

however, that these non-significant differences are indicative of the small sample sizes.

4.4. Perceived Peer contact in class and at break

Table 10: Pupils perceived peer contact in class and at break and teacher rating scales

	Perceived peer contact in class (pupil questionnaire)			Perceived peer contact at break (pupil questionnaire)			How Often in Class (teacher rating scale)			How Often Supported by an adult (teacher rating scale)		
	Mean	SD	Kruksal-Wallis	Mean	SD	Kruksal-Wallis	Mean	SD	Kruksal-Wallis	Mean	SD	Kruksal-Wallis
MA/HA	43.14	6.19	$\chi2$ (2 , 154) = 9.5 p = .009	56.19	15.20	$\chi2$ (2, 154) = 2.21, p = .33	4.62	0.72	$\chi2$ (2, 154) = 9.01 p = .01	1.95	1.09	$\chi2$ (2 ,154) = 34.30 p< .0005
LA	40.05	4.13		52.00	15.77		4.36	0.66		3.23	0.97	
SEN	39.07	6.90		53.36	16.37		4.29	0.61		3.36	1.15	

4.4.1. Perceived peer contact in class

PSEN were rated less frequently than LA pupils and MA/HA pupils as someone that others spent time with in class. These differences were significant (see Table 10). Post hoc comparison tests revealed that MA/HA pupils received statistically higher scores for perceived peer contact in the classroom compared to the PSEN, *(U=549, z=-2.016, r=.176, p=.044)* and the LA group *(U=841, z=-2.582, r=.219, p=.01).* Whilst LA pupils (M =40.1) received on average higher scores for peer contact than PSEN (M = 39.1), this was not significant.

4.4.2. Perceived peer contact at break

When pupils were asked how often they played with each of their classmates at break, pupils across all 3 groups received similar scores, and the differences between the scores were not significant (see Table 10). These results suggest that as far as perceptions of playground contact are concerned, attainment and SEN type did not appear to be related to the overall scores.

4.5. Teacher rating scales

4.5.1. Amount of time spent in the classroom

The teacher questionnaire responses showed that PSEN were reported to be in the classroom less than NSEN pupils. There was a significant effect of SEN type on the perceived levels of time spent in the classroom for the three groups (Table 10), with MA/HA spending more time in class compared to PSEN, *(U=555, z= -2.427, r=.211, p=.015)* and LA pupils *(U= 98, z = -2.18, r=0.18, p =.03).* However, there was no significant differences between SEN and LA pupils. These results indicate that SEN were away from their classroom more than MA/HA pupils but not substantially more than LA pupils. A closer look at the distribution of responses suggests that teachers reported that pupils were in the classroom 'all of the time' for 70% of all NSEN cases compared to just 42% of SEN cases.

4.5.2. Amount of support received in class

PSEN were reported by teachers to receive more support in class than NSEN pupils and there was a statistically significant difference in the amount of reported support that pupils received in class for the three groups. *(F(2,154) =20.86, p <.0005. η^2=.22)* (see Table 10). The post-hoc analysis showed that MA/HA pupils (M=1.95) received statistically less support than PSEN (M=3.36) and LA pupils (M=3.23). However, there was no statistical difference between LA and PSEN, indicating that they were perceived by teachers to receive similar levels of support.

Further analysis of the teacher questionnaire responses indicated that PSEN were supported by an adult "all the time" or "nearly all the time" for 50% of cases compared with just 10% of all NSEN pupils.

4.6 Summary of findings from the peer relationship data and teacher questionnaires

- Pupils with SEN engaged in less peer contact in the classroom and at break than pupils without SEN.

- Pupils with SEN had lower peer preference scores in social and work contexts, fewer best friend nominations and fewer reciprocal friendship nominations than pupils without SEN.
- There were no statistical differences found between the SEN and NSEN pupils for any of the categories explored using the SCM software
- Pupils without SEN were reported by teachers to receive less in class support and to spend more time in the classroom than LA pupils and SEN pupils.

4.7. Systematic observations-playground

For the following sections the analysis focusses on the 20 focus pupils selected for the study which included ten PSEN and ten comparison NSEN pupils.

4.7.1. Level of interactions

Table 11: Interaction level by SEN type

	Social			Parallel			Solitary		
	Mean	**SD**	**t-test**	**Mean**	**SD**	**t-test**	**Mean**	**SD**	**t-test**
NSEN	93.92	7.38	t (18)= 5.04, p=<.005 (r=.59)	2.00	3.28	t (18)= -3.40, p=.004 (r=.39)	4.08	5.57	t (18)= -4.31, p=<.0005 (r=.51)
SEN	72.58	11.16		9.23	5.86		18.19	8.74	

The relationship between SEN type on the proportion of social interactions in the playground was analysed and compared across the 2 groups (see Table 11). PSEN engaged in fewer social interactions *(t (18)= 5.04, p=<.005, η^2=.59)* and more parallel interactions *(t(18)= -3.40, p=.004, η^2=.39)* and solitary behaviours *(t(18)= -4.31, p=<.0005, η^2=.51)* at breaktime than pupils in the NSEN group.

4.7.2. Playground behaviour and activities

In terms of the nature of children's behaviour during breaktimes, PSEN were statistically more likely to be coded as onlooking *(t(18)=-1.705, p=.12)* and unoccupied *(t(18)=-4.58, p<.0005)* and statistically less likely to

be actively involved *(t(18) =3.95, p=.001*) in comparison to NSEN pupils. The results showed that PSEN accounted for 82% of all aggressive behaviours observed, 97% of all distressed interactions and 100% of teasing and taunting and disciplined interactions. However, overall, pupils with and without SEN engaged in very little confrontational (including aggression and disputing or distressed) behaviour and were found to be disciplined very rarely. These types of behaviours accounted for less than 4% of all behaviours observed at breaktime.

In relation to the types of play, games and social activity, there were on the whole few clear differences though there appeared to be a general trend for NSEN pupils to engage in more 'just conversation' than pupils in the SEN group *(t(18)=.22, p=.35).*

Please see Appendix L for a more detailed overview of the the types of activities engaged in and, the behaviours shown on the playground by SEN and NSEN pupils.

4.7.3. Peer context in the playground

Table 12: Identity of social contacts and adult support by SEN type

	Number of LA in group		Number of SEN in group		Adult present for interactions		Adult involved for interactions	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
NSEN	0.18	0.13	0.29	0.32	14.85	22.94	1.61	2.52
SEN	0.26	0.19	0.19	0.16	14.34	13.97	4.08	2.82

Table 12 shows the means and standard deviations for the 'adult involved' and 'adult present' interaction types for pupils with and without SEN. There was a statistically significant difference between the number of 'adult involved' interactions for the 2 groups with PSEN engaging in statistically more 'adult involved' interactions than NSEN pupils; *(U=22.5, Z=-2.11, r=2.12, p=.035).* There was no significant difference found for 'adult present' interactions for NSEN and SEN pupils.

4.8. Systematic observations- classroom

The ‘adult-target’ and ‘target-adult’ interactions outlined in Table 13 are subsets of the ‘adult interactions (total)’ data set, whereby the sum of the two subsets equate to the total adult interactions. Similarly, the sum of the ‘peer-target’ and ‘target-peer data sets’ equate to the ‘peer interactions (total)’ data set.

Additionally, the ‘TA interactions’ and ‘teacher interactions’ are a subset of ‘adult interactions (total)’ whereby the sum of these two subsets (in the observation level dataset) equate to the ‘adult interactions (total)’ data set.

4.8.1. Type of interaction

Table 13: Type of interactions in the classroom and size of group by SEN type

	No interaction		Adult interactions (total)		Peer interactions (total)		Adult- target		Target- Adult		Peer- Target		Target- peer		Teacher interactions		TA interactions		Size of group (when in groupwork)		Interactions with SEN pupils		Interactions with LA pupils	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
NSEN	67.19	11.40	2.30	1.68	30.37	12.12	.90	.95	1.40	.88	12.13	6.00	18.24	6.70	1.87	1.86	.12	.30	.08	.14	.02	.03	.01	.02
SEN	69.34	13.08	15.58	4.87	15.08	6.93	10.76	11.39	4.82	4.31	4.82	3.06	10.27	4.46	6.84	8.21	7.51	8.99	.11	.12	.11	.13	.07	.07

The results show that there were a number of differences relating to the types of interactions that pupils engaged in across the 2 groups. For example, PSEN engaged in significantly less peer interactions *(t(18)=3.46, p=.003, η^2=.39)* and statistically more adult interactions (total) *(t(18)=-2.71, p=.01,η^2=.28)* than NSEN pupils. It was found that that almost all of the interactions for the NSEN group were with peers (91%) whereas the interactions for PSEN were more evenly split between adults (53%) and peers (47%).

PSEN also engaged in statistically more interactions with TAs than NSEN pupils *(t (9.02)= -2.60, p=.03, η^2=.27).* There was a trend for PSEN to interact more with teachers than NSEN pupils however this was not significant, (see Table 13).

Further examination of the observation based data set reveals that PSEN engaged in a similar amount of interactions with TAs (52%) than with teachers (48%). Conversely, pupils in the NSEN group engaged in more interactions with teachers (94%) than with TAs (6%).

4.8.2. Who initiates the interactions?

Regarding the direction on the initiated interactions, there were a number of observed differences between the groups. PSEN initiated more interactions with adults than NSEN pupils; *(t (9.12)=-2.73, p = .02,η^2=.29)* (see Table 13). PSEN also participated in more adult initiated interactions than NSEN; (*t (9.75)= -2.453, p = .035, ,η^2=.25)* suggesting that PSEN were more likely to initiate interactions with adults and adults were more likely to initiate interactions with them than were their NSEN counterparts.

Conversely, NSEN pupils engaged in statistically more peer initiated interactions *(t(13.38)=3.436,p=.004,η^2=.40)* and were more likely to initiate interactions with their peers than were PSEN *(t (15.67)= 3.132, p =.01,η^2=.35).*

4.8.3. Identity of peers in interactions

This section explores the identity of the peers with whom pupils interacted with. PSEN engaged in a significantly higher proportion of interactions with other PSEN than did NSEN pupils, *(t(9.41) =-2.38, p=.04,* η^2*=.24)* (see Table 13). PSEN also engaged in a significantly higher proportion of interactions with LA pupils than did NSEN pupils, *(t (11.04)= -2.48, p=.03, ,* η^2*=.25).* However, it is important to note that the differences found in the statistical analysis refer to a very small number of interactions in these categories. In relation to group size, there was no significant difference in scores for pupils with and without SEN*, (t(18)=-.58, p=.57).*

In terms of percentages drawn from the observation based data set, on average 18% of all SEN peer interactions were with other SEN or LA peers whereas for NSEN pupils only 3% of their interactions were with SEN or LA pupils.

In regard to ability grouping, PSEN were seated in same ability groups for 47% of the time, mixed ability groups for 44% of the time and were seated alone for 9% of the time. NSEN pupils however, were seated in same ability groups for 57% of the time, mixed ability groups for 43% of the time for less than 1% of the time. Please see Appendix M for a further breakdown of the seating arrangements by SEN type.

4.8.4. Nature of interactions

Table 14: Nature of interactions and support type in the classroom by SEN type

	No interaction		Informative		Help-giving		Help-seeking		Social		Distracting		Aggression		Praise		Discipline		Teacher Support		TA support		No support	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
NSEN	67.54	11.65	6.94	3.26	1.27	1.35	1.83	.94	19.84	11.68	2.36	1.74	.09	.14	.00	.00	.13	.18	.71	1.27	.00	.00	99.29	1.27
SEN	69.64	12.57	11.72	10.48	3.51	3.52	3.28	1.61	7.86	4.32	2.81	3.19	.17	.38	.08	.13	.94	1.33	9.47	7.98	13.96	15.16	75.96	21.23

The nature of the interactions also yielded some interesting differences between the groups. For example, there was a statistical significance in the proportion of social interactions and help-seeking interactions between the 2 groups; SEN and NSEN. NSEN pupils engaged in statistically more social interactions than PSEN, *(t (11.41) =3.04, p=.01,* η^2*=.34)* whereas, PSEN engaged in statistically more help-seeking interactions than NSEN, *(t(18)=-2.47,p=.02,* η^2*=.53).* The differences in interactions by SEN type was not statistically significant for any of the other interaction types.

4.8.5. Support type in the classroom

This section explores the amount and type of teacher and TA support that pupils with and without SEN received in the classroom. This variable differs from the 'teacher interactions' and 'TA interactions' variables presented in section 4.7.1. The 'TA/teacher support' interactions relate to the adult 'accompanying' the pupil (with or without a verbal interaction), whereas the teacher and TA interactions relate to the presence of a verbal interaction from the adult to the target or the target to the adult. Please see Appendix E for a full overview of the coding definitions used.

Table 14 shows that PSEN received higher levels of teacher support than NSEN pupils which was statistically significant, *(t (9.46) = -3.43, p= .007,* η^2*=.40).* PSEN also received statistically more TA support than NSEN pupils; *(t (9) = -2.91, p = .02,* η^2*=.32).*

NSEN pupils were observed to be unsupported ('no support') more than PSEN. This difference was statistically significant, *(t (9.06) = 3.47, p = .01,* η^2*=.40).*

Further analysis of the observation based data set shows that for PSEN, 91% of the adult support they received was provided by TA's in contrast to just 9% which was provided by teachers. In contrast, NSEN pupils engaged in very few adult supported interactions and where these took place, the support was provided largely by teachers and not TAs.

4.9 Summary of findings from the observation data

- In the classroom, pupils with SEN were found to engage in more interactions with adults than with peers. In contrast, pupils without SEN were found to engage in more interactions with peers than with adults.
- Pupils with SEN received 91% of in-class support by a TA and only 9% by a teacher, whereas non-SEN pupils received all their support from a teacher.
- Pupils with SEN were found to engage in less social talk and more help-seeking behaviours in the classroom in comparison to non-SEN pupils.
- Within the playground observations, pupils with SEN were found to engage in more 'onlooking' and 'unoccupied' behaviours and less actively involved behaviours than pupils without SEN. In addition, pupils with SEN were found to engage in more 'parallel' and 'solitary' behaviours and less 'social' behaviours than NSEN pupils.

4.10. Exploring the relationship between variables

The following sections (4.8-4.9) seek to explore the relationship between a number of breaktime and classroom factors on key peer relationship measures: social preference, work preference, reciprocal best friend nominations and social peer interactions at break. These peer relationship measures were selected over unilateral best friend nominations and measures of acceptance and rejection as these measures draw information from a wider range of data points, providing richer data for the analysis.

Furthermore, the nature of interactions in the classroom, identity of social contacts and playground behaviour and activities were not included in the analysis due to the small number of interactions observed in these categories. The information from the teacher questionnaires were also considered for the analysis, however, this was omitted due to the similarities with other included variables and the small sample sizes used for this measure.

Table 15: The relationship between classroom and breaktime factors and peer preference scores and peer interactions at break

	Pearson Correlation Coefficient			
Classroom and Breaktime factors	Work Preference	Social Preference	Reciprocal best friend nominations	Peer interactions at break (social)
(PQ) Perceived classroom contact	.34**	.32**	.10	.34
(PQ) Perceived playground contact	.55**	.50**	.22*	.45*
(PO) Adult involved breaktime	-.36	-.29	-.45	-.43
(CO) Total peer interactions in class	.67**	.69**	.68**	.67**
(PO) Social peer interactions at break	.68**	.60**	.66**	---
(CO) Support total in class	-.56*	-.42	-.66*	-.68**
(CO) Adult interactions in class (total)	-.58**	-.48*	-.49	-.73**
(CO) Teacher interactions in class	-.40	-.34	-.46	-.63**
(CO) TA interactions in class	-.59**	-.52*	-.42	-.74**
(CO) Teacher support in class	-.49*	-.36	-.15	-.73**
(CO) TA support in class	-.56*	-.42	-.32	-.60**
(PQ) Reciprocal best friend nominations	.31**	.32**	-----	.66**
(PQ) Work preference scores	___	.88**	.31**	.68**
(PQ) Social preference scores	.88**	____	.32**	.60**

*Correlation significant at the .05 level

**Correlation significant at the .01 level

4.10.1. The relationship between classroom and breaktime factors and work preference

The relationship between a range of breaktime and classroom factors and peer relationship measures were explored using Pearson's correlation coefficient (Table 15). In relation to levels of peer contact, work preference scores were positively correlated with: the amount of perceived peer contact in the classroom (r=.34), the amount of perceived peer contact at breaktime (r=.55), observed peer interactions in the classroom (r=.67) and observed

peer interactions at break (r=.68) indicating a strong relationship overall between levels of peer contact and work preference scores, where a greater level of peer contact is associated with higher work preference scores.

There were also significant correlations between the type of adult involvement that pupils received in class and work preference scores. Work preference scores were negatively correlated with: the total amount of adult support in class (r=-.56), total amount of adult interactions in class (-.58) frequency of TA interactions in class (r=-.585), frequency of TA support in class (r=-.56) and frequency of teacher support in class (r=-.49). This suggests that a relationship exists whereby a greater level of adult involvement is associated with lower work preference scores. Conversely, adult involvement at breaktime was not significantly correlated with work preference (r=-.36), suggesting that there is a link between peer preference and levels of adult involvement in the classroom, but not the playground.

4.10.2. The relationship between classroom and breaktime factors and social preference

Similarly, social preference scores were positively correlated with the amount of perceived peer contact in the classroom (r=.32), the amount of peer contact at breaktime (r=.50), observed peer interactions in the classroom (r=.69) and observed peer interactions at break (r=.60), suggesting that there is a clear association between levels of peer contact and social preference (see Table 15).

A relationship was also found to exist between levels of adult involvement and social preference scores, as social preference scores were negatively correlated with: the total amount of adult support in class (r= -.42), total amount of adult interactions in class (r=-.48) frequency of TA interactions (r=-.52), frequency of TA support (r=-.42) and frequency of teacher support (r=-.36). Similarly to work preference, social preference scores were not significantly correlated with adult involvement at breaktime (r=-.29).

4.10.3. The relationship between classroom and breaktime factors and reciprocal best friend nominations

The number of reciprocal friendship nominations that pupils received were significantly, positively correlated with perceived playground contact (r=.22), total peer interactions in class (r=.68) and social peer interactions at break (r=.66), whereby higher levels of peer contact were related to a higher number of reciprocal friendships. Reciprocal friendships were also significantly, positively correlated with work (.31) and social (.32) preference scores, suggesting that pupils who were rated more favourably for the 'like to work with' and 'like to play with' questions also received more reciprocal friendship nominations.

Reciprocal friendship scores were negatively correlated with the total support in class variable (-.66) indicating that the more support pupils received in class, the less likely they were to receive a reciprocal friendship nomination.

4.10.4. The relationship between classroom and breaktime factors and peer interactions at break

Social peer interactions at break were positively correlated with peer interactions in the classroom (r = 0.67), work preference scores (r = .68), social preference scores (r = .60) and reciprocal best friend nominations, (r=.49) (see Table 15). In addition, peer interactions at break were negatively correlated with teacher support in class (r= -.73), TA support in class (r= -.60), teacher interactions in class (r= -.63) TA interactions in class (r= -.74) total amount of adult interactions in class (r=-.73) and total amount of adult support in class (r=-.68).

Overall, of all of the breaktime and classroom factors analysed, the amount of social peer interactions at breaktime was the most strongly correlated with frequency of TA interactions in class, whereby pupils who engaged in the most TA interactions in the classroom, were the least likely to engage in social peer interactions at breaktime. However, it is important to

note that the correlation coefficients were very similar for several variables, and therefore the relationship between the variables will be further explored using multiple regression in section 4.7.5 below.

4.10.5. Perceived peer contact and observed peer contact

The relationship between perceived peer contact and observed peer contact was investigated using Pearson's correlation coefficient. For breaktime contact, a medium and positive correlation was found between measures of perceived and observed contact and this was significant, (r=.45, p=<.05) For classroom contact, a medium, positive correlation was found between perceived and observed classroom contact (r=.38, p=<.10), however, this result was not significant. The lack of statistical significance may reflect the small sample sizes for this part of the study.

4.10.6. Regression analyses

Hierarchical multiple regression was used to identify the predictive power of a number classroom and breaktime factors on: social preference, work preference, reciprocal best friend nominations and social peer interactions at break. The classroom and breaktime independent variables that were explored were those that had significant correlations with the dependent variables, (p<.05). However, as work preference scores were highly correlated with social preference scores (r=.88), social preference scores were not included as a predictor variable for work preference and work preference was not included as a predictor variable of social preference. For the reciprocal best friend nomination and peer interactions at break dependant variables, social work preference was included as a predictor variable but work preference was omitted. This decision was made to overcome the difficulties associated with the high correlation between the two variables and because exploring the peer relations of pupils at breaktime is a main aim of the study.

As the data from the pupil questionnaires (PQ) was completed with the full sample (n=154) it was possible to include all of the selected variables within one analysis (see model 1b in Table 16). However, as the observations (CO/PO) were completed with a sub-sample of 20 participants,

only two of the observation variables could be entered in each analysis due to the small sample size which meant that a number of different regressions needed to be undertaken. SEN was entered at the first step for each analysis, followed by the classroom and breaktime variables. It must be recognised that given the small sample sizes included in the regression analyses below, the findings are by no means conclusive and can only be viewed as indicative of potential patterns and relationships between the variables. The generalisability of the results are discussed further in the discussion.

Work Preference

Table 16: Model of hierarchical regression with work preference as the dependent variable and selected variables from the pupil questionnaires and observational data as predictors.

Model	Std β	R^2
1a. SEN	-.21*	.05***
1b. SEN	-.17	
(PQ) Perceived classroom contact	-.02	
(PQ) Perceived playground contact	.54***	.32**
2a. SEN+	-.57**	.33**
2b. SEN+	-.25	
(CO) Total peer interactions in class	.52*	.49**
3b. SEN+	-.12	
(PO) Peer interactions at break (social)	.59*	.47**
4b. SEN+	-.37	
(CO) TA interactions in class	-.39as	.44**
5b. SEN+	-.56*	
(CO) Teacher support in class	-.03	.33*
6b. SEN+	-.55*	
(CO) TA support in class	-.29	.41*
7b. SEN+	-.37	
(CO) Total adult interaction	-.38as	.43**
8b. SEN+	-.36	
(CO) Total support in class	-.34	.40*

****=p<.001; **=p<.01; *=p<.05; as=approaching significance p<.10*

Note 1. [+]this model was for just the sub-sample (n=20).

Note 2. The information for SEN in model 2a is similar for models 2a to 8b and so is only presented once.

Table 16 shows that initially, SEN was a significant predictor of work preference although it had a low R^2 (.05). However, when further variables from the pupil questionnaire data set were added to the model (model 1b), the predictive power of SEN was overtaken by perceived playground contact which was found to be the only significant predictor of work preference (Std. β= .54). Adding the further variables improved the model (R^2= .32) from that of SEN alone (R^2= .05) and the analysis showed that a positive relationship was identified between perceived playground contact and work preference scores.

For most of the subsequent analyses the predictive power of SEN was over-taken by other measures in the second phase of the analyses, suggesting that there were a number of measures that were more predictive of work preference than SEN. For example, total peer interactions in class produced a good model (R^2 = .49) with this variable being a stronger predictor (Std. β = 0.52) of work preference scores than SEN (Std. β = -.25). In addition, peer interactions at break also produced a good model (R^2 = .47), and was a better predictor of work preference scores (Std. β = 0.59) than SEN (Std. β = -.12). Both peer interactions at break and peer interactions in class were positively related to work preference scores. Subsequent analyses did not identify further significant predictors of work preference.

The analysis found that SEN and peer interactions in class produced the strongest model and therefore explained the most amount of variance (49%) in work preference scores over all of the other variables analysed.

Social Preference

Table 17: Model of hierarchical regression with social preference as the dependent variable and selected variables from the pupil questionnaires and observational data as predictors.

Model	Std β	R^2
1a. SEN	-.25***	.06*
1b. SEN	-.19*	
(PQ) Reciprocal best friend nominations	.20	
(PQ) Perceived classroom contact	.07	
(PQ) Perceived playground contact	.39***	.32***
2a. SEN+	-.51*	.26*
2b. SEN+	-.13	
(CO) Total peer interactions in class	.61*	.48**
3b. SEN+	-.12	
(PO) Peer interactions at break (social)	.51	.37*
4b. SEN+	-.33	
(CO) TA interactions in class	-.35	.35*
5b. SEN+	-.36	
(CO) Total adult interaction	-.29	.32*

****=p<.001; **=p<.01; *=p<.05; as=approaching significance p<.10*

Note 1. +this model was for just the sub-sample.

Note 2. The information for SEN in model 2a is similar for models 2a to 5b and so is only presented once.

Model 1a shows that the model for SEN was weak, (R^2 = .06) suggesting that SEN could only account for 6% of the variance in social preference scores. When other variables from the questionnaire data were added to the model (1b), a better model was produced (R^2 = 32). Perceived playground contact (β=.39) was found to be positively and significantly associated with social preference and was found to be a better predictor of work preference scores than SEN (although SEN remained to be a significant predictor, β=-.19). Reciprocal best friend nominations and perceived classroom contact were not significant.

When the observation variables were analysed, a good model was produced for peer interactions in class (R^2=.48) with total peer interactions in class highlighted as a significant and positive predictor of social preference

scores (Std. β = .61). In contrast, SEN was not found to be a significant predictor of social preference in this model (Std. β = -.13). Although peer interactions at break had a positive Std. β of .51, this did not reach significance. The analyses involving total adult interactions in class and TA interactions in class did not identify any further significant predictors.

The analysis found that SEN and peer interactions in class produced the strongest model and therefore explained the most amount of variance (48%) in social preference scores over all of the other variables analysed.

Reciprocal Best Friend Nominations

Table 18: Model of hierarchical regression with reciprocal best friend nominations as the dependent variable and selected variables from the pupil questionnaires and observational data as predictors.

Model	Std β	R^2
1a. SEN	-.15	.02
1b. SEN	-.08	
(PQ) Perceived playground contact	.09	
(PQ) Social preference	.26*	.11*
2a. SEN+	-.62*	.38*
2b. SEN+	-.29	
(CO) Total peer interactions in class	.49as	.51**
3b. SEN+	-.27	.48*
(PO) Peer interactions at break (social)	.46	
4b. SEN+	-.52*	.42*
(CO) Teacher interactions in class	.23	
5b. SEN+	-.55*	.39*
(CO) TA interactions in class	-.14	
6b. SEN+	-.70*	.40*
(CO) Teacher support in class	.17	
7b. SEN+	-.60*	.47*
(CO) TA support in class	-.30	
8b. SEN+	-.50as	.41*
(CO) Total adult interaction	-.22	
9b. SEN+	-.43	
(CO) Total support in class	-.28	.42*

****=p<.001; **=p<.01; *=p<.05; as=approaching significance p<.10*

Note 1. [+]this model was for just the sub-sample.

Note 2. The information for SEN in model 2a is similar for models 2b to 9b and so is only presented once.

The model for SEN (with whole sample) (1a) had a low R^2 value (R^2 = .02) indicating that it was not a good fit for the data. When other variables from the questionnaire data were added to the model (1b), this led to a slight improvement in the model (R^2 = .11) which was found to be significant. In model 1b, social preference was the only significant predictor of reciprocal best friend nominations in which a positive relationship was found.

When the observation data was analysed, SEN produced a good model (R^2 = .38) and was found to be a negatively and significantly related to reciprocal best friend nominations (Std. β = -.62). When total interactions in class were added to the model (2b), the R^2 increased to .51. Total peer interactions in class were found to be a better predictor of reciprocal best friend nominations (Std β = .49) than SEN (Std β = -.29). This result was approaching significance and with a bigger sample may have achieved a significant result.

The analysis found that SEN and peer interactions in class produced the strongest model and therefore explained the most amount of variance (51%) in reciprocal best friend nominations over all of the other variables analysed.

Peer Interactions at Break

Table 19: Model of hierarchical regression with peer interactions at breaktime as the dependent variable and selected variables from the pupil questionnaires and observational data as predictors.

Model	Std β	R^2
1a. SEN+	-.74**	.55**
1b. SEN+	.50*	
(PQ) Reciprocal best friend nominations	.23	
(PQ) Social preference	.24	.66**
2b. SEN+	-.70***	
(PQ) Perceived playground contact	.28	.66***
3b. SEN+	-.57**	.64***
(CO) Total peer interactions in class	.31	
4b. SEN+	-.61**	.71***
(CO) Teacher interactions in class	-.39*	
5b. SEN+	-.52**	.75***
(CO) TA interactions in class	-.47**	
6b. SEN+	-.87	.64***
(CO) Teacher support in class	.24	
7b. SEN+	-.75***	.64***
(CO) TA support in class	-.24	
8b. SEN+	-.52**	.73***
(CO) Total adult interaction	-.46**	
9b. SEN+	-.56**	.66***
(CO) Total support in class	-.34as	

****=p<.001; **=p<.01; *=p<.05; as=approaching significance p<.10*

Note 1. +this model was for just the sub-sample.

Note 2. The information for SEN in model 1a is similar for models 1b to 9b and so is only presented once.

The model for SEN was found to produce a high and significant R^2 (R^2 = .55) suggesting that SEN accounted for 55% of the variance in scores for peer interactions at break. However, this model was improved when other variables were added to the model. For example, the model produced for teacher interactions in class was high (R^2 = .71) and showed that this variable was also a significant predictor of breaktime peer interaction scores (Std β = -.39). However, SEN remained to be the strongest predictor of the

variance in scores within this model (Std β= -.61). Both SEN and teacher interactions in class were found to be negatively related to breaktime peer interactions.

Similarly, the model for TA interactions in class (R^2 = .75) and total adult interactions R^2 = .73) were high and both of these variables were found to be significant predictors of breaktime peer interactions whereby a negative relationship was identified. The Std β scores for these variables were -.47 and -.46 respectively. However, for both of these models, SEN was still found to be the strongest predictor of the dependant variable.

None of the other analyses identified any further significant predictors, suggesting that SEN was the strongest predictor of social peer interactions at breaktime than any of the other variables analysed. One finding from this analysis is that SEN and TA interactions produced the strongest model and therefore explained the most amount of variance (75%) of breaktime peer interaction scores over all of the other variables analysed.

However, it must be recognised that given the small sample size included in this part of the regression analyses, that even in the case of the strongest model, the results are by no means conclusive.

4.11 Summary of findings from the correlation and multiple regression analysis

- Peer contact in the classroom was positively correlated with a range of peer relationship measures whereby pupils who engaged in the least peer contact in the classroom were least liked in work and social contexts and had fewer reciprocal friendships.
- Peer contact in the classroom was positively and highly correlated with the frequency of peer interactions at breaktime whereby pupils who engaged in the least peer contact in the classroom were least likely to engage in social interactions with their peers at breaktime.
- Adult involvement in the classroom was negatively associated with peer preference with an overall trend suggesting that pupils who had the greatest levels of adult involvement were least liked in social and work contexts.

- Adult involvement in the classroom was negatively associated with social peer interactions at breaktime, where pupils who had the greatest levels of adult involvement engaged in the least social peer interactions at breaktime.

4.12. Interview analysis

Five over-riding themes, each with a set of subthemes emerged from the data: positive aspects of friendships, negative aspects of friendships, positive aspects of breaktimes, negative aspects of breaktime and breaktime provision and context. Frequency analysis has been presented for each subtheme and individual code (node) to show how the codes varied by participants. This analysis allowed for both group and individual themes to be analysed and valued. In Tables 20-24, the participant identification codes of pupils who contributed to a subtheme (sources) and the overall frequency of codes are presented (references). All names provided have been altered to protect anonymity.

4.13. Theme 1: Positive aspects of friendships

This theme captures the participants perceptions of, and attitudes towards, their friendships which are positive in nature. The subthemes included in this theme are: showing kindness, spending time together, having friends in and out of class. Table 20 presents an overview of the subthemes and nodes and how these vary across the participants.

Table 20: Sub-themes and nodes for the theme; positive aspects of friendships

Theme 1: Positive aspects of friendships			
Sub-themes	Nodes	Sources	References
Showing kindness	• Friendships about looking after you	3, 4, 6	4
	• Friendships about helping and supporting you	2, 4, 5, 6, 10,	15
	• Friendships about being kind	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	19
	• Friendships about valuing you	2, 3, 7, 10	7
	• Friendships about respect	3	4
Spending time together	• Friendships are about people playing with you	1, 3, 5, 7, 8, 9,10	11
	• Friendships are about companionship	7, 8, 9, 10,	4
	• Friendships about making each other laugh	3, 4, 5, 6, 8	8
	• Happy about friendships	2, 3, 6, 8, 9, 10	11
Having friends in and out of class	• Has some friends	1, 7	3
	• Has lots of friends	1, 2, 4, 10	10
	• More friends outside of school	7, 9	3
	• Siblings as friends and helping with friendships	2, 7	5

4.13.1. Subtheme 1: Showing kindness

All the pupils in this study appeared to have a similar understanding of 'friendship' and used similar words and examples to describe what friendships meant to them. All pupils referred to 'showing kindness' as an important aspect of friendships and for many, this was a defining feature of a friend.

> *2F- Friendship is something where someone be's kind to you and then you have to be kind to them back.*

> *1M- It means being kind to each other and being friendly.*

In addition, many pupils described how they had experienced significant aspects of kindness in their own friendships with peers.

3F- Well, they're really kind and careful with me... every time they play, like they play rough, I tell them to stop and then they actually stop. So they're friends because they listen to me. Friendship to me is respecting one another and being kind to one-another.

However, there were some individual differences relating to the types 'kind' behaviours reported within their friendships. For one pupil, being supported by others when involved in a fight was a primary function of friendship for them.

6M- A friend is like someone who like looks after you. So, if someone got into a fight they would probably back you.

Another pupil described how taking the blame for someone when they are in trouble is for her, a key defining feature of friendships.

2F- When, I get in such big trouble, we all get in trouble, I will say "no it's me that did it" even if it was someone else, because they're friends and that's what friends do.

4.13.2. Subtheme 2: Spending time together

'Spending time together' emerged as another key characteristic of friendships, with all ten pupils referring to this within their interview. Breaktimes were revealed to be an important context for friendships to develop as many pupils reported that playing with others on the playground was an important and defining feature of their friendships.

9M- They are my friends because they play with me (.) Even when I am alone they play with me. So they come up to me on the playground and say, "do you want to play with us?".

1M- Hmm Ahmed is a good friend because he wants to play with me all the time and he likes me.

Most of the participants had positive comments to make about their friendships with just over half of the pupils reporting that overall, they are happy with their friendships at school. A number of participants also commented that they would not change anything about their friendships at school.

3F- I have lovely friendships at school. Because my friends respect me for who I am.

9M- I wouldn't want anything else to be different. I wouldn't change anything about my friendships. I have got good friendships.

4.13.3. Subtheme 3: Having friends in and out of class

The number of friends that pupils reported as having and the level of contentment that pupils had in relation to their number of friends at school varied significantly between the participants. However, all of the pupils interviewed told me that they have at least one friend at school. Some participants spoke about having friends in a positive way and described having friends as an aspect of their experiences that they valued and desired.

2F-So you know the people in my class they're so kind. Because if someone gets in trouble, they are still our friends. It doesn't matter what colour they're on it's about who they are, they will still be your friend. And I have many friends.

However, it is important to note that a few pupils gave contrasting comments at other times in the interview with and expressed that they often felt lonely on the playground. This will be explored further in theme four.

Although most of the pupils described their classmates as a source of positive friendships, a number of pupils also spoke about the importance of

their friendships outside of class. Some pupils spoke about their friendships with siblings as an important social relationship for them, and described the ways in which their siblings had helped them at school, for example by mediating peer conflicts or easing loneliness of the playground.

2F- Like sometimes my brother and me, if no-one is my friend, me and my brother and my brothers' friends play together.

One pupil described how their friendships outside of school were more valuable than their friendships within their class.

7F- Well I've got friends out of school and they are better friends.

4.14. Theme 2: Negative aspects of friendships

This theme captures the participants perceptions of and attitudes towards their friendships which are negative in nature. The subthemes included in this theme are; unhappy about friendships and unwanted behaviour from peers.

Table 21: Sub-themes and nodes for the theme; negative aspects of friendships

Theme 2: Negative aspects of friendships			
Sub-themes	Nodes	Sources	References
Unhappy about friendships	• Compromising to make friends happy	7, 10	5
	• Upset about friendships	3, 9, 10	10
	• Dislikes peers	1, 5, 6, 7,	9
	• Unhappy memories of friendships	2, 3, 7, 10	9
	• Friendships getting worse	1, 2, 4	8
	• Jealous of other people's friendships	1	3
	• Dislikes school because of friends	5	3
	• Wanting more friends	1, 7	4
	• School sanctions as a barrier to friendships	1, 5	5

Unwanted behaviour from peers	• Peers annoying	1, 5, 6	10
	• Peers unkind	1, 2, 3, 4, 5, 6, 4, 7,10	21
	• Physical aggression from peers	1, 3, 5, 6, 7, 10	10
	• Wanting more kindness from peers	3, 6	4
	• Being told on and blamed by peers	5, 7, 10	5
	• Bullied	3, 5, 7	6
	• People being unkind to friend	6, 7	3
	• Disagreements with friends	1, 6, 10	8

4.14.1. Subtheme 1: Unhappy about friendships

Although many positive aspects of friendships were acknowledged by the pupils in the study, all of the pupils apart from one (8M) described at least one element of their friendships that they disliked or wanted to be different.

Of the remaining 9 pupils who identified negative aspects of their friendships, some pupils described how they had to make unwanted sacrifices and compromises to please their friends and a number of pupils described how their friendships in school had caused them to feel physically upset.

> *3F- I remember when this day came, I said, can I play, like we are going to play teachers in the class, because it was wet play and I said can I play? And she said go and play another game. That really hurt me though. That put me down all day.*

Several pupils also expressed that they disliked a number of their classmates due to the way that they made them feel and the way they interacted with them. One pupil (5M) reported that the difficulties they had with their friendships in class had led to them not liking school altogether.

> *6M- My classmates at school are OK. Well it depends who I'm with really. Because some people I don't really like in my class….People who I don't like, it's because they annoy me, they shout in my face,*

there's these people who constantly do it, they just doesn't stop doing it. And that's why I get a bit annoyed.

Four of the pupils described how aspects of their friendships had previously been challenging in the past, but were now improving. In contrast however, the same number of participants described how there were aspects of their friendships that seemed to be getting worse.

2F- I just think as you get to an adult it gets worser and worser like as a child it's ok and then as you get to an adult it gets worser…. it's ok but when I was smaller it was even better.

One pupil (7F) described herself as having limited friendships at school and said that this was one of the first things she would change about school if she could.

7F- I like school …but I don't really have any friends though.

7F- If I could change something, I don't know, I'd have more friends.

Pupils described how they had received school sanctions for poor behaviour in class which often meant that they missed a significant amount of time from break. They described how missing this time from break had resulted in a reduction of time spent with peers at break which had resulted in negative consequences for the friendships and breaktimes.

1M- Well, the first day that that boy came, Duane, that was when everyone was making friends with each other and I had to go to the headteacher so I missed it.

4.14.2. Subtheme 2: Unwanted behaviour from peers

Most participants described experiences involving unwanted behaviours from their friends and classmates at school. Pupils gave descriptions of the ways in which their classmates acted in unfriendly ways

towards them by teasing them, saying unkind words or being verbally offensive.

6M- Because, we don't like them and they don't like us, like she comes up to us and shouts our name in our face.

Pupils also provided a number of examples in which they had experienced physical aggression from their peers. Some of the pupils referred to incidents of physical and verbal aggression as 'bullying' and described themselves as victims of bullying.

1M- They won't let me play with them. Like there was this time when a boy kicked me…I was sitting in a bench before the girls and him came. And then he kicked me and I fell on to the floor.

A number of pupils spoke about their discontent that other children had 'told' on them and gave examples of how they had been unfairly blamed by their classmates. Participants acknowledged this to be an undesirable trait and often used these characteristics to distinguish friends from non-friends.

5M- She's so annoying! She keeps trying to get me in trouble! She's a snitch!
5M- She just tells lies to get me told off! Sometimes I push her and then she cries. She whinges a lot!!

Pupils described the disagreements and arguments that they had experienced at school. Pupils spoke about the ways in which game choice and implementing rules in play often led to disagreements between friends at breaktime.

6M - We all decide like what we wanna play but sometimes we have a little row about it

4.15. Theme 3: Positive aspects of breaktimes

This theme captures the participants perceptions of and attitudes towards their breaktimes which are positive in nature. The subthemes included in this theme are: benefits of breaktime and breaktime games and activities.

Table 22: Sub-themes and nodes for the theme; positive aspects of breaktimes

Theme 3: Positive aspects of breaktimes			
Sub-themes	Nodes	Sources	References
Benefits of breaktimes	• Breaktime allows for talking	2, 6, 8	4
	• Breaktime as a chance to eat food	1, 6	3
	• Breaktime an opportunity to play	1, 2, 3, 6, 8, 9	19
	• Breaktime give freedom	2, 4	3
	• Breaktime provides a break from work	2, 3, 6, 7	8
	• Breaktime gives energy	1, 3, 6	4
	• Breaktime fun	1, 2, 5, 6, 8, 10	10
	• Breaktime an opportunity for fresh air	6, 7, 9	6
	• Breaktime provides physical exercise	3, 10	5
	• Breaktime spending time with friends	1, 3, 6, 8	8
	• Breaktime positive feelings	1, 2, 4, 5, 6, 8	11
	• School good because of breaktimes	1, 2, 3, 4, 6, 8	7
Breaktime games and activities	• Types of games that can be played at break	1, 2, 3, 5, 6	7
	• Types of activities that I like to engage in at break	1, 2, 4, 6, 8, 9, 10	32
	• In control of playground games and playmates	1, 2, 3, 8, 9, 10	21

4.15.1. Subtheme 1: Benefits of breaktimes

The pupils spoke about their feelings and attitudes towards breaktime. A major commonality was the level of importance that pupils attributed to breaktime with pupils giving examples of a large range of benefits that breaktimes provided for them. Pupils spoke about how much they enjoyed breaktime and discussed how breaktimes were the aspect of the school day that they enjoyed more than any other. Pupils described the many practical benefits that breaktime offered in terms of providing an opportunity to eat food, see their siblings and friends and take part in their favourite activities which centred around games and play.

> *8M- If we didn't have breaktimes it would be really boring, no fun because you couldn't even play football. I wouldn't like it.*

Pupils also described breaktimes as providing them with a sense of freedom and a break from work. Many pupils discussed how it would be difficult to continue learning if they were not able to stop for break. Other pupils described how breaktimes were energising for them and helped them to stay alert.

> *3F- Because you get to run around, and every time we work, breaks mean we have the energy to actually do it.*

> *4M- You get to shout, you can do whatever you want, that makes me happy because if I shout in class I will get in trouble but at breaktime you can do what you want.*

The physical benefits of breaktimes were also discussed. Pupils spoke about the opportunities that breaktimes provided for them in relation to improving their physical health by allowing them an opportunity to relax, get 'fresh air' and engage in physical exercise.

> *10F- I like them. Well, if we didn't have breaktimes we wouldn't have a chance to run around.*

4.15.2. Subtheme 2: Breaktime games and activities

The majority of pupils spoke positively about the choice of playground activities that were on offer. These included games and activities that the school provided resources for, for example: basketball, champ, football and drawing, as well as games that pupils could facilitate themselves, for example, telling ghost stories, dancing and just conversation.

There were noticeable gender differences relating to the types of games and activities that pupils described as their preferred breaktime activity. Boys tended to prefer games with balls including: champ, basketball, football and snoozeball, whereas girls preferred skipping, symbolic and sedentary play.

> *10F- And sometimes with India, well, with India she says, there are lots of flowers and we like to pick them.*

In addition, one participant's response indicated that she has also observed a number of differences in relation to the types of games and behaviour that boys and girls engage in at break.

> *3F- They are very rough. Especially the boys, because boys are really rough. The girls just love doing hair, I let them do my hair because they love hair! They love doing bows, they love diaries, everything.*

Some of the pupils thought that they had a good level of control over the games and activities that they played with friends, and described this as an aspect of breaktime that they took great pleasure and pride in. Pupils described how they felt special and valued when they were allowed to choose what was played.

> *3F Me! I get to choose what we play everyday. Because I am the special one, because I always respect my friends and they treat me and I treat them how they want to be treated. I always get to choose.*

4.15. Theme 4: Negative aspects of breaktimes

This theme captures the participants perceptions of and attitudes towards their breaktimes which are negative in nature. The subthemes included in this theme are, not enough people to play with and unwanted aspects of breaktime.

Table 23 Sub-themes and nodes for the theme; negative aspects of breaktimes

Theme 4: Negative aspects of breaktimes			
Sub-themes	Nodes	Sources	References
Not enough people to play with	• Wanting more people to play with	1, 10	4
	• Playing alone	1, 3, 6, 7, 9 10	20
	• Rejected in play	1, 2, 3, 7, 9, 10	20
	• Not wanting to play with certain people	1, 2, 3	5
Unwanted aspects of breaktimes	• Rough play at breaktime	1, 3, 10	3
	• Wanting to have more choice in breaktime games	1, 2, 5, 6, 8, 10	10
	• Wanting to have a different role in breaktime games	10	3
	• Getting in trouble at breaktimes	1, 2, 5, 6, 8,	5
	• Ambivalent about breaktimes	7, 10	3

4.15.1. Subtheme 1: Not enough people to play with

Pupils discussed who they spent time with at breaktime, to which a wide range of responses were given. Although some pupils suggested that they always had someone to play with when they wanted to, some spoke about wanting to have more people to play whilst others suggested that they had no-one to play with at all. For the group of children that described having no-

one to play with, some showed a level of acceptance to this, whilst others suggested that this was something that they really wanted to change.

> *7F- I only have Grace as a friend and I don't really like that sometimes when Grace is in violin (.) like on Friday's I don't have anyone to play with…. I really don't like those breaktimes, because I just have to play by myself especially if my sister isn't there.*

> *6M- Well, sometimes, but sometimes they go somewhere else and I'm just outside, on my own.*

Most of the of the pupils described situations in which they had been rejected by their peers when they wanted to play. Some pupils described these experiences as standalone events which occurred occasionally, whilst others seemed to suggest that this type of rejection was ongoing and frequent in nature.

> *3F- Yeah, she won't let me play, she won't let me join in any games. Like even though I was allowed to play it, she wouldn't chase me because she wouldn't want me to be allowed to play…. That broke my heart, because I just wanted to play with her.*

> *10F- Well I really, really wanted to play with her, so when she said No, afterwards I just sat down and cried. I felt sad.*

Pupils spoke about how they rejected others in play because they did not like how they were treated by their peers and so wanted to avoid spending time with them. One pupil described a number of occasions in which he rejected his peers in play situations. He described how rejecting his peers sometimes meant that he had to play by himself, but continued to reject others in spite of this.

> *1M- Because they normally annoy us, so I said "No, because you don't really wanna play". So he kept on pushing me and the Sarah was like, "I just wanna play with him because you're not letting him in" so then she left me and went and played with them and then I spent the whole lunch time by myself.*

4.15.2. Subtheme 2: Unwanted aspects of breaktime

Pupils spoke about the aspects of breaktimes that they disliked. Whilst a range of unwanted aspects of breaktimes were highlighted, many were related to the games and activities that were played and the role that pupils held within this. A number of pupils referred to 'rough play' at break and described this as a barrier to play. Specifically, pupils described 'rough play' as a characteristic that was associated with boys and discussed how rough play acted as a barrier for girls taking part in certain activities. These descriptions were consistent across male and female pupils.

> *3F- They are very rough. Especially the boys, because boys are really rough.*

Many pupils discussed their discontent around the games they were playing at breaktime and discussed how they wanted to have more choice in the games that they played. A number of pupils commented that they regularly had to play games that were chosen for them by others.

> *8M- Well he's in charge of me, he like decides everything. Like, like (.) "Gary and Nathan are the captains" (.) of football…it's 'cause he's taller.*
> *6M- I'd like to make up the rules more than I do.*

Some pupils spoke about getting into trouble at breaktime and described this as a negative aspect of breaktime. They provided examples of the behaviours that they engaged in that led to them being disciplined and described the types of sanctions that they received as a result.

> *2F- Yeah so sometimes I like breaktimes because I like to play games yeah? But sometimes I don't like to get in trouble and I don't like to fight and everything, so there are all these good things about break*

and all these bad things about break. But there's more good things than bad things.

One pupil (7F) described how she was unsure whether she enjoyed breaktimes and said couldn't think of any breaktime experiences that were wholly positive.

7F- I don't really remember a time that I really liked breaktime, I'm not saying I don't like it but I've just never really loved it.

4.15. Theme 5: Breaktime provision and context

This theme captures the breaktime provision and context. The subthemes included in this theme are, adult support at breaktimes and breaktime arrangements. Due to space limitations and the relevance of findings, the interview analysis relating to theme 5 are presented in Appendix N.

Table 24: Sub-themes and nodes for the theme; negative aspects of breatimes

Theme 5: Breaktime provision and context			
Sub-themes	Nodes	Sources	References
Adult support at breaktimes	• Adults present at breaktime	1, 2, 4, 6, 7, 8 10,	15
	• Wanting teacher involvement on playground to be different	1, 2, 3, 9, 10	12
Breaktime arrangements	• Playground context	1, 4, 6, 7	6
	• Wanting different options at breaktime	1, 6	5
	• Losing time from break	1, 2, 10	5
	• Wanting longer breaktimes	1, 2, 4, 5, 6, 7, 10	21
	• Happy with breaktime length	4, 7	4

4.16. Summary of findings relating to the research questions

RQ1

- PSEN pupils engaged in less peer interactions in the classroom than NSEN pupils.
- PSEN engaged in fewer social interactions and more parallel interactions and solitary behaviours at breaktime than NSEN pupils.
- PSEN scored lower than NSEN pupils on a range of peer relationship measures.
- Peer contact was positively associated with a range of peer relationship measures.
- 'SEN and peer contact in the classroom' explained the most amount of variance in scores for work preference, social preference and reciprocal friendship.

RQ2

- PSEN engaged in more 'onlooking' and 'unoccupied' behaviours than NSEN.
- In the classroom, pupils in the SEN group engaged in more interactions with adults than NSEN pupils.
- PSEN received more teacher and TA support in the classroom compared to NSEN pupils.
- PSEN were found to engage in less 'social' interactions in the classroom than NSEN pupils. In contrast, PSEN were more likely to engage in 'help-seeking' interactions than were NSEN pupils.
- Adult involvement was negatively associated with a range of peer relationship measures.
- 'SEN and TA interactions in the classroom' explained the most amount of variance in the level of 'peer interactions at break'.

RQ3

- All participants said that they had at least one friend at school.
- 'Kindness', 'support' and 'help' were highlighted by participants as key characteristics of a friend.

- Nearly all of the pupils commented on aspects of their friendships that they were dissatisfied with.
- Breaktimes were described as having a wide range of benefits for pupils.
- Themes of freedom, power and choice within breaktime interactions arose from the interviews.
- Many pupils commented on situations where they had nobody to play with at breakime.

Chapter 5: Discussion

5.1. Overview

In this final chapter, the key findings will be discussed in relation to the relevant research questions. The strengths, limitations and ideas for future research will then be considered and finally, the implications of the research for policy and practice will be reviewed.

The current research aimed to enrich our understanding of the peer relations of PSEN in mainstream provisions by looking beyond classroom interactions to explore the peer interactions of pupils in the playground. This study also sought to understand the ways in which classroom factors may influence peer relations and breaktime experiences and specifically aimed to examine the ways in which levels of peer contact and adult involvement in the classroom are related to levels of peer acceptance and breaktime interactions for the participants in the study. The qualitative and quantitative findings have provided a detailed account of the experiences that PSEN have of their breaktimes and peer relations at school, in comparison to the NSEN peers.

5.2. Results relating to RQ1

The first research question asked, '*what is the relationship between the frequency of peer contact (in class and on the playground) and peer relations for children with and without SEN?'*

5.2.1. Peer contact in class and at breaktime

The study showed that in the classroom, PSEN engaged in less peer interactions than NSEN pupils. These findings were identified in both the direct observations and the reported measures of peer contact through the pupil questionnaires, adding weight to the finding through triangulation of methods. In addition, PSEN were reported to spend more time outside of the classroom than were MA/HA pupils. These results are consistent with previous research (Frederickson and Furnham, 2004; Webster & Blatchford

2013) where it has been found that PSEN engage in significantly fewer interactions with peers compared to comparative pupils and have been found to spend significant periods of time away from their main classroom, their NSEN peers and class teacher.

The current study extends our understanding of peer relations by examining the levels of peer contact in the playground. The observational data showed that PSEN engaged in less peer contact with their peers at breaktime than did NSEN pupils. Specifically, PSEN were found to engage in less social interactions and more parallel and solitary interactions in the playground than NSEN pupils, adding support to the argument that PSEN are less integrated within social school settings than are NSEN pupils. It is interesting to note however, that there were no significant differences between SEN and NSEN pupils in the reported measures of perceived peer contact at breaktime. This finding indicates that pupils appeared to over-estimate the amount of time they spent engaging with PSEN at breaktime, possibly due to the unstructured nature of breaktimes and the implications that this has on the ability to accurately recall their peer interactions.

Whilst the present study suggests that the gap between peer contact for pupils with and without SEN still exists and extends to classroom and social contexts, the picture presented is not entirely negative for PSEN. In relation to the overall breaktime interactions that pupils engage in, it was found that PSEN engaged in social interactions (over parallel and solitary interactions) for a large majority of the time (73%). Therefore, whilst differences were identified between the breaktime interactions of pupils with and without SEN, it is possible that the high levels of social interactions overall could be viewed as a positive result for the PSEN involved. These themes of satisfaction with friendships will be explored in the discussion section related to RQ3 which looks at the qualitative analysis.

5.2.3. Peer relations measures

The study showed that PSEN received lower peer preference scores in both social and work contexts. Specifically, PSEN were rejected more often for the ‘like to work with’ question and were accepted less often for the ‘like to

play with' question than were NSEN pupils. In addition, PSEN received fewer best friend nominations and fewer reciprocal friendships than NSEN pupils. These findings reflect previous research which has shown that PSEN are typically less accepted than their NSEN peers (e.g. Avramidis, 2013; Frederickson and Furnham, 2004).

Pupils with and without SEN obtained higher work preference scores than social preference scores. This finding corresponds with previous research (Pinto 2015) and may reflect the fact that in the classroom, pupils are provided with a large number of scaffolds to guide their interactions and are more commonly expected to work with different groups of people, meaning that pupils may perceive it to be less arduous to interact with a range of different people in the classroom environment than in the playground environment.

5.2.4. Attainment

There is some evidence from the present study which suggests that PSEN and LA pupils had similar peer relations and levels of peer contact. For example, there were no statistical differences between peer preference scores or reciprocal friendship scores for LA and PSEN. These results support the findings from Nowicki (2003), who concluded that PSEN are not at a greater social risk than their attaining peers. Alternatively, however, it may also be possible that the LA sample used within study may have included pupils with undiagnosed SEN, which may have led to these pupils being exposed to a similar amount of additional provision which could help to explain the similarities in levels of peer contact and peer relations for these pupils. Indeed, a novel finding from the teacher questionnaires was that there were no significant differences in the amount of time that SEN and LA pupils were reported to spend outside of the classroom, or the amount of time they were reported to be supported by an adult. Furthermore, the pupil questionnaires indicated that there were no statistical differences between the levels of perceived peer contact in class for SEN and LA pupils. These findings suggest that a small number of peer relationship measures may be

more closely associated with the level of support that pupils receive in the classroom, and subsequent peer contact, as opposed to SEN type.

It is also important to note that in relation to unilateral friendship nominations, differences were noted between SEN and LA pupils as well as between SEN and MA/HA pupils suggesting that for this measure, PSEN were at greater risk than were LA pupils. These findings suggest that whilst PSEN were as likely as LA and MA/HA pupils to form reciprocal friendships with a small number of close friends, overall, they were less likely than LA pupils to be nominated as a friend by the rest of the pupils in the class.

5.2.5. The relationship between peer contact and peer relations

Given that PSEN were found to have less peer contact than NSEN pupils and were rated less favourably than their peers, the study sought to examine the relationship between these two variables: contact and peer relations. The principles underlying 'contact theory' and the 'mere exposure hypothesis' indicate that contact is an important and fundamental factor for preference to occur, suggesting that opportunities for peer contact in school settings could influence the successful formation of peer relationships. The present study found significant support for such theories and found that a strong relationship exists between peer contact and peer preference. For example, work and social preference scores and reciprocal friendships were positively and very highly correlated with measures of peer contact in the classroom, whereby pupils who engaged in more peer contact in the classroom received more positive peer preference scores and had more reciprocal friendships than those who engaged in less peer contact.

Furthermore, the regression analyses showed that the model produced for 'SEN and peer interactions in class' obtained the highest R^2 values, and therefore accounted for the most amount of variance in scores for three of the four dependent variables: work preference, social preference and reciprocal best friend nominations. This suggests that in the present study, the variance in these dependent variables was best explained by a combination of SEN type and 'peer interactions in class' over any other

combinations of variables analysed. In addition, the regression analysis revealed that when SEN was included as the first step in the analysis and 'peer interactions in class' was included as the second step, the addition of 'peer interactions in class' improved the model for all for four of the dependent variables, suggesting that this model provides a better explanation of the variance in scores than just SEN alone, highlighting the significance of peer contact in the classroom, over and above SEN needs, on subsequent peer relations. Moreover, 'Peer interactions in class' was found to be a significant, positive and powerful predictor of work preference scores and was the strongest predictor of social preference scores of all of the variables analysed. These results add further evidence to suggest that a clear relationship exists between peer contact in the classroom and subsequent peer relations whereby greater contact is associated with more favourable peer preference scores and a higher number of reciprocal friendships.

These findings correspond with previous studies which have highlighted the connection between proximity between pupils in the classroom and subsequent peer preference (e.g. Pinto, 2015; Van Dem Berg & Cillessen, 2015). It follows that by increasing the opportunities for peer contact in the classroom setting, it allows unfamiliar pupils to be introduced to one another, to get to know one another and also increases the chances that these pupils will be able to find common ground over the discovery of shared interests and goals.

However, the present study builds upon this research by showing that not only is peer contact in the classroom associated with less favourable measures of peer relations, it also very strongly correlated with the frequency of social peer relations that pupils engage in at breaktime, whereby pupils who experience more peer contact in class are more likely to engage in social interactions at breaktime. Previous researchers have found that when pupils were able to choose their own seating positions in the classroom, they typically chose to sit next to the pupils that they had previously had greater levels of classroom contact with, contributing to a cycle of contact and

preference (Van Dem Berg & Cillessen, 2015). This study extends this analysis by showing that this pattern also applies to breaktime contexts whereby the opportunities that a pupil has to interact with their peers in the classroom are associated with the level of social interactions that pupil has at breaktime. This finding has significant implications for decisions about seating arrangements and opportunities for peer contact within the classroom and suggests that providing pupils with greater opportunities to interact with their peers in the classroom could be an effective way to promote social interactions at breaktimes and to improve peer relations.

The present study also found that pupils who engaged in more social contact at breaktime were also rated more positively by their peers in work and social settings, further indicating that a repeating cycle of contact and preference exists, as highlighted by previous researchers (Van Dem Berg & Cillessen, 2015). The correlations between these measures of contact and preference were also found to be very high, suggesting a strong positive relationship exists between social contact at breaktime and peer relationship measures.

5.3. Results relating to RQ2

The second research question asked, '*what is the nature of the interactions with peers and adults of pupils with and without SEN during breaktimes and in class? How does this relate to peer relations?'* Whilst the previous research question identified trends in levels of peer contact, this research questions takes a broader look into the types of interactions that pupils with and without SEN engage with in class and in the playground.

5.3.1. Adult involvement

A key finding from the current study relates to the high levels of adult involvement that PSEN experienced in their day-to-day interactions within the school setting. Within the classroom setting, PSEN were found to engage in more interactions with adults (53%) than they were with peers (47%). This differed significantly from the experiences of NSEN pupils where nearly all of

the classroom interactions were with peers (91%) in comparison to adults (9%). In addition, PSEN received greater levels of adult support in learning contexts than did NSEN pupils which was true for both teacher and TA support.

These findings support those of previous researchers which have highlighted the high levels of adult involvement for PSEN (Blatchford et al., Webster & Blatchford 2013). However, the present study builds on previous research by showing that the involvement of adults extends to playground contexts as well. For example, PSEN were found to engage in more adult interactions at breaktime than were NSEN pupils. This finding is significant given that breaktimes are described by researchers to be one of the few opportunities that pupils have to interact socially with peers, in a context relatively free of adult control (Blatchford & Baines, 2010). The study provides evidence to suggest that PSEN have even less opportunities to engage socially with peers away from the supervision of adults than do NSEN pupils. However, it is important to note that adults engaged in social interactions with PSEN at breaktime for less than 5% of their total interactions, suggesting that for the majority of breaktimes, pupils with and without SEN were free to independently interact with their peers and make choices more of their own.

Consistent with previous research (Blatchford et al., 2009; Webster & Blatchford 2013), the present study found that PSEN had more interactions with, and received more support from TAs in comparison to teachers. However, it is difficult to make direct comparisons between this study and others due to differences in the analysis techniques and the definitions of SEN used. The current study presents stark findings in relation to the ratio of TA to teacher support for all of the pupils in the study. For example, PSEN were found to be supported by a TA for 91% of all supported interactions, compared to just 9% of supported interactions when they were supported by a teacher. In comparison, NSEN were supported by an adult on very few occasions, and where this occurred, this was provided by a teacher and not a TA (less than 1% of cases). These results are potentially concerning given the research by Blatchford et al. (2009) who showed that TA support was

negatively correlated with academic progress. This finding is also significant in light of the current SEN reforms which have attempted to encourage schools to promote quality first teaching over additional interventions or support such as those from TAs. The current study provides evidence to suggest that for PSEN in these schools at least, the supported learning experience is still characterised by greater levels of TA support and adult interactions, in place of teacher involvement and peer contact.

5.3.2. The relationship between adult involvement and peer relations

Whilst previous research has explored the association between SEN type and adult interactions, this study provides a unique insight into the relationship between levels of adult support and peer preference for pupils with and without SEN. The study found that several different measures of adult involvement were negatively associated with peer preference with an overall trend suggesting that pupils who received the greatest levels of adult involvement in the classroom were least liked in social and work contexts. In relation to work preference scores specifically, classroom measures including the level of TA interactions, teacher and TA support were found to be negatively correlated. Regarding social preference scores, TA interactions in class were found to be negatively correlated. Similarly, 'social interactions at breaktime' was negatively correlated with teacher interactions in class, TA interactions in class, teacher support in class, TA support in class and overall levels of adult support and involvement.

Furthermore, the regression analyses revealed that 'SEN and TA interactions in class' accounted for the most amount of variance (75%) in scores for the 'peer interactions at break' dependent variable, over all of the classroom and breaktime factors analysed. In this model, SEN and 'TA interactions in class' were both found to be significant predictors of 'peer interactions at break', both of which were found to have a negative relationship. The fact that TA interactions in class improved the model from just SEN alone, highlights the importance of TA interactions for subsequent peer relations over and above SEN needs, whereby a greater amount of TA interactions was associated with less peer interactions at break. Although

'SEN and TA support' and 'SEN and total support in class' also produced good models for the 'peer interactions at break' dependent variable (R^2= .64 and .66 respectively), this explained less of the variance than 'SEN and TA interactions in class, suggesting that it is the level of interaction with a TA, and not just support (presence of a TA) that is most closely associated with the level of 'peer interactions at break', possibly because an 'interaction' is more visible and invasive than the presence of a TA, which may be more off-putting to peers who are seeking a social partner. In addition, although 'teacher interactions' and 'total adult interactions' were also found to be significant, negative predictors of 'peer interactions at break', these were not found to be as powerful a predictor as TA interactions, suggesting that there is something unique to TA interactions that are associated with 'less peer interactions at break'. These findings extend those of Webster & Blatchford (2013) by suggesting that not only is TA involvement detrimental to academic progress for PSEN, but that TA involvement also appears to be detrimental to a number of peer relationship measures, predominantly, peer interactions at break. It follows that the level of TA interactions in class may be a priority area to address in order to promote inclusion for SEN within mainstream schools.

By drawing together the regression analyses data from all of the dependent variables, it is possible to suggest an overall model to demonstrate the potential relationship between a number of the breaktime and classroom factors and peer relationship measures. For example, the results of the analysis suggest that the presence of SEN and high levels of TA interactions in class is associated with lower levels of peer contact in the classroom, which are subsequently associated with lower levels of peer contact at break, which is then associated with less favourable peer preference and reciprocal best friend nomination scores. Whilst it is not possible to draw firm conclusions around this hypothesised relationship within the present study, it would be beneficial for future research to look more explicitly as this relationship, to provide more substantial evidence around the impact of TA involvement of subsequent peer relations.

The study found that levels of adult involvement at breaktime were not associated with levels of work or social preference, which may be related to the relatively low levels of adult involvement at break in comparison to the classroom. This finding suggests that the adult-pupil interactions in the classroom are of greater concern to the development of peer relations for PSEN, and should therefore, form a central focus in discussion around promoting the social well-being of PSEN.

5.3.3. The identity of social contacts

Consistent with previous literature (e.g. Bradbury & Holmes, 2017), pupils with and without SEN were found to be seated by ability for a large proportion of the school day (approximately 50% of classes). These findings are potentially concerning given that previous researchers have suggested that ability seating is associated with restricted opportunities to engage in more difficult lesson content and interact with positive learning models than their NSEN peers. Indeed, PSEN in the present study were found to interact more with SEN and LA pupils in the classroom than were NSEN pupils. In addition, PSEN were found to be seated alone for 8% of the time, in comparison to less than 1% of the time for NSEN pupils, further highlighting the barrier to peer interactions in the classroom that exists for PSEN.

However, whilst PSEN engaged in more interactions with SEN and LA pupils than did NSEN pupils, overall, the majority of peer interactions in the classroom for both SEN and NSEN pupils were with NSEN MA/HA peers. In addition, within the playground setting, there were no statistical differences found in the number of SEN and LA interactions between the 2 groups.

5.3.4. The characteristics of the interactions

Having explored the identity of the social contacts for the participants in the study, the research also aimed to explore the characteristics of the interactions that pupils engaged in at breaktime and in the classroom. PSEN were found to engage in less social talk and more help-seeking behaviours in the classroom in comparison to NSEN pupils. These results can be

connected to the notion of ‘communal relationships’ as postulated by Clark and Mills (1993) and the ‘I’ll help’ frame of friendship that has been presented by Meyer et at., (1998). These descriptions of peer relationships refer to the tendency for typically developing peers to take on a caring responsibility for PSEN within an asymmetrical relationship which may emulate the relationship between a parent and child (Frederickson, 2010). As equal status has been identified as a necessary pre-requisite for preference to occur (Allport, 1954), these findings suggest that not only do PSEN engage in less frequent peer contact, but that the characteristics of their interactions are also less conducive to the development of effective and balanced peer relationships.

Differences in the characteristics of the interactions for SEN and NSEN pupils were also identified within the playground observations in which PSEN were found to engage in more ‘onlooking’ and ‘unoccupied’ behaviours than NSEN pupils. It is possible to draw parallels between these interaction types and the ‘game involvement’ roles that were presented by Blatchford & Baines (2010). For example, as unoccupied behaviours were coded as the ‘target not doing anything and not watching others’ this may relate to the game involvement role that Blatchford & Baines (2010) refer to as ‘solitary players’. Similarly, as ‘onlooking’ behaviours were coded as, the ‘target watches others engaged in an activity/game/interaction’ may relate to the ‘hoverer’ game involvement role. Whilst these ‘game involvement’ roles have been identified within the interactions of typically developing peers, this study extends our understanding of breaktime interactions by indicating the differences that may exist between the ‘game involvement’ roles of pupils with and without SEN. In this study, there is evidence to suggest that PSEN are more likely to take on the roles of solitary and hoverer game involvement roles than are NSEN pupils.

However, whilst the observational data revealed stark differences in the types of behaviours that SEN and PSEN engaged in at break, there are some positive findings to report. For example, there were no statistical differences found between the SEN and NSEN pupils for any of the

categories explored using the SCM software including social network size, position in group or centrality in group, suggesting that PSEN and NSEN pupils were indistinguishable within peer groups according to the self-reported data completed by the participants in the study, supporting research from Estell et al. (2008).

Consistent with previous research (Blatchford et al., 2003), pupils with and without SEN were found to engage in very few aggressive, disputing, and distressed behaviours at breaktime and were disciplined very infrequently. The study found that these combined behaviours accounted for less than 4% of overall breaktime interactions and as such, this study provides evidence to support the view that schools may be misplaced in their reported concerns over breaktimes, concerns which have been used as a justification to reduce breaktime length, (Blatchford & Baines, 2006). However, the results showed that a number of unwanted breaktime behaviours such as showing aggression and being disciplined were disproportionately represented within SEN interactions, suggesting that these pupils may encounter more negative breaktime experiences than their typically developing peers, findings which have been suggested in previous research (Prunty Dupont & Mcdaid, 2012; Thompson, Whitney & Smith, 1994).

5.4. Results relating to RQ3

This question asked, what are the individual views and experiences reported by PSEN about their breaktimes and peer relationships? Using qualitative methods, this question provides a deeper understanding of the experiences of peer relations and friendships for PSEN.

5.4.1. Positive experiences of friendships

There were a number of commonalities relating to the definitions that pupils provided of friendship, with key themes of ‘kindness’ and ‘spending time together’ emerging within the interviews. Specifically, pupils referred to a friend as a source of fun, respect, physical and practical support and

companionship in play. Parallels can be drawn between the definitions of friendships that were offered by the PSEN in this study and with the definitions of friendship that have been identified in the research literature on typically developing populations (e.g. Layard & Dunn, 2009; Ladd, 1999). In addition, several pupils in the present study described their satisfaction with their friendships at school and spoke positively about their experiences of friendships. Pupils described how their friends at school were kind and helpful to them and played with them on a regular basis. This supports research from Estell et al., (2008) who suggested that PSEN can, and do enjoy positive peer relationships in inclusive settings. In addition, the findings add weight to the study by Avramidis (2013), who found that despite being identified as less popular and having fewer friendships, PSEN were deemed to have a positive self-concept and felt socially accepted by their peers.

5.4.2. Negative experiences of friendships

However, it must be acknowledged that these positive experiences of friendships were not reflective of all participants in the study with some pupils commenting that they felt unhappy with their friendships, and identified their friendships as a part of their school experiences that they most wanted to change. Where negative experiences of friendships were reported, these often related to having few friendships within the school setting and not having enough people to play with at breaktime, a key theme that emerged throughout the interviews. These comments are perhaps unsurprising considering that the quantitative analysis revealed PSEN received lower scores on peer relationship measures and were found to engage in more solitary behaviours at breaktime than were NSEN pupils. The interview data indicated that pupils who were least satisfied with their friendships at school placed greater emphasis on their friendships outside of their class. For example, pupils identified children outside of school and younger siblings as being a more positive source of emotional support and companionship for them. These findings are significant given recent research which has identified that PSEN have very few opportunities to socialise with friends outside of school due to practical, social and physical constraints (Higley,

2016) and suggest that the full range of peer relations for PSEN should be considered within future research.

5.4.3. Positive experiences of breaktimes

With respect to breaktimes, participants in the study discussed a wealth of benefits that breaktimes provided for them with overall themes suggesting that breaktimes are an aspect of the school day that they greatly valued and enjoyed, with the majority of participants reporting that their breaks were not long enough. These results support the findings from the research literature which suggests that an overwhelmingly large proportion of primary and secondary aged pupils enjoy breaktimes and describe them as their most favoured part of the day (Blatchford & Baines, 2006). The present study can build upon this research by indicating that these perceptions of breaktimes are also upheld by PSEN in mainstream schools, despite the quantitative findings which highlighted that these pupils experienced a much less sociable experience of breaktimes than PSEN and were typically accepted less and rejected more than NSEN pupils.

Pupils described a range of social, emotional and physical benefits of breaktime that they personally valued. Consistent with previous research (Hartup, 1992; Pellegrini & Bohn, 2004; Ridgers et al., 2006), pupils referred to breaktimes as an opportunity to spend time with friends, to eat and to play, as well as an opportunity to engage in physical exercise, get fresh air and to have an important break from work. Pupils also discussed how breaktimes provided them with a sense of freedom, an experience that researchers have noted that children rarely encounter, despite the significant benefits that a sense of freedom from adult involvement can bring in relation to the development of problem-solving skills, planning and organisational skills, social skills and emotional development (e.g. Blatchford & Baines, 2010).

5.4.4. Negative experiences of breaktimes

Although pupils identified a wide range of breaktime benefits, the interview analysis also drew light on the extensive challenges that PSEN face during their breaktimes at school. For example, themes of unkind behaviours, including verbal and physical aggression emerged from the interviews, with

these experiences being highlighted as a key concern for the pupils. This finding corresponds with the quantitative observations in which the majority of unwanted breaktime behaviours were observed within SEN interactions. However, the interview analysis extends on the quantitative data by showing that these behaviours were acknowledged and noticed by the participants themselves. These findings correspond with previous research in the field which have highlighted elevated levels of bullying within SEN populations (e.g. Thompson, Whitney & Smith, 1994). However, the present study goes beyond this research by examining the behaviours of breaktime interactions using observational and interview methods.

5.4.5. Choice and control in breaktime interactions

Themes of choice and power emerged within the interviews, whereby pupils expressed wanting to have more influence over their breaktime activities and roles within their play. This corresponds with the observation data in which PSEN were more likely to be identified as 'onlookers' and 'unoccupied' and were therefore less likely to be involved in the organisation and instigation of games and activities at breaktime. These findings add weight to the notion that pupils with and without SEN uphold different roles within breaktime games, with the interview data suggesting that this can lead to PSEN feeling dissatisfied with their breaktime interactions. As Allport (1954) describes 'equal status' between two social contacts as a necessary pre-requisite for preference to occur, it follows that PSEN, who appear to have less control and power in social school settings, may experience greater challenges within their peer relations.

5.4.6. Adult support at breaktimes

Whilst the practical and emotional benefits that adult involvement offered pupils was discussed, themes also emerged around their discontent at the level of adult involvement during breaktimes. For example, pupils described how adult involvement at breaktime made them feel uncomfortable and restricted their privacy. These findings are significant given the quantitative results which highlighted the high levels of adult involvement that PSEN experience, and offer an important reminder of the need to access the child's

voice in decisions around the provisions that are put in place to support such children within mainstream primary schools. Privacy, self-disclosure and intimacy have been identified by researchers to be an increasingly important part of friendships as children enter adolescence (Hartup and Stevens, 1997). As such, it is possible that PSEN in the present study were seen less favourably than NSEN pupils due to the increased levels of TA involvement in the classroom and the implications of this on their growing needs for privacy from adults within their peer relationships.

5.5. Strengths of the study

This study extends our understanding of the peer relations of pupils with and without SEN in mainstream primary schools within 2 distinct school settings, the classroom and the playground, an experience of schooling often overlooked in the literature on the peer relations of PSEN. Whilst other studies have investigated the peer relations of PSEN, these studies have tended to neglect the types and characteristics of peer relations that take place within playground settings and have instead focussed on whether or not these relationships exist (Webster & Carter, 2009). Similarly, whilst previous research has investigated the experiences and perceptions of breaktimes for pupils within mainstream primary schools, this research has focused on typically developing populations and research into PSEN have been largely overlooked. The current study therefore, is valuable in drawing together these two distinct areas of research, breaktime experiences and the peer relations of PSEN. This research is timely considering the current legislative context in which mainstream schooling has been advocated for PSEN and the current trends in education in which breaktimes have been found to be reducing in the UK.

Using clear and replicable methods, this study has utilised quantitative and qualitative approaches to provide a detailed understanding of the peer relations of PSEN in mainstream provisions. Specifically, the structured observations have provided a rich account of the frequency, nature and characteristics of the social interactions that pupils engaged in at class and at break, whilst the questionnaires have provided an overview of the levels of

peer acceptance and rejection for these pupils in work and social contexts. Meanwhile, the interviews have illuminated what these patterns of interaction and acceptance mean for the individual pupils involved, whilst also providing a fuller picture of their peer relations and breaktime experiences. In doing so, this study allows for a more comprehensive understanding of peer relations that could not have otherwise been achieved through the use of one method in isolation (Bryman, 2006). As PSEN are rarely utilised in research around inclusion, the fact that the child voice has formed a central part of this enquiry can be seen a significant strength.

This study captured levels of peer acceptance and peer preference using methods that have been extensively validated in previous research. In addition, measures of perceived peer contact and observed peer contact were utilised within the study providing more extensive data. There was a medium correlation found between these two measures of peer contact suggesting that whilst the two measures are related, self-reported measures may not fully capture the overall levels of peer contact. As such, the current study is able to overcome the limitations of previous research which has relied on self-report data alone (e.g. Pinto, 2015). Furthermore, teacher rating scales were also used to complement observation data on the amount of support pupils received and the amount of time pupils spent away from the main classroom, allowing data to be drawn from a range of different sources.

5.6. Limitations of the study and ideas for future research

There are several limitations to the study which must be considered for accurate and appropriate conclusions to be drawn. Firstly, the study was conducted in two schools within one local authority and focussed on Year 4 and 5 pupils. The schools had larger than average numbers of pupils who are eligible for pupil premium funding, speak English as an additional language and reach the expected standard in reading, writing and maths. Whilst it could be argued that the results are not generalisable to other school contexts or to schools in other areas of the UK, it should be acknowledged that the present study found results that were comparable to other published studies, suggesting that the pattern of results may be reflected in wider

contexts. For the results to be considered more generalisable, further observations of lesson and breaktime interactions with a more diverse and larger sample would be required.

The study also focussed on pupils who were on the SEN register for C&I or SEMH needs, which included pupils with and without EHCPs. It is recognised that these pupils do not represent the full range of SEN, and it may be helpful for future studies to replicate the research with pupils with other forms of SEN, such as those with learning and cognition or physical and sensory needs. It is also acknowledged that the SEN categories are not discreet and therefore pupils in the study may have had overlapping SEN in two or more of the broad SEN categories. As such, it may not be possible to attribute the variances found in the study to the factors associated with solely SEMH or C&I needs.

Additionally, whilst the size and demographics of a school may affect the experiences of pupils, the interventions in place for those pupils and the school ethos is arguably more influential to the everyday social experiences of pupils and may therefore have played a significant part in the patterns of peer relations and breaktime experiences of the pupils in the study. The schools used in the present study appeared to have an average to above average inclusive ethos, and took steps to promote an atmosphere of kindness and acceptance at a classroom and whole school level. This is of particular relevance given that researchers have identified an association between school ethos and policies on peer relations (Titman, 1994 as cited by Blatchford & Baines, 2010). It will be important for future research to take into account the classroom and breaktime interventions that are taking place for these pupils, in order to capture a more complete understanding of the factors that lead to successful peer relations for PSEN.

A further limitation of the study is that it in part, relies on data which is correlational in nature, and it is therefore not possible to ascertain a causal link between the variables included within the Pearson correlations and multiple regression analysis. As such, whilst this study indicates that there is a strong relationship between peer contact in the classroom and peer

preference, and between adult involvement in the classroom and peer preference, it is also possible that there are other confounding variables that are contributing to this relationship. For example, it is possible that overall levels of peer preference are more closely related to the characteristics and behavioural traits of the participants involved, as opposed to their levels of peer contact or adult involvement per se.

This is particularly relevant given that the SEN sample used in the present study were pupils with C&I and SEMH needs. Durkin and Conti-Ramsden (2010) in their review of the social and emotional functioning of young people with specific language impairment report that pupils with language needs are at a significant social disadvantage and are less likely to engage in social conversation with their peers, are less responsive to the initiations of others, have poorer conversational skills and are less likely to reach mutual decisions with their peers. Similarly, pupils with SEMH may experience a wide range of social and emotional difficulties such as being withdrawn or isolated or displaying challenging behaviours (DfE, 2015), characteristics which have been linked to: greater levels of peer rejection (Frederickson & Furnham, 2004), difficulties in initiating conversations (Blatchford,1994) and greater levels of bullying and victimisation, (Baines & Blatchford, 2010). As such it is reasonable to hypothesise that the lower levels of peer preference found for the PSEN in the present study may have been a primary consequence of their C&I and SEMH needs as opposed to their levels of peer contact or adult involvement, which in themselves, may have been a by-product of their levels of SEN. In order to gain a clearer perspective around these interrelating factors, it would be useful for future research, using a longitudinal approach, to look specifically at levels of peer contact, adult involvement and individual characteristics such as behavioural traits, social skills and language skills, in order to ascertain the relevant contributions of these variables to overall peer relations. However, whilst this represents a limitation of the current research, the present study is nevertheless valuable in opening the discussions around the possible environmental factors that may be contributing to poor peer relations for

PSEN, and in challenging the dominant discourse that ongoing adult support is beneficial for the inclusion of PSEN in mainstream schools.

It is also important to note that whilst the present study suggests that higher levels of peer contact in the classroom is associated with higher levels of peer contact at breaktime, the study is not able to show whether pupils were interacting with the same peers at breaktimes and in the classroom. It may be helpful for future research to explore whether those pupils that work together, also play together.

Additionally, the interviews were only carried out with PSEN meaning that the responses from the interviews could not be directly compared with NSEN pupils. As such, it is not possible to know whether or not typically developing children would have provided similar responses relating to their experiences of peer relations at school, limiting the conclusions that can be drawn from the study. However, it was possible to compare the results of the study to previous studies that have been carried out on the experiences of breaktimes for pupils with and without SEN in mainstream populations, allowing for parallels and contrasts to be highlighted and discussed.

Although attempts were made to make a comparison group for NSEN pupils who were matched by age, gender and academic ability, it was not always possible to closely match pupils according to these criteria. For example, there was one male pupil for whom a female comparison was found. As such, it is possible that the differences in peer relations and peer contact may have been attributed to factors other than SEN type, thus limiting the conclusions that can be drawn from the study. However, where the present study coincides with previous research, the results have been comparable (e.g. Pinto, 2015).

Although the study utilised peer relations measures that have been validated in previous research, the reciprocal best friend analysis yielded a number of challenges. For example, whilst a number of steps were taken to ensure the questionnaires were completed in full by the participating students, it was found that only 93 of the 153 pupils completed the questions which asked them to nominate their 3 best friends, meaning that the results

were restricted to the nominations received from this smaller selection of pupils within the overall sample. As such, this means that a large proportion of best friend nominations have been missed from the study, and as such the results from this part of the data analysis are not as robust as they could have otherwise been.

Finally, it is acknowledged that there were a number of important measures of peer relations that were not included as the focus of the study. For example, social skills are an important aspect of peer relations that have been linked to social success (Rubin, Bukowski & Parker in Weiner, 2004). However, the social skills of the pupils within the study were not measured, and thus it is not possible to know the extent to which levels of peer acceptance were related to social skills over other classroom and breaktime factors captured in the study such as peer contact and adult involvement. Findings from such research could significantly contribute to our understanding of the range of factors that are most influential to the development of successful social experiences for PSEN.

5.7. Implications for Educational Psychologists, Schools and Policy Makers

In this final section, the implications of the study will be discussed in relation to EPs, schools and education policy.

5.7.1. Educational Psychologists

The present study has drawn light on a range of social and environmental factors that may be contributing to a number of negative, social outcomes for PSEN. For example, reduced opportunities for peer contact and increased adult involvement have been identified as being strongly and negatively associated with measures of peer preference. EPs have a distinct responsibility to ensure that the interventions that are in place to support PSEN are based on an appropriate evidence base. Subsequently, EPs may provide training and guidance for schools on the possible implications on the SEN provisions that are being utilised in schools (e.g. same ability seating, TA support and taking pupils from class for

interventions) on the subsequent social relations of PSEN. In addition, EPs may seek opportunities within their consultations with teachers to explore the provisions that teachers are putting in place to support their PSEN and to guide teachers to develop an awareness of any potential barriers to peer contact that may exist as a result. In doing so, through the collaborative consultation process, teachers can be supported to make appropriate changes to the environment and provisions in place for PSEN in order to more effectively promote the inclusion of PSEN.

Specifically, the study suggests that making changes to the level of peer contact and adult involvement may be an effective tool for promoting PSEN peer relations and may be used to substitute or complement more individualised interventions to support the peer relations of PSEN such as social skills training. Whilst individual interventions such as social skills training may have their place in promoting the peer relations of PSEN, focusing solely on such approaches may be considered reductionist in the way that this narrows the focus to a problem that is purely within the child, (Visser & Zenib, 2009). Therefore, EPs have an important role in helping others to externalise the peer relationship difficulties that PSEN encounter and to help school staff to consider the environmental factors that may be acting as a barrier to learning, e.g. the deployment of TAs and taking PSEN out of class, as opposed to purely 'within-child' factors.

EPs may also help to address the issues raised in the study by helping teachers to take greater ownership of the teaching and learning practices of PSEN in their classes. In order to do this, EPs may help to 'up-skill' teachers to feel more confident in supporting PSEN in their classroom by providing training and facilitating ongoing SEN workshops around appropriate methods of differentiation and mediation for PSEN in their classes. EPs may also help to address these issues by providing training and guidance to TAs about how to effectively lead and facilitate group discussion, in order to empower TAs to work with other groups in the class, freeing up the class teacher to work more closely with the PSEN in their classes. EPs could also work closely with TAs to ensure that they are utilising the most effective strategies for engaging with pupils, whilst minimising situations in which they are acting as a barrier to

their peers and the class teacher. This could be achieved successfully through interventions such as Video Interaction Guidance (VIG) which is currently being used successfully by EPs with TAs across the world, Kennedy et al. (2011).

Furthermore, the present study suggests that EPs should carefully consider the contexts within which they observe children within their practice. For example, the present study suggests that PSEN may experience a range of social challenges during their breaktimes at school, challenges which may go unnoticed within the classroom. EPs therefore should ensure that the breaktime as well as classroom experiences are observed to gain a wider understanding of a child's strengths and needs. In addition, the study is a helpful reminder for EPs to look closely at the types of interactions that PSEN are engaging in when observing pupils as part of their practice. For example, the study shows that a pupil may look as though they are part of a peer group, but may in fact be upholding the role of 'hoverer' suggesting that they may not be fully participating in social interactions. Similarly, within the classroom, pupils may be engaging in a large number of peer interactions, but questions should be asked as to whether the pupil is upholding a purely 'help-seeking' role or whether they are fully involved in a balanced peer relationship.

5.7.2. Schools

The study suggests that a number of school factors may be contributing to the successful inclusion of PSEN in mainstream classes. For example, considering the findings that PSEN have limited opportunities to interact with MA and HA pupils, schools may need to carefully consider the seating arrangements and ability grouping arrangements that are in place. Schools must ensure that pupils have a number of opportunities to work with pupils of different abilities and strengths and that there are frequent opportunities within lessons for pupils to interact with their peers in a meaningful way. Additionally, schools should carefully consider whether it is appropriate for pupils to receive support interventions outside of the classroom, or for pupils to be seated alone, away from their mainstream peers. In order to promote

peer contact and opportunities for peer relations to develop, the study suggests that PSEN should be taught as part of the mainstream class where possible.

It is important that teachers, who are the most appropriately trained in teaching pupils with differing needs, are made responsible for the academic and social outcomes of PSEN. As such, it is important that teachers do not leave the planning, teaching and assessing of PSEN to TAs. Teachers and support staff should work together to ensure that whilst teachers are providing PSEN with additional support, TAs are able to attend to the needs of other pupils in the class. However, it is also essential that schools carefully consider the overall levels of adult involvement that is being offered to PSEN and to consider whether this is unintentionally acting as a barrier between PSEN and their NSEN peers.

Given the value placed on breaktimes for pupils in the study and the range of benefits identified, it may be helpful for schools to review their behaviour policies to ensure that school sanctions for classroom behaviour do not result in a reduction of breaktimes. This perspective is of particular relevance given that breaktimes have been found to be reducing in length. As PSEN who are known to experience increased behavioural needs, it follows that these pupils may have further restricted opportunities to interact with their peers if breaktimes are reduced as a behavioural consequence.

5.7.3. Policy

The study suggests that PSEN are provided with high levels of TA support which appears to be associated with more negative social outcomes for these pupils. In spite of legislative changes which have emphasized 'high quality teaching' over 'additional interventions' and 'outcomes' over 'support' within EHCPs, TA hours are still considered to be the main currency of an EHCP for local authorities across the country. As Webster (2014) points out, "professionals in education have apparently created a self-supporting logic rule that states a high amount of TA support is a pre-requisite for inclusion". It will be important for policy makers to continue to shift the focus of EHCPs

away from a designated number of TA hours and towards effective teaching for PSEN in inclusive settings.

In order to empower and upskill teachers so that they feel confident in providing the necessary levels of differentiation and support for the PSEN in their classes, it will be important for policy makers to consider the information that is being presented within teacher training programmes. For example, teacher training programmes should include elements of SEN training and provision and should highlight the current evidence base surrounding the potential challenges that additional TA support can mean for the PSEN within their classes.

Finally, as the present study illustrates the important benefits that breaktimes can offer pupils, it follows that policy makers should pay closer attention to the trends in the reduction of breaktimes and should ensure that the breaktimes are perceived to be a valued and protected aspect of the school day. In order to facilitate this, policy makers need to ensure that the demand for schools to produce academic results should not overshadow the significant value that breaktimes can provide for the social, emotional and academic well-being of pupils.

5.8. Summary and Conclusions

The research suggests that in comparison to NSEN pupils, PSEN experience less favourable outcomes in relation to their peer relations within both work and social contexts. A key finding is that PSEN have substantially less opportunities to interact with their peers than NSEN pupils and were observed to engage in more adult than peer interactions within the classroom. Additionally, the adult interactions that pupils engaged in were predominantly with TAs and not teachers. These high levels of TA involvement and reduced opportunities for peer contact were negatively associated with positive peer relations for PSEN. For example, peer contact in the classroom was the most powerful predictor of peer preference scores and reciprocal friendships whilst the level of TA interactions in class was a powerful predictor of peer interactions at breaktime.

The study has demonstrated that where interactions are observed between PSEN and their peers, these interactions differ from the interactions observed between NSEN pupils whereby PSEN find themselves on the lower part of an unfortunate power imbalance. In light of the findings of the present study, it is perhaps unsurprising that PSEN in the study highlighted a number of negative aspects of breaktimes and friendships that were of significant concern to them. However, in spite of the challenges encountered by the PSEN within social school contexts, the majority of PSEN in the present study still considered breaktimes to be a highly valuable and beneficial part of the school day, and a part of their school day that they hoped to increase. Furthermore, the majority of PSEN had positive things to say about their friendships and had similar involvement in peer groups to their NSEN peers.

In conclusion, the study demonstrates that there remains a substantial gap between the peer relations of pupils with and without SEN and the evidence suggests that PSEN are not being effectively included within mainstream settings. It follows that addressing the environmental factors of TA involvement and subsequent opportunities for peer contact in the classroom may be one way to promote the peer relations and to ensure the true social inclusion of PSEN within mainstream settings.

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Chapter 6: Appendices

A. How the literature review was undertaken
B. Letter to Head Teacher
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D. Gender breakdown of pupils by class, year group and school
E. Coding categories and descriptions
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Appendix A: How the literature review was undertaken

Between December 2016 and April 2017 a review of the following databases was completed: Psych Info, Web of Science, British Education Index, ERIC and UCL library catalogues. Search terms included: breaktime, recess, playtime, SEN, special needs, learning difficulties, learning disabilities, primary, school-aged children, peer relations, peer contact, peer acceptance, friendship, mainstream, inclusion. Books, journal articles, reports and government publications were included in the review. Materials were excluded if they were in a language other than English, were published prior to 1990 or were non-peer reviewed. In addition, other references were obtained from research supervisors and course lecture notes.

Appendix B: Letter to Head Teacher

Dear Head teacher,

I have been liaising with <SENCO> about the possibility of completing a research project at your school and am writing to ask for your permission for this to take place. The research project is concerned with the peer relations and friendships of children with special needs and their mainstream peers. The purpose of this research is to understand more about the patterns of peer interaction and break time experiences of children both with and without SEN. Specifically, this study will seek to explore the level and nature of peer contact for KS2 pupils both in the classroom and at break time.

I hope that this information can be used by schools and Educational Psychologists to help children with special needs develop their relationship with other children. This research will be supervised by Dr Ed Baines and Dr Karen Majors of the UCL Institute of Education and is allied to a national study of break times by Ed Baines and Peter Blatchford, (See http://www.nuffieldfoundation.org/follow-survey-break-and-lunch-times-schools).

Of course, I would try to ensure minimal disruption to the staff and pupils during the research process and would be happy to work flexibly, in a way that is most convenient for the school. In my previous role, I was a class teacher, and I would be delighted to use this experience in any way to support your children alongside my research. For example, I would be happy to carry out guided reading sessions or PSHE lessons to any year group, or to support in any other way that you may find useful.

The research would involve pupils completing a short questionnaire which would take no more than 15 minutes to complete and would be completed at a convenient time, e.g. during PSHE. The questionnaire will ask about who the children would like to work with and play with and who they have contact with in the class and at break time. I would also administer a very short questionnaire to the class teacher, which will ask about the amount of time each child spends in the classroom. In addition, I would hope to carry out observations of 5 pupils with SEN and 5 comparison NSEN pupils, in the classroom for approximately 5 days. I would also hope to observe the same pupils at break times and lunchtimes for approximately 10 days. The observation will focus on the number and type of interactions that children have with both peers and adults. Following this, I would hope to conduct a short interview with approximately 5 PSEN. This would need to be audio recorded and would take no more than 30 minutes each.

The study has been approved by the Institute of Education Research Ethics Committee.

All information collected from children and teachers will remain confidential and anonymous and no individuals or schools will be identifiable when the findings are reported. Once the research is complete I would be very happy to share with you the main findings and implications of the study.

Parents/carers of children will be written to and asked to give consent for the study. This letters would be shared with you before sending out to parents. Those involved in the research may withdraw their permission to participate in this study up until the research report has been written.

If you have any questions or would like further information, please do not hesitate to contact me by email jasmine.brown15@ucl.ac.uk. I will be in touch by telephone shortly to find out whether you would be interested in helping with this research. With your agreement, I would also be happy to continue to make arrangements for this project via <SENCO>.

Kind regards,

Jasmine Brown
Trainee Educational Psychologist
Institute of Education

Appendix C: Ethical considerations and consent forms

Consent

Parents of all Year 4 and 5 classes were sent letters outlining the details of the study, including: the aims of the study, the procedure and how the results would remain confidential and anonymous (see Appendix C). Parents of the 20 focus pupils (10 with SEN and 10 comparison NSEN pupils) were asked for their written consent for their child to take part in all 3 aspects of the study: interviews, observations and questionnaires. Parents of the other pupils in the class were invited to 'opt out' if they did not want their child to participate or be included in the questionnaires. One parent refused consent, and their child was not included in the study.

Prior to data collection, the researcher also outlined the details of the study to all the classes involved. Pupils were told what would happen to the data and that their participation was voluntary. All pupils were then asked to give their written consent to take part in each of the 3 stages of the study: observations, interviews and questionnaires. In total, 5 pupils refused consent to take part in the interviews and observations and their data was not included in this part of the study. No pupil refused to participate in completing the questionnaires. Prior to the interviews being carried out, selected pupils were once again reminded of the aims of the study and their right to withdraw and pupils were asked to provide a second written consent to take part in the interviews.

3.6.2. Sensitivity of topic

As this research project is concerned with exploring experiences and perceptions of breaktime and friendships, there was a possibility the interviews could have led to feelings of discomfort, sadness or anxiety. To minimise these risks, pupils were given information regarding the nature of the study and the possible questions that would be asked, so that participants could give informed consent before taking part. In addition, participants were reminded that they could miss out any questions that they

did not want to answer and could leave the study at any time. As this is a potentially sensitive subject area, a key adult was also identified in the school that could offer support or advice following participation.

3.6.3. Confidentiality

All pupils were informed that their data would remain anonymous and would be confidential. All schools and pupils were given code names and/or numbers so that the participants could not be identified. Storage devices and written data were stored in a locked cupboard to which only the lead researcher had access. Recording devices used for the interviews were stored electronically and remained password protected.

Consent forms

Dear Parent or Carer,

I am writing to tell you about a research project that I will be carrying out in your child's school which has been agreed to by the Head teacher, XXX. The research will explore the social relationships of different children in the classroom and during breaktime. This research is being overseen by Dr Ed Baines and Dr Karen Majors of the UCL Institute of Education and is allied to a national study of breaktimes by Ed Baines and Peter Blatchford, (See: XXXXX).

The purpose of this research is to understand more about the patterns of peer interactions and breaktime experiences of a range of different children. Specifically, this study will seek to explore the level and nature of peer contact for KS2 pupils both in the classroom and at breaktime. I hope that the results can be used in the future to help children from different backgrounds develop and sustain positive relationships and friendships with their peers.

I am writing to let you know that I will be asking children in your child's class to complete a questionnaire about who they would like to work and play with and who they have contact with in the classroom and at breaktime and I would like to include your child in this research**.** Previously, I worked as a class teacher at a school in Westminster and I have a real enjoyment and understanding of working with primary aged children. I will ensure there is minimal disruption to the class during this process.

The study has been approved by the UCL Institute of Education Research Ethics Committee. I can assure you that all information collected from children and teachers will remain

confidential and anonymous and no individuals or schools will be identifiable when the findings are reported.

If you would rather your child **did not** participate in these questionnaires, please complete and return this reply slip to XXXX by **Monday 26th June 2017**. As part of this project I would also like to observe and talk to a few children to find out about their experiences of breaktimes and their social lives in school. I will however, write to you separately about this.

If you have any questions, or would like to discuss this further, please contact me at this email address XXXXXX

Kind Regards,

Jasmine Brown

Trainee Educational Psychologist

Institute of Education

Please complete and return this form only if you **do not** wish for your child to participate in this research.

☐ **I DO NOT** give my permission for my child to participate in this research.

Name of child in BLOCK letters_____

School_____ Class _____

Signature _____

Name in BLOCK capitals_____

Dear Parent or Carer,

I wrote to you previously about a research project that I am carrying out at your child's school, with the agreement of the Head teacher, XXX. This research is being overseen by Dr Ed Baines and Dr Karen Majors of the UCL Institute of Education and is allied to a national study of breaktimes by Ed Baines and Peter Blatchford, (See XXXX). The purpose of this research is to understand more about the social relationships and breaktime experiences of a range of different children. This study will also seek to explore the amount of peer contact that takes place for KS2 pupils both in the classroom and at breaktime. I

hope that the results can be used in the future to help children from different backgrounds develop and sustain positive relationships and friendships with their peers.

I am writing to ask if you would be willing to give permission for your son/daughter to take part in the second part of this research. This will involve observing your child in class and at breaktime for short periods for 10 days. Please note that participation in this study is not an indication of the social skills of your child. Data will be collected from a large number of children regardless of their social profile. No video or audio recordings will be taken during the observations and I will ensure minimal disruption for your child and their class.

At a later stage, I will be carrying out interviews with a small number of pupils. It might be that your child is interviewed in order to find out about their experiences of breaktimes and friendships at school. The interview would take place at school during normal school hours and will take less than 30 minutes to complete. The interviews would be carried out using an engaging format that would be appropriate to their age and stage of development. Before carrying out the observations and interviews, your child will first be provided with information about the study and will be asked for their consent to take part.

The study has been approved by the UCL Institute of Education Research Ethics Committee. All information collected from children and teachers will remain confidential and anonymous and no individuals or schools will be identifiable when the findings are reported.

Many thanks in advance for your consideration of this project. I would appreciate it if you could complete the attached permission slip and return it to xxx **by Monday 26th June**. If you have any questions, or would like to discuss this further, please contact me at this email address: XXXXX.

Kind Regards,

Jasmine Brown

Trainee Educational Psychologist

☐ **I give** my permission for my child to participate in this research.

Please return by Monday 26th June

Name of child in BLOCK letters_____

School_____ Class _____

Signature _____

Name in BLOCK capitals_____

Appendix D: Gender breakdown of pupils by class, year group and school

		Female	Male	Total
	School 1			
Year 5	Total pupils	15	15	30
	Focus SEN pupils	1	2	3
	Focus NSEN pupils	2	1	3
Year 4	Total pupils	12	19	31
	Focus SEN pupils	1	2	3
	Focus NSEN pupils	1	2	3
	School 2			
Year 5	Total pupils	21	23	44
Class 1	Total	11	12	23
	Focus SEN pupils	1	0	1
	Focus NSEN pupils	1	0	1
Class 2	Total	10	11	21
	Focus SEN pupils	0	1	1
	Focus NSEN pupils	0	1	1
Year 4	Total pupils	21	29	50
Class 1	Total	10	15	25
	Focus SEN pupils	0	1	1
	Focus NSEN pupils	0	1	1
Class 2	Total	11	14	25
	Focus SEN pupils	1	0	1
	Focus NSEN pupils	1	0	1

Appendix E: Coding categories and descriptions

Coding categories and descriptors for the classroom observations

Type of Interaction	**Description**
No interactions	The target is not verbally interacting with others (this includes whole class teaching unless the target is directly involved in an interaction)
Adult-target	An adult is verbally interacting with target pupil
Target-adult	The target pupil is verbally interacting with an adult
Peer-target	Another pupil is verbally interacting with target pupil
Target-peer	The target pupil is verbally interacting with another pupil
Nature of interaction	**Description**
Informative	There is an exchange of information related to the task or activity (not in direct response to help-seeking)
Help-giving	A person is providing information to another person in a direct response to a request for help
Questioning/help-seeking	A person is asking another person for help
Social/conversational	There is an exchange of information from one person to the next that is not related to the task or activity and not in direct response to help-seeking.
Distracting	A person initiates an interaction that prevents another person from concentrating on their work/activity.
Aggression	A person initiates an attack on another person (physical or verbal)
Praise	A person expresses approval or admiration of another
Discipline	A person is being told off or given a sanction
Approach to learning	**Description**
On-task	Target is engaged in the task for the full 10 second interval
Intermittently on task	Target is engaged in the task for the majority but not the entire 10 second interval
Off-task	Target is disengaged in the task for the entire 10 second interval
Context of interaction	**Description**
Whole-class	The whole class have the same, shared focus, e.g. attending to the board or teacher as a group
Group work	The class are working on a task as part of small groups
Paired Work	The target pupil is working with one other peer on the task/activity
Individual work	The pupil is not working with any other peers on the task/activity (may be supported by a TA or teacher)

Support level of interaction	Description
Teacher support	The teacher is present (accompanying the pupil) during the activity and may or may not be actively interacting with the pupil
TA support	The TA is present (accompanying the pupil) during the activity and may or may not be actively interacting with the pupil
No support	The pupil is working independently without the TA or teacher present

Coding categories and descriptors for the playground observations

Level of social interaction	Description
Social	Target is engaged in a physical or verbal interaction with another pupil or is involved in a game with another pupil (includes children engaged in parallel activities but also talking)
Parallel	Target is situated in close proximity (within 4 foot) of another pupil and they are both engaged in the same activity but are not verbally or physically interacting
Solitary	Target is not interacting with another pupil and is not engaged in a game or parallel activity with another pupil
Type of activity (play/non-play)	**Description**
Just conversation	Target is involved in conversation and when asked what they are doing they say just talking or something to the same effect
Vigorous play	Target is engaged in vigorous activity e.g. cartwheels, spinning, running etc.
Sedentary play	Target is engaged in quiet activity e.g. playing in sand, with cars, etc
Fantasy play	Target is engaged in imaginative/role-play – e.g. mums and dads, families, cops and robbers etc.
Type of activity (game)	**Description**
Chasing/ catching/ seeking	Target is involved in a game where pupils run after or look for

	others with the aim to touch, catch (no object involved) or just see them
Racing	Target is involved in a competition with others with the aim being to win. They may run (etc.) together, as pairs or time each other
Ball games	Target is involved in a game within which players use a ball, includes: pig in the middle, throwing and catching, tennis, champ, football, basketball etc.
Skipping	Target is involved in a game where individuals skip with a rope each or where a rope is shared between a number of individuals
Games with materials:	Target is involved in other games which use materials e.g. board games, frisbee etc.
Verbal games	Target is involved in activity where children sing or say verbal rhymes (e.g. eanie meanie minie mo…, dancing and rhymes - unless involve other category e.g. skipping then superseded) or singing and dancing etc.
Other	Activities that are not covered by non-games or games above e.g. musical statues, What's the time Mr. Wolf?

Behaviour in Interaction	**Description**
Onlooker	Target watches others engaged in an activity/game/interaction. He/she may be out of the game or even involved in the game just watching the action (this would include the goalkeeper)
Unoccupied	Target is not doing anything and not watching others
Disputing	Target is involved in/ part of group arguing about 'things'
Tease/ taunt	Target is involved in verbal teasing and taunting of others (e.g. derogatory name calling) as part of a game 'you can't catch me' or framed in a more dispute like or aggressive context
R & T play	Target is involved in play fighting – what may look like aggressive acts (hitting, wrestling, kicking etc) but children remain together – no active avoidance and splitting up after. May be embedded in a game.
Aggression	Target is involved in giving an aggressive act (verbal or physical)

Positive/affection –	Target is continuously touching a peer in some affectionate way (e.g. arm around shoulders, arms linked etc.)
Distress/ crying	Target is crying or is upset for some reason
Disciplined	Target is either being told off by the teacher or is being sanctioned
Actively involved	Target is fully focussed and included in the activity (superseded if other behaviours observed in the same 10 seconds)
Leader	Target is telling/showing others what to do (non-aggressive)

Level of Adult support (Adult ID noted)	**Description**
Present	Adult is within 6 feet of target not actively involved (i.e. pupil does not talk to or listen to adult) but maybe watching.
Involved	Target talks to or listens to adult.
No adult	The target is not within 6 feet of an adult.

Appendix F: Observation Schedules

Classroom observation schedule

			Interaction																											
			Type					Nature									Approach to learning				Context					Support				Notes
Time intervals	No interaction		Adult-target (adult id)	Target-adult (adult id)	Peer- target	Target-peer		Informative	Help-giving	Questioning/help-seeking	Social/conversational	Distracting	Aggression	Praise	Discipline		On-task	Off-task	Intermittently on task		Whole Class	Group work (note size/SEN)	Paired work	Individual work		Teacher support	TA support	No support		
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														

Breaktime observation schedule

Scan/ focal child sampling

If categories overlap, the category that is observed for the most amount of time is the category to be coded.

Coding categories:

Time & date; AM, Lunch or PM break, Name of child being scanned

a=morning, b=lunch, c= afternoon

Contextual information

Props/ apparatus - Fixed – (seats, climbing frames, goal posts, markings on ground, wall, fence, etc.)

- Portable – (balls, skipping ropes, yo-yo, gameboy etc.)

Location (playground, field, inside)

Macro categories

1. **Level of social interaction**

   a) Social
   b) Parallel
   c) Solitary

2. **Type of activity (play/ game/non-play)**

   Non-game –

   a) Just conversation (may be worth asking children what they are doing)
   b) Vigorous play
   c) Sedentary play
   d) Fantasy play (may be worth asking children what they are doing)

   Games –

   e) Chasing/ catching/ seeking

f) Racing

g) Ball games (Soccer, basketball, Am. football, others)

h) Skipping

i) Games with materials

j) Verbal games (e.g. dipping, rhymes - unless involve other category then superseded)

k) Other

Micro categories

3. **Behaviour**

a) Onlooker

b) Unoccupied

c) Disputing

d) Tease/ taunt

e) R & T play

f)Aggression – is involved in giving or receiving an aggressive act (verbal or physical)

g) Positive/ affection – is touching a peer in some way (e.g. arm around shoulders, arms linked etc.)

h) Distress/ crying – when child cries or is upset for some reason

j) Disciplined – either being told off by the teacher or has been put against the wall, must stay with teacher or is sent to Head Teacher or kept in to be disciplined etc.

k) Actively involved- engaged in the activity (no other behaviours observed)

l) Leader- telling/showing others what to do (non-aggressive)

4. **Identity of social contacts (including game players)**

Active social network – Names of other persons that target is <u>actively</u> interacting with (talking to or physically engaged with maybe all persons in activity)

Game/ play network – Names of other players (within the game/ play) and therefore age, gender, ethnicity (where possible – group may be too large or other

children from different classes in which case note number, age, sex and ethnicity)

5. Adult/s involved and type of adult

Support:

0. No adults
1. TA
2. Teacher
3. Lunchtime supervisor
4. Other

6. Adult/s present/involved

Adults present or involved – Present = within 6 feet of target not actively involved (i.e. pupil does not talk to or listen to adult) but maybe watching. Involved = child talks to or listens to adult.

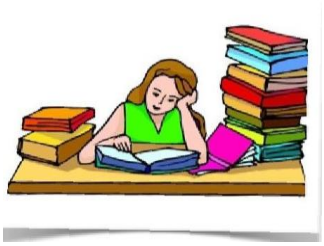
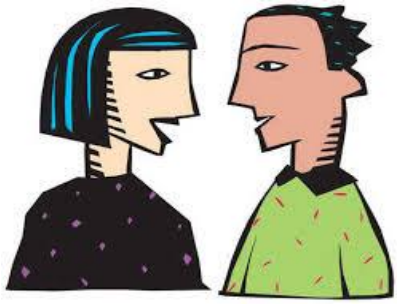
0. N/A

1. Present

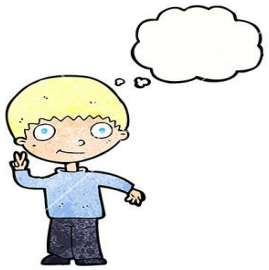
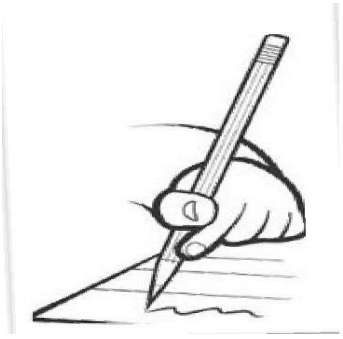
2. Involved

Appendix G: Pupil consent form and questionnaires

Information Sheet

		
Hello my NAME is Jasmine Brown	I am STUDYING at the Institute of Education.	I want to TALK to children
		
about their BREAKTIMES	and their FRIENDSHIPS at school.	
		
I want to ask you some questions about who you like PLAYING WITH at breaktime	and who you like WORKING WITH in the classroom.	

Information Sheet

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>I will also be spending some time in your CLASSROOM and on your PLAYGROUND</td><td>so that I can LEARN more about the friendships and breaktime experiences for different groups of children.</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>I may also want to talk to you on another day about how you THINK</td><td>and how you FEEL about your breaktimes and your friendships at school.</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>What we talk about is PRIVATE. This means I WILL TELL people WHAT we talked about but I WON’T TELL people your NAME.</td><td>I will WRITE a report about what people have told me and what I have seen</td><td>I might use YOUR WORDS but I WON’T use YOUR NAME.</td></tr>
</table>

Information Sheet

		
I will SHOW this report to Psychologists.	This will help them to UNDERSTAND what it's like to for young people at school	This will help to SUPPORT other people.
		
You can choose to say YES or NO to talking to me.	You can change your mind and STOP if you want to.	You can LEAVE whenever you want to.

	YES	NO
I am happy to answer some questions about my friendships using the sheets provided.		
I am happy for Jasmine Brown to spend some time with me in the class and at breaktime and to make notes on who I am talking to and what I am talking about.		
I am happy to talk with Jasmine Brown about how I think and feel about my breaktimes and my friendships.		

Hi there!

I have written some questions which ask you about your classmates at school.

Not everyone thinks the same and so it is important that we know what **you** think.

There are no right or wrong answers, but it is important that you keep your answers secret!

Q1. How much do you like to <u>work</u> with each of these children in your class? For *each classmate, put a tick under the face that shows how you feel.*

			
Names			

Q2. How much do you like to play with each of these children at breaktime? *For each classmate, put a tick under the face that shows how you feel.*

			
Names			

Q3. Can you put a tick next to the 3 people that you feel are your closest friends?

Q4. How often do you sit next to each of these children in the class?

For each classmate, put a tick in the column that shows how often

	Most days	At least once a week	At least once a term	Never

Q5. How often do you play with each of these children at breaktime? *For each classmate, put a tick in the column that shows how often*

	Most days	At least once a week	At least once a term	Never
Names				

Q6. Are there some children here in your class who play together a lot?

Write down the names of children in each group.

Please start with the names of children that you play together with.

My group
Group 1
Group 2
Group 3

Appendix H: Ethical approval

Dear Jasmine,

I am pleased to inform you that your research project **'An exploration of the peer interactions and breaktime experiences of pupils with and without Special Educational Needs in mainstream primary schools'**, for the year 2 research project on the Doctorate in Professional Educational, Child and Adolescent Psychology, has been given ethical approval. If you have any further queries in this regard, please contact your supervisor.

Please note that if your proposed study and methodology changes markedly from what you have outlined in your ethics review application, you may need to complete and submit a new or revised application. Should this possibility arise, please discuss with your supervisor in the first instance before you proceed with a new/revised application.

Your ethical approval form has been logged and will be uploaded to the UCL IOE database.

Good luck with your data collection.

Kind regards,

Appendix I: Breaktime arrangements in participating schools

In School A, lessons started at 9am and finished at 3.15pm. There was a morning break at 10.30 which lasted for 15 minutes and a lunch break at 12.30 which lasted for one hour. There were two playgrounds on site, one playground for Reception and KS1 pupils, and a second playground for KS2 pupils. Balls and hoops were available in both playgrounds and there were several benches and tables available. The KS2 playground had two football goal posts at either end. The school received support from 'MEND' (Mind, exercise, nutrition and…Do it!) a social enterprise that delivers initiatives around reducing obesity and weight management (Hamblin, Fellowes & Clements, 2017). As part of this initiative, a representative from MEND organised games and activities to facilitate physical exercise every lunchtime. These activities were organised for the Year 1 and 4 classes and pupils could choose whether to take part in these activities or not. The morning breaktimes were supervised by class teachers and the lunchtimes were supervised by TAs and lunchtime supervisors. There were approximately 6 adults on duty for each breaktime.

School B had the same start and end time as school A. There was a morning break at 10.30-10.50 and a lunch break at 12.45 which lasted for 60 minutes for 4 days a week and 30 minutes for 1 day a week. There were 2 playgrounds on site as per School A, one for Reception and KS1 and one for KS2. The KS2 playground was split into several different areas including; an astro-turfed football pitch, a large climbing frame, a basketball hoop and pitch area and a seating area. The KS1 playground also had a large climbing frame. Hoops, balls, skipping ropes and board games were available for children to use on a daily basis. All breaktimes were supervised by approximately 8 adults, all of whom were classroom TAs.

Pupils in both schools were free to make their own activity and play-mate choices at breaktime.

Appendix J: Interview schedule

1. Can you tell me about your school?

Prompt:

- What do you like about your school? Why?
- What would you change about your school? Why?

2. Can you tell me about the other people in your class?

Prompt:

- What does friendship mean to you?
- How would you describe your friendships at school?
- Do you have any good friends at school? Can you tell me about them? What makes them a good friend?
- Do you always have someone to play with/talk to at breaktimes when you want to?
- What do you like about your friendships at school?
- If you could change anything about your friendships at school, what would you change and why? (what else?)
- Overall, do you feel happy with your friendships at school? Why/why not?

4. Tell me about your breaktimes at school

Prompt:

- Can you tell me about a typical/normal breaktime for you? e.g. Who do you normally spend time with at breaktimes, and what do you do?
- Does this match what you want to do? Why/why not?
- Who chooses what you do?
- Can you think of a time that you have really enjoyed your breaktime. Can you describe this to me? What did you like about it?
- Can you think of a time that you did not enjoy your breaktime? Can you describe this to me? What didn't you like about it?
- Overall, do you enjoy breaktimes? Why/why not?

- What do you like about your breaktimes?
- If you could change anything about your breaktimes, what would you change and why? (what else?)
- Is there anything the school could do to help improve your breaktimes?
- In what ways are teachers and other adults involved in your breaktimes?

3. **Is there anything else you would like to say?**

Appendix K: Evidence of thematic analysis process

Transcript	Code
So you said you don't have many friends. What makes you say that?	
I don't know, I have Grace and she's a friend. But she gets picked on too- more than me. Like, she is my friend but she gets effected and people pick on her more by the others in the class so it's not great.	-Has a friend -People being unkind to friend
Did you say she gets picked on?	
Yes and so do I	-Peers unkind -People being unkind to friend
Can you tell me more?	
Well the girls in my class, you know Sara?	
Yeah	
We used to go to Chicken Shed together, we used to be good friends but not anymore. My mum used to make her a meal every week for a long time and we went to chicken shed every week and then later on she just started being rude to me.	-Friendships getting worse -Peers unkind -Spending time with friends outside of school
So she has been rude to you? Can you tell me more about that?	
Well, she's bullied me for like- well because I was a lot shyer than I am now so I didn't have any friends in year 2 because Sara and Grace weren't there. So, yeah, so (.) erm (.) so she was like bullying me so Mrs Haynes the dinner lady spoke to Briony and she said she would always play with me but she didn't play with me.	-Bullying -Unhappy memories of friendships -Adults helping at breaktime -Rejected by peer sin play
So you said she was bullying you before? What makes you say that?	

Like, kinda made me feel like I wasn't really allowed to play in any games and I just wanted someone to play with.	-Rejected in play -Wanting more people to play with
Has anything else like that happened since?	
Not that much. I mean Rachel, she's just (.) Rachels like not kind. To me and Grace she was like, "how many friends do you have?" and I said "I've got Grace" and she said, "well I've got Briony, Mila, Sadie and (inaudible)". She said me and Grace were not her friends.	- Peers unkind - Being asked amount number of friends - Rejected in friendship
Ok, so are you happy with your friendships at school?	
Well, I've got a sister who is my friend. So I see her, like, but she has more friends than me because she's kinda got like (.) a better class.	-Sibling as friend -Having a less good class
Thank you. So if you change anything about your friendships at school would you?	
If I could change something, I don't know, I'd have more friends.	-Wanting more friends
So, you'd like to have more friends?	
Yeah, but I used to like to be friends with Rachel bit now I don't want to be friends with Rachel because I know she might change me.	-Not wanting to be friends with certain people - Belief that friends could change you
So you would like to have more friends but maybe you're not sure who with. Is there anything that's making it difficult for you to make friends?	
I think maybe because I'm friends with Grace, people don't like Grace so maybe people don't like people that are friends with Grace as well.	- Not liked because of peers

Appendix L: Playground behaviour and activities by SEN type

PLAYGROUND BEHAVIOUR

Behaviour type on the playground by SEN type

	SEN	N	Mean	Std. Deviation
Onlooker	NSEN	10	8.48	9.21
	SEN	10	15.92	10.27
Unoccupied	NSEN	10	2.35	3.71
	SEN	10	13.56	9.80
	NSEN	10	84.60	10.91
Actively involved	SEN	10	60.75	15.70
Disputing	NSEN	10	.33	1.05
	SEN	10	.14	.44
Teasing and taunting	NSEN	10	.00	.00
	SEN	10	.45	.76
Rough and tumble play	NSEN	10	1.40	1.34
	SEN	10	1.50	1.41
Aggression	NSEN	10	.27	.60
	SEN	10	1.22	1.96
Positive affection	NSEN	10	1.84	1.42
	SEN	10	2.10	1.36
Distress/crying	NSEN	10	.05	.156
	SEN	10	1.79	2.90
Disciplined	NSEN	10	.00	.00
	SEN	10	2.06	2.65
Leader	NSEN	10	.68	1.43
	SEN	10	.51	1.16

On average, pupils in the SEN group had higher scores than the non-SEN group in all behaviour categories with the exception of 'actively involved', 'disputing' and 'leader' which were observed more frequently in the non-SEN group. However, due to the small number of interactions observed in some of the behavioural categories (disputing, teasing and taunting, rough and tumble play, aggression, positive affection, distress/crying, disciplined and leader), it was not possible to further explore the relationship between

SEN type and behaviour on the playground using statistical tests in these areas.

For the categories in which the number of interactions reached over 10% of all interaction types, t-tests and Mann Whitney tests were carried out to further explore the impact of SEN type on behaviour type in the playground, (see Table above). As the results were comparable, the results of the t-tests are discussed in this section.

Pupils in the SEN group (M=15.92, SD= 10.27) engaged in statistically higher 'onlooker' behaviours than the non-SEN group (M=8.48, SD= 9.21); t (18)= -1.705, p = .105 (two-tailed).

Pupils in the SEN group (M= 13.56, SD= 9.80) also engaged in statistically higher 'unoccupied' behaviours than the non-SEN group (M=2.35, SD= 3.71); t (18)= -4.578, p< .0005 (two-tailed).

Pupils in the SEN group (M= 60.75, SD= 15.70) engaged in statistically fewer 'actively involved' behaviours than pupils in the non-SEN group(M= 84.60, SD= 10.91).

PLAYGROUND ACTIVITIES

Observed activity type on the playground by SEN type

	SEN	N	Mean	Std. Deviation	t-test
Just Conversation	NSEN	10	34.52	25.08	t (18) = .224, p = .825 (two-tailed)
	SEN	10	31.95	26.23	
Play	NSEN	10	14.84	10.83	t (18) = -1.286, p = .215 (two-tailed)
	SEN	10	20.51	8.78	
Games	NSEN	10	48.16	31.98	t (18) = .76, p = .073 (two-tailed)
	SEN	10	38.90	21.43	
	SEN	10	8.64	4.73	

Due to the small number of interactions observed for each observation category, the categories were grouped together to form 3 wider categories of: ‘just conversation’ ‘play’ which includes: sedentary, vigorous and fantasy play and skipping, and ‘games’ which includes ball, chasing games, racing and verbal games and games with materials. The Table above shows that despite a trend for NSEN pupils to engage in more ‘just conversation’ and ‘games’ than PSEN, these differences were not significant. In addition, PSEN engaged in more ‘play’ NSEN pupils, however this did not meet statistical significance. This lack of significance may reflect the small sample sizes and the small number of interactions observed within these categories.

Appendix M: Ability grouping by SEN type

ABILITY GROUPING

Ability grouping by SEN type

	SEN	N	Mean	Std. Deviation	t-test
Mixed- ability	NSEN	10	42.6946	16.08642	t (18)= -.216, p = .831 (two-tailed)
	SEN	10	44.4326	19.64101	
Same ability	NSEN	10	56.7524	15.69096	t (18) = 1.337, p = .198 (two-tailed)
	SEN	10	46.9682	17.01794	
Seated alone	NSEN	10	.5530	1.66200	t (9.208) =-1.636, p = .136 (two-tailed)
	SEN	10	8.5993	15.46654	

The Table above shows that there was no statistical difference in score for mixed-ability grouping; t (18)= -.216, p = .831 (two-tailed), same ability grouping; t (18) = 1.337, p = .198 (two-tailed) or 'seated alone'; t (9.208) =-1.636, p = .136 (two-tailed) for the 2 groups; SEN and NSEN. This indicates that pupils with and without SEN are included in similar arrangements in relation to seating positions in the classroom.

The data suggests that pupils with without SEN are seated in same-ability sets for approximately 50 % of the time. For PSEN this was 47% and for NSEN this was 57%.

Appendix N: Qualitative analysis

4.8.5.1. Subtheme 1: Adult support at breaktimes

Pupils discussed the ways in which adults were involved at breaktimes. Many pupils spoke about adult involvement in a positive way and said that they were kind and helpful when children were hurt or upset. Pupils also described how teachers helped to implement fairness, rules and sanctions which allowed them to have a more positive experience of break.

> *6M- But you've got the other teachers in the school, you know when you have breaktime and you need a teacher to go outside? Well we have that for lunchtime and then, we can tell the teachers if people annoy us and then they get sent on the wall.*

In contrast however, a number of pupils discussed about how they disliked their experiences of adult involvement at break. Some pupils described how the adults made them feel uncomfortable or restricted their feelings of privacy and freedom. Other pupils said that the adults did not do enough to help mediate peer conflicts or implement fair sanctions when pupils were unkind to them.

> *1M- I want the teachers to be less involved because I don't really like the teachers' glares. It makes me feel nervous because I have too much teachers- there's too much teachers outside….Some of them I don't even know.*

> *9M- If I could change anything about breaktimes there would be zero adults because I want to have my privacy with my friends.*

> *3F- I would like them to be more involved…like when I was in Year 5, basically we kept jumping, and then my friend Simon pushed Tom and then wacked me around the face and then pulled my glasses off. That hurt me and the teacher didn't do anything.*

4.8.5.2. Subtheme 2: Breaktime arrangements

Pupils discussed the playground environment and resources that were available to them. The majority of pupils commented on aspects of the playground that they disliked and said that there were a number of factors that they wanted to change about their playground contexts. Some pupils spoke about not having sufficient or adequate equipment whilst others spoke about the small size of the play areas and the fact that some areas were restricted and off-limits to them.

> *6M- I suppose just more things going on in the front playground. Like where we are, you've got the church door and then there's hardly any space, like if we could just play football I'd be happy.*
>
> *4M- Well I would just have a new climbing frame, because all we have got are monkey bars and I want more things to play on.*

Pupils discussed wanting to have alternative breaktime options that were more suited to their needs. For example, one pupil described how we wanted to stay in school during breaktime so that he could access more sedentary activities in a calmer and quieter environment.

> *1M- Yeah we are not technically allowed to draw at break, but I just like to stay in and draw.*
>
> *1M- I would want to play computing instead of going out for breaktime because it's quieter.*

In addition, one pupil described how the breaktime activities available to him were limited and were variable throughout the week.

6M- When we are in the front playground we can't play football and there's nothing to do. So we just have to talk and sit down. That's every Thursday and Monday.

Pupils discussed the length of breaktimes and their satisfaction with the breaktime length. A key commonality was that the majority of pupils wanted to have longer breaktimes than they currently had. In particular, pupils spoke about their morning breaks being too short and not long enough for pupils to have a sufficient break.

6M- They are fine but morning break is a bit short. I'd like a longer break. So then you get more fresh air and you are not just sitting down in class listening to the teacher which is a bit boring.

Pupils losing time from their break due to behavioural incidents emerged as a key contributing factor to pupils wanting to have longer breaktimes. Pupils described how they often felt responsible for the behavioural incidents and were often blamed by their peers for losing time from break.

2F- I like it but in the morning I'd like it to be a little bit more longer. Because, if you get in trouble you get 5 minutes or 10 minutes taken off your breaktime to stay in the classroom and you can't talk and then you waste all of your breaktime and lunchtime. And then you go out for 5 minutes and after 5 minutes you have to go back to class.

10F- I would want morning breaktime to be a little bit longer because it's only 15 minutes and sometimes people blame me and say "you argued and now we missed our breaktime".

Conversely, two pupils did not agree that they wanted their breaktimes to be longer and commented that their breaktimes were about the right length. One pupil's comments suggest that a longer breaktime could be challenging for her on the days that she has no one to play with.

7F- Well I think they are about right I'm not sure really. If it's the day when Grace has violin I can get a bit bored so I wouldn't want them any longer.