

YOUNG SOCIAL BEINGS: AN INVESTIGATION INTO THE SOCIAL INTERACTIONS AND
RELATIONSHIPS OF A YEAR FIVE CLASS

By

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A thesis submitted to the University of Birmingham for the degree of APPLIED
EDUCATIONAL AND CHILD PSYCHOLOGY DOCTORATE

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June, 2016

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"We human beings are social beings. We come into the world as the result of others' actions. We survive here in dependence on others. Whether we like it or not, there is hardly a moment of our lives when we do not benefit from others' activities. For this reason, it is hardly surprising that most of our happiness arises in the context of our relationships with others."

Dalai Lama XIV

"Oh, I get by with a little help from my friends."

The Beatles, With a Little Help from My Friends

ABSTRACT

The research study employed a mixed methods research design to investigate the social interactions and relationships of a Year Five, mainstream Primary School class.

The first strand of the research empirically evaluated an adaptation of the Applied Behaviour Analysis (ABA) intervention 'The Good Behaviour Game' (TGBG), which aimed to increase the positive social behaviour of the Year Five class. TGBG is a dependent group contingency, behaviour management intervention which is implemented at the whole class level. The research employed a single case, ABAB reversal design to evaluate its efficacy for promoting behaviour change for the target social behaviours of *working as a team*, *supporting peers* and *positive social interactions with a peer*. Observation data was also collected for a focus participant to explore the effects of a universal intervention at the targeted level of an individual participant.

The second strand of the research utilised Personal Construct Psychology (PCP) to explore participants' construing of their social interactions and relationships with others. The repertory grid interview method was used to interview 8 participants. The PCP strand to the study was perceived to add an illuminative addition to the ABA strand, which incorporated a constructivist approach to understand the unique perceptions and views of the child.

The findings demonstrated that TGBG positively influenced the behaviours *working as a team* and *positive social interactions with a peer* for the whole class but had no effect on the behaviour *supporting peers*. TGBG appeared to have no effect on the social behaviours of the focus participant. The findings from the PCP repertory grid interviews revealed the complexities of how children construct their social interactions and relationships with others. An interpretation of the findings is presented and implications for theory development and educational psychology practice are discussed. The limitations of the study and suggestions for future research are made.

DEDICATION

To my family

To my Mum, Dad and Brother

ACKNOWLEDGEMENTS

A huge thank you to my academic tutor, Sue Morris, for her excellent guidance and firm belief in me.

Thank you to the entire educational and child psychology course tutor team at The University of Birmingham for their support and teaching over the past three years.

A special thank you to Bev Burke, course co-ordinator, for all her support as well as for just being lovely.

Likewise, thank you to my placement supervisor Dr Heather Ball for her support and guidance over the last two and a half years.

Thank you to the teaching and support staff at the Primary School who willingly took part in my research. Thank you to the Year Five children who so positively embraced The Good Behaviour Game and to those eight participants who opened up their hearts to me during our interviews.

A big thank you to my best friend Lara Reilly. She was always there for me when I needed her and didn't stop believing in me.

Thank you to my peers and friends on the course for being so open and creating such a wonderful collegiate atmosphere.

Thank you to my partner Dave Brown for all the encouragement, belief and patience, as well as practical support.

Thank you to my Brother for being so proud of his older sister, and for telling me so. An eternal thank you to my Mum and my Dad for their unconditional love and support. They loved me and believed in me no matter the outcome and that was the most important thing.

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LIST OF ABBREVIATIONS

Applied Behaviour Analysis (ABA)
Autistic Spectrum Condition (ASC)
Educational Psychologist (EP)
Educational Psychologists (EPs)
Emotional, Social and Behaviour disorders (ESBD)
Personal Construct Psychology (PCP)
Special Educational Needs (SEN)
The Caught Being Good Game (TCBGG)
The Good Behaviour Game (TGBG)
Trainee Educational Psychologist (TEP)
Year Five (Y5)

CHAPTER ONE: INTRODUCTION

1.1 Initiation of the research study

Educational psychologists (EPs) apply psychological theory at the individual, group and organisational levels to improve the educational and developmental outcomes of children and young people (Boxer, Challen and McCarthy, 1991; Cameron, 2006; Fallon, Woods and Rooney, 2010; Atkinson, *et al.*, 2015). EPs engage in the five key roles of consultation, assessment, intervention, training and research (Cameron, 2006). Typically, a service is provided to schools whereby school staff may 'refer' a perceived problem to the EP and negotiate appropriate further action following a 'plan, do, review' model of consultation (Farouck, 2004; Kennedy, Fredrickson and Monsen, 2008; Nolan and Moreland, 2014). When relevant to the problem situation, EPs may recommend a research investigation where an applied research study is conducted to further explore the phenomena of interest (Barlow, Hayes, and Nelson-Gray, 1984 and Mackay, 1997).

The current research evolved from an existing professional relationship between a trainee educational psychologist (TEP) and a mainstream primary school. In fulfilling the previously outlined role of the EP, the TEP worked conjointly with the school's Year Five (Y5) class teacher on a perceived developmental and educational problem. The class teacher had significant concerns about the social behaviours and interactions of the pupils during lessons. It was felt that pupils had difficulty working as a group, co-operating with each other and supporting one other.

Initial applied educational psychological work conducted by the TEP involved holding three consultations with the class teacher. The problem dimensions were explored in full before a course of action was decided on. As part of the problem exploration phase, under the guidance of the TEP, the class teacher engaged in the following actions:

- They conducted their own interviews with members of the class about their social interactions as a group. This was supported with an interview script developed with the TEP during the initial consultation.
- They conducted a sociogram of the whole class to reveal social networks and isolated peers (Banerjee, 2015).

The findings of the sociogram and the interviews cannot be shared as they were conducted as part of the initial casework, before ethical approval was obtained for the current research project. However, these actions led to the following inferences¹ being developed in the final consultation between the TEP and the class teacher:

- It was inferred that pupils could, on occasion, engage positively with each other but appeared to lack the motivation and desire to engage socially with each other in a positive way during lessons. Pupils demonstrated a lack of motivation to co-operate with each other, work as a team and engage in positive social behaviours.
- It was inferred that pupils' views and conceptualisations of their social worlds and interactions played a role in how they understood the classroom social dynamics. This was thought to subsequently influence their motivation to engage in positive social interactions with others.

The initial information gathering phase and the subsequent interpretations informed a joint decision that the next best course of action would be to conduct an applied research study to explore the social behaviours and interactions of the Y5 class in a more systematic manner. The research project also fulfilled the TEP's requirement to produce an applied research

¹ The word 'inferences' has been deliberately chosen for use here instead of the word 'hypotheses'. Usually, with applied educational psychology work the term 'hypotheses' is used to indicate assumptions developed about real world phenomena, based on gathered information. However, 'inferences' has been used instead to convey the same meaning in order not to confuse the reader between the assumptions developed during the pre-research phase with the later assumptions (research questions) of the research itself, which are also often referred to as 'hypotheses'.

project as partial requirement for completion of the Professional Doctorate in Applied Educational and Child Psychology at the University of Birmingham.

1.2 Initial rationale and aims of the research

Based on the inferences developed through the preceding applied educational psychology work, the initial rationale for the research project was as follows:

- (1) That there was a need to intervene to encourage the members of the class to be more socially appropriate and positive in their interactions with each other.
- (2) That there was a need to understand the pupils' views and perceptions of their social interactions and relationships with others.

Given this rationale, the major aim of the research study was to conduct an investigation into the social behaviours and interactions of pupils in the Y5 class. It aimed to find a way to successfully motivate pupils to engage in positive social behaviours and interactions with peers and to develop knowledge of what the pupils' personal understandings and perceptions of their social interactions and relationships were. The study sought to achieve these aims by:

- (1) Making an empirical evaluation of an intervention aimed at increasing positive social behaviours amongst participants, as it was hoped this intervention would motivate pupils with their social behaviours.
- (2) Making an explorative inquiry into the constructs of social relationships and social interactions held by a sample of participants, as it was thought that this would enable the development of an understanding of the child's perspective.

The research project was conceptualised as having two 'strands', the first was the empirical evaluation and the second the explorative inquiry. The second aim, and research strand, was viewed as subsidiary to the first aim and strand. From the perspective of the teacher,

intervening to improve the pupils' social interactions was viewed as the primary goal, and so the empirical evaluation was fronted. The second aim of an explorative inquiry was conceived of as adding an additional, illuminative examination aspect to the research.

The rationale and aims of the research were further developed after a wider examination of the research context had been made (presented in Chapter Two). The developed rationale for the research is fully explored in Chapter Two, Section 2.7.

1.3 Structure of thesis

This volume comprises eight chapters. The current chapter provides an overview of the thesis and focuses on the development of the research project. Chapter Two presents an examination of the research context including the theoretical context and the UK educational policy context. Based on the developed understanding of the research context, the chapter ends by further developing the rationale and aims of the research. Chapter Three presents one of two literature reviews. It focuses on the research literature for the chosen intervention for the empirical evaluation, The Good Behaviour Game (TGBG). Chapter Four presents the second literature review, which focuses on the research literature for the theory chosen for the explorative inquiry into participants' construing of their social interactions and relationships with others (Personal Construct Psychology, [PCP]). The research questions are presented after the outcomes of both literature reviews have been considered. Chapter Five provides an in-depth discussion of the ontological and epistemological assumptions of the research and the chosen methodological approaches. It engages in debate around the use of different philosophical approaches in a mixed methods research framework. Chapter Six gives an account of the research studies' method. This is followed by Chapter Seven which presents the findings of the research. Chapter Eight is the concluding chapter. It presents a discussion of the findings with a critical reflection. The perceived limitations and ideas for future research are discussed.

CHAPTER TWO: RESEARCH CONTEXT

2.1 Introduction and overview

The initiation of the research led to a focus on social behaviours and interactions in the Y5 class. The following chapter explores the wider context for this focus. The concepts of social skills and social competence are outlined to identify a relevant area of psychological theory and research. The importance of social skills and social competence in child development are highlighted by addressing the long term impact of social skill and competency deficits. The development of social skills and social competence is then explored from significant psychological theoretical perspectives. The efficacy of social skill interventions are then reviewed in relation to this. Finally, an inspection of UK educational policy and government advice which advocates for the role of the school in supporting positive social development is made.

The chapter finishes by linking the wider context for the research with a developed rationale. In light of this, the specific intervention adopted for the empirical evaluation strand of the research is presented for the first time. The theoretical approach chosen to guide the explorative inquiry is also presented.

2.2 Conceptualising social skills and social competence

The research history of psychology has long been interested in the study of social behaviours and the varying proficiency of individuals in negotiating social situations (Hogg and Vaughan, 2011; Nolen-Hoeksema, 2009). Research has explored how social groups are formed and maintained, social pressure and compliance, social identity and categorisation and the impact of perceived social support (Milgram, 1963; Tajfel *et al.*, 1971; Milgram, 1974; Heller and Swindle, 1983; Prentice, Miller and Lightdale, 1994).

In the field of applied psychology two key terms, 'social competence' and 'social skills', have come to be used to designate abilities in social interaction. Spence (2003) defines social skills as "the ability to perform those behaviours that are important in enabling a person to achieve social competence" (pg. 84). Social competence has been defined by Spence and Donovan (1998) as having the proficiency to obtain successful outcomes as a result of interacting with peers.

A difference emerges where the term social skills is employed to designate certain behaviours or traits that lead to success, whereas the term social competence may be used broadly to refer to a more general ability in social interactions. However, these are minor distinctions which are not consistently made in the literature and the two terms are often used interchangeably (Spence and Donovan, 1998; Spence, 2003). Both conceptualisations share the key axiom that there should be success in social interactions. Weighted importance is placed on obtaining positive outcomes through the employment of positive social behaviours when interacting with others. As such, the current research employs both terms.

2.3 Theoretical context: The importance of social skills development and the long term impact of impaired social competence

Before embarking on a research project aimed at intervening to improve the social interactions of a Y5 class the wider question must be asked; why are social skills and social competence an important focus for research? The answer to this question is found in research which has demonstrated the long term negative impact of impaired social competence and social skill deficits. An evidenced connection with long term psychological maladjustment and functioning provides justification for exploring ways in which to mediate social skill development.

Social skills deficits and relationship difficulties have been shown to have significant long term impact on psychological adjustment and adaptive functioning (Campbell, Hansen and Nangle, 2010). Children with impaired social skills are more likely to develop depression as adults, whereas, adolescents who have been exposed to social skill training interventions are less likely to develop depressive symptoms as adults (Segrin, 2000; Rose, Hawes and Hunt, 2014). In line with this finding, the possession of social co-operation skills predicts higher levels of emotional wellbeing during adolescence (Halopainen *et al.*, 2012).

The relationship between social competence and psychological adjustment and functioning has been shown to be evident in a range of adult psychological problems. Perez, Riggio and Kopelowicz, (2007) reported that social skill imbalances indicated a higher degree of symptom severity on participant self-report measures for a variety of mood disorders and schizophrenia. One potential reason for this is that social skill deficits and difficulties with social competence can lead to potential social isolation. Segrin, McNelis and Swiatkowski (2016) found that poor social skills minimized an individual's ability to seek social support and benefit from its protective effects. Those who did not seek social support reported experiencing more psychological distress.

Given the influential role of social skills and social competence in later psychological adjustment and adaptive functioning, the use of social skills training interventions have been utilised in a preventative manner. For example, the addition of a social skills training component to therapeutic preventative interventions for mood disorders has been advised (Rose, Hawes and Hunt, 2014). Likewise, child social skills training has an integral role in preventative programmes of antisocial behaviour and crime (Losel and Bender, 2012).

The collective research picture highlights the importance of developing social competence and effective social skills during childhood and adolescence. It provides impetus for the present investigation into the social interactions and behaviours of the Y5 class. It is arguably important to address a perceived difficulty with social behaviours and interactions in

order to safeguard against potential future difficulties with social and psychological adjustment.

2.4 Theoretical Context: the development of social skills and social competence in childhood and adolescence

It was important to position the investigation into the social behaviours and interactions of the Y5 class within the wider context of prominent psychological paradigms which have drawn up an account of the various facets of social skills and social competence and how they develop. This would enable the selection of theoretically relevant approaches appropriate for the empirical evaluation and explorative enquiry respectively.

The development of social skills and social competence has been researched from a broad variety of psychological theoretical perspectives. For example, an interactionist perspective can be contrasted with a biological one, where social skills are seen to develop due to an interaction of influences, including environmental, instead of developing mostly as a result of a pre-determined genetic influence (Shotter and Gergen, 1989; Robinson, Grozinger, and Whitfield, 2005). From an alternative perspective, positive psychology would position the development of social skills and social competence more broadly within the part they play in the advancement of resiliency and authentic happiness (Seligman, 2004). Clearly, there is a broad church of psychological paradigms which account for social skill development. Each theoretical perspective offers a slightly different avenue from which to base an understanding and subsequent exploration of the research topic.

The current theoretical context focuses on the psychological approaches of developmental psychology, behaviourism, emotional processing theory and cognitive psychology. These are foregrounded as they are understood to be traditional psychological paradigms that investigated social skill and social competence development. In addition, Spence (2003) drew exclusively on these paradigms when developing an integrated understanding of social

competence development, which centralised and combined their core theoretical roles. PCP is also investigated as a theoretical alternative to the dominant paradigms as it links with the later methodological choices of the research project.

2.4.1 Developmental psychology

Developmental psychology research seeks an understanding of how social behaviours form and develop across the childhood developmental span. Table 1 summarises the developmental pattern of social behaviour in children and young people. The key points of the developmental psychological explanation of the evolution of social skills and social competence are that;

- a desire for social interaction is present from a young age,
- social environments become more complex as the child ages, and more complex social responses are required,
- the child's initial social models are their parents which changes to their peer group during early adolescence.

Developmental age	Typical pattern of social behaviour
Birth to two years of age	<p>The drive for social interaction is present from a young age (Miller, 2010).</p> <p>One illuminative example of this is the phenomena of infant - care giver reciprocity where babies mimic adult's facial expressions as a form of early social interaction and communication (Cohn and Tronick, 1989).</p> <p>As babies and young children develop in autonomy and their social world expands so too does a drive for increased social interaction.</p>
Two years of age to Seven years of age	<p>During the toddler and early primary school years it is theorised that children attempt to develop a basis of co-operation skills as they experience new free flow play environments, with a need to interact and share resources with an increasing number of others (Rubin <i>et al.</i>, 2011).</p>
Ages ten to fourteen (late childhood and early adolescence)	<p>Termed 'the social turn', children begin to turn away from their parents as the major social source and begin to place increasing importance on social relations with peers (Erikson, 1959).</p> <p>Social interactions become increasingly complex and networks of</p>

	peer friendships more dynamic. Developmental psychologists postulate that it is during this developmental period that social competence crystallises and the individual's pattern of social responding is formulated (Lamb and Bornstein, 1999).
--	--

Table 1: A summary of the developmental pattern of social behaviour across childhood and early adolescence.

2.4.2 Behaviourism

From a behavioural perspective the development of social skills and social competence is viewed as being the result of an individual's interaction with the environment via the shaping of behaviour through contact with reinforcement and punishment based contingencies (Cooper, Heron and Heward, 2007). Each individual experiences an environment unique to themselves and the contingencies for developing and exhibiting positive social skills vary from person to person. This explains why some children develop more socially appropriate behaviour than others. For example, access to other individuals who model socially successful behaviour will vary between children. Likewise, so too will access to contingencies that promote the use of advantageous social skills. If children do not receive desirable consequences from their performance of social skills (reinforcement), or receive negative consequences that reduce the likelihood of them attempting them again (punishment) then it is unlikely that the acquisition of social skills will occur. This impinges on the overall development of social competence.

Gresham (1997) makes a distinction between deficits in skill acquisition and deficits in skill performance. A child has a skill acquisition deficit if they cannot engage in a particular social behaviour because it is not in their behavioural repertoire. In other words, they do not yet know how to do the behaviour. A performance deficit occurs when a child does have the ability to behave in a socially successful way, but does not consistently demonstrate their social skills in one or more interactions with others. From a strictly behavioural perspective, performance deficits can occur as a result of competing contingencies where engagement in perceived challenging behaviour affects more success in obtaining desirable outcomes than

engagement in positive social behaviour. For example, a 4 year old child, when wanting to share a toy with a peer, may have the ability to negotiate turn taking in their behavioural repertoire. However, it may be easier and more effective for the child to hit the peer to gain the toy. This is a powerful competing contingency which promotes performance of the behaviour of hitting over the behaviour of negotiation.

2.4.3 Emotional processing theory

Affective factors have been found to be related to social competence and acceptance with peers. For example, Hernandez *et al.*, (2016) found with kindergarten pupils that there was a positive relationship between the experiencing of positive emotions and high levels of peer acceptance. In contrast, they found a relationship between the experiencing of negative emotions and a higher rate of conflict with peers.

A child's ability to effectively emotionally self-regulate has been shown to mediate the success of their social interactions with peers, and could account for this relationship. How a person regulates their emotions refers to how they modify their emotional reactions in the event of emotionally arousing situations (Eisenberg *et al.*, 1993). Table 2 presents the three types of emotional regulation coping patterns developed by Eisenberg *et al.*, (1993).

Emotional regulation coping pattern	Emotional regulation behaviour
Passive coping	Avoidance Denial of the problem Internalisation of emotions
Constructive coping	Problem solving Facing the problem
Emotional venting	Emotional release of frustration Externalisation of emotions

Table 2: the three types of emotional regulation patterns developed by Eisenberg *et al.* (1993).

Research evidence has demonstrated that engagement with different emotional regulation coping patterns have divergent effects on the child's ability to engage in socially competent behaviour. Those who succeed in social interactions, and particularly in negative social interactions, engage in constructive coping and effectively regulate their emotional responses and subsequent emotion related behaviours (Schmidt, Demulder and Denham, 2002). In contrast, those who engage in emotional venting and an externalisation of emotions experience increased conflict with peers (Calkins *et al.*, 1999). Adoption of a passive coping style predicts internalisation of the problem and maladaptive social responses, such as social isolation (Blair *et al.*, 2004).

One potential explanation for these findings is that emotions disrupt and re-direct psychological processes and resultant behaviour, impinging on a child's ability to engage in the appropriate social skills at the right time (Cole, Martin and Dennis 2004). In the previous example of a four year old child wanting to share a toy, the child may feel frustration and anger at not being able to immediately gain access to the toy. Engaging in an emotional venting coping pattern to manage these emotions would disrupt their ability to focus attention and problem solve, potentially leading to socially inappropriate behaviour such as hitting and shouting at the peer. This would be indicative of an externalising of emotions.

2.4.4 Cognitive psychology

Further to the role of affective factors, cognitive deficits and distortions have also been shown to influence social behaviour. Deficits in cognitive appraisal and understanding of a social situation influence the subsequent behavioural response. In order to be successful, children must first be able to accurately identify the presence of a challenging social interaction, be able to create a variety of ways to deal with it and pragmatically evaluate the outcomes of each option to choose a course of action. If children do not have these cognitive

problem solving ability skills then they are less likely to engage in appropriate social action (Spence, 2003).

Cognitive distortions can mediate an interpretation of a social interaction and subsequent behaviour may be inaccurately based on the distorted understanding. Lochman and Dodge (1994) found that highly aggressive children exhibited distortions in the social cognitive processes of attributions, affect labelling, social problem solving, outcome expectations and perceived social competence. This led them to misinterpret social events and the social approaches of others, which in turn increased the likelihood of them responding in an aggressive manner. Similarly, Rudolph and Clark (2001) demonstrated that children who presented with aggressive symptoms were more insensitive to social cues and, as a result, were more likely to experience a problematic status in the peer group and be rated by adults as having social competence deficits.

In contrast, children with depressive symptoms demonstrate the cognitive deficit of being over sensitive to social cues, which also led to a problematic peer group status (Rudolph and Clark, 2001). Children experiencing depressive symptoms also under estimate their social competence, which has a long term effect on their ability to confidently interact with others (McGrath and Repetti, 2002).

2.4.5 Personal construct psychology

PCP provides a unique angle from which to develop a cognizance of how social interactions and relationships develop in children. It differs from previously explored theories in that it offers a theory of human behaviour which views an individual's unique experience and understanding of the world to be central to their actions within it. Kelly (1955) theorised that an individual acts as a scientist, making predictions about the world based on their current perception and understanding of it, which is continually altered according to experience. Future events are anticipated and responses planned in accordance with what is termed an

individual's 'model of the world', which is their particular perception and comprehension of events.

The 'construct system' is the theorised mechanism that represents a person's 'model of the world' (Fransella and Dalton, 2000; Bannister and Fransella, 2013). A 'construct system' is made up of numerous 'constructs', the smallest theoretical unit for knowing something about the world and making an interpretation of it to form an presumption of how things are. Constructs are binary and possess two polar points such as 'happy / sad' or 'good / bad' (Fransella and Dalton, 2000; Bannister and Fransella, 2013). Constructs relate to other constructs in a network of relations where some are subordinate to others (Feixas and Saul, 2004).

PCP would posit that each individual child develops their own set of constructs for predicting and responding to social interactions and developing relationships (Fransella, 2003). As each individual's experience is unique the individual's constructions of their social interactions and relationships will be nuanced. Therefore, how they anticipate and respond to social events are a result of their previous social experiences and the constructs they have developed as a result (Fransella, 2003). This theoretical perspective for the development of social skills and social competence significantly centralises the individual views and perceptions of the child.

In addition, the 'sociality corollary' to PCP theory states that individuals interact with each other by construing the constructions of others (Fransella and Dalton, 2000; Fransella, 2003). They perceive that others have an interpretation of the world separate from their own and attempt to understand the actions of others by inferring their constructs (Fransella and Dalton, 2000; Fransella, 2003). From the PCP theoretical perspective the development of social skills and social competence is closely linked to the individual's inferences and understanding of how others are interpreting the world (PCP theorising of the development of social interactions and relationships is further explored in Chapter Four).

2.4.6 Summary

Research has shown that the development of social skills and social competence during childhood and adolescence is multi-factored and subject to a variety of influences including;

- developmental social processes that are present from birth and progress over the lifespan,
- access to positive social role models,
- access to contingencies of reinforcement that promote social skill acquisition and performance,
- the ability and use of constructive emotional regulation coping strategies,
- the application of social cognitive processes, such as attributions, affect labelling, social problem solving, outcome expectations and perceived social competence,
- the development of personal constructs about social interactions and the social behaviours of others.

Spence (2003) presents a model of social competence that includes the equal role of cognitive, behavioural, emotional and environmental determinants of skilled social responding. A visual summary of the influence of each is presented in Figure 1.

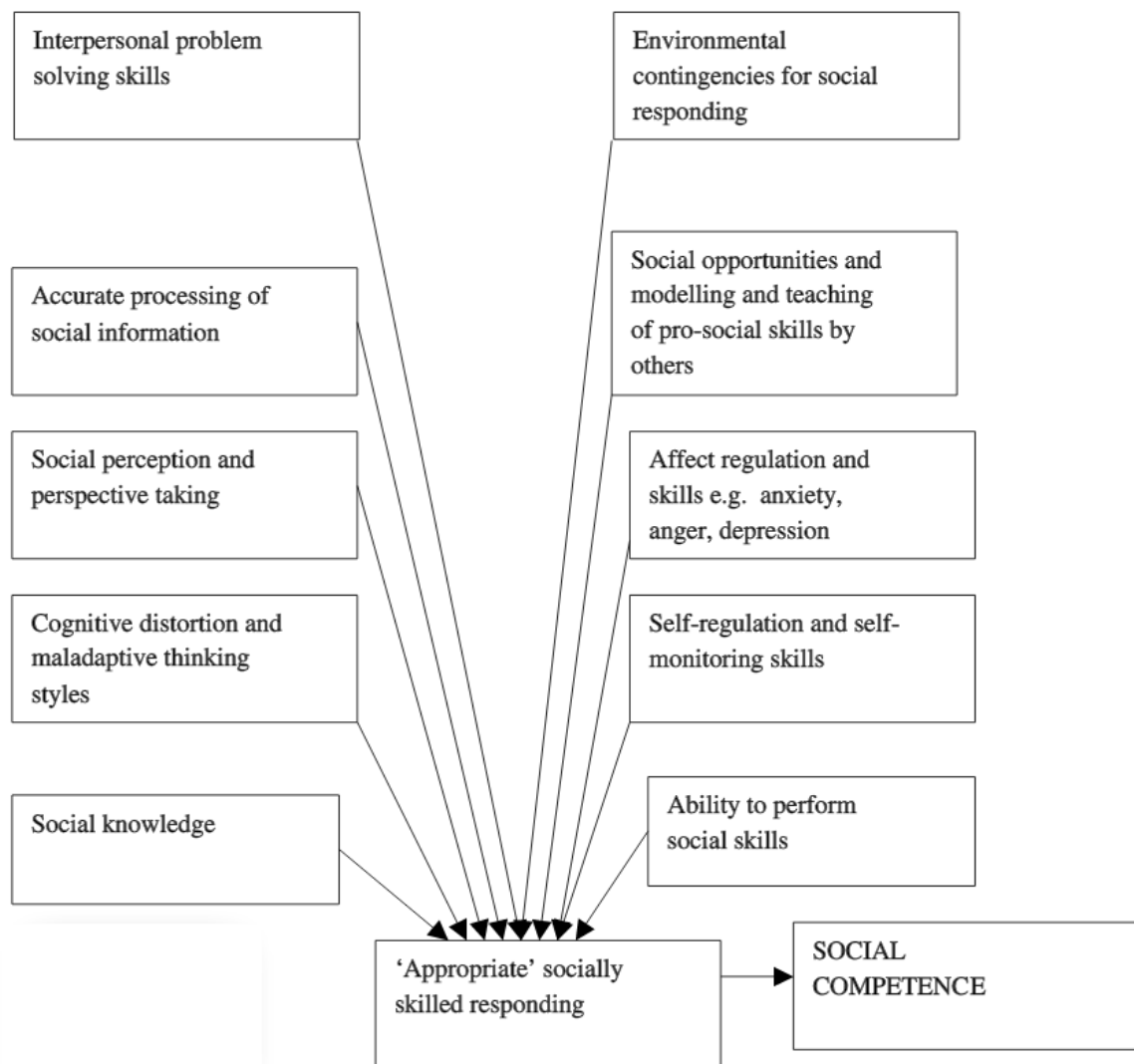


Figure 1: Spence (2003) model of social competence

2.5 Theoretical context: the efficacy of social skills interventions

As the research planned to evaluate an intervention that aimed to promote engagement in positive social behaviours and interactions, the efficacy of social skills interventions was explored. This provided an overview of how successful previous interventions had been at producing desired behaviour change. It also provided a template of 'what works best' to be

examined and utilised for the purpose of developing the intervention that would be evaluated with the Y5 class.

There is an expansive research literature which has empirically evaluated the efficacy of social skill training interventions. However, reviews and meta-analyses that have focused on the efficacy of interventions at the group level for all children are limited in number. Historically conducted meta-analyses have established the view that social skill intervention at the level of the whole class is effective and warranted, despite a complex literature (Schneider and Byrne, 1985; Gresham, 1997). The most recent synthesis of the literature has been conducted by Spence (2003) who concluded that as a whole class intervention for all pupils' social skills training could be said to have a moderate effect at producing short term changes in social behaviour. It was noted that there was a dearth of research that investigated long term outcomes. The effectiveness of intervention also appeared to "vary as a function of the presenting problems of a child" (pg. 92), such as children who are categorised as having emotional, social and behavioural disorders (ESBD) or Autistic Spectrum Condition (ASC).

The research literature which has investigated the impact of social skills training for individuals categorised as having ESBD or ASC has been more recently thoroughly explored. Maag (2006) reviewed both narrative and analytical reviews of social skills training for children with ESBD and reported a moderate effect size. However, Cook *et al.* (2008) only reviewed meta - analyses and reported that social skill interventions resulted in social skill improvements in two thirds of pupils with ESBD compared to one third of controls. Similarly, Chen (2006) investigated literature which had been conducted in America and concluded that social skill interventions were effective in developing socially accepted behaviour and positive relationships with others in participants categorised as having ESBD. The most recent systematic review conducted by Sullivan and Sadeh (2014) found methodological rigour to be lacking in the 9 research reports examined and called for more rigorous research to be conducted with pupils in this population.

A similar picture emerges with reviews and meta-analyses that have examined the impact of social skills training for individuals categorised as having ASC. Bellini *et al.* (2007) conducted a meta-analysis of 55 single subject design studies and concluded that social-skill interventions demonstrated a minimal effect on the social behaviour of children categorised as having ASC. Similarly, Rao, Beidel and Murray (2008) conducted a review of the literature and found minimal evidence. The most recent review of the evidence based literature reports that there is an increasing evidence base for the efficacy of social skills interventions for individuals with ASC, but further rigorous research is still warranted (Callahan *et al.*, 2016).

One reason for the apparent disparity of results within the research literature is that each social skills intervention is unique with respects to the component strategies employed, rendering direct comparisons of effectiveness difficult. In response to this, research has attempted to identify the components to interventions which appear to affect the largest amount of significant change. Table 3 summarises the various components that could be employed in a social skills intervention with examples.

Social skills intervention component	Explanation	Examples
Behavioural components	<p>Common behavioural components to social skills interventions may include:</p> <p><i>Modelling:</i></p> <p>Modelling involves providing an explicit example of how to successfully engage in a particular behaviour or set of behaviours. The model might be written down in a simple step by step guide and / or performed by an adult or peer as a physical example.</p> <p><i>Role play:</i></p> <p>Role play involves practising the performance of the behaviour in a safe and supportive environment.</p> <p><i>Performance feedback:</i></p>	<p>'The Tough Kid Social Skills Book' (Sheridan, 1995).</p> <p>'Superheroes Social Skills: A Multimedia Program' (Radley <i>et al.</i>, 2014; Block <i>et al.</i>, 2015).</p>

	<p>Performance feedback is given to the child when they engage in the behaviour. They are given advice on what they did well and how to improve in the future. Feedback should be specific.</p> <p>Feedback can be given verbally from an adult or peer. Some interventions may utilise video feedback, where participants can generate their own feedback on their performance.</p> <p><i>Contingency management:</i></p> <p>Contingency management involves making effective antecedents and consequences frequently available in the intervention and generalisation environment to encourage engagement in the target behaviours.</p>	
Emotion management components	<p>Common emotional management components to social skills interventions may include:</p> <p><i>Mindfulness and relaxation techniques:</i></p> <p>Mindfulness and other relaxation techniques, such as progressive muscle relaxation and visualisation, have been incorporated into social skills training interventions as a way to support participants to respond to emotions in a positive way, rather than react to them in a negative way.</p> <p><i>Affect labelling:</i></p> <p>Affect labelling involves widening emotional vocabulary use and the identification of emotions as a way to increase emotional awareness.</p> <p><i>Distraction techniques:</i></p> <p>Distraction techniques may be taught as a means to provide options for ignoring or minimising the effect of strong emotions.</p>	'Stop, Think, Do: Social Skills Training' (Peterson and Lewis, 2000).
Cognitive components	<p>Common cognitive components to social skills interventions may include:</p> <p><i>Self-instruction:</i></p> <p>Self-instruction involves using internal positive self-talk to successfully guide yourself through a challenging social situation. E.g. a person who experiences negative thoughts that they are not liked may internally tell themselves "I am likeable" when in a situation where they may be required to meet lots of new people.</p> <p><i>Interpersonal problem solving skills:</i></p>	<p>'Talkabout: A Social Communication Skills Package' (Kelly, 1997).</p> <p>'Comicstrip Conversations' (Gray, 1998).</p> <p>'Social Stories' (Gray and Garand, 1993).</p>

	<p>Interpersonal problem solving skills are taught by providing a framework which can be applied when seemingly intractable problems arise. The processes differ but an example would be: firstly identify what the problem is, generate some possible solutions, mentally test out each solution, consider the benefits and cons and then pick a potential solution to follow.</p> <p><i>Social perception skills:</i></p> <p>The goal is to teach individuals how to better perceive what is happening in a given social situation and to understand what the complexities are. An example social scenario is often given and then explored in a safe environment with the person or group. An emphasis is placed on attempting to perceive the situation from someone else's perspective.</p>	
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Table 3: Potential components of a social skills intervention.

Spence (2003) reported that the behavioural components to intervention of modelling, performance feedback, role play and contingency management have been found to be the most effective in promoting improvements in specific social skills. In contrast, it was concluded that evidence for the effect of emotional-cognitive intervention components, such as interpersonal problem solving skills, self-instruction and social perception skills was inadequate.

Gresham (1997) summarised the narrative and meta-analytical review literature and also concluded that the inclusion of behavioural training techniques were a key component to a successful social skills and social competence intervention. Significant emphasis was placed on the inclusion of contingency management as a key component to promote the use of newly acquired social skills in a competing behaviours framework. It was put forth that this is a crucial element in a social skills intervention as it enables positive social behaviour to be more reliable and reduces the efficiency of competing behaviours.

This is seconded by Evans, Axelrod and Sapia (2000) who highlighted the importance of prompting targeted social behaviours in generalised settings outside of the intervention

teaching context. Again, the use of contingency management to reduce competing behaviours was advised.

2.5.1 Summary

There is some evidence that suggests that social skills interventions are adequately effective in producing short term changes in the social behaviour of participants at the group level of the whole class. There is a need for longitudinal data to assess the sustainability of these effects over time. There is also some evidence to suggest that social skills interventions are particularly effective for children classified as having ESD. The evidence for the effectiveness of social skills intervention for children with ASC is perceived to be minimal.

One of the difficulties in assessing social skill intervention effectiveness is that there is no one set format that is adhered to across interventions. Interventions vary in the emphasis placed on different components, e.g. the ratio of emotional-cognitive skill building versus use of behavioural methods. Thus, the findings of research which have investigated the role and usefulness of each approach was important to the choice of intervention for the current research.

Such research has demonstrated the integral role of behavioural techniques. Particular emphasis is placed on structuring the generalisation environment with use of contingency management, in order to promote new behaviours and reduce engagement in competing behaviours. This is of particular interest to the current research study and its aim to develop motivation for engagement in positive social behaviours which are already inferred to be in the class' collective behavioural repertoire.

2.6 The UK educational policy context

The role and responsibility of the school in encouraging and supporting the development of social skills and social competence in its pupils has been repeatedly recommended by UK educational policy and government advice. It has also been fore fronted in policy and advice related to mental health, which has considered the context of the school for promoting positive well-being. Table 4 presents significant government advice and policy developments and their impact on the role of the school in the social development of children. A distinction is made between educational policy and advice and that which comes from a mental health perspective by indicating in square brackets within the table.

Government policy, advice and reviews	Implications for role of the school in the social development of children
'The Education Act' (1944)	<p>The Education Act of 1944 established, for the first time, Secondary Modern Schools and required education to be mandatory to the age of 15.</p> <p>With the establishment of Secondary Modern Schools new curricular emphases were developed (The Education Act, Chapter 31, 1944). Amongst these the Personal, Social, Health and Economic curriculum was implemented. The broad aim of the curriculum was to allow pupils to learn 'practical' skills for life.</p> <p>For the first time, the role of the school for providing a curriculum for social and personal development was introduced.</p>
'Education Reform Act' (1988)	<p>The Education Reform Act of 1988 introduced the National Curriculum for the first time and with it a fresh emphasis on school to be a place of preparation for adulthood. The moral, social and spiritual aspects to learning were highlighted in the new, wider curriculum.</p> <p>As with the previous The Education Act (1944), the school was positioned to take increasing responsibility for the personal, as well as academic, development of pupils.</p>
'A Handbook on Child and Adolescent Mental Health' and 'Together we stand', Health	In 1995 the Department for Health published two advice documents that led to the development of a four tiered Child and Adolescent Mental Health

Advisory Service (1995) [Mental health perspective]	<p>Service.</p> <p>At tiers one and two the role of the school in promoting positive mental health and social and emotional well-being was cemented (Appleton, 2000; Williams and Kerfoot, 2005).</p>
'Every Child Matters Framework' (Department for Education and Skills, 2003)	<p>With the stage set by the historic education reforms of 1944 and 1998, the role of the school in the development of pupils' social competence and social skills was initially highlighted and significantly developed with the implementation of the 'Every Child Matters Framework'.</p> <p>Of the five outcomes for optimal child development (Be Healthy, Stay Safe, Enjoy and Achieve, Make a Positive Contribution and Achieve Economic Wellbeing) those that highlighted the importance of social development were:</p> <p>Enjoy and achieve - achieve personal and social development and;</p> <p>Make a positive contribution - develop positive relationships and choose not to bully and discriminate.</p>
'The Children's Plan' (Department for Children, Schools and Families, 2007, pp. 54–57)	<p>'The Children's Plan' laid out clear policy aspirations, envisioning that children would develop positive social and emotional lives as they transitioned from Nursery to Primary School.</p> <p>It also stated that secondary schools required a fresh focus on pupils' social and emotional needs in recognition that their social understanding and capacity are influential in their academic engagement and attainment (Department for Children, Schools and Families, 2007, pg. 70–72).</p>
The Social and Emotional Aspects of Learning (SEAL) plan (Department for Education and Skills, 2005)	<p>The development of social skills was included as one of the five key social and emotional aspects to learning. This spearheaded a substantial increase in school based interventions aimed at developing social skills and social competence in schools in the UK, and positioned the school in a central role (Hallam, 2009; Gillies, 2011).</p>
'Social and Emotional Learning: Skills for Life and Work' (Cabinet Office, 2015)	<p>Although the 'Every Child Matters Framework' was discontinued in 2012 the explicitness of its focus on social and emotional wellbeing left a legacy for the role of the school in promoting social skills and social competence.</p> <p>A review of the importance of early social and</p>

	<p>emotional learning for later adult success was jointly commissioned by the Cabinet Office, the Early Intervention Foundation and the Social Mobility and Child Poverty Commission (Cabinet Office, 2015). It concluded that the development of social skills and social competence play a crucial role in shaping future life outcomes and consequently called for "more purposive action across the schools and youth sector" (pg. 11).</p>
<p>'Mental Health and Behaviour in School'. (Department for Education, 2014) [Mental health perspective]</p>	<p>The position of the school in promoting social competence and positive social interactions with peers has been more closely tied with the preventative role these skills play in reducing risk to mental health problems, as well as the development of positive well-being.</p> <p>The government's advice document for mental health and behaviour in schools explicitly highlights the significant role that deficits in social skills play in the development of emotional and behavioural disorders (Department for Education, 2014).</p> <p>It states that "Social Skills Training (SST) can be an effective element of multi-method approaches to bolstering the ability to perform key social behaviours that are important in achieving success in social situations" (pg. 24).</p>

Table 4: UK Government policy, advice and reviews that have shaped the responsibility and role of the school in the social development of children.

2.6.1 Summary

In the UK the role of the school in developing social skills and competence in children and adolescents has received increasing attention in recent decades, but has antecedents as far back at the 1944 Education Act. One of the key reasons for this increased focus has been the importance of the successful development of social competence and social skills for positive outcomes in adult life. This has placed an increasing responsibility on schools and school staff to develop their understanding of pupils' social behaviours and how to help encourage social success.

Influence from a mental health perspective has also illuminated the distinct approaches of universal and targeted intervention and the roles they play in relation to each other. Within the school context, this has translated into two different focuses. The first focus aims to target all children and is implemented in a preventative manner. This may be considered in line with ‘universal provision’. The second focus aims to target particular children or groups of children who are perceived as ‘vulnerable’. This may be considered in line with notions of ‘targeted intervention’.

2.7 Development of the research rationale

The original rationale was advanced and refined after the examination of the theoretical and UK educational policy context had been made. Table 5 presents the rationale that was developed in light of the wider research context.

Research context	Developed rationale
UK educational policy context	<p>Government legislation and guidance places schools in a central role of responsibility for pupils’ development of social skills and social competence.</p> <p>This placed the participating school in a position of responsibility for understanding and intervening in its pupils’ development of social skills and social competence, which the focus of the research project contributed to.</p> <p>Further still, the influence of targeted and universal interventions was highlighted and the rationale was developed to acknowledge and explore the influence of a universal approach for a focus individual. This was achieved by additionally evaluating the efficacy of the group intervention for a focus child within the class.</p>
Theoretical context – developmental psychology	<p>Theoretical knowledge purported that a desire for social interaction was present from a young age and highlighted the role of ‘the social turn’ at ages 10-13, where the main social reference point shifted from the family to peers.</p> <p>This provided the rationale that because social interactions and relationships were of importance to pupils’ it was supportive to intervene.</p>

<p>Theoretical context – the long term impact of deficits in social skills and social competence</p>	<p>Research evidence demonstrated that deficits in social skills and social competence were associated with long term negative outcome in adulthood.</p> <p>This provided impetus for intervening to effect positive behaviour change in the pupils of the Y5 class.</p>
<p>Theoretical context – behaviourism, emotional processing theory, cognitive psychology and the evidence base for social skills interventions.</p>	<p>The research literature emphasised the importance of utilising evidence based practice approaches. It particularly demonstrated that the use of the behavioural approach of contingency management was a crucial component to intervention as it prompted the generalised use of social skills in the classroom setting.</p> <p>This provided rationale for the empirical evaluation of an intervention aimed at encouraging the social interactions of the Y5 class, as their ability to engage in positive social behaviour with each other was inferred to be present but not engaged in due to a lack of motivation (See Chapter One, Section 1.2). Thus, the intervention employed would not teach social skills explicitly, but provide motivation for engagement with them in the classroom context, via contingency management.</p> <p>Based on this expanded rational, The Good Behaviour Game (TGBG) was chosen as the intervention of choice. This choice is explored further in Section 2.7.1.</p>
<p>Theoretical context – Personal Construct Psychology</p>	<p>PCP provides an understanding of the development of social behaviours and interactions from the unique position that individuals have their own social experiences and, based on these, construct their own predictions of the social world. As such, social responses are made based on personal constructs which guide an interpretation of a social event and lead to the subsequent action.</p> <p>This theoretical perspective further supported the initial rationale that the child's personal views and understandings were a vital, illuminative component to the investigation of the social behaviours of the Y5 class.</p>

Table 5: The developed research rationale.

2.7.1. Developed rationale: The use of The Good Behaviour Game as an intervention to encourage positive social behaviours in the classroom context

The initial research rationale stated that there was a need to intervene to encourage the members of the class to be more socially appropriate and positive in their interactions with each other. Based on this, and the developed rationale, TGBG was chosen as it provided an evidence based intervention which had the potential to create motivation, via contingency management, for the Y5 class pupils to engage in targeted positive social behaviours with each other.

TGBG is a group contingency intervention implemented at the whole class level for promoting a reduction or increase in targeted behaviours (Barrish, Saunders and Wolf, 1969; Flower, *et al.*, 2014.) As a form of contingency management at the group level the intervention is conceptualised as a dependent group contingency. This is where positive reinforcement (a reward) is delivered to every member of the group contingent on the behaviour of every individual. In this way, it effects change by providing access to reinforcement based on all participants engaging in targeted behaviour.

The original conception of the intervention was played as a 'game' in a classroom setting (Barrish, Saunders and Wolf, 1969). The class was divided into two teams. Behaviours targeted for a potential reduction in frequency were being out of seat and talking out of turn. TGBG was played for an hour during usual lesson time. The rules of the game were 'stay in your seat' and 'don't talk out of turn'. Each time a member of a team broke a rule and engaged in either of the target behaviours a point was given to their team. At the end of the lesson each team that had scored below a specified number of points won TGBG and every member of the team had access to the reward. (The effectiveness of the initial evaluation of this version of TGBG is discussed in Chapter Three, Section 3.3.)

An adapted version of TGBG involves awarding points when desirable behaviours are engaged in by a member of the team. TGBG is won when the team scores more than a

specified criterion for winning. This version encourages behaviour development rather than behaviour reduction. This version of TGBG is further explored in Chapter Three, Section 3.6 and was chosen to be implemented for the first strand of the research as it focused on increasing positive behaviour, which was a research aim².

Developed from the understanding of the UK educational policy context, TGBG was also thought to be an intervention where it would be possible to evaluate the positive social behaviours of a focus participant within the group. This meant that the effects of a universal intervention for a targeted individual would be explored. The method and ethics for the evaluation of the efficacy of TGBG intervention for a focus child is fully presented in Chapter Six, Sections 6.2 and 6.3

2.7.2 Developed rationale: the use of Personal Construct Psychology for exploring pupils' perceptions of their social worlds

The initial research rationale suggested that there was a need to understand the pupils' views and perceptions of their social interactions and relationships with others. Based on this, and the developed rationale, PCP offered an appropriate theoretical lens through which the participants' construing of their social world could be sufficiently explored. It allowed for an understanding of social behaviours and interactions to be closely related to the pupils' personal social experiences and their individual interpretation, or construing, of these. Thus, it was deemed a good fit for the second strand of the research study.

² In addition to the use of TGBG being attributable to the developed rationale the educational psychology service with which the TEP had a placement was seeking to develop use of TGBG across the city. The service's senior psychologists expressed a desire for the TEP to run an evaluation of the intervention in a local school as part of their doctoral research. Therefore, the use of TGBG in the research also aligned with the service's needs and interests for service development.

In parallel to TGBG, PCP was deemed³ highly relevant to developing an understanding of the child's perspective. One significant critique of behavioural interventions is that they are 'done to' children, rather than 'done with' children's involvement (Harzem, 2004). It has been argued that this can lead to a lack of consideration of the child's views and the role these may play in response to intervention (Ntinis, 2007). It was thought that the PCP based exploratory strand of the research would provide insight into the participants' constructions of their social world, which would complement the adult led behavioural aspect. In this way, the study combined the empirical support of the behavioural model with a psychological approach that would account for the behaviourist supposed lack of interest in subjective experience. For these reasons, the second aim and subsequent strand to the research project should be considered as supplementary and illuminative to the main focus of the research, which was the empirical evaluation of TGBG.

³ A note on voice: This thesis is written in the third person, where phrases such as 'it was deemed' are used it should be assumed that the author refers to the decision being made by themselves only, unless otherwise stated differently.

CHAPTER THREE: EXPLORING THE LITERATURE FOR THE GOOD BEHAVIOUR GAME

3.1 Introduction and overview

The following two chapters present two literature reviews related to the two strands of the research study. The first explores research relevant to the empirical evaluation of TGBG. The second explores research relevant to PCP and the exploration of participants' construing of their social interactions and relationships.

3.2 Literature search method and rationale

The present literature review aimed to employ a systematic method to explore the diverse and vast research literature for TGBG. The literature review questions were chosen as they narrowed the exploration of the large literature to topics which were closely linked to the current research. The literature review questions and their rationale are presented in Table 6 and discussed in Sections, 3.3, 3.4 and 3.5.

Literature review question	Rationale
What is the strength of the evidence base for TGBG?	The evidence base for TGBG was crucial for the current study as the research aimed to employ an intervention that was considered an evidence based strategy.
Can TGBG be successfully adapted to new situations or behaviours?	As the current study sought to adapt TGBG to focus on increasing positive social behaviours it was relevant to look at other research which had successfully adapted the intervention in some meaningful way.
What effect does TGBG have on individual participants?	The current study investigated the effect of TGBG intervention on a focus participant so research studies which had done likewise were sought.
Is a 'rule follow' version of TGBG as effective as the traditional 'rule infraction' version?	The current study used a 'rule follow' version of TGBG to encourage positive behaviours, rather than punish unwanted behaviours. Research that had investigated the efficacy of a version was reviewed.

Table 6: Literature review research questions and rationale (The Good Behaviour Game).

Employing boolean logic, the search terms in Table 7 were entered into the databases PubMed, PsychInfo, EBSCO and Web of Science. In addition, the terms were entered into the search engines Google Scholar and Science Direct. Included studies were limited to research papers that only investigated the effects of TGBG, rather than group orientated, contingency management interventions. Only studies that employed a single case research design were included. Rhetoric, theoretical or opinion-based papers and qualitative or case study research were excluded as they were not deemed to offer a rigorous, empirical analysis of the effects of TGBG.

First term	'AND' Second term
The Good Behaviour Game	Systematic review
	Literature review
	Adaption
	rule follow
	rule infraction
	Unique application
	Single subject
	Target participant

Table 7: Search terms used for The Good Behaviour Game literature review

A snowball method was subsequently employed to find further papers that were of interest. Papers that were included were scanned for further references that would be of relevance to the literature review. Those that were deemed relevant were then included. Included research papers were also entered into Google Scholar and the 'cited by' tool used to find further relevant research which had not yet been included.

No limitations were placed on location or date of publication in order to capture the development of research over time.

3.3 What is the strength of the evidence base for The Good Behaviour Game?

The original conception and evaluation of TGBG investigated the use of a group contingency – whole class behaviour management strategy in a fourth grade general education classroom (Barrish, Saunders and Wolf, 1969). The class teacher reported high levels of disruptive behaviour and several children who often called out inappropriately. Based on this, 'out of seat' and 'talking out of turn' behaviours were targeted for reduction. TGBG intervention involved splitting the class into two teams and assigning the following rules:

- "No one was to get out of his seat to talk to a neighbour. This also meant there was to be no leaning forward out of a seat to whisper."
- "No one was to get out of his seat to go to the chalkboard (except to sign out for the restroom), pencil sharpener, waste basket, drinking fountain, sink, or to the teacher without permission." (Barrish, Saunders and Wolf, 1969; pg. 121).

Each time a 'rule infraction' was observed by the class teacher during the game a point was given to the team to which the member breaking the rule belonged to. At the end of game play if each team had earned less than a pre-specified criterion of points then they had 'won the game' and each member had access to the reward. TGBG was played for one hour during both maths and reading study sessions.

The effect of the game on reducing the target disruptive behaviours was evaluated by using an ABAB reversal design. The results demonstrated that there were fewer incidents of disruptive behaviours when TGBG was played in comparison to baseline and reversal conditions, when it wasn't played. There was a reduction in incidents of disruptive behaviour from 80% - 96% to 10%-19%. The study concluded that TGBG had been effective in reducing the targeted disruptive behaviour.

Since the original conception and trialling of TGBG by Barrish, Saunders and Wolf (1969) further replications have consistently demonstrated positive results. TGBG has also been

extended to new populations. The first replication of TGBG found the procedure to be equally effective for reducing the disruptive behaviours of a fifth grade class composed of 2 teams, made up of 14 students each (Medland and Stachnik, 1972). Subsequently, the effectiveness of the intervention has been demonstrated for American education system grades 1-6 (Harris & Sherman, 1973; Maloney & Hopkins, 1973; Robertshaw & Hiebert, 1973; Bostow & Geiger, 1976; Darch & Thorpe, 1977; Warner, Miller and Cohen, 1977; Johnson, Turner and Konarski, 1978; Fishbein & Wasik, 1981; Gresham & Gresham, 1982; Darveaux, 1984; Kosiec *et al.*, 1986; Patrick, Ward and Crouch, 1998; Davies & White 2000). TGBG has also been successfully trailed with pre-schoolers (Murphy *et al.*, 2007; McGoey *et al.*, 2010; Tanol *et al.*, 2010) and adolescents (Salend, Reynolds and Coyle, 1989; Ford, 2015).

The majority of research evaluating the effectiveness of TGBG has been conducted in America. There is a small but expanding literature exploring the implementation of TGBG in other countries. In the first demonstration of TGBG in a non-American education system Huber (1979) replicated the original procedure in a fourth grade class in a special school in Germany and judged the game to be effective in reducing disruptive classroom behaviour.

Likewise, Saigh and Umar (1983) trialled a version of TGBG similar to the original in a Sudanese second grade school classroom. The target behaviours of 'out of seat' behaviour, verbal disruptions and aggressive behaviours were found to convincingly reduce when TGBG was applied, in comparison to baseline. The research study is also notable for being one of two explorations of the application of TGBG in a developing country. The second was an application of TGBG in three elementary classrooms in Belize, Central America (Nolan, 2013). TGBG was introduced as an alternative to the recently banned use of corporal punishment in the education system and was found to be effective in reducing out of seat behaviour and talking out of turn. Similar trials of TGBG which demonstrate positive outcomes have been conducted in the UK (Chan *et al.*, 2012).

TGBG has also been successfully replicated in the Netherlands by employing a longitudinal methodology. TGBG was implemented with 794 pupils across 13 schools in first and second grades. The intervention was shown to result in a reduction in conduct problems by the end of the third grade, lower levels of antisocial behaviour and experiences of peer rejection by age 10, reduced experiences of depression and anxiety by age 13 and reduced incidences of tobacco consumption between the ages of 10 and 13 (van Lier *et al.*, 2004; van Lier *et al.*, 2005; Vuijk *et al.*, 2007; van Lier *et al.*, 2009).

Kellam *et al.* (1994) worked with the Baltimore Prevention Project to conduct a randomised controlled trial of TGBG with a longitudinal follow up, similar to van Lier *et al.* (2004). TGBG was implemented in the kindergarten and grade one classes of 19 elementary schools and compared to a control intervention. Initial data showed that those who were exposed to TGBG were less likely to engage in aggressive behaviour and drop out of school. Longitudinal research data showed that when the research cohort reached adolescence, exposure to TGBG condition meant a reduced likelihood of an individual smoking, experimenting with illicit drugs, engaging in age inappropriate sexualised behaviour as well as lower levels of self-reported anxiety and depression (Poduska *et al.*, 2008; Kellam *et al.*, 2011; Kellam *et al.*, 2014). These results have been replicated in another randomised control trial of TGBG in the Netherlands (van Lier *et al.*, 2004; van Lier *et al.*, 2005; Vuijk *et al.*, 2007; van Lier *et al.*, 2009).

These randomised controlled trials provide promising results for the long term outcomes of TGBG and notably strengthen the intervention's evidence base and claims of effectiveness. Embry (2002) claimed that the findings exhibit the power of TGBG, naming the intervention a 'behavioural vaccine' which provides a simple and efficient way to prevent a wide range of negative behavioural outcomes.

Given the vastness of the research literature for TGBG it is useful to provide an overview of the conclusions of any literature reviews which have been conducted. In the first presented summary of the literature Embry (2002) provided a descriptive review of 20 independent

replications of TGBG and concluded that they collectively demonstrated TGBG to have a robust and consistent impact on reducing disruptive and impulsive behaviours. Tingstrom *et al.* (2006) presented an updated descriptive literature review, synthesising 29 studies. They reported that TGBG had been shown to be effective for a variety of populations ranging from school grades 1 through to 6 as well as with pre-schoolers, adolescents and adults. The review found that most studies used a response cost approach which was aimed at reducing behaviours and divided the group up into two teams. Attention was also paid to consumer satisfaction, summarising that most of the studies reviewed reported that TGBG had been rated as acceptable or highly acceptable by students and teachers. It was concluded "that there is considerable empirical evidence for the efficacy of the good behaviour game" (Tingstrom *et al.*, 2006, pg. 243).

Flower *et al.* (2014) attempted to describe the strength of the effect of TGBG by conducting a meta-analysis of 45 independent studies. Studies that had included both single case research design and group design were included in the analysis. Specific focus was made on the impact of TGBG on observable and measurable challenging behaviours. Table 8 outlines the effects of TGBG found for each type of challenging behaviour investigated. From reviewing each type of challenging behaviour it can be seen that TGBG has a trend across challenging behaviours of having a moderate to large effect. Based on this analysis the review concluded that TGBG could be said to have a moderate to large effect on addressing challenging behaviour in the classroom and school setting, and that this effect was apparent immediately TGBG was implemented.

Challenging behaviour type	Number of studies reviewed	Effect of The Good Behaviour Game
Disruptive behaviour (talking out, out of seat, touching others, motor behaviour that disrupts the work of others, noisemaking, verbalisations,	8	Six out of eight of the studies reviewed found TGBG to be effective in reducing disruptive behaviour.

aggression).		Two of the studies found there to be a null effect.
On task and off task behaviour.	6	Five out of six of the studies found that TGBG had a moderate to large effect. One of the studies found there to be a null effect.
Aggression (physical contact with a peer such as hitting, pinching etc.).	5	All five studies demonstrated a moderate to large effect of TGBG.
Talking out behaviour (talking out without permission from adult).	4	For all four studies TGBG had a moderate effect for talking out.
Out of seat behaviour (out of seat without permission).	4	Three out of four studies found TGBG to have a moderate effect for out of seat behaviour. One study found there to be a null effect.
Peer acceptance and rejection (Peer acceptance was defined if peers liked the pupil. Peer rejection was defined if peers did not like the pupil).	2	Both studies found that TGBG had a modest effect on increasing acceptance and reducing rejection.
Rule violations (not following classroom rules).	2	Both studies found a large effect for reducing rule violations.
Anti-social negative behaviour (negative social interactions and tantruming).	1	In this study TGBG was highly effective in reducing negative social interactions.
Externalising behaviour (oppositional and conduct problems).	1	The study found TGBG to have a modest effect on reducing externalising behaviours.
Swearing / negative comments to others	1	The study found that TGBG had a large effect in reducing swearing and negative comments.

Table 8: The effects of The Good Behaviour Game on each category of challenging behaviour (Flower *et al.*, 2014).

Building on the work of Flower *et al.* (2014), Bowman-Perrott *et al.* (2015) conducted a meta-analysis of 21 single-case research design studies that had investigated the effects of TGBG

and found a large effect size for the impact of TGBG. The analysis also investigated the effect size for TGBG when pupils with emotional and behavioural disorders were compared to controls and found that TGBG was more effective for those with, or at risk of, emotional and behavioural disorders than those without. Likewise, individuals who exhibited higher levels of off task behaviour prior to the game were more likely to benefit from the game than those who didn't.

3.3.1 Summary

TGBG is a simple, whole class behaviour management intervention which has been widely evidenced to successfully target challenging and disruptive classroom behaviours for a wide range of populations (Embry, 2002; Tingstrom *et al.*, 2006; Flower *et al.*, 2014). A strong and consistent evidence base has been developed since the late 1960s with more recent studies providing longitudinal data from randomised control trial studies, the 'gold standard' of evidenced based practice research (Poduska *et al.*, 2008; Kellam *et al.*, 2011; Kellam *et al.*, 2014). This collective research positively evidences the efficacy and reliability of TGBG.

3.4 Can The Good Behaviour Game be successfully adapted to new situations or behaviours?

3.4.1 Adaptions of The Good Behaviour Game to new contexts and behaviours

Given that the research study sought to adapt TGBG with the aim of increasing new target behaviours a literature review of studies that have adapted TGBG was warranted. TGBG has been successfully adapted to various other settings and targeted behaviours with Fishbein and Wasik (1981) publishing the first demonstration of a successful adaption. The original intervention was adapted to address new behaviours in the new setting of a school library. On task behaviours were adapted from the original classroom definitions to fit the

library setting. For example, behaviours specific to a library were chosen such as being quiet, picking a book to read and reading a book. A reduction of off task behaviour and aggression were also observed and targeted for change. Off task behaviour was operationally defined as a child engaging in behaviour that was deemed not to be on task but was not disruptive, such as gazing out of the window. Aggressive behaviour was operationally defined as anything that disrupted library activity, including noisemaking, verbalisation and aggression.

TGBG was played with a class of 25 students who attended a weekly session in the library. TGBG was also played in a regular education classroom to provide a comparison of intervention effects between settings. The results demonstrated that the implementation of TGBG in the new setting of the library, with a focus on new off task and on task behaviours, was successful in changing the targeted behaviours of the group in the desired direction. Task relevant behaviour increased by 21%, on average, above baseline. On average, disruptive behaviour decreased by 16% below baseline and off task behaviour decreased by 5.7%. Fishbein and Wasik (1981) concluded that this provided evidence that TGBG could be an effective intervention when challenging behaviour was occurring in different settings.

More recently TGBG has been adapted to the setting of the school cafeteria and has focused on new behaviours deemed relevant to this setting. McCurdy, Lannie and Barnabas (2009) implemented the intervention in a lunch-time cafeteria in an urban school with the aim of reducing the aggressive, disruptive behaviour of 200 pupils. Behaviours that were specifically targeted for reduction were; out of seat, play fighting, physical contact with force, throwing objects and screaming. The intervention was introduced to all year groups during class time by their teacher and was implemented in the cafeteria by ten lunch time supervisors. Classes won the game by getting below a maximum number of rule infractions for the week. At the end of the week the head teacher presented winning teams with prizes during a whole school assembly. A multiple baseline design across three lunch time periods was employed to assess degree of change in disruptive aggressive behaviour. The

intervention was found to have a positive impact, with the frequency of aggressive, disruptive behaviours decreasing following intervention.

This successful adaption of TGBG to the school cafeteria has been replicated by Parrish (2012) with a focus on providing reinforcement for rule following, rather than the original 'rule infraction' version of the game. Levels of pro-social behaviours and negative aggressive behaviours were observed at baseline in a public school cafeteria which catered to 373 pupils. Appropriate social behaviours were operationally defined as socially appropriate interactions, both verbal and nonverbal, and abiding by the rules of the cafeteria. The rules of the cafeteria were; respect others, stay safe and talk quietly. A multiple baseline design across lunchtime periods demonstrated that the adapted version of TGBG successfully reduced aggressive behaviour. However, the intervention did not have an effect on increasing pro-social behaviours. There was no notable change in the rates of target behaviours from baseline to intervention phases. The adaption of TGBG was evaluated by Parrish (2012) as partly successful in its aims for the new context and new focus behaviours.

3.4.2 Adaption of The Good Behaviour Game to new behaviours only

There are also studies reported in the literature which haven't adapted TGBG to a new context but have focused on original behaviours. For example, in a very unique application of the game Swain, Allard and Holborn (1982) adapted TGBG to become 'The Good Teeth Brushing Game', aiming to increase the oral hygiene of participants. Each class in the participating school was divided into participating teams. Each day all children had the cleanliness of their teeth inspected using a standardised procedure. The team with the lowest mean oral hygiene scores won daily. Mean oral hygiene scores dropped from 5 to 2 when comparing intervention to baseline and the intervention was deemed effective.

Instead of focusing on disruptive classroom behaviours, Dolan *et al.* (1993) aimed to decrease rates of aggressive and shy behaviour in the classroom setting. Nineteen schools

from five urban areas in Boston, Massachusetts were selected to take part. Schools implemented either TGBG or a comparison intervention in their early years classrooms. As with other studies the reduction of aggressive behaviours was satisfactorily replicated. In addition, shy behaviours were found to be reduced as a result of TGBG intervention as measured using the Peer Assessment Inventory. This provides initial impetus for the notion that TGBG can be adapted to positively affect changes in social behaviours, as well as decreasing disruptive, aggressive behaviour.

Finally, Salend *et al.* (1989) demonstrated that TGBG could be individually adapted to target a diverse range of behaviours unique to a group of pupils with Social, Emotional and Behavioural disorders (SEBD). The intervention took place in three classes of students in a residential SEBD school. Pupils were divided into two or more teams and each team was allocated its own target behaviour unique to the behavioural needs of the pupils comprising the team. Target behaviours were developed in consultation with class teachers and were; inappropriate vocalisations, touching, negative comments, cursing and drumming. An ABAB reversal design demonstrated a significant reduction each time the intervention was implemented and a return to baseline when game play ceased. This successfully showed change for target behaviours different to the original conception of TGBG and demonstrates that TGBG can be implemented to address the unique behavioural needs of a class.

3.4.3 Summary

Collectively, these studies demonstrate that TGBG is a flexible intervention that can be effectively adapted to new contexts and new target behaviours. Across the literature the majority of new behaviours have concentrated on an extension of off task behaviours, but have been adapted and personalised to meet the needs of the participants. Novel contexts have remained within the confines of the general school setting but have focused on locations where aggressive and disruptive behaviours disturb instructed proceedings, such as the cafeteria or library. There is limited but encouraging evidence that TGBG can have a

positive impact on social behaviours, such as reducing unwanted negative social behaviours like aggression or shyness. Of particular interest to the current research are the findings of Parrish (2012) where use of TGBG was not found to increase the engagement in positive social behaviours, even though a 'rule follow' model was implemented. As the Parrish (2012) study was run in the unique setting of the cafeteria it would be appropriate to trial the use of TGBG in the traditional classroom setting to evaluate whether a focus on increasing positive social behaviours is achieved.

3.5 What effect does The Good Behaviour Game have on individual participants?

As TGBG is a group intervention which aims to produce behaviour change at the whole class level it follows that the majority of research designs employed to evaluate its efficacy have utilised data collection methods that sample the behaviour of the whole group. However, as discussed in Chapter Two, Sections 2.6 and 2.7, also of interest is the effect of a group intervention on the behaviour change of particular individuals. Group interventions are often chosen by teachers to encourage behaviour change in one child, or a small sample of children, over individualised behaviour support interventions for a variety of reasons. For example, they may wish to avoid singling out a child or hope to provide additional benefit for the whole group (Sugai and Horner, 2009). This being the case, whilst it is still relevant to evaluate behaviour change at the group level it is also desirable to monitor potential behaviour change and intervention effects for selected individuals within the group. For example, Thorne and Kamps (2008) reported on a class wide, group intervention that was implemented in order to encourage positive behaviours in 12 target pupils. They found that the intervention had an impact on the behaviour of the group but also significantly benefited the target pupils.

Another reason for investigating the efficacy of a group intervention for an individual is to explore the potential that significant changes at the whole group level could be the result of the behaviours of one, or a handful, or participants. Conversely, desired significant behaviour change at the level of the group could mask a lack of change for an individual. For example, when trialling TGBG for a reduction in challenging behaviour Rodriguez (2010) reported that in one of the five experimental groups a minor overall reduction (26%) in challenging behaviour was found between baseline and intervention. It was noted that the challenging behaviour of one child in the group accounted for 92% of the challenging behaviour coded for the whole group. Based on this information it was hypothesised that TGBG may have been successful in reducing the challenging behaviour of most individuals in the group but this effect was masked by the high levels of challenging behaviour in one individual, who was said to require more individualised intervention. In this way, the rates of target behaviour of one individual in the class can lead to a potential misconstruing of the group data.

There are only a few studies in TGBG research literature which have investigated the effects of the group intervention on behaviour change in selected individuals. In the first example of studies that have done this, Robertshaw and Hiebert (1973) examined the effects of TGBG group intervention on increasing the attentive behaviour of one male class member singled out by the class teacher as having particularly inattentive behaviour. Attentive behaviour was operationalised as (1) orienting eyes towards teacher when talking about a task (2) orienting body and eyes towards task (3) engaging with a work task. The dependent variable for the whole class was the number of worksheets completed. The results showed that the average number of weekly worksheets completed by the class rose from 9.5 to 36, indicating TGBG had a successful impact on the behaviour of the group. For the focus participant the average rate for attentive behaviours during a lesson rose from 56% to 96% when TGBG was implemented. It was concluded that the group intervention had a positive effect for increasing the attentive behaviours of the focus child.

Similarly, Darveaux (1984) examined the effects of TGBG on two target children in a special educational needs classroom. Each target child was selected as they had a history of challenging and disruptive behaviour and completed only a small number of assignments given to them during class. The class of 24 pupils was divided into two teams and each target child was placed in their own separate team. The target child did not know that they had been singled out and the game was introduced with the rationale that it aimed to help the whole class monitor their behaviour. To win TGBG each team had to score below five points. TGBG was played daily for fifteen minutes during work periods. The results showed that TGBG dramatically reduced incidents of challenging behaviour for the two target children and the intervention was deemed to be successful in effecting behaviour change for individuals within the group.

Lastly, Tanol *et al.* (2010) investigated the effects of TGBG on six focus pupils. TGBG was played in two kindergarten classrooms with three focus pupils in each classroom. All of the focus participants were male and selected due to having reported difficulties with following rules, engaging with academic tasks and being easily distracted. TGBG aimed to increase the amount of rule following each child engaged in. Two versions of TGBG (a 'rule follow' vs a 'rule infraction') were played for ten minutes each day. For the six focus participants both versions of TGBG were effective in increasing compliance with instructions, indicating that both versions of TGBG had an effect in producing the desired behaviour change at both the group and individual level.

3.5.1 Summary

There are only three studies in literature which have examined the effects of TGBG on individually observed participants. However, when examining the outcomes of these studies together it appears that TGBG has been shown to be effective in changing the behaviour of individuals within a group. In each instance the target behaviours and rules of TGBG were developed based on the needs of the focus participant. This may have positively influenced the effectiveness of the intervention for these participants. If the focus behaviours and rules

of TGBG had been developed more broadly around the needs of the group and then the effects observed for a randomly selected individual, it is debatable whether the same positive influence on behaviour would have been found.

Also of note, across the studies it is reported that the pupils who were targeted were chosen for being the most challenging, in relation to the target behaviours for the intervention. As such, a conclusion can be drawn that TGBG can be said to be especially effective in changing the behaviour of those who require it most. Of course, this conclusion is highly tentative given the paucity of research, this being contemplated from only three research papers. As such, the review here offers a starting point from which to further explore the effects of TGBG on the behaviour of targeted individuals within a group.

3.6 Is a 'rule follow' version of The Good Behaviour Game as effective as the traditional 'rule infraction' version?

The original conceptualisation of TGBG involved a 'rule infraction' process whereby teams were given violation points for breaking the rules of the game. Winning the game was achieved by getting lower than a specified amount of violation points. This original version of the game will be referred to as the 'rule infraction' version of TGBG. The 'rule infraction' version can be conceptualised as a version of differential reinforcement of low rates of responding, which is where a reinforcement is delivered at the end of a specified time interval if the rates of a target behaviour have fallen below a specified criteria (Deitz, 1977). One of the main disadvantages of this version of TGBG is that it only focuses on reducing unwanted behaviour and does not make allowances for a focus on increasing positive, wanted behaviours (Tingstrom, Sterling-Turner and Wilczynski, 2006). It is also potentially viewed as a 'negative' way to encourage the 'right' type of behaviour in a classroom, as it can be argued to work through a punitive form of control. This is potentially objectionable to educational professionals.

There is a small collection of research studies that have focused on implementing an alternative version of TGBG which rewards engagement in positive behaviours with points. The team has to get more than a specified amount of points in order to win the game. This version of the game will be referred to as the 'rule follow' version of TGBG. The crucial difference is that during the game, rule following is rewarded with a point, rather than rule breaking being punished with a point. In this way the focus is on increasing positive, wanted behaviours and the intervention takes on a far less punitive approach.

Appendix 1 provides a summary of eight research studies that have trialled a 'rule follow' version of TGBG. Collectively, they show that the 'rule follow' version of TGBG is effective in increasing targeted positive behaviours. Additionally, Robert and Hiebert (1973), Fishbein and Wasik (1981) and Rodriguez (2010) also demonstrate that the 'rule follow' version of TGBG can lead to a decrease in unwanted behaviours, although this represents a small sample of studies and there is limited replication of these results in the literature.

In one of two studies to directly compare the effects of the 'rule infraction' version of TGBG against the 'rule follow' version of TGBG Tanol *et al.* (2010) implemented both versions in a kindergarten classroom. The study was implemented with 6 focus children who had been displaying disruptive behaviour. Each version of the game consisted of two rules of;

- (1) Stay in an adult assigned space,
- (2) Pay attention to the adult directed learning activity.

In the 'rule infraction' version each team started with four stars and lost a star every time they broke a rule. The game was won if at the end of game play a team had one or more stars remaining. In the 'rule follow' version each team started with no stars and was awarded a star every time they followed the rules. The game was won if the team had three or four stars at the end of the game. In both games the reinforcement delivered to all members of a winning team was a small edible reward. The game was played ten minutes daily for eight consecutive weeks.

Tanol *et al.* (2010) found that both the 'rule follow' and 'rule infraction' version of TGBG were equally effective in reducing the amount of rule violations across all of the six participants. The 'rule follow' version led to lower levels of rule violations. These results indicate that both the 'rule follow' and 'rule infraction' version of TGBG are potentially effective in reducing challenging behaviour.

Wright and McCurdy (2012) also compared the traditional, 'rule infraction' version of TGBG with a 'rule follow' version which focused on reinforcing positive behaviours. The new version was called 'The Caught Being Good Game' (TCBGG) and involved the class teacher making an observation of the class every 20 minutes and awarding five points to any student who was seen to be on task at that point. The study was conducted in a kindergarten and grade four class of the same school. The comparison of the effects of each version of TGBG was made using a counterbalanced reversal design where the research conditions were baseline, TGBG, reversal and TCBGG for the first classroom and then baseline, TCBGG, reversal and TGBG for the second classroom. Both TGBG and TCBGG were equally effective in reducing disruptive behaviour and increasing on task behaviour. These results provide preliminary data to indicate that either a 'rule follow' or a 'rule infraction' version of TGBG is viable for effecting change in classroom behaviours.

To date, Tanol *et al.* (2010) and Wright and McCurdy (2012) are the only research studies to directly compare the effects of the 'rule – follow' against the 'rule infraction' versions of the game. As both were conducted exclusively in a kindergarten setting it is difficult to extrapolate their results to the diverse range of ages and settings that the original version of TGBG has been conducted with. Taken together with studies that have evaluated the 'rule follow' version of TGBG, there is tentative but promising evidence that this version can also produce significant behaviour change for targeted behaviours.

3.6.1 Summary

The ten research studies reviewed here consistently demonstrate that TGBG can be successfully modified to a 'rule follow' version to promote the increase of target behaviours. With the exception of Parrish (2012), who found limited significance or social validity in the change in target behaviours, the range of behaviours that have been successfully increased or improved include on task behaviour, the amount of work completed, the quality of the work completed, compliance with requests and oral hygiene. This provides evidence that TGBG can be propitiously adapted to encourage engagement with positive behaviours by participants. In addition, emerging evidence demonstrates that the 'rule follow' adaption is just as effective for behaviour change as the 'rule infraction' version, providing impetus for the choice of the former (Tanol *et al.*, 2010; Wright and McCurdy, 2012).

Noted advantages of the 'rule follow' version are that it allows for a focus on and means to increase wanted, positively perceived behaviours and encourages behaviour change in a less punitive manner. As such, the literature review presented here provides rationale for the use of a 'rule follow' version of TGBG for encouraging the frequency of socially desirable behaviours.

CHAPTER FOUR: EXPLORING THE LITERATURE FOR PERSONAL CONSTRUCT PSYCHOLOGY AND SOCIAL INTERACTIONS AND RELATIONSHIPS

4.1 Literature review search method and rationale

The current literature review aimed to employ a systematic method to investigate research which had used PCP to explore an individual's construing of their social relationships. The literature review questions were related to this aim and are presented in Table 9 along with their rationale and are further discussed in Sections 4.2, 4.3 and 4.4.

Literature review question	Rationale
How do individuals construe their social interactions and relationships with others?	This would help develop an understanding of how PCP could be used as a theoretical lens for exploring how individual's uniquely perceive and interpret social interactions and relationships. It would also provide a more in-depth understanding of how the theory accounted for human social behaviours and interactions (initially outlined in Chapter Two, Section 2.4.5).
How does social context effect individual's construing of their social interactions and relationships with others?	The current study sought to explore participants' construing of their Social interactions and relationships as mediated by their positioning within the social context of being a part of the Y5 class. It was relevant to refer to other studies which had explored the effect of different social contexts on individual's construing of their social interactions and relationships.
What does research conducted with children and young people show about how this demographic construe their social interactions and relationships with others?	The current study was conducted with a Y5 class so it was relevant to explore other research that had been conducted with a similar age range.

Table 9: Literature review research questions and rationale (Personal Construct Psychology).

Employing boolean logic, the search terms in Table 10 were entered into the databases PubMed, PsychInfo, EBSCO and Web of Science. The terms were also entered into the search engines 'Google Scholar' and 'Science Direct'. In addition, further

research was discovered by following up relevant references found in the first research papers that were read. Included studies were limited to those which explicitly employed PCP and focused on social interactions and relationships. Ten studies were included in total in the final literature review.

First term	'AND' Second term
Personal construct*	Children
(Constructs, constructions etc..)	Social Skills
	Friendships
	Relationships
	Social interaction
Personal Construct Psychology*	Children
	Social skills
	Friendships
	Relationships
	Social interaction

Table 10: Search terms used for Personal Construct Psychology literature review.

4.2 How do individuals construe their social interactions and relationships with others?

The use of PCP in research to explore and understand individual's construing of their social interactions and relationships was first investigated by Duck (1972; 1973). Duck (1973) posited that from the PCP perspective social interaction is conceptualised by an individual seeking to confirm the accuracy and predictability of their constructs by comparing them with others. Individuals develop interpersonal relationships with others through this comparison. Convergence between constructs with another should be related to the perceived degree of intimacy with that person.

To test this hypothesis Duck and Spencer (1972) compared the constructions of those within a friendship group with individuals outside of the friendship group. Twenty participants, ten of

whom were members of a known friendship group, completed a 'Repertory Test' to elicit a set of personal constructs. It was hypothesised that those who were in the friendship group would show greater similarity in the structural arrangement and content of their constructs than those outside of the friendship group. It was found that friends demonstrated more similarity on positive poles of constructs than non – friends. This was taken to demonstrate that those in a friendship group are more likely to construe in similar ways than when compared with individuals who they do not share in a friendship group with. This finding was thought to indicate that similarity of constructs form the basis for continued social interaction. Individuals construe their social interactions and relationships with others from a position of similarity or dissimilarity dependent on how 'close' they perceive them to be.

Neimeyer and Neimeyer (1986) further tested this finding by investigating acquaintance development over a 20 week period. They examined how participants' constructions of their social interactions and relationships changed as a result of amount of time spent knowing someone. Participants engaged in a one hour weekly discussion with a group of initial strangers. Repertory grids were used at the fourth and eighteenth week to elicit their constructions about peers in the group and their social interactions with them (For an explanation of the repertory grid procedure see Chapter Six, Section 6.4.2). It was found that deteriorating relations between participants occurred when they were less similar in their construing of members of the group. Conversely, those who developed friendships were more similar in their constructions of others. This further supports the notion that constructs influence social interactions by linking individuals with likeminded individuals who perceive the world in a similar way to themselves. This relates to Duck's (1973) original theorising that the basis of social interaction is to provide social confirmation or alterations of ones construct system.

Other research has examined how an individual's construing of social interactions and relationships affects behaviour towards friends. Cochran (1981) was interested in the relationships between how a person perceives and views their friends and how they

understand their own behaviour towards their friends. Individuals' constructs of friends and their constructs of behaviour towards friends were investigated. Six constructions of close friends and six constructions of action towards friends were elicited from 28 participating college students, aged 17-23.

When investigating the structure of constructs it was found that central personality constructs, those with strong internal relations to other constructs, correlated strongly with central action constructs. In reverse of this, personality constructs with fewer internal relations, i.e. more peripheral constructs, were more weakly correlated with action constructs. This finding implies that central constructs of friends have stronger behavioural implications for action towards friends than peripheral constructions of friendship. The conclusion was drawn that how individuals construe their social interactions and relationships with others is very closely linked to how they perceive their way of behaving towards them. For example, construing that a friend is open and caring will be related to a construction of action that a person would call on them for help during a time of need.

The influence of an individual's construct system on how they view their social interactions and relationships has also been studied by Leichty (1989). Specifically, the relationship of construct differentiation (the complexity of a construct system) to how people view and interpret their friendships was explored. The construct systems of 48 participating college students were elicited and rated for their levels of construct differentiation. As a method of friendship interpretation, participants were also asked to compile a list of activities they enjoyed participating in with friends and their personal reasons for this. Given reasons were coded into three categories of (1) activity based reasons (they liked to share activities with a person), (2) general compatibility reasons (they deemed their personality compatible with a person) and (3) interpersonal attributions (they felt themselves to have a deeper emotional connection with a person).

Correlations between level of construct differentiation and reasons given for enjoying an activity with a friend showed that those who demonstrated a higher differentiated construct

system (e.g. a more complex construct system) were more likely to emphasise emotional expression and fit of personality for understanding their social interactions and relationships. Conversely, individuals who had a less differentiated construct system emphasised the rationale of enjoying shared activities. It was concluded that construct system complexity is closely linked with how people view and understand their friendships.

4.2.1 Summary

The reviewed studies demonstrate that PCP can be used to explore how an individual's construing affects their approach to social interaction and relationships. Social interaction behaviours are influenced by an individual's construing in that they appear to seek and find it easier to form bonds with those who hold similar constructions to themselves (Duck and Spencer, 1972; Neimeyer and Neimeyer, 1986). Social action towards others is closely linked with how individuals construe friendships, as constructions of friends have been shown to closely relate to constructions of actions towards friends (Cochran, 1981). In addition, constructions of social relations are influenced by the level of construct differentiation of a person's construct system (Leichty, 1989). People who have a more complex construct system are more likely to construct friendships as occurring due to shared personality traits and emotional connections whereas those with less complex construct systems are more likely to construct friendships as resulting from joint interests and shared activities (Leichty, 1989). Therefore, in these specific ways, PCP research has proven to be a useful theoretical lens through which to understand an individual's construing of their social interactions and relationships and how this can affect their social interaction behaviours and relationship formation.

4.3 How does social context affect individuals' construing of their social interactions and relationships with others?

Researchers have used PCP to investigate how the construing of social interactions and relationships can change as a result of social context (Duck, 1973; Klion and Leitner, 1991). One pertinent social context is how construing occurs in the context of new acquaintance formation as compared to the context of established groups and friendships. Duck (1973) investigated the impact of new relationships versus established relationships on how individuals construed their interactions with others.

In one study, forty three college students, aged seventeen to twenty three, who did not know each other prior to the experiment, participated in a thirty minute discussion which aimed to create new acquaintances. After the activity participants were asked to complete a repertory grid where the elements were the people they had just met (see Chapter Six, Section 6.4.2 for an explanation of the repertory grid interview technique). They were also required to complete a second repertory grid where the elements were people who they already knew well. Analysis of the content of constructs showed that when discussing people who they had just met, participants were more likely to construct their understanding of these individuals based on physical characteristics and mannerisms. In comparison, their understanding of people they had known longer was based on psychological constructs referring to characteristics, such as, 'calm / not calm' and 'happy / not happy'.

In a second study, the influence on construing of newly acquired acquaintances versus established relationships was further investigated. This study sought to explore relationships that occurred naturally by following twelve male and sixteen female college students, aged seventeen to twenty three, from the start of their course, when relationships were new, to six months later, when relationships were established. A repertory grid was administered regularly to elicit constructs about social interactions and social relationships. The content of female constructs was investigated as none of the male members of the group made established social ties with peers, whereas women did. Analysis of the constructs showed

that when females initially met each other they employed constructs about mannerisms and physical characteristics to understand their social relations and interactions with others. However, this changed when they had known people for longer. At the six month point of a social relationship the women's constructions involved more psychological characteristics, referencing personality traits and behaviours.

Both of these studies demonstrate that it is likely that people's constructions of their social interactions and relationships with others are influenced by the social contextual factor of how long they have known the individual. At the early stage of acquaintance individuals make use of constructs related to mannerisms and physical characteristics, reflective of the limited information that is available to them initially. At later stages of acquaintance individuals rely on constructs that are more psychological in content to form the understanding of their social interactions and relationships with others.

Similarly, Klion and Leitner (1991) asked 49 university students to fill out repertory grids for well known and newly met acquaintances. When they compared their analysis of the two sets of repertory grid data they found that newly met individuals were construed using more construct independence and with less integration of constructs in comparison to well know acquaintances, signalling a simplified construct system. At a ten week follow up, the newly met acquaintances were construed in a manner that was more integrated. This was taken to mean that more complex construing occurs in the context of well-known relationships than in newly formed relationships. As relations with others develop further, information about them is gathered and integrated into the construct system, which is subsequently changed in order to produce a more 'accurate' prediction of social interactions with others. This is reflected by an increasingly complex construct system in relation to the individual or group of people.

4.3.1 Summary

The research presented here demonstrates that individual's construing of social interactions change as a function of the social context of newly acquired acquaintances versus longer established relationships. When first confronted with a new acquaintance individuals construe social interactions in terms of the information that is initially available to them (Duck, 1973). This leads to constructions that are based on physical characteristics and mannerisms. Over time, as intimacy increases, individuals are privy to more information and they begin to construe people in terms of psychological attributes (Duck, 1973). As relationships develop people also demonstrate increased construct integration and an increasingly complex construct system as they test out predictions and alter constructs in response to further information (Klion and Leitner, 1991). It can be concluded that social context plays a role in how individuals construe their social interactions with others.

4.4 What does research conducted with children and young people show about how this demographic construe their social interactions and relationships with others?

The research reviewed thus far has been predominantly conducted with college students aged 17-23. As the current study is concerned with the social behaviour of children in a Y5 class, the above question of the literature review was developed in response to this. The literature search only revealed three relevant studies. These studies are reviewed in more detail than in the previous two questions, given their uniqueness in the literature and pertinence to the current research.

Maxwell (2006; 2015) provide good examples of research that utilises PCP to explore children's perceptions of their experiences at school. Both studies asked pupils about their experiences of school more generally but found that one of the significant experiences that children chose to represent and examine was their social interactions and relationships with

peers. Constructs regarding social relationships were of particular importance to the participants.

Maxwell (2006) asked 13 children who were junior aged, and recorded as being on the school's special educational needs (SEN) register, to complete four drawings of themselves in school. Each pupil was then interviewed twice using a "PCP conversation style" (Maxwell, 2006, pg. 22) which aimed to reveal the salient issues to the participant. The analysis of the group data sought emergent themes from the conversations and drawings.

The findings revealed the particulars of social interactions and relationships that were of importance for the participants. Important relationships centred on peer and friendship interactions rather than teacher and pupil interactions. Pupils expressed a desire to be included in peer group interactions, but felt that they could be deliberately rejected. They often perceived themselves as lacking the right social skills to achieve this. Other significant themes related to peer conflict and resolution, as well as problem solving in relationships. Participants spoke about seeking help from others, both practical and emotional, and offering support to others. There was an expressed belief that social skills could be taught and made a part of the school curriculum, which is of relevance to the current studies' evaluation of an intervention for promoting positive social interaction behaviours.

These findings were supported and developed further by Maxwell's (2015) investigation of the views and constructions of an expanded sample of seventy two Y5 pupils. Participants were asked to draw a picture of themselves 'happy' whilst at school and a picture of themselves 'sad' whilst at school. As with the previous research, pupils placed a weighty emphasis on the importance of their social interactions and relationships with peers. 96 out of the 149 pictures generated denoted a social scene. A case analysis explored the perceptions of a girl who drew herself alone on a bus, with others not allowing her to sit by them and then produced a second picture that showed her involved in a conversation with a social group. This example denoted the strong themes of social isolation and exclusion that emerged from the research.

The findings of Maxwell (2015) are of particular relevance to the current study due to the parallel representation of the construing of Y5 pupils rather than a specific demographic such as those with special educational needs. They demonstrate the perceived importance of social interactions and relationships to pupils and the desire to be successful and included in social situations.

In a similar, but different vein, Cipolletta (2011) explored the construing of 59 juveniles, aged 9-20 years, living in a residential therapeutic village in Italy. The study also compared the construing of individuals who were close to the participants (such as parents, friends and teachers) in order to provide a measure of interpersonal constructions. Each participant filled in a repertory grid that consisted of twelve elements of self, father, mother, brother, sister, past self, ideal self, best friend, a houseparent, a teacher, an employer, a person in authority, a person who was regarded as socially accepted and a person they viewed as fulfilled. The elicited constructs were then used to rate each of the elements on a six point scale. Likewise, individuals who were close to participants filled in a repertory grid where they rated the participant on the same constructs.

Distances between element ratings within the participants' repertory grid were calculated to gain measures of their personal world. These are presented in Table 11.

Measure of personal world	Comparison of elements
Identification with significant others (e.g. mother, father, houseparent)	By comparing distance between rating for self and the significant other.
Perceived self-change	By comparing the distance between present self and past self.
Self-acceptance	By comparing the distance between ratings for present and past self.
Social -acceptance	By comparing the distance between present self and the socially accepted person.
Self-fulfilment	By comparing the distance between the ratings for the present self and the fulfilled person.
Social negativity	By comparing the distance between the ratings for ideal self and all elements referring to others.

Table 11: Measures of personal world via comparison of elements in Cipolletta (2011).

Distances for measures of interpersonal world demonstrated that participants showed a greater identification with a significant other who was a member of their family, than those who were an employee of the therapeutic village, such as a houseparent. Measures of perceived self-change, self-acceptance, social acceptance and self-fulfilment and social negativity showed a wide variance across participants.

Secondly, Cipolletta (2011) compared the scores of the young person's repertory grid with repertory grids rated by others where the young person was the only element but the constructs remained the same. This gave an account of the individual's acceptance by others and commonality of view of self with how others perceived them. Table 12 presents how this was achieved.

Measure of interpersonal world	Comparison of elements
Acceptance by others	Distance between the scores of the participants' ideal self and the scores of the person rated by significant others.
Commonality of views about self	Distance between how the person rates themselves and how the significant others rate them.

Table 12: Measures on interpersonal world via comparison of participant ratings with the ratings of other individuals Cipolletta (2011).

After making these comparisons three profiles of the interaction of how participants constructed their social interactions and relationships with others and how others rated them emerged. The first was termed 'far' as it represented a large distance between the individual's self-construction for their social interactions and relationships and the construction of them by others. The second was termed 'close' due to constructions being similar with less distance between them. The third was similar to 'close' in that ratings of elements were similar but individuals also identified a bigger change in themselves on the interpersonal measure 'perceived self-change'. It was hypothesised that those who demonstrated the first profile, or 'far', were more likely to have positive outcomes from access to the therapeutic village.

4.4.1 Summary

Research which has employed a PCP methodology to explore how children and young people construe their social interactions and relationships with others has demonstrated a desire to be successful and included in peer relationships. It has also shown that participants acknowledge the need for particular social skills or problem solving approaches in order to be able to achieve this (Maxwell, 2006; Maxwell, 2015). A dislike of social exclusion is also a prominent theme.

Cipolletta (2011) demonstrated the successful use of the repertory grid technique for exploring a specific demographic of children and young people's construing of their social

interactions and relationships with significant others. This was achieved by exploring identification with significant others by calculating distances between ratings for the element of self and ratings for elements that reflect others on the same constructs. In this way, the role that the construction of self plays in relation to construction of social interactions and relationships was highlighted. By comparing distances in ratings for self and others a conceptual 'map' emerged of how the child placed themselves in relation to significant social relationships. This provided a way to gain a picture and understand the complexity of their unique social world and their individual construing of it.

4.5 Research questions

The research questions were developed in light of the two literature reviews and the extended research rationale. Given that the research study was conceived of as having the two strands of an empirical evaluation and an explorative inquiry a unique set of research questions were devised in these two domains.

4.5.1 Empirical Evaluation of The Good Behaviour Game intervention

Will the adapted version of TGBG successfully encourage Y5 pupils to engage in positive social behaviours during class time?

Will the adapted version of TGBG successfully encourage a focus pupil to engage in positive social behaviours during class time?

4.5.2 Exploration of Year Five pupils' constructions of their social interactions and relationships

How do the Y5 participants construe their social interactions and relationships with their family, friends and peers?

How do the Y5 participants construe their sense of self? That is, how does their construing of 'How I am now' compare with their construing of 'How I was', 'How I wouldn't like to be' and 'How I would like to be'?

How do the Y5 participants construe themselves in relation to others? That is, how do their constructions of 'How I am now' compare with how they construe others?

CHAPTER FIVE: RESEARCH STRATEGY

5.1 Introduction and overview

The following chapter summarises the ontological and epistemological assumptions of the research study and offers a rationale for these. It then presents the mixed methods research strategy with a discussion about the appropriateness of this type of approach. Thus, the research strategy is laid out as a philosophical and methodological foundation for inquiry before the methods of the research are reported in Chapter Six.

5.2 Ontological and epistemological assumptions

The phenomena chosen for investigation was viewed as complex and multi-dimensional, which cannot be fully understood from one true and ultimate perspective. To reflect this presumed intricacy, the research developed multiple but complementary understandings of the object of inquiry in order to develop a multi-nodal, dialogic explanation of a dynamic reality (Mason, 2006). For this purpose, the two unique strands of the research were developed as separate but affiliated investigations.

In attempting both an empirical evaluation of an intervention and an explorative enquiry into the participants' construing of their social interactions and relationships with others, thought was given to the appropriate epistemological and ontological stances for both strands of the study. How these could be positioned in relation to each other in a mixed methods research design was an important question. To address this, the following discussion presents the philosophical stances adopted and pays attention to their points of contact and departure. In doing so, philosophical justification for their joint employment is developed.

5.2.1 Exploration of participants' construing of their social interactions and relationships with others

The exploration of participants' construing of their social interactions and relationships with others was conceived from a constructivist epistemology perspective. Constructivism posits that there is a world independent of human experience and interpretation, but that it cannot be objectively represented (Crotty, 1998). Instead, knowledge of the world is viewed as a human construction that occurs via the interactions of one's beliefs and experiences, and in the wider context of joint social construction of meaning with others (Jonassen, 1991; Perkins, 1999). There is a particular emphasis on truth being created and held individually with weight given to the role of personal perspective (Perkins, 1999).

The Constructivist philosophy was deemed highly appropriate to the research task of orienting to and exploring the constructions of the participating children as it places the role of individual perspective and subsequent meaning making as its central tenet. For this core reason, the relationship between the Constructivist philosophy and PCP theory has been argued to be a very close one (Raskin, 2002; Walker and Winter, 2007). PCP emphasises the role of the individual's 'construct system' which is a theoretical representation of a person's knowledge and construction of 'truths' about the world (Kelly, 1963). This offers a psychological mechanism that can be suppositionally mapped onto the *a priori*; metaphysical assumption that knowledge is constructed by the individual. In this way, it offers a means to explore individuals' constructions and meaning making.

5.2.2 Empirical evaluation of The Good Behaviour Game

The empirical evaluation of TGBG was conceived from a Pragmatist philosophical perspective. Like its Constructivist 'cousin' (see Table 13), Pragmatism also posits that there is a world independent of human experience and understanding of it, and likewise rejects that an accurate mirror of reality can be represented through enquiry (James, 1975;

Garrison, 2008). Instead, Pragmatism considers that enquiry and knowledge are tools for problem solving and action. For this reason, it is not important whether knowledge is objectively 'true' but whether it serves as useful when compared against the original goals of an enquiry. This is termed the 'working truth' criterion whereby the outcomes of an enquiry are judged to be 'true' if they are successful and fulfil the original problem solving objectives.

Pragmatism was deemed an appropriate philosophical model for the Applied Behaviour Analysis (ABA) methodology adopted to pursue the empirical evaluation of TGBG. The aim of the empirical evaluation was to improve the positive social interactions of the participants and knowledge generated from the enquiry was deemed 'true' and 'relevant' in as much that it demonstrated the success or non-success of this original aim. Further still, the ABA approach clearly places itself in the Pragmatist philosophical paradigm for reasons similar to this central rationale.

Firstly, the ABA approach to enquiry and analysis is a deliberately practical one. Applied Behaviour Analysts seek patterns of behaviour through use of the three term contingency of antecedent, behaviour and consequence in order to predict and alter future behaviour. This is not a statement of absolute truth about how a person is going to behave but a prediction made on the basis of how they have behaved in similar circumstances. It does not state how they *will* behave for certain but how they *may* behave given previous observations of similar behaviour in consistent contexts. Skinner stated that such statements about an individual's behaviour are "rules for effective action, and there is a special sense in which it could be 'true' if it yields the most effective action possible" (Skinner, 1974, pg.235). Thus, ABA enquiry employs a 'working truth' criteria which closely aligns it with a Pragmatist philosophy.

Secondly, the major academic voices that have shaped the ABA perspective have long admitted that it is not possible to position ABA within a positivist, objective philosophical paradigm (Hayes, Hayes and Reese, 1988; Baum, 2005). Skinner (1974) argued that by engaging in the act of making a scientific evaluation of behaviour the researcher is behaving

too. The researcher cannot step outside of their own behaviour and actions to "observe behaviour from some special vantage [as if] 'perched on the epicycle of mercury'" (Skinner, 1974, pg. 234). For this reason, they cannot argue that they are exempt from the analysis and able to view reality from an objective position. Instead, a Pragmatist perspective is adopted, which acknowledges the integral involvement of the researcher in the research process, and allows full admission of their role in setting initial goals for enquiry in order to judge outcomes in relation to these.

5.3 Exploring the use of different philosophical paradigms in a mixed methods research design

From one standpoint the adoption of two epistemological and ontological positions for the distinct strands of the research project may prove problematic due to views on the compatibility of philosophical paradigms in social science research. The incompatibility argument states that the *a priori* philosophical assumptions about the nature of knowledge and reality influence subsequent decisions about methodological approach in a top down manner (Howe, 1988; Tashakkori and Teddlie, 2003). This being the case, the incompatibility argument states that each paradigm's *a priori* epistemological and ontological beliefs are unique to themselves and thus cannot be combined, or understood in conjunction. Kuhn (1996) created and employed the term 'incommensurability' to define the view that to adopt the position of one paradigm is to reject the views of others, as there can be no one to one correspondence of understanding between approaches.

If such a standpoint is fully accepted then the use of two philosophical paradigms, arguably required for a mixed methods research design, renders the whole mixed methods project problematic. Indeed, the difficulty of the fit of qualitative and quantitative approaches at the methodological level and discordance between their fit at the philosophical level has been

widely noted (Bryman, 2006; Denscombe, 2008; Howe, 1988; Onwuegbuzie and Leech, 2005). However, the 'compatibility thesis' puts forth that this need not be the case.

The compatibility argument holds that a 'forced choice' between philosophical paradigms is a false notion as they do not represent distinct and unique schools of thought. Guba and Lincoln (2005) argue that philosophical paradigms of epistemology and ontology have weak and permeable boundaries. The extensive time dedicated by academics to debate about paradigm distinctions and similarities can be highlighted as evidence of this. Similarly, Hanson (2008) presents the idea that such perceived boundaries could be socially constructed to enact political goals.

If this is taken as true, the incompatibility argument's dictum on the uniqueness of paradigm perspective and the top down influence they exert on methodology breaks down. Morgan (2007) puts forth that instead a two way relationship between methodology and metaphysical assumptions opens up, whereby each informs the other (See Figure 2). This represents a more flexible, practical approach to research which "rejects the top down privileging of ontological assumptions ... as simply too narrow an approach to issues in the philosophy of nature" (Morgan, 2007, pg. 68)

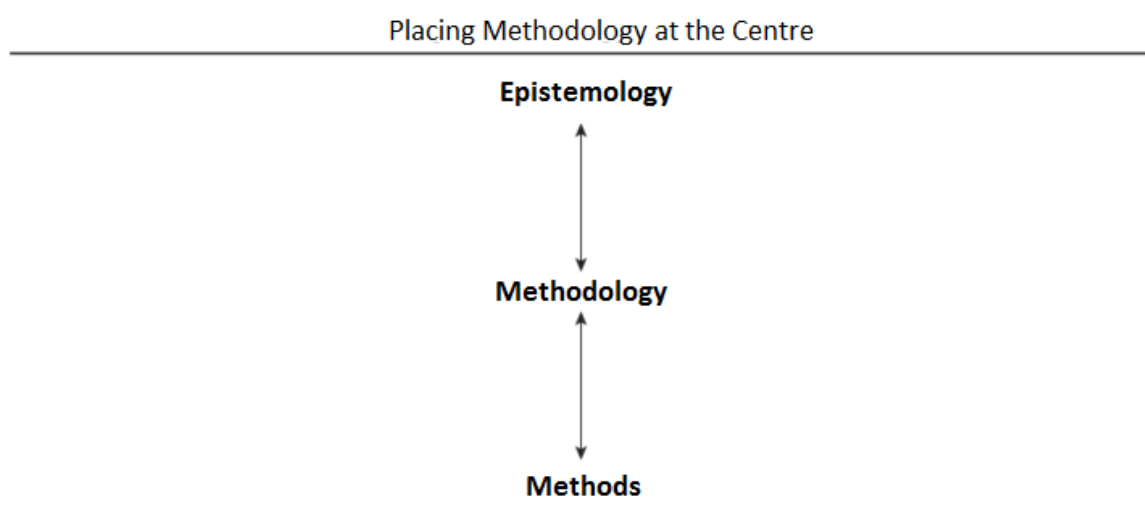


Figure 2: Bi-directional research relationship from Morgan (2007).

The current research adopted the compatibilist view, perceiving the boundaries of epistemological and ontological paradigms to overlap, rendering uniqueness, and thus incompatibility, obsolete. Table 13 presents the perceived points of contact between the Pragmatist and Constructivist world views and thus the basis of the argument for their parallel use. The current chapter does not constitute a full treatise on the relationship between the two philosophies; instead, it is presented to highlight a solidarity which may not be apparent to the beginner in metaphysics.

Point of philosophical contact	Description of philosophical contact
Epistemological relativism	<p>In contrast to positivism, which posits an absolutist theory of truth by purposing the role of research to develop an accurate representation of reality, both Constructivism and Pragmatism can be viewed as conceiving of truth from a more relativist position (Egan, 2007).</p> <p>Constructivism does not posit an ontological reality that can be epistemologically represented through observation and reason, but instead posits a theory of knowledge where meaning is derived by the individual from the relation between their experiences and their ideas. This represents a form of relativism because notions of ‘truth’ about reality are contextually derived and representative of personal and interpersonal experience, differing between individuals (Crotty, 1998).</p> <p>Likewise, Pragmatism does not posit an ontological reality that can be epistemologically sought through observation and reason; instead it questions the need of such a task at all. Pragmatism rests its notions of truth on a ‘working truth’ criteria, where it does not matter if knowledge is truly accurate but rather whether it leads to useful practical action. In this way, there cannot be said to be absolute truth as truth is dependent on the functional outcomes of the acquired knowledge. This automatically leads to diversity in different inquiry contexts and a relativist position (Rorty, 2013).</p> <p>Therefore, both Constructivism and Pragmatism have a point of philosophical contact where they both take a relativist stance to ‘truth’, although their reasoning for this positioning differs between the two paradigms (Egan, 2007; Scharp, 2015).</p>
Anti-foundationalism	<p>Both Constructivism and Pragmatism can be said to be anti-foundationalist (Rorty, 2013). That is, they both deny that a grounded account of truth exists which can be arrived at as an end point to enquiry.</p> <p>As Constructivism seeks individual accounts and understandings, with an expectation of variation between individuals and groups of</p>

	<p>individuals, it would be absurd to state that an end goal of enquiry is the revealing of some form of foundational truths that underwrite all beliefs. Such a view is incompatible with the core of the theory (Jonassen, 1991; Perkins, 1999).</p> <p>Pragmatism seeks knowledge that is judged on its workability, that is, it asks the question; once knowledge is acted upon, are the consequences of use to the original research aims? As such, 'true' knowledge is what is useful and contextual to the current enquiry. This postulating denies the existence of a 'core' knowledge which is foundational and ever present (Rorty, 2013).</p> <p>Thus, for both Pragmatism and Constructivism, the end goal of enquiry is not the revealing of pre-existing foundational knowledge that underwrites all 'true' belief.</p>
Anti-essentialist	<p>Given their respective stances on the basis of reality and creation of knowledge neither Constructivism nor Pragmatism can be said to hold the view that truth has an essence. That is, they both assume that there is nothing inherent in a truth that makes it so.</p> <p>Knowledge and truth become so when they can be shown to be of practical use when compared against previously held aims or goals, as with the Pragmatic approach (Rorty, 2013). Or, as with the Constructivist approach, knowledge and truth come into being through interaction between an individual's views and their environment (Crotty, 1998).</p> <p>Thus, from both perspectives truth cannot have an essence because of the respective views for how it is believed to be brought into being, rather than having a pre-existing quality extant before enquiry.</p>

Table 13: Points of philosophical contact between Pragmatism and Constructivism

The adoption of the compatibilist view eschewed a top down approach where metaphysical considerations strongly dictated methodological and method choice. Morgan's (2007) alternative model was applied, placing methodology at the centre of a bi-directional relationship. In this way, initial ontological assumptions about a complex, dynamic reality influenced choice of a mixed research methodology which, in turn, influenced epistemological and ontological assumptions that reflected the respective research designs. This process is also presented visually in Figure 3.

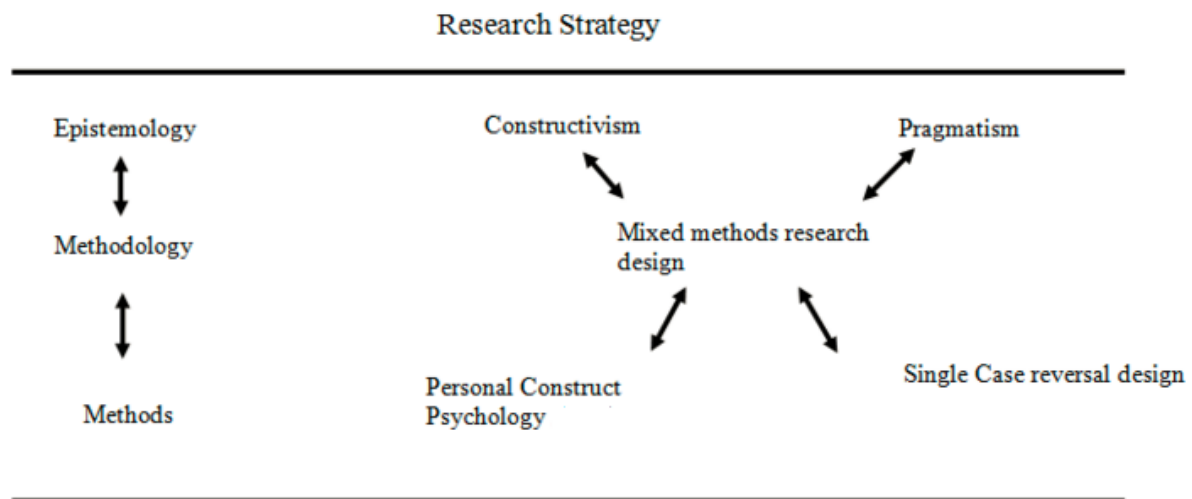


Figure 3: Visual representation of research strategy based on Morgan's (2007) model.

5.4 Mixed methods research design

Before outlining the rationale for the selected design, it is important to engage with the complexity of the 'mixed methods' approach in order to fully explain the reason for its use. The following section explores the development of the conceptualisation of mixed methods research design as a back drop to the choice of its use in the current research.

When the mixed methods approach was first put forth it was hoped that it would allow for researchers to creatively use "*all* legitimate methodological traditions" (Greene 2005, pg. 207) [authors italicising emphasis]. Yin (2006) argues that the notion that qualitative and quantitative approaches are mutually exclusive is false. This supports the idea that a mixed methods design allows for a high degree of freedom in combining methodological and method approaches.

As mixed methods research design has become more popular in use some commentators have held the view that it has been subject to reification (Yin, 2006; Symonds and Gorard, 2010). Reification refers to something being brought into being and made real. It is argued that the mixed methods research design has become reified and legitimised as a research

paradigm. It is perceived by many commentators as the third research paradigm, after qualitative and quantitative (Creswell and Plano, 2007; Johnson, Onwuegbuzie, and Turner, 2007).

One concern with regards to this is that "conceptualising methodology as a categorical entity is worrying as by nature it defines boundaries which perceptions and activities are encouraged not to cross." Symonds and Gorard (2010, pg. 2). Categorising research approaches means that boundaries are formed between them and the conceptualisation of each becomes more defined. This potentially limits the creative use of a wide range of methodologies and methods originally hoped for when the mixed methods research design approach was originally conceived.

With this context mind the current project chose to employ a 'mixed methodology' but in doing so holds the term 'lightly'. By holding the term 'lightly' a mixed methods research design is indicated as the design of choice, but the choice for the mix of methods is not restrained by any barriers or boundaries that arise from the reification of the approach. The boundaries of the research paradigm are not perceived to be fixed rules for research action. Instead, a creative mixture of methods occurred, as was hoped for when the mixed methods research design approach was originally put forward (Yin, 2006; Symonds and Gorard, 2010).

At the simplest level of argument, a mixed methodology was chosen because if the social phenomena being investigated is viewed as complex and multi-dimensional then a mixture of different research paradigms, and their accompanying methods, allowed for a sufficient multi-nodal investigation into presumed complexities. It allowed for a mix of research questions, and accompanying blend of methodologies, which addressed the same research topic but were not linked analytically. In this way the research topic was investigated from distinct perspectives and vantage points to provide a rich, diverse picture true to the ontological and epistemological assumptions of the research.

Mason (2006) outlined this rationale for utilising a mixed methods approach to investigation as 'parallel logic'. With 'parallel logic' each part of the investigation can be conceived of as a 'mini study' which has its own design, data collection and analysis logical to its own assumptions. There is no attempt to blend the data at the analysis stage in order to answer the same research question. This widens the 'mix' of methods for potential use. It also potentially eschews the previously discussed limitations of false paradigmatic boundaries, brought about by the conceptualisation of mixed methods as a categorical entity, by enabling creativity through its broad scope.

There is a correspondence of methods, rather than integration, in this type of multi-part, multi-question study. There is no attempt at corroboration at the data output, analysis stage. Brannen (2005) outlined four alternatives for combining results to the dominant corroboration, or triangulation approach. These are outlined in Table 14.

Way of combining data	Explanation
Elaboration / Expansion	Where one type of data analysis adds to and expands the understanding of the other.
Initiation	The use of the first creates new research questions that causes use of the second.
Complementary	The different methods are treated as unique approaches. When brought together they are juxtaposed to create complementary insights. A 'bigger picture' emerges.
Contradictions	Contradictions emerge between the different types of data which were assumed to equally help investigate the same phenomenon. Leads to an investigation of both methods and potentially discounting one.

Table 14: Brannen's (2005) four alternatives to corroboration for combining data in a mixed methods analysis.

The current study utilised a complementary approach to data analysis. This mirrored the assumption that each method was unique in its approach and viewed the phenomena from an entirely different perspective. Again, as with the application of 'parallel logic', this was chosen to develop a 'bigger picture' and a more in-depth, diversified understanding of the subject matter.

Based on these arguments, the first strand of the mixed methods research study utilised a single case research design methodology to evaluate the impact of TGBG. Single case research design was chosen as it is the dominant methodology employed in ABA research (Cooper, Heron and Heward, 2007). It is viewed as an appropriate methodology due to its use of the subject acting as their own control, enabling a sensitive evaluation of the effects of applied interventions in real world contexts (Horner *et al.*, 2005; Kazdin, 2011).

The second strand of the mixed methods research employed PCP theory as the methodology for exploring participants' constructions of their social interactions and relationships with others. This methodology was chosen as it was thought to provide a useful theoretical metaphor for perceiving pupils as having an individual view and interpretation of the world. Therefore, it was a relevant theoretical lens for examining individual interpretations and understandings.

In addition, PCP has been successfully used in research investigating children's constructions of a wide variety of topics such as, meta-cognition, nature, co-teaching, self-image, starting school and experiences of exclusion (Pezzica, *et al.*, 2015; Beattie, 2014; Adams, 2012; Thomas *et al.*, 2011, Einarsdottir, Dockett and Perry, 2009; Moore, 2009). Thus, PCP theory was deemed a highly relevant choice of methodology due to previous examples of the successful use of the theory as a means for developing an appreciation of children's constructs for diversified research topics.

Within exploratory research of this kind there are often several viable methods that may be employed to achieve the aims of the study (Robson, 2002). Choice of the final methodology

employed is reliant on the perceived fit and usage of that methodology for meeting the research aims. Due to the scope and restraints of the current thesis it is not viable to review all possible alternatives. However, Table 15 presents the dominant alternative methodological approaches which could have potentially been employed as part of the exploration strand of the research project. The specific reasons for why PCP theory was chosen over these are discussed to illuminate the perceived fit and usage of PCP that led to its choice over the competitors.

Potential alternative method	Rationale for choosing Personal Construct Psychology
Discourse analysis	<p>Discourse analysis would have provided a potential alternative methodology for the research as it explores how the discourse of participants establishes and creates ‘reality’ through the use of language (Angermuller, 2014; Gee, 2014). This methodology could have been employed to develop an understanding of how language used by participants influenced the creation of the ‘reality’ and ‘truths’ of the social world they inhabit.</p> <p>The perceived advantage that PCP had over this approach was that it provided more flexibility to place the scope of analysis beyond a theorised central importance on language, which discourse analysis advocates. Constructs are theorised to exist before language, and PCP should not be confused as a form of analysis of language (Kelly, 1955). Language is a useful way to access constructs, but PCP offers a deeper analysis of the child’s ‘model of the world’, which is conceptualised as existing in a pre-language sphere.</p> <p>As such, the analysis is not a direct investigation of language and discursive structures, although these are used to facilitate an investigation of constructs. Instead, it is positioned as an attempt to elicit and explore the child’s personal interpretation and view of the world by employment of a psychological theory that centralises the role of individual experience and understanding.</p>
Thematic analysis	<p>Thematic analysis is a qualitative research method that aims to reveal and cluster prominent motifs (themes) within the data (Braun and Clarke, 2006). Themes emerge through coding of the data and identification of the prominent patterns that have emerged (Fereday and Muir-Cochrane, 2006)</p> <p>Whilst thematic analysis would have enabled the reoccurring topics and motifs of the participants’ views and perceptions to be examined, it would not have offered a psychological framework for relating the</p>

	<p>emergent themes into a wider theory of the development and form of social interactions and relationships. This is because it only offers a means to develop knowledge of participants' views and perceptions, whereas PCP holds the advantage of providing theoretical presumptions of how constructs relate to both further constructions and social interactions and relationships (See Chapter Four).</p>
Interpretative phenomenological analysis	<p>Interpretative phenomenological analysis is an ideographic approach which attempts to create a unique understanding of how one person or a small group of people are making sense of a particular phenomenon (Smith, 2004). It involves a close examination of participants' experience and the meaning making they produce in response to this (Smith, 2004; Larkin, Watts and Clifton, 2006).</p> <p>Interpretative phenomenological analysis, although seemingly a natural fit for the current research project, was not deemed a relevant method due to the 'bottom up' nature of its approach to the use of theory (Smith, 2004; Larkin, Watts and Clifton, 2006). Interpretative phenomenological analysis does not set out to apply pre-existing theory to a topic but to develop new theory and perspectives from the data. As such, the topic is not strictly directed from the outset of the research. It can develop and alter, especially given the strong idiographic core of the method.</p> <p>Due to the interest from the outset in the social interactions and behaviours of the Y5 class, the project's topic was firmly fixed. The complementary exploratory methodology had to explore within these parameters and thus, for this reason, PCP was chosen over interpretative phenomenological analysis.</p>
Participatory action research	<p>Participatory action research emphasises the participation of community members in the research. It aims to produce actions in the real world resultant of illuminative findings. It centralises a collective inquiry and analysis which is grounded in the experience of participants (McIntyre, 2007).</p> <p>The main justification for why participatory action research wasn't employed was that it wasn't positively received by the participating school staff due to pragmatic considerations. For example, implementing a participatory action research project would have meant more participation from the pupils, which would have resulted in more time out of class. This was viewed negatively by the class teacher.</p> <p>Beyond practical considerations, the scope and size of a participatory action research project arguably justifies a research design in its own right. For this reason, it would not have been best suited to the mixed methods research design.</p>

Table 15: Alternative methodology options and rationale for the choice of Personal Construct Psychology methodology.

CHAPTER SIX: METHOD

6.1 Introduction and overview

The following chapter presents the method of the research study. The ethical considerations of the research are detailed first as they were a primary consideration and significantly influenced the development of the method.

Following this, each strand of the mixed methods design is presented separately, with the empirical evaluation of TGBG presented first, followed by the exploration of participants' construing of their social interactions and relationships with others.

A summary of ABA single case research design terms is available in Appendix 8.

6.2 Ethical considerations

Close attention was paid to the ethical considerations of the research study and these were addressed accordingly. Ethical approval was granted by the University of Birmingham's Ethical Review Board (Appendix 9). Table 16 presents the dominant ethical concerns and summarises how these were addressed.

Ethical concern	Summary
Informed consent: involvement of children in a group intervention	<p>Thought was given to the ethical considerations related to involving the Y5 pupils in TGBG. Because the implementation of TGBG was initiated as part of the whole school behaviour policy, pupils were not given the option of deciding not to take part in the intervention, which raised concerns around gaining consent for participation. This is a common occurrence in schools when research is not being conducted, where interventions and strategies for behaviour management are often implemented without consideration of gaining pupil consent for involvement.</p> <p>This ethical concern was addressed in three ways. Firstly, parents of the pupils were contacted and TGBG and the research project were fully explained to them. They were given the option to opt-out on behalf of their children and the complexities of this option, such as removal of access to the whole class reward, were fully explained.</p> <p>Secondly, the pupils were also fully informed of the research taking place and the rationale behind the research and TGBG. This happened during an introductory session run by the researcher (explained further in Section, 6.3.3). Any questions they had were answered directly during this session.</p> <p>Thirdly, the second strand of the research offered an opportunity for participants' voices to be gathered and considered. This provided the children to have a stake in the research despite the adult directed and school behaviour policy nature of TGBG.</p>
Informed consent: involvement of focus participant in the group intervention	<p>Thought was given to the ethical considerations of involving a focus participant in the exploration of the effects of TGBG for a focus participant within the group. There was a duty to gain consent and prevent any potential personal damage for the individual.</p> <p>It was difficult to gain informed consent from the individual as this would involve making them aware that they were going to be observed. This would have potentially had an altering effect on their behaviour, limiting the experimental control and validity of the research.</p> <p>This concern was addressed by gaining informed consent from the parents of participants.</p> <p>After TGBG had finished the child was sensitively debriefed by the researcher and class teacher about the individual observations and their particular involvement.</p> <p>A rationale was given about why they had been chosen. The child was told that the class teacher had wanted to support them to be able to make friendships in the class. The child was asked how they felt and given further opportunities to talk to an adult in the school about their involvement and whether they felt upset or had</p>

	<p>any other negative emotions or experiences.</p> <p>After the intervention had finished, further support was provided by the class teacher and teaching assistant to help with their social skills, development and social acceptance by the whole class. This applied EP work cannot be reported further here as it was outside the remit of the initial research proposal and ethical appraisal. However, it can be reported that this was supported via the typical EP consultation model.</p> <p>Of importance is that consideration was given to the effect participation in TGBG may have had on the participant, including negative outcomes, and that this was addressed by providing additional support after the intervention and research had ceased.</p>
Informed consent: involvement of participants in the PCP interviews	<p>It was important to gain informed consent for the participants' involvement in the PCP interviews. Parental opt-in consent was gained first, where parents gave permission for their child to participate. Pupil's informed consent was also gained before starting the interviews.</p> <p>In both contexts for gaining consent, the rationale and procedure for the research was outlined first.</p>
Confidentiality	<p>Due to the sensitive nature of the research it was important that information was kept confidential and the participating school and pupils could not be identified. No names were used and pupils were referred to via a numbered system.</p> <p>Similarly, the school was kept confidential and a pseudonym used when referring to the Local Authority to which it belonged to.</p>
Dissemination of findings	<p>It was important to make the findings of the research available to the participants. The findings of the study were fed back to the participants and the participating school accordingly.</p> <p>The TEP presented the findings of the group intervention (excluding the individual observation data and interview data) to the whole class at the end of a lesson.</p> <p>The findings were also discussed with classroom staff during a consultation run by the TEP. During the consultation the general themes from the PCP interviews were presented but the particulars from individual participants were not reported to retain confidentiality.</p> <p>Parents were given the researcher's contact details and asked to make a request for the findings to be shared with them if they were interested. At the time of writing this thesis no parents had made a request for this information. If a request is made only the findings of the group intervention for TGBG and general trend across the</p>

	PCP data will be shared, in order to retain confidentiality.
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Table 16: The ethical concerns of the research project and a summary of how they were addressed.

6.3 Empirical evaluation of The Good Behaviour Game

The first strand of the mixed methods research study was an empirical evaluation of TGBG intervention which aimed to promote positive social behaviours in the Y5 class.

6.3.1 *Participants and setting*

Group observation

The recruited school was geographically located within a large urban area of a major UK city. The recruited class was a Y5 mainstream class. Table 17 presents demographic information of the participating mainstream primary school. Table 18 presents demographic information for the participating class.

Demographic Information	
Type of School	Mainstream, co-educational
Type of Entry	Single form entry
Number of pupils	225, smaller than the national average
Proportion of disabled and SEN pupils in comparison with national average	In line with the national average
Proportion of pupils on free school meals in comparison with national average	In line with the national average
Proportion of students with English as an additional language	Slightly above the national average
Ofsted rating	Good

Table 17: Demographic data for the participating school.

Demographic information	
Number of students	27
Percentage of female students	58%
Percentage of male students	42%
Age range of class members	8-10
Number of pupils with SEN	5
Number of pupils with EAL	0

Table 18: Demographic data for participating Year Five class.

The research took place in the same classroom for the entire duration of the research. The classroom was an average sized classroom on the second floor of the main school building. The classroom had windows down one entire side of the room. There were three other walls, with no windows, and one door leading into the corridor. The front of the class had a white board and the class teacher's desk. There were five table groups distributed in the remaining space. Table groups averaged 4-6 pupils per desk. All pupils could orient towards the front of the class. Pupils had a specific individual seat which they occupied at the start of the class but seating arrangements changed throughout a lesson based on task requirements and at the direction of the class teacher. The observer sat at the back of the class and had a view of the entire classroom.

Individual Observation

One participant was selected to be observed individually in addition to the observation of the whole class. This was put in place to answer the research question 'Will the adapted TGBG successfully increase the positive social behaviours of a focus participant in a Y5 mainstream class?' The method of observing one participant's changes in behaviour offered an opportunity to assess if TGBG resulted in behaviour change for that child.

The method of observing the behaviour change of an individual child exposed to TGBG intervention was also directly linked with the developed rationale of exploring the effects of

universal, group interventions on individuals who would meet a perceived threshold for targeted intervention (See Chapter Two, Sections 2.6 and 2.7). It allowed an analysis of one child's response to the group, universal intervention and discussion around whether targeted intervention would be more appropriate.

The participant was selected through consultation with the class teacher and teaching assistant. The pupil was identified as a child who was considered to show particularly low levels of positive social engagement with others and thus would be suitable for assessment of whether TGBG had an impact in changing their behaviour. From the perception of the class teacher, the pupil was viewed as being classified as having SEBD special educational needs. The pupil was male and aged ten years old.

The observations of the focus participant took part in the same classroom as previously described for the group observations.

6.3.2 Experimental design

Group observation

An ABAB reversal design was used to empirically assess the effectiveness of the intervention. This design allowed for an evaluation of whether TGBG resulted in a direct change in whole group behaviour (Cooper, Heron and Heward, 2007; Kennedy, 2005; Barlow, Nock and Hersen, 2009). It also allowed for two opportunities for repetition of the intervention effect. An additional reason for choosing a reversal design over any other design was that the literature review (See Chapter Three) showed that this was the dominant design used in the extensive evidence base.

The ABAB design consisted of A = baseline, B = intervention, A = return to baseline and B = intervention. Phase changes between baseline/ intervention and reversal / intervention occurred when there was a stable trend in the data. Phase changes between intervention and reversal occurred when there was an increasing trend. Both of these changes were judged via visual interpretation. Visual interpretation of data in single case research design has been demonstrated to be a reliable analysis of the effects of the independent variable on the dependent variable and is predominantly used in the field (DeProspero and Cohen, 1979; Kahng, *et al.*, 2010). It also allows for the extent of meaningful change in behaviour to be socially judged and validated by the researcher and research partners, such as school teachers (Ottenbacher, 1990; Kahng *et al.*, 2010). The class teacher and teaching assistant, working in partnership with the researcher, implemented all phases of the study and agreed on when phase changes should occur.

Individual observation

The individual observation of the focus participant followed the same ABAB reversal design where A = baseline, B = intervention, A = return to baseline and B = intervention. Phase changes followed whole group phase changes, the decision of which was made based on the whole group data alone. This was a pragmatic decision. It was felt that phase changes should reflect the whole group data, due to conceptualisation of TGBG as a group intervention with an additional interest in the particular effects for the focus child.

The seven dimensions of applied behaviour analysis

In a seminal text Baer, Wolf and Risley (1968) outlined seven dimensions to ABA. For a research design to be considered applied behaviour analytic in nature it must meet these dimensions. Table 19 presents the seven dimensions and how the research meets them.

Dimension of Applied Behaviour Analysis	How the research met the dimension
Applied – The research deals with behaviours that are of genuine social importance.	As detailed in Chapter One, Section 1.1 and 1.2 the research arose out of a genuine real world problem which gives in inherent social importance.
Behavioural – The research addresses behaviour that is measurable and observable.	As detailed in Chapter Six, Section 6.3.4 and Table 21 each target behaviour was operationalised so that it was observable and a novice would be able to recognise the behaviour from the description.
Analytic – The research shows an objective demonstration that the intervention caused the change in behaviour.	The use of the reversal ABAB design allowed for an analysis of experimental control and judgment that the intervention was responsible for change in behaviour.
Technological – The intervention is sufficiently described that anyone can implement it and the research is readily replicable.	Chapter Six, Section 6.3.3 outlines in detail a step by step approach of how the intervention and research was conducted. This allows for an easy replication to be conducted by others.
Conceptually systematic – The intervention for research arises from a recognisable theory.	The empirical evaluation and TGBG were closely linked to behaviourist theory. A theorising of how TGBG ‘works’ from a behaviourist perspective is presented in Chapter Three, Section 3.3.
Effective – The research produces strong effects that are socially valid.	The research procedure included a social validity measure which was rated by the class teacher and teaching assistant. This is presented in Chapter Six, Section 6.3.7 and Chapter Seven, Section 7.2.4.

Generality – The intervention that is researched is designed to occur in novel contexts and continue after research has ended.	The TGBG was novel because it focused for the first time on social behaviours. The local authority planned to implement TGBG as a service initiative after the research was completed.
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Table 19: How the research met the seven dimensions of Applied Behaviour Analysis outline by Baer, Wolf and Risley (1968)

6.3.3 Procedure

The ABAB reversal phases of the research were implemented daily over a continuous period unless this could not occur due to pragmatic reasons pertaining to the school's scheduling. A break of a week occurred between baseline observations and intervention phase one due to it being half term. As the behaviour rates at the start of intervention phase one resembled the baseline, it was judged that the break of a week did not demonstrate any change or variability in data. Table 20 demonstrates the dates on which each phase of the research design was implemented. Days on which the research did not occur are accounted for by the following reasons:

- 21.05.2015 – The whole of the Y5 class was out of school on a school trip.
- 22.06.2016 – The whole of the Y5 class was required to sit a mock exam.

Observation number	session	Date
BASELINE		
1		15.05.2015
2		18.05.2015
3		19.05.2015
4		20.05.2015
5		22.05.2015
INTERVENTION PHASE ONE		
1		01.06.2015
2		02.06.2015
3		03.06.2015
4		05.06.2015
5		08.06.2015
REVERSAL		
1		09.06.2015
2		10.06.2015
3		11.06.2015
4		12.06.2015
INTERVENTION PHASE TWO		
1		15.06.2015
2		16.06.2015
3		17.06.2015
4		18.06.2015
5		23.06.2015

Table 20: The dates for each twenty minute observation session.

TGBG intervention procedure:

The version of TGBG implemented in the study was based on the original TGBG classroom management strategy with some alterations made to accommodate the particular purpose of the current research (Barrish, Saunders and Wolf, 1969). The altered version of the game rewarded rule following rather than punitive 'rule infraction'. The game focused on increasing positive social behaviours rather than focusing on increasing compliance with classroom rules.

During the intervention phases TGBG intervention was implemented by the class teacher and the class teaching assistant. TGBG was played in the morning during the first lesson of each day. The lesson would be either English or Maths. Each lesson started with adult led instruction where the pupils attended and listened to the teacher. After this there would be twenty minutes of group activity work. TGBG was played during these twenty minutes.

TGBG was initially introduced to the class during a thirty minute presentation (See Appendix 5 for slides from the presentation). The session was conducted by the researcher and the class teacher. The session outlined what the game was and how it was played using a power point presentation. The class teacher explained to the group that they were going to be playing the game in order to encourage them to get along better with each other and to be friendlier with one another. Examples and non-examples of the three target social behaviours were modelled to the group. Then, role play of the three target behaviours between pupils occurred with feedback from the session presenters. The opportunity for participants to have questions answered about the game was offered. An example run of the game was then played.

When TGBG was implemented, the class teacher would first announce to the class that TGBG was going to be played. The class teacher was provided with a script to remind participants of how the game was going to be played (See Appendix 4). The class were then reminded of the three rules which were:

1. We will show positive behaviour towards each other:

- Use calm voices
- Use friendly body language
- Use friendly faces

2. We will work as a team:

- Ask questions of each other
- Contribute and share the work load

3. We will support our peers:

- Praise each other
- Encourage each other

A4 size posters displaying the rules of the game were put up on the classroom walls so all participants could see one at any time (Appendix 3).

A timer was then set for twenty minutes and game play begun. The whole class was one team. During the playing of the game anytime a rule was observed to be followed by the class teacher a point was awarded to the whole team. The teacher would verbally praise the whole group for the point and give explicit feedback on the social behaviour that had won the point. Points were displayed on a large sheet of paper at the front of the class.

At the end of the twenty minutes the teacher would end game play and reveal if the group had won or lost TGBG. The group won TGBG by scoring more points than pre-set criteria for winning. The criterion for winning was kept secret from the class until the end of the twenty minutes and game play had ceased. The criterion was initially set slightly lower than the average baseline number of occurrences of target social behaviour. The criterion for winning the game was then varied across game play sessions based on the final score for the previous game. Over time the criterion was increased to encourage an increase in the

frequency of social behaviour. To start with, the criterion was gradually increased, but as increasing behaviour change was observed larger jumps were implemented. In this way the criterion for winning the game produced motivation for participation. Table 21 shows the criterion for winning each session.

Session	Criteria for winning The Good Behaviour Game (amount of points)
Intervention phase one	
1	15
2	12
3	14
4	30
5	31
Intervention phase two	
1	25
2	40
3	41
4	45
5	50

Table 21: Criterion for winning The Good Behaviour Game during each game session.

If the group had won TGBG the class teacher would announce their success to the whole class. The whole class then gained access to the reward. The reward was five marbles for the class marble jar, which was a classroom reward system existent prior to the game. Once the jar was full of marbles the class were rewarded with a whole class activity, such as a school trip. This was a highly motivational reward as it allowed the class to work as a team to gain prized marbles.

As part of the initial plan for the research procedure, it was envisioned that as behaviour improved and TGBG continued to be implemented the group reward would change from five marbles to time for engagement in enjoyable social activities, such as time to talk with peers or group game time. This was planned so that an orchestrated move could be made from an extrinsic form of motivation towards an intrinsic form of motivation⁴. It was felt that this would allow for TGBG to shift the motivation for engagement in social behaviour from a tangible reinforcer to one that more closely reflected naturally occurring reinforcement that occurs intrinsically during social interactions, such as enjoyment in another person's company. Unfortunately, this plan did not come to fruition as it conflicted with the views of the school's senior leadership team and the reward for winning TGBG remained as five marbles for the marble jar throughout the intervention.

If the group had not won TGBG they did not have access to the reward and were told that they would have an opportunity to play TGBG again tomorrow. Verbal feedback was offered on which behaviours they could focus on more next time in order to win.

Baseline and reversal procedure

During the baseline and reversal experimental phases TGBG was not played. The class teacher conducted the lesson as usual. No reinforcement was made available for positive social interactions. The whole class reward of marbles for the marble jar was still available for other behaviours, such as remaining on task, but not for social behaviours.

⁴ Intrinsic and extrinsic motivation have been shown to have a differential impact on children's motivation to engage in the school context, with internalised motivation cited as leading to more engagement with difficult tasks (Chandler and Connell, 1987; Singh *et al.*, 2010). Ideally, behavioural interventions utilising positive reinforcement will aim to move from contrived forms of reinforcement to more naturally occurring forms of reinforcement (Cooper, Heron and Heward, 2007). This is thought to help develop internal motivation for engagement in behaviour and reduces a reliance on external, contrived forms of reinforcement, which are not typically occurring in the naturalistic context (Flora, 2000; Flora, 2004).

6.3.4 Dependent variables and measurement

Direct observation data was collected for the dependent variable of positive social behaviours. The observations across all experimental phases were conducted for twenty minutes at a time. This was because during the intervention phases TGBG was played for 20 minutes each day so it was important for baseline and reversal observation phases to provide consistency with this set time.

In each twenty minute observation period occurrences of each target behaviour were recorded using frequency event recording. This method was chosen as the target behaviours were discrete and short in duration and thus suited to the frequency count method (Cooper, Heron and Heward, 2007). For the baseline and reversal experimental phases all data collection was completed by the researcher as well as a second observer for the purpose of inter-observer agreement. For both intervention experimental phases data collection was completed by the class teacher as part of playing TGBG. The number of points scored and recorded during the game fulfilled the purpose of data collection. The researcher collected secondary observation data to this for the purpose of inter-observer agreement.

The dependent variables were three target social behaviours which were developed in consultation with the class teacher and teaching assistant. The following questions were asked to elicit answers that would pin point behaviours for change that had social validity for the classroom staff:

How would you like your pupils to interact with each other?

What kind of social behaviours would you like your pupils to display?

What is important to you for how you would like your pupils to behave in a group situation?

What kinds of negative social interactions do your pupils display towards each other? What would be the opposite of this?

The answers were then expanded upon with the use of follow up questions aimed at eliciting objective, observable behaviours, such as “what would that look like?” or “what would the pupil be doing?”

The operationalised target positive social behaviours included *positive social interactions with a peer*, *working as a team* and *supporting peers*. Table 22 presents a description of each behaviour.

Target positive social behaviour	Description
<i>Positive social interactions with a peer</i>	<i>Positive social interactions with a peer</i> was scored when a participant interacted with a peer using a measured tone of voice which was of a medium audible volume and faced the individual with a reasonable distance between them. They also displayed an open body posture and had a relaxed, approachable facial expression.
<i>Working as a team</i>	<i>Working as a team</i> behaviour was scored when a participant asked a question of another peer related to the work or both peers engaged in a joint work activity together for example, by working out a maths answer together or taking it in turns to colour in.
<i>Supporting peers</i>	<i>Supporting peers</i> behaviour was scored when a participant made an encouraging comment to a peer such as “you can do this” or when a participant made a praising comment to a peer such as “that’s really neat colouring in”.

Table 22: The target positive social behaviours.

The same dependant variable data were collected for both the group and individual observations.

6.3.5 Inter-observer agreement

Inter-observer agreement (IOA) data were collected by having two independent data collectors simultaneously observe pupils and record the frequency of participant engagement in target behaviours. IOA was collected for 40% of the total number of observation periods. This was distributed equally between baseline, intervention and

reversal experimental phases. IOA was calculated separately for observations made of the behaviour of the group and the behaviour of the focus participant.

6.3.6 Indirect observation method: Intervention Integrity

The term 'Intervention Integrity' refers to the extent that the intervention was implemented with precision and fidelity (Cooper, Heron and Heward, 2007; McIntyre *et al.*, 2007). Intervention Integrity measures are put in place to ensure that the intervention doesn't deviate from the standard procedure (McIntyre *et al.*, 2007).

The class teacher was trained in the implementation of TGBG. Training consisted of a 60 minute Continuous Professional Development session provided by the researcher (See Appendix 2 for power point slides). The session took place after school hours in the Y5 classroom. Fidelity checks were conducted once a week. The fidelity checklist was used to observe the class teacher implementing the game (Appendix 6). The researcher then met with the class teacher to review the checklist and provide feedback on performance and further ad-hoc training as necessary.

6.3.7 Indirect observation method: social validity

The term 'social validity' refers to the use of measures to assess whether the goals, procedures and outcomes of an intervention are socially acceptable to members of society (Foster and Marsh, 1999). A literature review of the intervention acceptability literature in applied behaviour analysis revealed that the factors of initial problem severity, intervention approach, time required to implement intervention, side effect to intervention and cost had the most influence on consumer's evaluation of interventions (Reimers, Wacker and Koepple, 1987). Given this, the social validity of TGBG intervention was assessed using the Usage Rating Profile Inventory (URP-I) (Chafouleas, *et al.*, 2009). The URP-I consists of 35

items which are rated on a scale of one to six where one is strongly disagree and six is strongly agree. The items cover the categories of acceptability of intervention, understanding of intervention, feasibility of the intervention and support for implementation. A full explanation of each category is presented in Table 23. The categories were deemed too broadly cover the five factors outlined by Reimers, Wacker and Koepple (1987).

Category	Explanation
Acceptability	To what extent was the intervention acceptable for use by classroom staff?
Understanding of intervention	To what extent did the classroom staff have a secure understanding of the intervention processes?
Feasibility	How easy was it to implement the intervention alongside regular classroom routine?
Systems support	Was enough support provided by the researcher to help with the implementation of the intervention?

Table 23: An explanation of the categories of the URP-I.

6.4 Exploration of participants' construing of their social interactions and relationships with others

6.4.1 Participants and setting

Eight parents gave consent for their child to be interviewed. Initially the researcher had hoped for a higher number of parents providing consent so that a stratified sample of the class population could be interviewed. However, due to the lower than expected return rate of consent forms these eight children became participants. Therefore, an opportunity sampling method was used.

Of the eight children interviewed three were female and five were male. None of these children were identified as having special educational needs by the class teacher.

Before the first interview each participant was given a developmentally appropriate information sheet about the research and asked to read it (See Appendix 9). Any questions they had about participation in the research were then answered. Participants were also informed about the confidentiality of their data and then requested to sign a child consent form, additional to the adult consent form, before participating.

The interviews took place in a small, quiet room in the school where there was minimal disturbance. Interviews typically lasted between 30 minutes to an hour.

6.4.2 Repertory grid interview procedure

The chosen method for eliciting and exploring participants' constructs was the repertory grid interview method (Kelly, 1955). The repertory grid interview method allows the elicitation of participants' constructs by encouraging them to consider aspects of their self and others and then offers the opportunity for participants to rate themselves and others on the grid regarding the aspects of self (constructs) they have developed (Winter, 1992). Repertory grids are made up of four components of the topic, the elements, the constructs and the ratings. Table 24 described the elements of a repertory grid and their part in the interview process more fully.

Repertory grid element	Function
Topic	The topic of the grid is the subject matter that the interviewer or interviewee wishes to explore. The topic will seek to reference some element of a person's experience.
Elements	<p>Elements are individual items that provide instances of the topic. For example, if the topic is 'family' then a set of references to family that form the elements may be 'mother', 'father', 'sister', 'brother', 'cousin' etc.</p> <p>There can be any number of elements, which are either set by the interviewer, the interviewee or a mixture of both.</p> <p>Typically, elements are used to generate constructs.</p>

Constructs	Constructs have been previously theoretically described in Chapter Two, Section 2.4.5. They consist of basic terms which the interviewee uses to make sense of their experience of the world. Each construct consists of two poles, the desirable pole and its contrast, such as, 'good / bad'.
Ratings	<p>On the repertory grid the two sides of the construct poles are placed either side of the elements so that the elements can be rated against the constructs.</p> <p>A Likert scale is typically used to achieve this so that each element is rated against the preferred or non-preferred pole of the construct. This is done for each construct that is relevant to the element so its meaning for the interviewee is captured and expressed.</p>

Table 24: An explanation of the four components of a repertory grid and their functions.

Repertory grid interviews were chosen over other PCP methods for the purpose of eliciting constructs as it was felt that they offered a rigorous method for exploring the complexity of participants' construing. Other possible methods include the use of drawings combined with an appropriate form of analysis, such as content analysis. As demonstrated by Maxwell (2006, 2015), asking children to provide drawings on a given topic can act as an engaging and enjoyable method for eliciting the views of children in a developmentally sensitive way. It is also utilised because language is not required, which was found to be of particular use when participants had special educational needs (Maxwell, 2006).

However, the repertory grid interview method was chosen as it was felt to have the added advantage that it enables a precise definition of constructs to occur, which is not as readily developed with drawing methods (Fransella, Bell, and Bannister, 2004). In addition, the structure and process of the repertory grid interview method allows relationships among elements to be explored as based on the ratings of constructs for each element. This meant that relationships between elements could be investigated to provide an overall picture or 'feel' of the participants' perceptions of their social world. In particular, it enabled the relationship between the self as a social being and others to be examined, via comparisons made between the elements relating to self and elements relating to others. This was central to the research questions (see Chapter Six, Section 6.4.9 for an elaboration of this).

Language was not deemed to be a barrier for the participants who engaged in the repertory grid interviews. None of the participants were reported to have special educational needs or developmental difficulties with language. As reported in full in Chapter Seven, Section 7.3 and demonstrated in Appendix 12, the participants proved verbose and generated rich and meaningful constructs.

One final advantage of the chosen method was that the participant is not forced to choose an option on a questionnaire but is instead free to develop their own options and then rate them (Houston, 1998). This limits distorted responding in the form of participants attempting to tell the researcher what is a socially desirable answer as dictated through structured answer options.

The interview procedure described below was initially trailed with a child aged eight who attended a different primary school. The child was a daughter of the researcher's friend who volunteered to partake in the activity.

6.4.3 Topic

The topic of the repertory grid interview was directed by the researcher as it was important for the research that it should be linked to the focus of social interactions and relationships with others. The topic was described to participants as "friendships and social behaviours".

6.4.4 Elements

Five elements were chosen by the researcher based on the topic of the research being children's constructions of their social interactions and relationships with others. The researcher provided the following elements:

- How I am now

- How I was
- How I would like to be
- How I wouldn't like to be
- Best friend (in Y5 class)

Elements related to self were chosen as past research had highlighted the important role of self in individuals' construing of their social interactions and relationships (Cipolletta, 2011). The best friend element was chosen as it focused the participant on a close social relationship they had in their class of peers. Participants were then given the option of independently choosing up to 5 additional elements. Participants were directed to pick people who they knew and had some form of relationship with.

Participants were not limited by the context within which they knew these people. This was so that they would be free to pick individuals not just from their class but from their social world more broadly. It was felt that this was less constricting and would allow for constructions that were more meaningful to the participants' social world to emerge. It was perceived that this mix of researcher and participant provided elements ensured a balance between the dictated topic for the repertory grid interviews and the participants' own construing of their social interactions and relationships with others. Typically, additional elements were family members and peers they identified as friends. The final list of elements was assessed to make sure that they were discrete and did not overlap.

6.4.5 Constructs

To elicit the participants' constructs Kelly's (1955) original triadic methodology was employed. The elements were first written down on individual pieces of card. Three element cards were presented to the individual and the question asked "in what way are two of these alike and one different". To focus the participants' construing towards the topic of social

interactions and relationships the question was expanded to reference social interaction. For example, the question was phrased in the following ways:

"In what way are two of these people alike and one different in the way that they interact with others"?

"In what way are two of these people alike and one different in terms of their friendships with people"?

The answer was written down as an emergent pole. A contrast pole was then elicited by asking the question "in what way is the third one different from the other two?" This process was repeated with different element card combinations until a sufficient number of bipolar constructs had been recorded. Constructs were placed on the repertory grid by asking the participant to say which pole was preferred and which pole was non-preferred.

In some instances the 'laddering' technique was additionally employed to further explore emergent constructs. "Laddering" involves taking an emergent construct pole and asking 'how come', such as 'how come it is this this way'. By asking this question repeatedly a hierarchy of answers emerge. Answers at the top of the hierarchy, or 'ladder', are presumed to more accurately reflect 'core' constructs (Hinkle, 1965; Korenini, 2014). These constructs are then used.

6.4.6 Ratings

Participants were then invited to rate each element on a 7- point Likert scale for each of their constructs. They were given access to a picture of a 7-point Likert scale to aid the rating activity. If required, the construct poles were written on additional cards and placed at the appropriate ends of the visual aid.

6.4.7 Analysis

IdioGrid software version 2.4 was used to analyse the data (www.idiogrid.com). Each research question is presented with the accompanying analysis method and rationale.

6.4.8 How do Year Five pupils construe their social interactions and relationships with their family, friends and peers?

Content analysis of participants' constructs was chosen as the analysis method for exploring how participants construe their social interactions and relationships (Green, 2004). Content analysis was chosen because it facilitates the identification and analysis of patterns and themes in the data. In this way rich information about the topic of investigation can be meaningfully organised. As a result, a substantial understanding of how participants as a group were construing the topic of social interactions and relationships with others was developed.

The content analysis category system (CACS) developed by Feixas, Geldschläge and Neimeyer (2002) was used to categorise each construct. The CACS comprises forty five categories divided into six overall themes of moral, emotional, relational, personal, intellectual / operational and values / interests. The themes and their categories are summarised in Table 25. The CACS was deemed relevant for the following reasons:

- It has specifically been developed and tested for the validity of its general themes, or categories, for the 'types' of constructions that participants' construing can fall into (Feixas, Geldschläge and Neimeyer, 2002). This allows for a rigorous conceptual understanding of participants' construing.

- The categories specific to the CACS would allow for an analysis of whether participants employed constructions that were more relational / personal than moral, emotional and intellectual.
- The CACS advises that the two construct poles be treated as related rather than separate, as is the case with Landfield's (1971) categorising system. This is more sympathetic to PCP theorising where a complete construct is viewed as a preferred and non-preferred pole (Kelly, 1955).
- The CACS offers more exclusive categories with less overlap between them, in comparison to other construct categorising systems, such as Landfield (1971) (Feixas, Geldschläge and Neimeyer, 2002).

Moral	Emotional	Relational	Personal	Intellectual / Operational	Values / Interests
good - bad	visceral - rational	extroverted – introverted	stable – weak	capable - incapable	ideological, political, religious, social, moral and gender values
altruist – egoist	warm - cold	pleasant - unpleasant	active – passive	intelligent - dull	values and specific interests
humble – proud	optimist - pessimist	direct - devious	hard working – lazy	cultured - uncultured	
respectful - judgemental	balanced - unbalanced	tolerant - authoritarian	organised – disorganised	focused - unfocused	
faithful - unfaithful	specific emotions	conformist - rebel	decisive - indecisive	creative - not creative	
sincere - insincere	sexuality	dependent - independent	flexible - rigid	specific abilities	
just - unjust		peaceable - aggressive	thoughtful – shallow		
responsible – irresponsible		sympathetic - unsympathetic	mature – immature		
		trusting - suspicious	self- acceptance - self- criticism		

Table 25: Feixas, Geldschläge and Neimeyer's (2002) forty five construct categories divided into the six themes.

A single rater categorised each construct with its opposite pole into the category which they deemed the best fit. A second, independent rater followed the same categorising process. Both rater categorisations were then compared for the amount of agreement and disagreement to form a reliability check.

6.4.9 How do the Year Five participants construe their sense of self? That is, how does their construing of 'How I am now' compare with their construing of 'How I was', 'How I wouldn't like to be' and 'How I would like to be'?

Differences between how participants construed themselves in various contexts were explored in order to examine how participants construed their sense of self. The following differences were explored:

- The difference between the elements 'How I was' and 'How I am now' was explored to provide an examination of how participants' constructions of self had changed over time.
- The difference between elements 'How I would like to be' and 'How I wouldn't like to be' was explored to gain a picture of ideal self and non-ideal self.
- The element 'How I am now' was compared with the elements 'How I would like to be' and 'How I wouldn't like to be' to explore how participants' constructions of actual self compared with their construing of ideal self and non-ideal self.
- The element of 'How I was' was also compared with 'How I would like to be' and 'How I wouldn't like to be' to explore how participants' constructions of past actual self compared with their construing of ideal self.

Table 26 presents these comparisons.

Comparison between elements	Comparison between elements
How I am now	How I was
How I am now	How I would like to be
How I am now	How I wouldn't like to be
How I would like to be	How I wouldn't like to be
How I was	How I would like to be
How I was	How I wouldn't like to be

Table 26: Comparison between elements for research question two.

Distances are considered to be an accurate and appropriate way to measure associations across elements (Fransella, Bell and Bannister, 2004). They provide a way of exploring how similar or dissimilar two elements are when ratings across all constructs are considered. The chosen statistical method of analysis was Euclidian distances as it provides an analysis of dissimilarities between scores. This type of analysis thus identified the elements that participants viewed as different to each other on the basis of dissimilarly rated constructs.

6.4.10 How do the Year Five participants construe themselves in relation to others? That is, how do their constructions of 'How I am now' compare with how they construe others?

The final research question sought to explore how individuals construing of themselves compared with how they construed others on the same constructs. This would provide a conceptual 'map' of their social world by developing patterns of an individual's construction of themselves as similar or dissimilar to others. As previous research demonstrated (see Chapter Four, Section 4.3) individuals form close social relationships with those who they see as having similar constructs to themselves, and thus a perceived sense of similarity at the construct level is a fundamental element to successful social interactions and relationships with others (Duck, 1972; Neimeyer and Neimeyer, 1986). Thus, examining

individuals construing of self in relation to significant others provides an opportunity to explore occasions for social similarity or dissimilarity.

As with the second research question, Euclidian distances was chosen as the statistical method as it would provide an analysis of dissimilarities between scores. It identified those who were most different to the participants and those who weren't. Comparisons were made between the element 'How I am now' and every element which identified another individual.

6.5 Position of the researcher

With all research the position of the researcher, which is their position in society (families, organisations, clubs etc.) and its influence on their values and biases, should be acknowledged in relation to the topic, methodology and method as well as analysis of the data (Flyvbjerg, 2001). The researcher was a white female in her late twenties. The researcher acknowledges a pre-existing interest in social interactions and relationships which developed from past work experience as an Assistant EP. As a graduate of a Master's of Science degree course in Behaviour Analysis the researcher also acknowledges pre-existing knowledge and interest in this paradigm. Similarly, an interest in Personal Construct Theory and constructivist approaches facilitated the development of the rationale to explore participants' construing.

As such, when evaluating the research project's topic, choice of methodology and methods for collection and analysis of the data, this position should be kept in mind and applied to help balance the interpretation and influence of the findings and outcomes. However, a wider and deeper justification for the research has been developed and it is felt that the position of the researcher, though necessarily influential, does not contribute a significant bias.

CHAPTER SEVEN: RESEARCH FINDINGS

7.1 Introduction and overview

This chapter presents the findings of the mixed methods research study. The findings for the empirical evaluation of TGBG are presented first. Data derived from the group observation is displayed and discussed followed by data derived from the focus participant. The outcomes for inter-observer reliability and social validity are then reported.

Secondly, the findings for the exploration of participants' construing of their social interactions and relationships with others are presented. Each research question is addressed in turn.

A glossary of ABA and single case research design terms can be found in Appendix 8.

7.2 Empirical evaluation of The Good Behaviour Game

7.2.1 Group observation

Figure 4 displays the group frequency of occurrences for the three target social behaviours across experimental phases. The baseline observations for *positive social interactions* showed mostly stable variability with a low to moderate level, demonstrating no trend ($M = 6$). When TGBG was introduced there was an eventual change in level with a change from no trend to an overall increasing trend with a reasonably steep slope and some moderate variability to the data ($M = 13$). Upon removal of the intervention there was an instant change to a low level. Data remained stable with a slight decreasing trend ($M = 3$). When TGBG was introduced a second time there was a marked change in level with the stable data demonstrating an increasing trend ($M = 22$).

The baseline observations for *working as a team* showed a moderate to low trend with moderate variability and no trend ($M = 9$). Implementation of TGBG resulted in an initial

decrease in level followed by a steep increasing trend with stable variability ($M= 11$). When TGBG was removed there was an instant change to a low level with stable data showing a decreasing trend ($M= 6$). Upon reintroduction of TGBG there was a marked change in level with an increasing trend and very slight variability ($M= 22$).

The baseline observations for *supporting peers* demonstrated a low level with no trend and stable variability ($M= 0$). When TGBG was implemented there was a very slight increase in level with no trend ($M= 0.8$). When TGBG intervention was removed the trend, variability and level were the same as they had been during baseline ($M= 0$). Upon the second implementation of TGBG, there was a very small increase in level with no trend. This was followed by a decrease in trend with the data showing no variability ($M= 1$).

In summary, observation data for *positive social interactions* increased in level and demonstrated an increasing trend during TGBG intervention experimental phases and decreased in level and demonstrated a decreasing, or no trend, during baseline and reversal experimental phases. Data showed a consistent slight variability throughout experimental phases. Observation data for *working as a team* showed a similar pattern of a decreasing, or no trend, with a low level during baseline and reversal experimental phases and an increase in level and an increasing trend during TGBG intervention experimental phases. The data showed a very slight variability during the baseline phase only and showed stability in all other experimental phases. Observation data for *supporting peers* demonstrated a consistent low level with no variability or trend across all experimental phases.

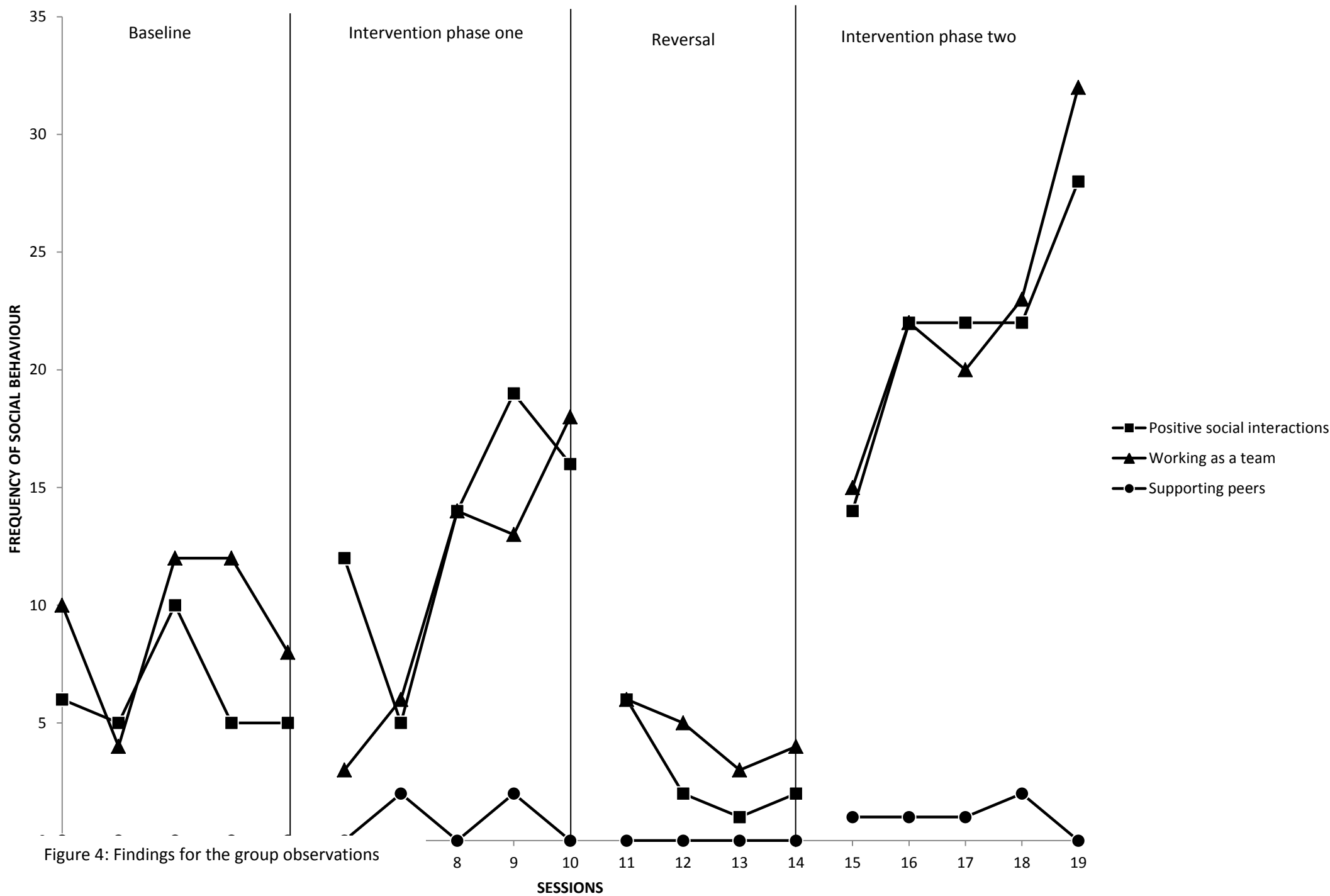


Figure 4: Findings for the group observations

7.2.2 Individual observation

Figure 5 displays the frequency of occurrences for the three target social behaviours across experimental phases for observations made of the focus participant. The baseline observations for *positive social interactions* demonstrated a stable data pattern with a low level and no trend ($M = 1$). Upon introduction of TGBG there was minimal change to the data with a continuation of the low level, moderately stable data set which displayed an initial increasing and then decreasing trend ($M = 2$). During the reversal experimental phase there was no return to data patterns observed in the baseline experimental phase. There was a moderately variable, increasing trend ($M = 3$). In the final TGBG experimental phase there was a moderate variability with no trend and the same low to moderate level observed across all experimental phases ($M = 3$).

The baseline observations for *working as a team* showed variable data with no trend and a low level ($M = 2$). After the introduction of TGBG there was a slight increase in the level of the data which was variable and demonstrated a slight increasing trend ($M = 4$). During the reversal experimental phase data was variable with no trend ($M = 3$). During the final implementation of TGBG there was no trend with high variability ($M = 6$).

The baseline observations for *supporting peers* demonstrated a low level with no trend and no variability ($M = 0$). After the introduction of TGBG, data remained the same as previously with a low level and no trend or variability ($M = 0$). This pattern remained during the reversal experimental phase ($M = 0$). The pattern was again the same during the final implementation of TGBG ($M = 0$).

In summary, observation data for both *positive social interactions* and *working as a team* demonstrated variable data, with no consistent changes to trend or level across experimental phases. Observation data for *supporting peers* demonstrated a consistent low level with no variability or trend across all experimental phases.

7.2.3 Inter-observer agreement

IOA was calculated separately for the group observations and individual observations. The number of agreements and disagreements was counted across observations in each phase. IOA was calculated using the formula: (Number of times the observers agree / total number of observations) X 100.

For the group observations there were 18 agreements and 4 disagreements. There was an agreement of 81%.

For the individual observations there were 19 agreements and 3 disagreements. There was an agreement of 86%.

7.2.4 Social validity

The class teacher and teaching assistant's ratings of TGBG using the URP-I are presented in Appendix 7. Table 27 presents the overall score on the URP-I for the class teacher and teaching assistant, as well as a breakdown of scores for acceptability, understanding, feasibility and systems support (see Chapter Six, Section 6.3.7). The scores presented are out of a total possible score of 210. A higher score indicates a higher level of intervention acceptability. However, for the sub group of systems support a lower score is desirable as it indicates a greater ability to implement the intervention independently.

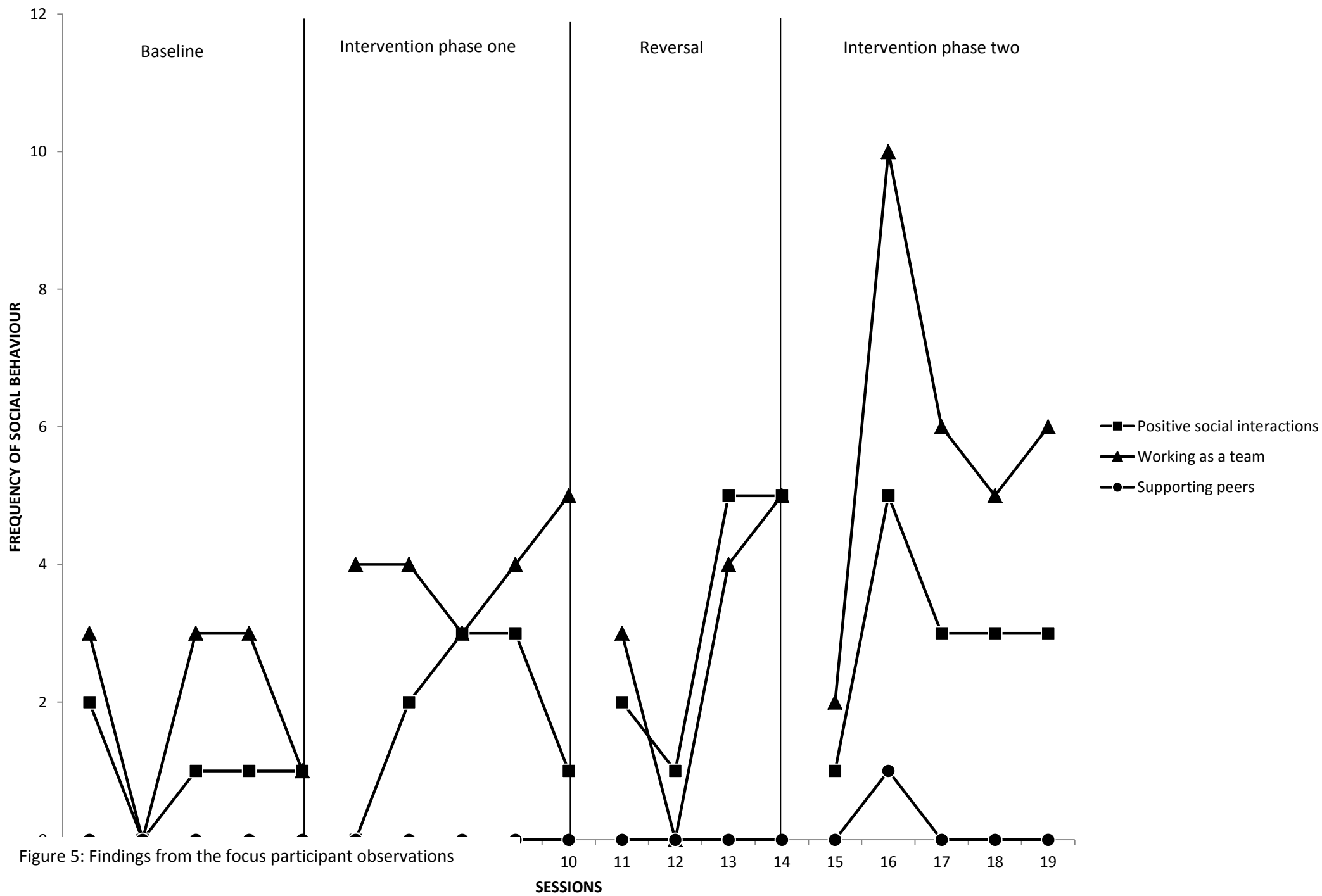


Figure 5: Findings from the focus participant observations

Rater	Acceptability score	Understanding score	Feasibility score	Systems support score	Total
Class teacher	61/78	43/48	41/48	15/36	160/210
Class teaching assistant	69/78	42/48	43/48	17/36	171/210

Table 27: Social validity scores as measured using the URP-I.

The scores for the class teacher and teaching assistant demonstrate that they thought they had a good understanding of TGBG (understanding score), that they felt they could implement it without additional help (systems support score) and that the intervention was feasible (feasibility score). It appeared that TGBG was viewed as acceptable for use, although high scores are desirable (acceptability score). Follow up conversations around the acceptability of TGBG made after the classroom staff had filled in the URP-I illuminated the reason for these scores. It was communicated to the researcher that they felt that the acceptability of TGBG was not as high as it could be due to the additional commitments required of them due to participation in the research project. It is likely that if TGBG had been implemented as part of school educational psychology service, minus the research elements, the acceptability of the intervention would be higher.

7.3 Exploration of participants' construing of their social interactions and relationships with others

7.3.1 How do the Year Five pupils construe their social interactions and relationships with their family, friends and peers?

Constructs were coded by the researcher (Rater One) into Feixas, Geldschläger and Neimeyer's (2002) classification system (a full account of the classification system is

presented in Table 25 in Chapter six, section 6.5.7). Appendix 10 presents Rater One's classifications.

Out of the six main possible categories of Feixas, Geldschläger and Neimeyer's (2002) classification system 5 (83%) were found to be applicable. Of the 45 possible sub-categories, 14 (31%) were found to be applicable. The most commonly occurring were extroverted / introverted (29%) and pleasant / unpleasant (25%). Table 28 shows the frequency and percentages of Feixas, Geldschläger and Neimeyer's (2002) categories as applied to the constructs drawn from participants' grids. Categories that did not receive any ratings are not included.

Main category	Sub-category	Frequency of construct poles	Percentage
Relational	extroverted / introverted	14	29%
	pleasant / unpleasant	12	25%
	sympathetic / unsympathetic	4	8%
	Personal Others	2	4%
	relational others	1	2%
	Visceral - rational	1	2%
	Tolerant / authoritarian	1	2%
Emotional	balanced - unbalanced	4	8%
	specific emotions	4	8%
	warm – cold	1	2%
Values and Interests	values and specific interests	4	8%
Moral	altruist – egoist	1	2%
Personal	hard working – lazy	1	2%
Intellectual / Operational	active – passive	1	2%

Table 28: Content categories for participants' grid constructs (Feixas, Geldschläger and Neimeyer, 2002).

Of the 14 sub classifications within which the constructs fell, the majority belonged to the major categories of 'relational' and 'emotional'. The highly populated major category was 'relational' as five of the sub-categories of the 'relational' category were categorised with the highest proportion of constructs. Following this four of the 'emotional' major category sub-categories were categorised but with a much lower proportion to 'relational'. Within the 'relational' major category the two sub categories of 'extroverted / introverted' and 'pleasant / unpleasant' had a significantly larger portion of constructs compared to all other sub-categories.

These findings suggest that participants tended to use relational constructs for construing their social interactions and relationships with peers. Also of importance was the use of emotional constructs. It appeared that of almost ubiquitous use were constructs that referred to how introverted to outgoing a person was and how pleasant or unpleasant they were to others.

To test reliability to Rater One's categorisation a second rater independently used the Feixas, Geldschläger and Neimeyer's (2002) classification system to categorise the same constructs. Appendix 11 presents the second rater's classifications. Inter-rater reliability was calculated by dividing the number of agreements by the number of disagreements and multiplying this number by one 100. This gave an agreement of 96% which was judged to confirm a high level of inter-rater reliability.

7.3.2 How do the Year Five participants construe their sense of self? That is, how does their construing of 'How I am now' compare with their construing of 'How I was', 'How I wouldn't like to be' and 'How I would like to be'?

The Euclidian distance analysis output for all eight participants is presented in Appendix 13. Euclidian distances between significant elements are presented in Table 29. The smaller the Euclidian distance, the more similar the two elements are deemed to be. Likewise, the larger the Euclidian distance, the more different the two elements are deemed to be

Participant	Elements	How I am now	How I was	How I would like to be	How I wouldn't like to be
1	How I am now		3.74	5.48	9.49
	How I was			6.48	6.78
	How I would like to be				11.22
	How I wouldn't like to be				
2	How I am now		2.64	3.16	10.58
	How I was			4.90	8.54
	How I would like to be				12.12
	How I wouldn't like to be				
3	How I am now		3.74	5.92	6.86
	How I was			8.66	3.87
	How I would like to be				12.00
	How I wouldn't like to be				
4	How I am now		3.16	3.16	12.17
	How I was			4.24	10.86
	How I would like to be				14.42

	How I wouldn't like to be				
5	How I am now		6.08	4.42	10.39
	How I was			6.24	10.82
	How I would like to be				11.58
	How I wouldn't like to be				
6	How I am now		3.00	3.00	11.96
	How I was			4.69	10.95
	How I would like to be				13.93
	How I wouldn't like to be				
7	How I am now		2.24	3.16	8.72
	How I was			4.12	7.81
	How I would like to be				10.95
	How I wouldn't like to be				
8	How I am now		4.47	8.06	4.58
	How I was			5.92	6.40
	How I would like to be				10.86
	How I wouldn't like to be				

Table 29: Euclidian distance analysis for relevant elements.

When comparing the elements of 'How I would like to be' and 'How I wouldn't like to be', the analysis shows a trend across the eight participants where there is greater distance than similarity between the two elements. The range of Euclidian distance scores across the eight participants was 10.58 to 14.42, which represent large distances. This means that the participants' constructions of how they would like to be were contrasted against how they would not like to be. This finding has intuitive meaning as we would expect an individual's

ideal of how they would want to be to contrast sharply with, or at least be different from, how they would not want to be. This suggests internal validity to the data.

When making the comparisons of 'How I am now' and 'How I was' to ideal and non-ideal self ('How I would like to be' and 'How I wouldn't like to be'), a similar trend in the data emerged across the eight participants' scores for both of these elements. Their perceptions of 'How I am now' and 'How I was' both tended to be close to their ideal self and dissimilar from their non-ideal self. These data gives rise to the interpretation that both the past view of self and the current view of self held by participant were closer to their ideal self and dissimilar from how they did not want to be. It appears that participants generally tended to construct themselves as close to their ideal self.

Examination of the differences between the comparisons of 'How I am now' and 'How I would like to be' and 'How I was' and 'How I would like to be' show a shift over time in the participants' construing of self. This shift was made in the direction towards 'How I would like to be' and away from 'How I wouldn't like to be'. The mean for distances between 'How I was' and 'How I would like to be' was 4.92. The mean for distances between 'How I am now' and 'How I would like to be' was 4.54. This shows a slight movement towards ideal self between 'How I was' and 'How I am now'. The only participant not to follow this trend was Participant Eight, whose ratings positioned them as further away from their ideal self in terms of 'How I am now' in comparison to 'How I was'. The largest shift was constructed by Participant Three, whose elements of 'How I was' and 'How I would like to be' had a closeness of 8.66, and the elements of 'How I am now' and 'How I would like to be' had a closeness of 5.92, suggesting a movement towards ideal self over time.

Given that participants tended to construe both 'How I am now' and 'How I was' as similar to 'How I would like to be' it follows that 'how I am now' and 'how I was' were construed by participants' as being similar to each other. The range of Euclidian distance scores across the eight participants was 2.24 to 6.08. These represent small distances between the two elements. These findings suggest that as a general trend participants construed themselves

as being closer to their ideal self than their non-ideal self. They construe themselves as having made some positive movement towards their ideal self but as they see their past self as close to their ideal self they construe themselves now as broadly similar to how they were in the past.

7.3.3 How do the Year Five participants construe themselves in relation to others? That is, how do their constructions of 'How I am now' compare with how they construe others?

The Euclidian distance analysis output for all eight participants is presented in Appendix 13. The Euclidian distances between the element 'How I am now' and all other elements relating to an individual other to them are presented in Table 30. Participant Five was omitted from the final analysis for this research question as they did not wish to rate anyone other than their self during the repertory grid interview.

Participant	Elements relating to an individual other than self	Element 'How I am now'
1	Best friend	5.57
	Mum	5.83
	Dad	4.00
	Brother	2.24
2	Best friend	5.20
	Granddad	5.83
	Brother one	5.00
	Brother two	4.12
	Brother three	5.83
	Friend	3.16
3	Best friend	3.74
	Mum	5.92
4	Best friend	2.83

	Middle brother	3.00
	Younger brother	3.16
	Sister	3.46
	Mum	3.32
	Dad	1.14
5	Omitted	Omitted
6	Best friend	3.16
	Mum	3.16
	Dad	2.65
	Big brother	3.46
	Little brother	2.00
7	Best friend	3.32
	Mum	3.32
	Dad	2.65
	Brother one	3.32
	Brother two	4.80
	Best friend two	4.24
8	Best friend	4.00
	Little sister	6.00
	Mum	7.81
	Dad	5.29
	Cousin	5.57

Table 30: The Euclidian distances for the eight participants between the element 'How I am now' and all other elements relating to another individual.

The elements that participants chose can be scrutinised for their potential significance. As discussed in Chapter Six, Section 6.4.4 participants could choose up to 5 additional elements so long as these were people they knew well. From the range of elements chosen across all participants it appears that family members were the dominant group for element choice. All participants chose family members only as additional elements, with Participant Seven and Participant Two choosing a second friend from their class in addition to family

members. This finding indicates that when asked to create a picture of their social world by choosing significant others from it, the family unit became a strong reference point for the participants.

The analysis shows a general trend across participants whereby they construed themselves as similar to most family members. There was a high level of similarity across the analysis of participants who compared their constructs of siblings to their construct of 'How I am now'. The one expectation for this trend was Participant Eight where the Euclidian distance between their construction of 'How I am now' and construction of their 'Sister' was 6.00, which although not a large distance still constitutes a slight difference between the elements. Similarities between constructions of 'How I am now' and 'Dad' were particularly close with a range of 1.14 – 5.29 and a mean of 3.15. Similarities were also found between 'How I am now' and 'Mum', although these did not appear to be as close as relations found between 'How I am now' and 'Dad', with the range of scores being 7.81-3.16 and a mean of 4.89.

Comparisons between 'How I am now' and elements constituting friends were also found to be similar with a range of 2.83 – 5.57 and a mean of 3.48. These findings give rise to the interpretation that as a general trend, participants tended to construct themselves similarly to how they constructed those whom they picked as having significance in their social circle. This creates a map of their social worlds where family are of central importance and those who are of importance are construed as similar to their selves.

7.4 Summary of findings

TGBG was shown to demonstrate experimental control for the group for the behaviours of *positive social interactions* and *working as a team*. As such, the intervention effected change for these behaviours in the desired direction. TGBG was not shown to demonstrate experimental control for the group for the behaviour of *supporting peers* or for the focus participant for all three target behaviours. The intervention cannot be said to have effected change in the target behaviours.

The eight pupils who participated in the PCP repertory grid interviews predominantly employed relational constructs when construing their social interactions and relationships with others. Constructs that fell into the relational categories of 'extroverted / introverted', 'pleasant / unpleasant' and 'sympathetic / unsympathetic' were principally employed. With regards to how participants typically appeared to construe their sense of self, the findings suggested that as a general trend, participants construed themselves as being closer to their ideal self than their non-ideal self. Past self was seen as being broadly similar to current self, as both were construed as being close to ideal self. One interpretation of this is that pupils possessed a positive self-identity. Participants typically construed themselves as similar to family members and appeared to choose family members over peers as their additional elements. A conclusion may be drawn that this indicates that the family unit was an important social reference for the participants.

CHAPTER EIGHT: DISCUSSION

8.1 Introduction and overview

The chapter presents a discussion of the research findings and the research study more generally. Interpretation of the findings are presented singularly, firstly for the empirical evaluation of TGBG and secondly for the exploration of participants' construing of their social interactions and relationships with others, such as friends and family members. An interpretation of how the findings from the two strands of the research complement each other is then explored.

The interpretations of the findings are followed with a discussion of their contribution to theory development and implications for schools and EPs. The strengths and limitations of the study are explored, followed by recommendations for future research. The chapter finishes with a general conclusion to the thesis.

8.2 Empirical evaluation of The Good Behaviour Game

8.2.1 Interpretation of findings

The first research question was “will the adapted version of TGBG successfully encourage Y5 pupils to engage in positive social behaviours during class time?” For the two target behaviours of *positive social interactions* and *working as a team*, experimental control was demonstrated. The data can be interpreted as showing that TGBG was an effective intervention for changing behaviour at the group level, in a desirable direction, for these specific behaviours. For the target behaviour of *supporting peers* experimental control was not demonstrated and there was no noticeable change in behaviour as a result of TGBG. This leads to the interpretation that, for this specific behaviour, TGBG was not an effective intervention for changing the behaviour of the group.

One plausible explanation for the lack of change in the group's *supporting peers* behaviour is that the group were experiencing a skill acquisition deficit rather than a skill performance deficit (Gresham, 1997) (See Chapter Two, Section 2.4.2). Lack of engagement in the behaviour at baseline could be an indication that this behaviour was not present in their social behaviour repertoire. As previously discussed in Chapter Two, Section 2.7.1, TGBG was implemented to encourage and increase engagement in social behaviours in the classroom setting that were thought to already be in the group's behavioural repertoire. This was based on the inference, developed from applied EP work conducted prior to the research, that pupils were capable of engaging in socially appropriate behaviours in the classroom setting but lacked the motivation to do so. It may be that this inference was incorrect with respect to the behaviour of *supporting peers*, as demonstrated by baseline data.

Therefore, an intervention which was chosen to provide motivation for a behaviour which is presumed present is not going to be effective if that behaviour isn't actually present. It is likely that a more successful intervention for *supporting peers* would have involved an explicit teaching of this skill prior to TGBG intervention via methods such as group work, role play, modelling and feedback etc. This type of approach would have been more fitting to social interaction difficulties thought to arise from an acquisition deficit.

The second research question was "will the adapted version of TGBG successfully encourage a focus pupil to engage in positive social behaviours during class time?" Regarding the observation data for the focus participant, experimental control was not demonstrated and the frequency of engagement in the target social behaviours cannot be said to have changed as a result of TGBG. There are a number of possible interpretations of this finding. These are presented in Table 31.

Possible reasons for lack of desired behaviour change in focus participant's social behaviour	Explanation
The focus participant was experiencing a skill acquisition deficit rather than a skill performance deficit and so TGBG was not a sufficient intervention.	<p>The focus participant did not engage in any of the three target social behaviours during baseline. This could indicate that these behaviours were not in their behavioural repertoire prior to the intervention.</p> <p>Therefore, TGBGs targeted use for encouraging behaviours thought to result from performance deficits would not have had an effect at increasing the desired behaviour, due to a potential acquisition deficit. The pupil may have benefitted from pre-intervention aimed at explicitly teaching the targeted social behaviours.</p>
The focus participant was not personally motivated by the group reward.	<p>When the class won TGBG a reward of 5 marbles for the class marble jar was given to every member of the team (See Chapter Six, Section 6.3.3).</p> <p>It may have been the case that the focus participant was not personally engaged by this reward, and thus TGBG intervention did not provide motivation to engage with the target behaviours.</p>
The three behaviour targets were developed based on the general behaviours of the group and may not have been closely aligned with the specific behavioural needs of the focus participant.	<p>Previous research which has focused on the behaviour change of individuals in response to TGBG developed the target behaviours based on the needs of the individual, rather than the group. (Robertshaw and Hiebert, 1973; Darveaux, 1984; Tanol <i>et al.</i>, 2010) (See Chapter Three, Section 3.5 for a full review of the literature). Conversely, the current study targeted the behaviour needs of the whole group and then observed potential change in one focus participant.</p> <p>Therefore, behaviour change may not have happened for the focus participant because the target social behaviours were not closely aligned with their own behaviours and development. For example, the behaviour of <i>work as a team</i> may not have been a developmentally appropriate target for the individual. Instead, they may have responded to a behavioural target such as, 'makes consistent appropriate eye contact when working with another peer' which is a precursor behaviour for <i>working as a team</i>.</p>

Table 31: Possible reasons for the lack of desired behaviour change in response to The Good Behaviour Game for the focus participant.

This finding demonstrates how an individual's lack of behaviour change can be obscured by group data which demonstrates a positive change for the whole class. In doing so, it highlights how the individual needs of one child may not be adequately addressed by TGBG or any group contingency intervention.

The interpretation of the findings shows that TGBG can be successfully adapted to increase the positive social behaviours of a Y5 mainstream class, when those behaviours are present at baseline. Additionally, they demonstrate that a 'rule follow' version of TGBG can be effective in promoting engagement with positive social behaviours. This limits the need to employ a rule – infraction version of the game (See Chapter Three, Section 3.6 for the previous discussion of the benefits of the 'rule follow' version). The findings also show that TGBG cannot be readily adapted to successfully increase the positive social behaviours of a focus participant. Successful adaptation of TGBG for this purpose would potentially involve exploring target behaviours appropriate to the child's individual needs and developmental ability as well as the use of rewards which are personally motivating.

8.2.2 Contribution to theory development

Firstly, the research demonstrated a successful adaption of TGBG to target social behaviour. This finding develops the literature of successful adaptations that have targeted new behaviours beyond the focus of the original TGBG on compliant classroom behaviours (Fishbein and Wasik, 1981; Swain, Allard and Holborn, 1982; Salend, Reynolds and Coyle, 1989; McCurdie, Lannie and Barnabas, 2009; McCurdie, Lannie and Barnabas, 2009; Parrish, 2012) (See Chapter Three, Section 3.4.2 for a full review). The findings are also consequential in the context of previous research that attempted to specifically adapt TGBG to target social behaviours. Dolan *et al.* (1993) successfully demonstrated that TGBG could be adapted to reduce shy behaviours. The current research's findings provide evidence for the initial impetus that Dolan *et al.* (1993) provided for TGBG being employed to positively

affect social behavioural development. The research findings are also notable as they differ from the findings of Parrish (2012) where TGBG did not successfully increase pro-social behaviours. Therefore, the current research contributes to an expansion of knowledge indicating that TGBG can be successfully adapted to increase positive social behaviours.

As discussed in Chapter Two, Section 2.5, social skills interventions have been critiqued for not producing sustainable change outside of the intervention context (Maag, 2006). Previous research has emphasised the importance of the generalisation and promotion of social skills in desirable contexts, such as the classroom, through the use of contingency management (Evans, Axelrod and Sapia, 2000; Spence, 2003). The current research supports this as it provides evidence that contingency management via TGBG is effective in increasing the frequency of behaviours that pupils already engage in. It can therefore be assumed that behaviours developed through a social skills intervention could be encouraged in the generalised classroom context through employment of TGBG.

Finally, the research findings cast fresh significance on the effect of TGBG for individual children. The previous literature consistently demonstrated that TGBG effected behaviour change for target children as well as for the whole group (Robertshaw and Hiebert, 1973; Darveaux, 1984; Tanol *et al.*, 2010). However, the current study demonstrates an example where the focus child was not affected by TGBG. This limits the consistency of previous findings and opens up further questions about the impact of TGBG for focus children who are, arguably, more in need of effective intervention. It also more widely indicates that the impact of universal, group interventions on those most in need should be considered and further explored.

8.2.3 Implications for schools and educational psychologists

Given the increasing political onus for schools to take responsibility for the social development of their pupils (See Chapter Two, Section 2.6) it is desirable for EPs to be able to offer teachers simple to implement and cost effective interventions. The current research

demonstrates such an intervention. TGBG was rated as highly acceptable by the participating school staff and the research verified it to be a simple, inexpensive intervention (See Chapter Seven, Section 7.2.4). It can be implemented without the dedication of vast amounts of additional time and resources.

The findings of the individual observations of the focus participant highlight for schools and EPs how individual responses to group interventions can become lost in group data. Heeding these findings, school staff and EPs should may wish to pay particular attention to the responding of vulnerable and focus children when implementing a group intervention. If a lack of change or effect has been observed then the consideration of more individualised intervention could be made. Arguably, EPs are more sensitive to these effects due to their knowledge of psychological theory and research training. They may wish to share the findings of the current research, and other similar studies, to impart to teachers the nuances of the impact of a group intervention.

There is evidence to suggest that schools set expectations for behaviour and punish 'rule infraction', but are less likely to reward rule following (Skiba and Peterson 2000; Sugai and Horner, 2002). The current research supports the notion that behaviour is successfully changed through rewarding occurrences of behaviour and rule following. EPs and schools may wish to consider the use of positive, rewarding measures over punitive forms of behaviour change strategies.

8.3 Exploration of participants' construing of their social interactions and relationships with others

8.3.1 Interpretation of findings

The first research question was "how do Y5 pupils construe their social interactions and relationships with their family, friends and peers?" The findings of the content analysis

demonstrated a high degree of commonality in participants' construing. Constructs that could be categorised as 'introverted / extroverted' and 'pleasant / unpleasant' were consistently popular. One interpretation is that the mannerisms of extroversion and pleasantness were important to most participants when regarding their social interactions and relationships with others.

The construct categories of 'pleasant / unpleasant' and 'introverted / extroverted' are both references to psychological traits and attributes. As previously discussed in the PCP literature review (See Chapter Four, Section 4.3), research has shown that when individuals are more familiar with a person they are more likely to construe them by utilising constructs of psychological attributes. Conversely, when construing their social interactions and relationships with someone with whom they are less familiar they employ constructs that refer physical attributes and mannerisms (Duck, 1973; Klion and Leitner, 1991).

One interpretation of the finding is that the participants' elements represented people who they knew well. This is because participants could choose additional elements by selecting individuals from their social world, leading to choices of family members and close friends. As such, the findings are a possible demonstration of the effect shown by previous research where participants employ constructs relating to psychological attributes when construing their social interactions and relationships with those who they know well (Duck, 1973, Klion and Leitner, 1991).

An additional interpretation of this finding is that the construct categories of 'introversion / extroversion' and 'pleasant / unpleasant' were repeatedly represented across the construing of participants as they are closely linked to core personality traits that are known to play a central role in successful relationships. The possession of personality traits of extroversion and agreeableness, which is arguably a synonym for pleasantness and therefore a similar construct, has been shown to mediate higher levels of satisfaction with social relationships (Tov, Nai and Lee, 2016; Asendorpf and Wilpers, 1998). People who are more extroverted and agreeable also perceive themselves to have a higher quality of social relationships

(Lopes, Salovey and Straus (2003). Therefore, the prominent presence of these two construct categories may reflect their significance as personality traits that mediate positive perceptions of social interactions and relationships.

Finally, the finding that participants demonstrated similar constructs is consistent with Kelly's original conception of PCP and the commonality corollary (Kelly, 1955). The commonality corollary postulates that individuals with shared experiences will possess shared constructs. Based on this theoretical postulate, one interpretation is that the closely shared experience of the school environment and Y5 class led to a high degree of shared constructs between participants.

The second research question was "how do the Y5 participants construe their sense of self?" That is, how does their construing of 'How I am now' compare with their construing of 'How I was', 'How I wouldn't like to be' and 'How I would like to be'? As an overall trend, participants tended to construe themselves as close to their ideal self. One interpretation of this finding is that participants appeared to have a positive sense of self and were comfortable with how they were as a person. As the majority of constructs referred to social interactions and relationships it is possible to infer that participants construed themselves positively in terms of their ability to interact socially with others.

The final research question was "how do participants construe themselves in relation to others? That is, how do their constructions of 'How I am now' compare with how they construe others?" Participants appeared to perceive themselves to be similar to others as rated on their own constructs. This finding is similar to the outcomes of Cicolletta (2011) who found that participants construed themselves as being more similar to family members than non-family members (See Chapter Four, Section 4.4). This was interpreted to mean that participants identified more with family members. A similar interpretation may be drawn with the current findings as interestingly the majority of participants chose family members

for their choice of elements, and construed themselves as similar to them. A conclusion of this is that participants made a strong identification with family members.

This finding differs from previous research conducted by Maxwell (2006; 2015) (initially presented in Chapter Four, Section 4.4) which found that primary school pupils made more references to their relationships with peers than their relationships with adults, such as their relationships with teachers. Limited references were made to family. However, Maxwell (2006; 2015) asked participants to make pictures of and talk about school. This may have focused the participants to only think of people within the school context, even if their relationships with family members outside of school were of importance. The current research expands on these previous findings and points to an appreciation of other sources of social importance for pupils beyond the school context.

8.3.2 Contribution to theory development

As discussed in the literature review presented in Chapter Four, Section 4.4, there has been limited research investigating children's construing of their social interactions and relationships with others. The current research takes an important step towards developing such an understanding. Although the findings need to be interpreted with caution due to the small sample size, the high degree of commonality between participants for the construct categories of 'extroverted / introverted' and 'pleasant / unpleasant' provides initial research data that these play a crucial role in children's personal understanding of their social interactions and relationships with others.

One particularly interesting finding for theory development was the role of the family as a strong reference point in the child's social world. As previously discussed in Chapter Two, Section 2.4, in developmental psychology the idea of 'the social turn' posits that from ages 10-13 the focus for the child's social interactions and relationships progressively moves away from the family unit towards peers of the same age (Erikson, 1959). It could be

postulated that the current research indicates a potential cultural shift, whereby ‘the social turn’ appears to happen at a later age, due to the consistent use of the family as the main reference point. However, this theorising should be interpreted with much caution due to the small sample size of the research and a lack of wider investigation into cultural norms and how they develop.

Lastly, the research contributes to theory development by opening up for consideration the role of the child’s constructions of their self and others in their development of social skills and social competence. The participants in the study had a positive view of themselves as social beings. According to PCP, behaviour is planned and engaged in as a result of an individual’s personal construing of the world (Kelly, 1955). If a child construes themselves as being able to successfully interact in a social situation then it follows that they will be more likely to plan for, and engage in, successful social behaviours. Incorporation of the child’s constructions into an understanding of the development of social skills and social competence thus seems crucial to understanding success in social interactions.

8.3.3 Implications for schools and educational psychologists

The use of PCP in the current research project broadly highlights the usefulness of considering the context for an intervention from the perception of the participants. It demonstrates the appropriateness of PCP as a methodology that facilitates this. This leads to the implication for schools and EPs to utilise PCP methodology in a similar way during social skills and social competence interventions, as well as in applied EP work more broadly. This implication is further discussed in Section 8.4.3.

8.4 Developing a complementary understanding of the research findings

8.4.1 Interpretation of findings

Chapter Five, Section 5.4 laid out the research strategy for how the findings from the two strands of the research would be examined together using a complementary rationale for combining findings, rather than corroboration or integration (Brannen, 2005). The purpose was to develop a multi-faceted view and diversified understanding of the subject matter. The following presents a complementary interpretation for the combined findings of both strands of the research study. When considering the significance of this interpretation it was important for the researcher to remember that only eight of the class members were interviewed, a significantly smaller percentage of the total group who experienced TGBG, so these interpretations should be considered with a high degree of subjectivity and caution.

The findings from the PCP explorative strand of the research revealed what was important and central from the participants' perspectives with regards to their social interactions and relationships with others. At times, this differed from what the adults of the classroom deemed important via their choice of target behaviours for TGBG. There are also examples where the construing of participants appeared to align with the choice of target behaviours. It is possible to hypothesise that TGBG was more effective when there was alignment with participants' constructs.

It can be argued that the construct categories favoured by participants of 'introverted / extroverted' and 'pleasant / unpleasant' relate to the target social behaviours of *positive social interactions* and *working as a team*. Both involve confidence in ones interactions with others and a pleasant demeanour in order to successfully engage in the behaviours. Therefore, it follows that pupils potentially engaged in these behaviours in response to TGBG intervention as they shared a commonality with their personal constructs.

With the target behaviour of *supporting peers*, although 'introverted / extroverted' and 'pleasant / unpleasant' are of some relation, arguably the content category of 'respectful / judgemental' could be said to be of more relevance. Paying a compliment and encouraging someone else involves a degree of respect and non-judgement towards that person. This construct category was not found to be held by the participants. As such, it potentially follows that pupils did not engage in the social behaviour of *supporting peers* as it did not share a commonality with their personal constructs.

Another joint interpretation is that the school based implementation of TGBG was an irregular fit with participants' construing of the family as a significant social reference point in their social worlds. As family members appeared to be of importance to participants, one hypothesis is that participants could potentially have been more amenable to TGBG if parental involvement had occurred in some manner. For example, rewards for winning the game could have been arranged to be delivered at home by parents. In doing so, the range of the intervention could have been expanded into the wider social context of the family. This would have matched the implementation of the intervention more considerably with the participants' construing of their social interactions and relationships with others.

The finding that pupils typically construed themselves positively regarding their social interactions and relationships with others relates to the implementation of TGBG. It is questionable whether the participants shared the class teacher and researcher's rationale for use of TGBG. TGBG was implemented because the adults held the view that the social behaviours of the class were not positive or competent. Conversely, the participants appeared to be content with their social behaviours and interactions, as indicated by their positive construction of self. It may be speculated that this would have lead them to have limited investment in TGBG intervention, potentially mediating its effectiveness.

8.4.2 Contribution to theory development

The current research contributes to theory development by providing an example of the use of an alternative theoretical approach alongside a behavioural intervention, with the aim of additionally exploring participants' construing and perceptions of the focus of the intervention. As discussed in Chapter Two, Section 2.7.2, traditional behavioural interventions have been critiqued for being adult led and 'done to' participants rather than 'done with' them (Harzem, 2004; Ntinias, 2007). Participants do not often have an equal or considered inclusion in the development of the intervention.

The mixed methods research design has shown that PCP is an appropriate method through which to mitigate this concern. The joint interpretation of the findings theorised a connection between the participants' constructions and the efficacy of TGBG intervention. This enabled the development of interpretations for the influence of the child's constructions on the efficacy of contrived behavioural contingencies for behaviour change. Employing PCP methods in order to develop such postulates would provide a theoretical avenue through which to make informed adjustments to behavioural interventions. Consideration of the role of participants' construing could influence decisions around target behaviours, use of reinforcement, use of punishment and length of time of intervention.

8.4.3 Implications for school staff and educational psychologists

The potential relation between a child's constructs and the impact of a behavioural intervention, such as TGBG, has been highlighted. The joint interpretation of the findings has theorised that pupils will be more amenable to engaging in certain behaviours desired by school staff if target behaviours reflect their personal constructs. The implication of this for schools and EPs is the inclusion of PCP techniques in applied work and research. PCP could be employed to seek out the child's construing before embarking on potential

behaviour change interventions. The involvement of the child, or group of children, in the creation of behaviour targets would seemingly lead to the better outcomes for all involved in the intervention process. The process could also be used in a creative way to identify which groups of children would benefit more readily from intervention by accessing both their constructs around the topic and their constructs for change.

This is in accordance with legislation and guidance, such as the The Special Educational Needs Code of Practice and the United Nations Conventions on the Rights of the Child Article 12 which have led to increasing emphasis on the inclusion of the child's voice (Department for Education, 2014; The United Nations, 1990). The current research has demonstrated that PCP offers a useful theory for collecting and analysing the voice of the child and linking this to intervention development and implementation. EPs have an existing skill base in PCP and are thus well placed to support and shape this type of work in schools.

The finding that the family is a strong focal point for the child's social world and the potential influence of this for social skills and social competence interventions provides implications for schools and EPs to consider the creative inclusion of parents in the development and implementation of interventions. EPs are aware of Bronfenbrenner (1977), who proposed the systemic model, which provides a theoretical lens through which to conceptualise the joint role of the family and school in child development. This pre-existing knowledge base could be brought to bear when working with school staff in order to build 'bridges' with the home environment. This approach is already utilised in behavioural interventions for targeted pupils with SEN, such as attention and behavioural problems, where interventions are planned and implemented across the home and school environment (Sheridan and Colton, 1994). The findings of the current research suggest widening these attempts for liaison between home and school to interventions at the group level.

8.5 Strengths and limitations

The research study was subject to certain limitations but also demonstrated particular strengths. Table 32 presents the perceived limitations of the study with an exploration of what could be done differently if the study were to be repeated. Table 33 presents the perceived strengths of the study.

Limitation	Explanation	What could be done differently?
Use of an opportunistic sampling method for recruitment of the PCP interview participants, and a non-representative sample.	<p>The eight participants who were recruited for the repertory grid interviews were done so via an opportunistic sampling method. Only eight parents returned the permission slips.</p> <p>It can be argued that this may have led to a non-representative sample, where the type of parent who responded to the request was potentially more pro-social and likely to respond positively to requests from the school. This may have then have been reflected in the participants.</p> <p>As such, the constructs of the children potentially represent a skewed sample and were not representative of the whole class.</p>	<p>A stratified sampling method would have been an alternative sampling method which would have sufficiently represented the class.</p> <p>However, the study still required parents to opt-in to the study and provide consent. It may be that the method of recruitment, of sending letters home and waiting for a response, was not engaging enough to encourage parental consent.</p> <p>Busy parents may have been put off by the effort of consenting, reading a long letter and then having to respond. If an approach had been used that reduced the effort involved for consenting this may have elicited more replies. For example, during parents evening the teacher and researcher could have verbally informed parents about the study, face to face, and requested consent.</p>
Lack of further exploration of the class teacher's	The class teacher was influential in the development of TGBG, as it needed to be	The experiences of the teacher and how their teaching practice may have

experiences.	<p>a 'good fit' to their current classroom practice (See Chapter Six, Section 6.3.3 for a full account of this). The teacher and the class teaching assistant were also assessed for their thoughts about the social validity of TGBG.</p> <p>However, it can be argued that the research design of the study could have further sought to explore the teacher's experience and views of the game. For example, one interesting research question would have been an exploration of how the teacher viewed the involvement in TGBG to have affected their teaching practice.</p>	<p>changed as a result of TGBG intervention could have been explored in a variety of ways.</p> <p>From a behavioural research methodology perspective potential changes in the teacher's behaviour could have been assessed via observations of the teacher's behaviour before (baseline) and during the implementation of TGBG. Relevant target behaviours in previous studies which have evaluated the impact of TGBG on teacher behaviour have focused on the frequency of praise statements given to students, frequency of negative statements directed at students and amount of teacher burnout (Elswick and Casey, 2011; Wehby, 2012).</p> <p>Additionally, the teacher's views and perceptions of implementing TGBG in their classroom could have been collected and explored with the use of a variety of interpretive methodologies. One particular pragmatic method would have been a semi structured interview. Thematic analysis would have provided a useful tool for exploring the content of the interview.</p>
Limited replication of the empirical evaluation of TGBG.	<p>Due to practical restrictions TGBG could only be evaluated with one class for nineteen weeks. Practical restrictions include the amount of time and resources the school could donate and the dictated length of the current thesis.</p>	<p>If the practical considerations had been different then the scope of the evaluation of TGBG could have been widened to include a replication in any of the following:</p> <p>Replicated with the same class but conducted during</p>

	<p>This means that the current research project demonstrated the effects of TGBG for the small sample size of the participating class, without a replication in another classroom within the same or different school. If carried out, this would have strengthened the outcomes of the research study.</p>	<p>the afternoon rather than the morning.</p> <p>Replicated with a different class in the same school.</p> <p>Replicated with a different class in a different school.</p> <p>Any of these would have meant a replication and expansion of the findings, which would have served to strengthen the research study.</p>
<p>A need for more rigorous selection methods for the selection of the focus participant.</p>	<p>As explored in Chapter Six, Section 6.3.1 the focus participant was selected based on the class teacher's perceptions. The participant was perceived by the class teacher to have particular difficulty with his social interactions.</p> <p>With hindsight, this method of selection would have benefited from the use of more rigorous selection criteria, rather than being singularly based on the teacher's perceptions. A more rigorous method would have ensured that the focus participant was selected based on objective criteria.</p> <p>However, given that the school and class teacher had willingly agreed to participate in the study, the selection of the focus participant also represents a compromise between the interests and needs of the researcher with the interests and needs of the school and teacher.</p>	<p>Stringent selection criteria could have been developed and refined between the researcher and the class teacher. A number of children may have then been nominated and matched against the criteria, before a final focus participant chosen.</p> <p>The use of additional methods would have potentially strengthened the matching process. For example, if one of the criteria was 'Child is not viewed by peers as a friend' then the use of a sociogram would have been beneficial (Banerjee, 2015). A sociogram would have suited this purpose as it asks each pupils to rate three children who they would play with and three children who they wouldn't play with. This creates a visual 'map' of children who are popular (lots of children would play with them), children who are rejected (lots of children would not like to play with them) and children who are</p>

		neglected (they received minimum nominations from others).
A lack of analysis of generalisation of intervention effects	<p>The ABAB reversal design allowed for one replication of the intervention effect. It does not, however, allow for a follow up of the intervention after an intervening number of weeks, to see if behaviour change had been maintained.</p> <p>Likewise, observations in other contexts, such as the playground, would have allowed an analysis of potential for generalisation outside of the classroom setting.</p> <p>As with previous limitations, this could not be implemented due to practical considerations. The class had a whole class project and exam preparation scheduled for the end of the term which meant that a follow up was not permitted by the school.</p>	<p>A follow up to TGBG would have involved employing a ABABC reversal design where 'C' is observational data taken after a specified amount of time has elapsed from the last implementation of TGBG. It would be hoped that the rates of the target behaviours would have remained at similar levels indicating continuation of intervention effects.</p> <p>Likewise, the single case research design could also have been advanced by observing potential changes in target behaviour outside of the classroom setting, such as in the playground at break time.</p>
A need for social acceptability rating for TGBG to be collected from participants.	<p>The research would have been strengthened if social acceptability ratings had been taken from the pupils, as well as from classroom staff.</p> <p>Due to practical and time constraints on the research this could not be effected. It was deemed that the PCP strand to the research acted in lieu of social acceptability ratings as it represented the voice and perceptions of participants.</p>	A replication may consider utilising social acceptability ratings with participants.
Lack of movement from extrinsic motivation to	As detailed in Chapter Six, Section 6.3.3 the rewards for winning TGBG were planned	If replicated, TGBG should start with contrived forms of reinforcement, such as

intrinsic motivation.	<p>so that they would move from contrived reinforcement to those that were more typically occurring in the natural environment. This was to be enacted to provide a basis of movement from extrinsic motivation for engaging in the target social behaviours, to facilitating the development of intrinsic motivation.</p> <p>Unfortunately, this plan did not occur due to intervention from the school's senior leadership team regarding the type of reward available.</p>	<p>access to tangible rewards, and move towards rewards that reflect more naturally occurring contingencies.</p> <p>For example, engagement in social behaviours begets positive responses from others so rewards such as time speaking to a friend, or playing a group game, would enable this to occur.</p>
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Table 32: The proposed limitations of the study.

Strength	Explanation
The research additionally considered the perspective and views of the participants whilst evaluating a behavioural intervention.	<p>As discussed in Chapter Two, Section 2.7.2, ABA interventions have been critiqued for being 'done-to' participants, rather than involving them in the research or considering their views (Harzem, 2004). Consideration is often given afterwards to the child's view of the intervention through the use of social validity measures, but rarely is it considered as part of the whole analysis.</p> <p>The current research is a successful example of an attempt to consider the child's internal model of the world and subsequent expectations for behaviour with an interpretation of how these may influence responses to a behavioural intervention.</p>
The use of the repertory grid interview technique allowed for a sensitive collation of participants' perspectives.	The repertory grid interview method requires a child's voice to be recorded verbatim representing their original voice (Fransella, Bell, and Bannister, 2004). This meant that children of varying developmental abilities could access the PCP strand to the research, and were not discriminated against. As can be seen from the participants' constructs, some children had more advanced linguistic and vocabulary ability than others. However, since a child's construing is always 'correct' from their perspective and constructs are perceived to be pre-verbal, then the selected method for exploring the child's perspective meant that this was not a barrier to participation.
The research project is an example of how research can evolve in	As presented in Chapter One, the research project was developed in response to an identified need in the participating school. As such, it can be viewed as being socially meaningful

response to real world problems.	and of direct relevance to the context in which it was conducted. This is in contrast to other social science research which has been critiqued as research which lacks true social relevance (Bok, 2009). The outcomes of the project demonstrate the utility and usefulness of applied psychological research.
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Table 33: The proposed strengths of the study.

8.5.1 Summary

There are some limitations to the research study. The majority of limitations stem from pragmatic difficulties arising from the unique position of conducting research whilst also fulfilling the role of a TEP. Implementing an empirical evaluation within a school setting also proved to have its constraints. There occasionally arose barriers to the implementation of the project which were immovable, for example, if the Y5 class was out for a whole day school trip, or sitting examinations. These limitations are understood to compromise the kind of obstacles that typically arise when attempting to conduct applied psychological research (Robson, 2002). Despite these limitations, the project demonstrates an array of strengths which contribute to the robustness of the research findings.

8.6 Future research

There are certain considerations that future research may wish to take into account when replicating or expanding the current study. With regards to the empirical evaluation of TGBG there are a number of directions in which the research could be developed. For example, it would be interesting to repeat the research with different age groups. The use of the adapted TGBG could be implemented in younger Primary School age groups, as has been trialled with the traditional version of TGBG (Kellam *et al.*, 1994). This would also allow for longitudinal data to be gathered to explore potential preventative effects of the intervention. The traditional version of TGBG has been described as a 'behavioural vaccine' based on

longitudinal research which has demonstrated its positive long term behavioural effects (See Chapter Three, Section 3.3) (Kellam *et al.*, 2014; Embry, 2002). An adapted version that targets social behaviours at a young age, instead of classroom compliance behaviours, may have similar positive outcomes for the behavioural trajectories of vulnerable individuals.

Future research may also wish to further the work begun around the evaluation of the effects of a whole class intervention on the behaviour of individuals within the group. It could examine the role that hypothesised mechanisms of TGBG play in shaping and supporting behaviour change for focus children. For example, it was hypothesised that one reason why the behaviour of the individual child didn't change may have been that they weren't personally motivated by the reward for winning the game. Future research could explore the use of personalised rewards and the effect this may have on the behaviour change of individuals within the group.

When expanding the PCP exploratory strand of the study future research would benefit from trialling different methods of eliciting and evaluating pupils' constructs. Use of Cipolletta's (2004) model of the child's interpersonal world, by having significant others rate the child using the same constructs the child developed and then comparing the difference between the two, would allow for the involvement of significant others. This would enable a more complex picture of their social relations, involving the perspectives of others, to emerge. Alternatively, the use of drawings would provide a substitute method, as utilised by Maxwell (2006; 2015). Drawings are perceived to be advantageous as they enable children to express themselves without the use of language, which may be difficult due to the child's developmental level or special educational needs. Therefore, a 'deeper' range of constructs may arguably emerge. It would also be beneficial to widen the sample of pupils expressing their views and constructs.

The dominant themes of the research speak broadly to the direction of travel of the wider literature around the development of social skills and social competence. Future research could seek to continue an exploration of the effect of incorporating the child's views and

perceptions into the development of interventions for social skills and competence. The potential long term impact of such research would be the development of evidence based protocol for social skill interventions which include, from the outset, an appreciation of the constructs pupils hold regarding their social interactions and relationships with others and how this may mitigate efficacious outcomes.

8.7 Concluding statement

The present research has contributed to existing knowledge by demonstrating a successful adaption of TGBG for social behaviour in the Y5 classroom setting. TGBG may be employed to provide motivation for the generalisation of social skills already existent in a group's behavioural repertoire. It is suggested that it may be used as one component part to an intervention that also utilises other techniques such as role play, modelling and emotion regulation practice. Additionally, the research has highlighted that although behaviour change may be observed at the group level, there may be limited behavioural change for particular individuals. Therefore, when implementing group behavioural interventions, additional attention is warranted for focus participants.

The research has also presented the use of PCP as a relevant theory with which to explore participants' construing of their social interactions and relationships. The affiliation of a child's understanding of their social world with the potential effects this may have for a behavioural intervention have been tentatively presented as a new dimension for single case research design of a behavioural nature. It is put forth that this offers a comprehensive framework through which to develop the voice and involvement of children and young people.

8.8 Reflections on the experience of being an applied psychologist researcher

The final section of this thesis is written in the first person as it aims to explore how the research change me, the researcher, as an academic and applied psychologist practitioner. Research is a reflective process, where the existent assumptions and stance of the researcher develop and change as a result of the process of engaging with a research project. This is particularly true with research that employs PCP theory, as it is a reflective paradigm that calls upon its adherents to consider their own involvement and experiences.

I feel that I significantly developed as a researcher as a result of conducting the current research project. Firstly, my views on what constitutes a justified initiation for research was shaped by my experiences of developing the project from school work conducted as an applied trainee educational psychologist. I am satisfied that as the research grew out of a genuine real world problem it reflects the concerns of practitioners 'on the ground'. It cannot be critiqued for reflecting the isolated views of an academic in an 'ivory tower'. Having had this experience and seeing first-hand the utility of conducting research in this way I shall endeavour to replicate this in the future.

In addition, the employment of an explorative enquiry to offset an empirical evaluation has taught me of the power and utility of this dynamic. In future research I shall always consider the use of a mixed methods research design that will include the perceptions of the participants.

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Appendix 1: A summary of eight research studies that have trialled a 'rule follow' version of The Good Behaviour Game

Research study	Research Design	Details of 'rule follow' version	Target behaviours	Participants	Results	Conclusions
(1) Robertshaw and Hiebert (1973)	AB non-reversal design (Baseline then intervention).	<p>The class was divided into six teams.</p> <p>Tokens were awarded to teams when a team member followed the rules.</p> <p>The GBG was played for the entirety of the school day.</p> <p>Only one team could win.</p> <p>The team with the most tokens won.</p>	<p>The amount of seatwork tasks completed.</p> <p>Rate of inattentive behaviour</p> <p>Rate of attentive behaviour</p>	All pupils in a first grade, mainstream education classroom.	<p>Inattentive behaviour averaged 44% during baseline and reduced to an average of 4% during intervention phase.</p> <p>Attentive behaviour averaged 56% during baseline and increased to 96% during the intervention phase.</p> <p>During baseline the class averaged 9.5 completed seatwork tasks per week. This increased to an average of 18 during intervention</p>	It was concluded that the GBG has a significant positive effect on changing target behaviours in their desired direction.

		The members of the winning team won the ability to pick free choice activities first.			phase.	
(2) Darch and Thorpe(1977)	A/B/A/C/A reversal design	<p>Class divided into two teams.</p> <p>The GBG played for the entirety of a lesson which lasted 30 minutes daily.</p> <p>Points awarded when all members of a team were engaging in on task behaviour.</p> <p>Teams won if they scored over a pre-specified point</p>	On - task behaviour	All pupils in a fourth grade, mainstream educational classroom.	<p>Occurrence of on task behaviour averaged 26% during baseline.</p> <p>During the first intervention phase on task behaviour averaged 86%.</p> <p>Occurrence of on task behaviour averaged 51% during baseline 2.</p> <p>During the second intervention phase on task behaviour averaged 75%.</p>	It was concluded that the GBG has a significant positive effect on increasing on task behaviours.

		criterion.			In the final baseline phase on task behaviour averaged 34%.	
(3) Lutzker and White-Blackburn, (1979)	ABAB reversal design	<p>The GBG was played in a rehabilitation unit during workshop time.</p> <p>The group was split into two teams.</p> <p>The GBG was played as a 'pseudo game' as both teams always received the reward.</p> <p>Points were awarded to teams based on rate of completion of work tasks.</p>	Work performance: the quality of each work unit produced.	Four individuals who were residents at a state hospital who were trainees at a rehabilitation work unit.	Work performance improved 104% in the first intervention period, in comparison to baseline and 64% in the second intervention period, in comparison to baseline.	It was concluded that the GBG improved work performance and was continued to be used in the facility after the research ended.

		<p>The GBG was played during the completion of work tasks.</p> <p>Winning teams were rewarded with sweets or early termination of work.</p>				
(4) Fishbein and Wasik (1981)	ABAB reversal design	<p>The GBG was played in the library and during the classroom. Each session lasted around an hour.</p> <p>The rules were stated positively, i.e. what the pupil must do rather</p>	<p>Rates of:</p> <p>Task relevant behaviour.</p> <p>Off task behaviour.</p> <p>Disruptive behaviour.</p>	All pupils in a 4th grade, mainstream education class.	<p>Average levels for target behaviours during baseline were as follows:</p> <p>On-task behaviour: 9% of observed intervals.</p> <p>Off task behaviour: 73% of observed intervals</p>	It was concluded that the GBG had a significant positive effect on increasing on task behaviours and reducing off task and disruptive behaviours.

		<p>than what they mustn't do.</p> <p>The pupils were split into two teams.</p> <p>Points were awarded to a team if a member followed the rules.</p> <p>Winning teams chose between the rewards of, doing an art project or having the teacher read to them.</p>			<p>Disruptive behaviour: 18% of observed intervals.</p> <p>During intervention phase one average levels for target behaviours changes as follows:</p> <p>On task Behaviour: 21%</p> <p>Off task behaviour: 5.7%</p> <p>Disruptive behaviour: 16%</p> <p>On implementation of the second baseline percentage averages returned</p>	
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					to initial baseline trends and then increased again, in the expected direction, on implementation of the final intervention phase.	
(5) Swain et al. (1982)	Multiple baselines across groups of children.	<p>'The good teeth brushing game' used to encourage good oral hygiene.</p> <p>The two classes were randomly divided into two teams.</p> <p>4 students randomly chosen from each team daily and tested for oral hygiene score.</p>	<p>Oral hygiene rated using 'The Simplified Oral Hygiene Index'.</p> <p>Average oral hygiene score take from 4 randomly selected pupils from each team</p>	22 grade one students and 23 grade two students in a mainstream school.	<p>At baseline the mean oral hygiene score for the grade one class was 5 and for the grade two class was 5.5.</p> <p>When the GBG was implemented mean scores for the grade one class fell to 3.3 and to 4.4 for the grade two class.</p> <p>At follow up the mean oral hygiene scores for the</p>	It was concluded that the GBG had a significant positive effect on decreasing the mean oral hygiene scores for the two classes and so positively impacted on the oral hygiene of the pupils.

		<p>Team with the lowest score would win.</p> <p>Every member of the winning team had their name put on a 'winners poster' and received a sticker.</p>			<p>grade one class were, 2.2, 2.5, and 2.6. and 3.1, 3.2, and 2.7. For the grade two class.</p>	
(6) Swiezyat et al. (1992)	Multiple baseline across pairs of subjects.	<p>4 subjects divided into two teams of two.</p> <p>During gameplay a puppet asked the children to do things.</p>	<p>Compliance with a request.</p> <p>Non-compliance with a request.</p>	4 children who attended a pre-school.	Compliance increased by 63% for team one and for 49% for team two.	It was concluded that the intervention was successful in increasing compliance in both teams.


		<p>If children complied won a point for the team.</p> <p>The game was won if the team got above a set criteria for winning.</p> <p>The game was played once a day and lasted until ten instructions had been given to the children.</p>				
(7) Rodriguez (2010)	Multiple baseline across five instructional groups	Each instructional group was divided into two teams.	Rate of student problem behaviour (talking out, out of seat without permission, disruptive behaviour, and noncompliance.)	5 kindergarten literacy groups in a mainstream school. 29 participants	For rate of student problem behaviour all rates decreased from baseline to intervention across the five groups. The average rates	The study concluded that the GBG was a successful intervention for reducing rates of student

		<p>The GBG was played daily for one hour.</p> <p>Smiley faces (points) were delivered to a team if every member met a behavioural expectation.</p> <p>The game was won when the team earned as many points as a pre-specified criterion, which was kept secret during game play and revealed as a 'magic number' at the end of game play.</p>	<p>Academic engagement(Following teachers academic requests, watching the teacher or looking at the task, completing requested tasks)</p> <p>Literacy achievement (Measured using standardised assessments of early literacy skills)</p>	<p>across the 5 groups.</p>	<p>of student problem behaviour change were as follows: 78% at baseline to 16% at intervention, 80% at baseline to 8% at intervention, 82% at baseline to 13% at intervention, 65% at baseline to 7% at intervention and 71% at baseline to 26% at intervention.</p> <p>For academic behaviour mean student engagement was 91% for all groups at baseline and at 98% after intervention.</p> <p>Across all five groups there did not appear to be a significant</p>	<p>problem behaviour.</p> <p>The study also concluded that the GBG had no effect on academic engagement and was not successful in increasing literacy achievement.</p>
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					difference in literacy achievement between baseline and intervention.	
(8) Parrish (2012)	Multiple - Baseline across 5 lunchroom periods.	<p>During a lunch time period each class was a team.</p> <p>The game was played for the whole lunch period.</p> <p>Points were awarded at the end of each lunch time period. A maximum of 2 points could be won each game. A class could win 2 points for all of the class following all of the rules for the entire lunch time period. 1 point</p>	<p>Students appropriate social behaviours.</p> <p>Student's inappropriate social behaviours.</p> <p>Both rated using the Behavioural Assessments of Students in the Lunchroom (Volpe, Hoffman and Parrish, 2009)</p>	Grades 1-5 students in a mainstream school.	<p>At baseline the mean percentage for occurrence of appropriate social behaviour was 36.9% and was an average of 35.8% during intervention.</p> <p>At baseline the mean percentage of inappropriate social behaviour was 14.6% and decreased to 9.7% during intervention.</p>	The study concluded that the GBG had no effect on changing appropriate social behaviour and a minimal effect of inappropriate social behaviour.

		<p>for most of the class for following all of the rules for the entirety of the lunch time period or 0 points if none of the pupils followed the rules.</p> <p>At the end of each week a weekly criterion number was revealed and class teams which had exceeded that number won access to a reward.</p>				
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The Good Behaviour Game (TGBG)

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RECAP: What is the GBG?

- An evidenced based group intervention to change behaviour of a group.
 - We aim to increase positive social behaviours of the class.
 - Whole class is one team.
 - Earn points for the whole team each time a member exhibits a target behaviour.
 - At the end of the game if the team has scored above a set criteria of points then everyone in the team gains access to the prize.
-

RECAP: when our intervention will be played

- First lesson of the day each morning.

RECAP: operationalised target social behaviours

- Working as a team:
 - Collaborating – Asking Q's of each other and equally sharing work load.
 - Accommodating – Saying ok and accepting someone else's point of view
 - Patience – Waiting and not snapping.
 - Positive talk and peer support:
 - Praise each other. E.g. 'say well done'
 - Encouraging e.g. 'would you like to join in' 'that was a good point'
 - Acknowledging someone else's input
 - Sharing e.g. not grabbing but waiting patiently for resources.
 - Good interactions:
 - Calm, collected voices.
 - Keep hands to self
 - Smiles
 - Friendly faces
-

RECAP: operationalised target social behaviours

- (1) We will show positive behaviour to each other.
 - Calm voices
 - Friendly body language
 - Friendly faces
 - (2) We will work as a team.
 - Ask questions of each other
 - Contribute and share the work load
 - (3) We will support our peers.
 - Praise each other. E.g. 'well done'
 - Encourage. E.g. 'you can do this'
-

RECAP: planned rewards

RECAP: setting winning criteria

- Initial baseline observation rates =
 - The initial winning score should be set slightly below this.
 - Then increased each time, but also varied.
 - Rules:
 - Should never be too low that winning is easy
 - Should never be too high that winning is impossible
-

Purpose of today

- By the end of today you will:
 - Have an understanding of the research project
 - Have an understanding of the timeline for the research project
 - Know how to implement The GBG
 - Know how to collect group observation data
 - Know how to collect individual child observation data
-

Research

- Does the intervention make a difference to group behaviour?
 - Does the intervention make a difference to selected individual's behaviour?
 - Does the intervention make a difference to individuals perceptions of themselves as social individuals?
-

Time lines

- BASELINE – five data points (5 days – one school week)
 - Whole class behaviour observations
 - Individual children behaviour observations
 - Individual children interviews
 - INTERVENTION – five data points (5 days – one school week)
 - Whole class data collection
 - Individual children observations X3
 - REVERSAL – five data points (5 days – one school week)
 - Whole class data collection observation
 - INTERVENTION TWO – five data points (five days – one school week)
 - Whole class data collection
 - Individual children observations X3
 - Individual children interviews (follow up)
 - FOLLOW UP (three weeks later. Still sing the GBG?)
 - Whole class observations
 - Focus group interview with Wendy and Carl, experience of using the intervention
-

Purpose of today

- By the end of today you will:
 - Have an understanding of the research project
 - Have an understanding of the timeline for the research project.
 - Know how to implement The GBG
 - Know how to collect group observation data
 - Know how to collect individual child observation data
-

Procedure for playing the game.

3 stages:

- Setting up the game
 - Scoring points
 - Winning the game
-

Introducing / setting up the game

- Introduce the start of the game to the class to initiate game play.
 - Remind class of the game rules.
 - Tell class what today's prize will be.
 - Finish by reminding them that they are a team.
 - Start the timer for the game. (*PLAYED FOR SAME AMOUNT OF TIME EACH DAY)
-

Scoring points

- Continue with your regular teaching.
 - Every time you see a member of the class exhibit a target social behaviour say their name, give specific praise and award a point by marking it on the score sheet.
-

winning

- At the end of set time for game play announce that the game has finished.
- Reveal the criterion for winning and compare to their score.
- If the team won: give praise and administer the reward
- If the team lost: tell them this and provide encouragement for next time.
- Fill in your data sheet for how many points were scored, what the criterion for winnings was and whether it was a win or a loose.

Purpose of today

- By the end of today you will:
 - Have an understanding of the research project
 - Have an understanding of the timeline for the research project.
 - Know how to implement The GBG
 - Know how to collect group observation data during intervention phase one and two
-

Overview of data collection

AS to conduct the majority of data collection.

Secondary observer for 40% of data collection opportunities = observes twice in each 5 day research phase.

Data collection sheets:

(1) Group for during intervention phases one and two

Appendix 3: Poster of rules for The Good Behaviour Game displayed in classroom

The Good Behaviour Game: Rules

(1) We will show positive behaviour to each other.

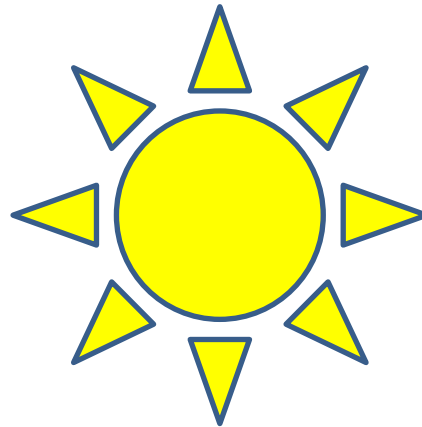
- Calm voices
- Friendly body language
- Friendly faces

(2) We will work as a team.

- Ask questions of each other
- Contribute and share the work load

(3) We will support our peers.

- Praise each other. E.g. 'well done'
- Encourage. E.g. 'you can do this'



Appendix 4: Written guide for class teacher on how to implement The Good Behaviour Game

How to implement The Good Behaviour Game

Outline of the game:

The Good Behaviour Game is an evidenced based intervention for either reducing unwanted behaviour or encouraging positive behaviour. We will be aiming to encourage positive social behaviour between peers whilst in the classroom setting.

The Game involves treating the whole class as a team. Whilst the Game is being played each time a pupil engages in one of the target behaviours then a point is scored for the whole team. If at the end of the team has reached above a pre-set criteria for winning then the whole group gains access to the reward.

When the game will be played:

The first lesson for the first period of each day.

Operationalised target behaviours:

- (1) We will show positive behaviour to each other.
 - Calm voices
 - Friendly body language
 - Friendly faces
- (2) We will work as a team.
 - Ask questions of each other
 - Contribute and share the work load
- (3) We will support our peers.
 - Praise each other. E.g. 'well done'
 - Encourage. E.g. 'you can do this'

Planned rewards: We will plan rewards together now.

Setting winning criterion:

The criterion for winning must initially be set based on baseline observations of frequency of occurrence of target behaviours. E.g. if behaviours occur for an average of 6 times per class then the initial baseline would be set at 5.

This will then be slowly increased as the team wins. Although, it can be varied over time. For example, 5,7,4,8,5,7,8,9 etc.

Procedure for playing the game:

Introducing / setting up the game

Introduce the start of the game to the class to initiate game play. E.g. "Ok class we will now begin playing the GBG for the next X minutes."

Remind class of the game rules. E.g. "every time I see a member of the class follow one of these rules and show these actions I will give the team a point. You can see the points on this score sheet. At the end of the game we will see if you have won."

Tell class what today's prize will be. E.g. "Today if the whole class wins then everyone will have a sticker".

Finish by reminding them that they are a team e.g. "remember to work as a team. Support each other during the game".

Start the timer for the game.

Scoring points

Continue with your regular teaching.

Every time you see a member of the class exhibit a target social behaviour say their name, give specific praise and award a point by marking it on the score sheet.

E.g. "Well done Sophie that was lovely sharing you just did with Jack. One point is awarded to the group".

Winning

At the end of set time for game play announce that the game has finished. E.g. "well done class we have now finished the GBG"

Reveal the criterion for winning and compare to their score "You scored a total of X points and the winning criterion was X"

If the team won: give praise and administer the reward. E.g. "Well done every one."

If the team lost: tell them this and provide encouragement for next time e.g. "Unfortunately this means that you didn't quite make it this time. But we will play again tomorrow so maybe you can make it then"

Lastly, fill in your data sheet for how many points were scored, what the criterion for winnings was and whether it was a win or a loose

If you have any questions about how to implement the Good Behaviour Game (or any other part of the research project) please email me on XXXXXXXX

The Good Behaviour Game

Alexandra Sewell,
Trainee Educational Psychologist

• As an Educational Psychologist I...

Help children with their
learning...

Work with children
individually...

Help children
make friends...

Work with
small
groups of
children...

Work with whole
classes of children...

Am interested in how
children feel and what
can make them feel
better...

Why are we going to be playing the good behaviour game?

To learn how to be good friends to each other.

To work as a team.

To become better friends with each other.

To learn how to be kinder to each other.

To interact more successfully with each other in class.

Smiling at others

Shouting at someone

Using an appropriate tone of voice

Making good eye contact

Saying positive comments

Hitting someone else

Having a friendly face

Frowning at others

Saying something mean about someone else's piece of work

Encouraging someone else

Equally share the work load when completing a group task as a team

How to play The Good Behaviour Game

The whole class is one team.

You will play the game during the first lesson of every day.

Mr [REDACTED] will let you know when the game is about to start.

The aim is to win as many points as possible.

You win points for the team by following the rules.

Rules of the Game

- (1) We will show positive behaviour to each other.
 - Calm voices
 - Friendly body language
 - Friendly faces

Rules of the Game

- (2) We will work as a team.
 - Ask questions of each other
 - Contribute and share the work load

Rules of the Game

- (3) We will support our peers.
 - Praise each other. E.g. 'well done'
 - Encourage. E.g. 'you can do this'
-

Rules of the Game

- (1) We will show positive behaviour to each other.
 - Calm voices
 - Friendly body language
 - Friendly faces
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 - Ask questions of each other
 - Contribute and share the work load
 - (3) We will support our peers.
 - Praise each other. E.g. 'well done'
 - Encourage. E.g. 'you can do this'
-



Any questions...?

- Now we are going to try playing the Good Behaviour Game.

Appendix 6: Fidelity checklist for The Good Behaviour Game

The Good Behaviour Game Fidelity Checklist for Observation

During the observation the classroom teacher does the follows (tick as appropriate):

- Introduces TGBG following the procedure script [☐]
- Reminds pupils of the game rules [☐]
- Reminds pupils of the reward [☐]
- Displays rules poster on the classroom wall [☐]
- Indicates that the game has begun [☐]
- Consistently rewards occurrences of target behaviours by verbally praising the exact behaviour (e.g. “well done, that was a very nice compliment to a peer”) [☐]
- Consistently rewards occurrences of target behaviours by giving a point by marking it on the board [☐]
- Consistently rewards occurrences of target behaviours by encouraging others to follow the same behaviour as the peer who just won the point [☐]
- Tells the class when the game has ended [☐]
- Reveals the criterion for winning the game and states if the game has been won or lost [☐]
- Immediately delivers the reward if game has been won [☐]

Appendix 7: Class teacher and teaching assistants scores on the Usage Rating Profile Inventory (URP-I) (Chafouleas, *et al.*, 2009)

Teacher's scores:

Item number	Rating score
1	5
2	4
3	6
4	5
5	3
6	6
7	4
8	6
9	6
10	5
11	4
12	5
13	1
14	1
15	5
16	2
17	5
18	5
19	4
20	5
21	4
22	5
23	1
24	2
25	6
26	5
27	6

28	4
29	4
30	6
31	5
32	5
33	5
34	1
35	6

Teaching assistant's scores:

Item number	Rating score
1	6
2	2
3	5
4	6
5	6
6	5
7	5
8	5
9	5
10	5
11	5
12	6
13	2
14	1
15	6
16	2
17	6
18	6
19	5

20	5
21	5
22	5
23	2
24	2
25	5
26	5
27	5
28	5
29	5
30	6
31	6
32	5
33	5
34	2
35	5

Appendix 8: Glossary of ABA terms

Baseline – A *baseline* is a collection of behavioural observation data that is taken before intervention occurs. It acts as an indication of frequency of behaviour before intervention occurred.

Experimental Phases – An *experimental phase* represents each part of the research design. For example, in an ABAB reversal design 'baseline', 'intervention phase one', 'return to baseline' and 'intervention phase two' would all be considered individual experimental phases.

Intervention – An *intervention* refers to any behavioural manipulation of the environment to effect a desired change in target behaviour. In a single – case ABAB reversal design the effects of the *intervention* are compared against the baseline and reversal phases to demonstrate experimental control.

Level – The term *level* refers to the position of the data in relation to the Y axis. Data that clusters at the top of the y axis is referred to as having a *high level*. Data that clusters at the middle, a *middle level* and data that is seen at the bottom of the Y axis as having a *low level*. Alternatively, data that has a change in level can be described as *low to moderate level*, *moderate to high level* etc.

Phase changes – Phase changes refer to when a change is made between an experimental phase. So, for example, when the research focus switches from baseline to intervention.

Reversal - In a single – case ABAB reversal design the reversal experimental phase involves removing the intervention and observing what happens to the target behaviour as a result. It is also referred to as a *return to baseline*.

Trend – The term *trend* indicates the direction that the data is going in. If the data points go down then there is said to be a *decreasing trend*. If the data points go up then there is said to be an *increasing trend*. If there is no direction then there is said to be *no trend*. Alternatively, if the data is moving away from the desired direction after intervention it is said to have a *counter-therapeutic* trend.

Variability – When making a visual analysis of behaviour observation data *variability* refers to how different data points are to each other, or how data fluctuates or remains consistent to itself. When data does not fluctuate much and the data points are similar to each other, it is described as *stable*. More fluctuation and difference between data points then the data may be described as *variable* or *highly variable*.

Appendix 9: Application for ethical review









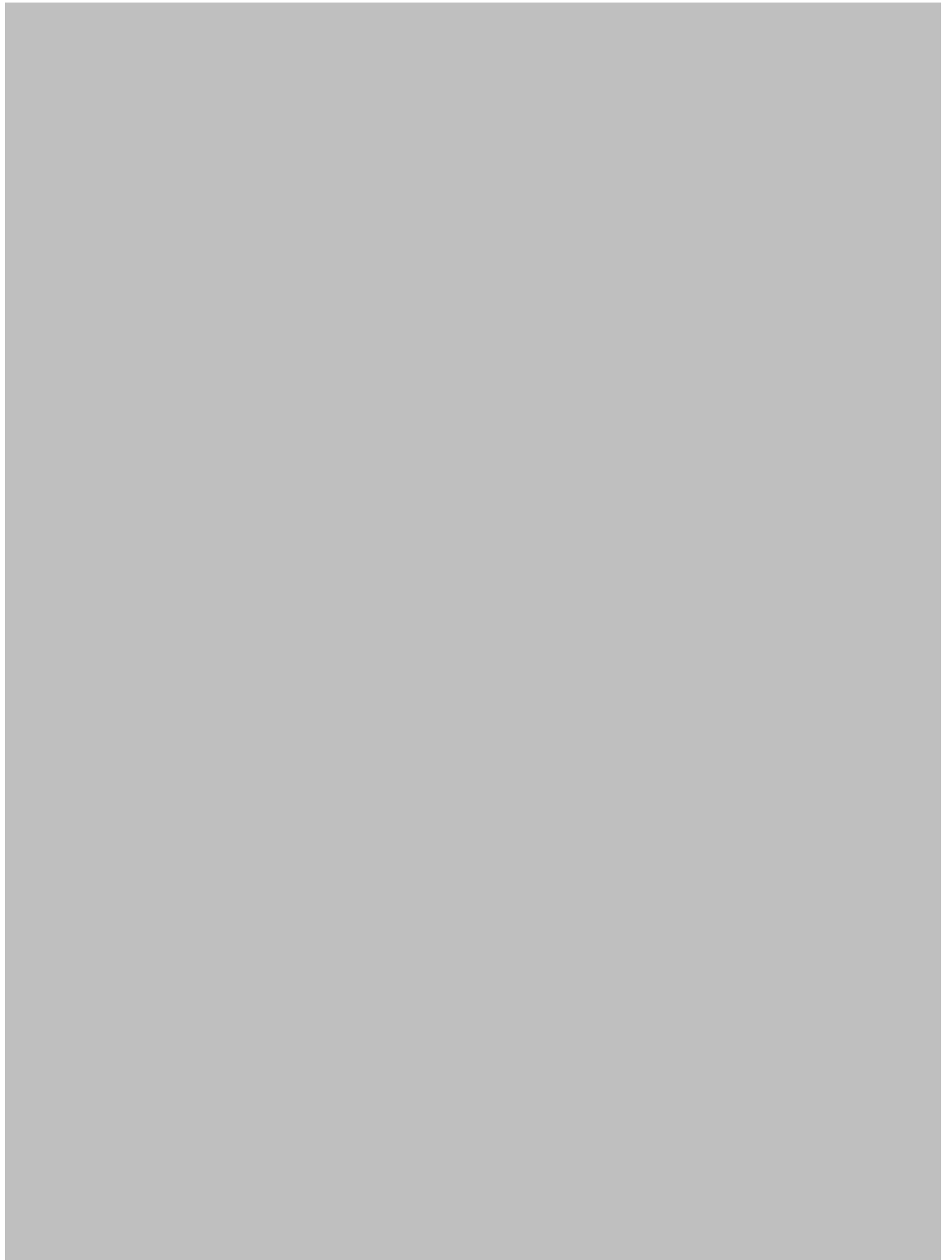




7. CONDUCT OF PROJECT

Please give a description of the research methodology that will be used





The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights how cultural differences can influence the interpretation of data and the design of the study. The author argues that researchers must be sensitive to these differences and adapt their methods accordingly. This is particularly true in cross-cultural research, where the researcher is often working in a foreign environment. The paper then moves on to discuss the challenges of conducting research in a non-Western context. It notes that many of the assumptions and methods developed in Western countries may not be applicable in other cultures. For example, the use of individualistic questionnaires may not be appropriate in collectivist societies. The author suggests that researchers should use a more holistic approach, taking into account the social and cultural factors that influence the behavior of the participants. The second part of the paper focuses on the importance of building trust and rapport with the participants. It emphasizes that this is a crucial step in the research process, especially in cultures where there is a high level of suspicion towards outsiders. The author provides several strategies for building trust, such as spending time with the community, learning the local language, and involving local researchers. The paper also discusses the importance of transparency and honesty in the research process. It argues that researchers should be open about their goals and methods, and should not attempt to deceive or manipulate the participants. Finally, the paper concludes by emphasizing the need for a collaborative approach to research. It suggests that researchers should work closely with the community, sharing knowledge and resources, and respecting the local customs and traditions.



the 1990s, the number of people in the world who are under 15 years of age has increased by 1.2 billion, from 1.1 billion in 1980 to 2.3 billion in 1999. The number of people aged 15 years and over has increased by 1.1 billion, from 1.1 billion in 1980 to 2.2 billion in 1999.

There are a number of reasons why the world population is growing so rapidly. One of the main reasons is that the number of people who are surviving to old age is increasing. This is due to a number of factors, including improved medical care, better nutrition, and a decline in the death rate.

Another reason why the world population is growing so rapidly is that the number of people who are having children is increasing. This is due to a number of factors, including a decline in the age at which people are having children, and a decline in the number of children who are dying in infancy.

There are a number of other factors that are contributing to the rapid growth of the world population. These include a decline in the death rate, and a decline in the number of people who are having children.

The rapid growth of the world population is a major concern for many people. This is because it is leading to a number of problems, including a decline in the standard of living, and a decline in the quality of the environment.

There are a number of ways in which the world population can be controlled. These include a decline in the death rate, and a decline in the number of people who are having children.

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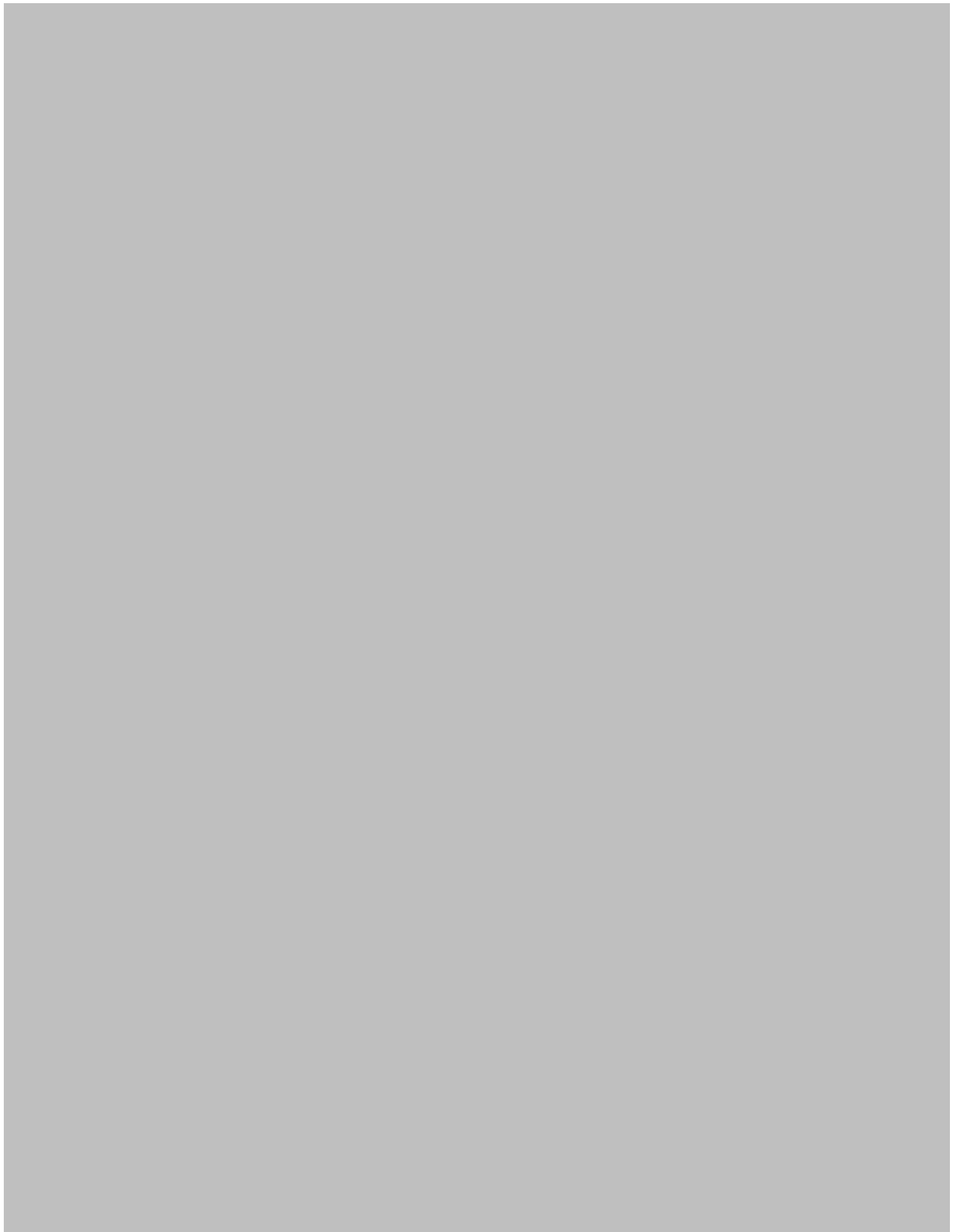
The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The second part of the paper describes the methodology used in the study, including the data collection and analysis techniques. The third part of the paper presents the results of the study, and the fourth part discusses the implications of the findings. The paper concludes with a summary of the main findings and a list of references.

The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data was collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the implications of the findings are discussed in detail. The paper is well-structured and easy to read, and it provides a valuable contribution to the field of research.

The findings of the study have important implications for the field of research, and they provide a basis for further research. The research has identified a number of key factors that are important in the study, and it has shown that these factors are related to the outcome of the study. This information can be used to develop interventions and policies that are based on the findings of the study.

The research has also identified a number of limitations, and it has shown that there are a number of factors that can affect the results of the study. These limitations should be taken into account when interpreting the results of the study, and they should be used to guide future research.

In conclusion, the research has provided a valuable contribution to the field of research, and it has identified a number of key factors that are important in the study. The findings of the study have important implications for the field of research, and they provide a basis for further research.



the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million (1990–1999) and is projected to increase by a further 1.5 million by 2010 (Office for National Statistics 2000). The number of people aged 65 and over is projected to increase by 2.5 million by 2020 (Office for National Statistics 2000).

There is a growing awareness of the need to develop strategies to meet the needs of the ageing population. The Department of Health (1999) has identified the need to develop a 'new paradigm' for the care of the elderly. This paradigm is based on the principle of 'active ageing', which is the process of maintaining and enhancing the functional ability of older people to live independently and to participate in society. The Department of Health (1999) has identified a number of key areas for action in order to achieve this paradigm, including: (1) the development of a 'new paradigm' for the care of the elderly; (2) the development of a 'new paradigm' for the care of the elderly; (3) the development of a 'new paradigm' for the care of the elderly.

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the 1990s, the incidence of *S. flexneri* has increased in the United Kingdom [10]. In the United States, *S. flexneri* has been reported as the most common serotype in children with acute bacterial dysentery [11].

There is a paucity of data on the epidemiology of *S. flexneri* in the United Kingdom. In the 1970s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [12]. In the 1980s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [13].

In the 1990s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [14]. In the 2000s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [15].

In the 2010s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [16]. In the 2020s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [17].

In the 2030s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [18]. In the 2040s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [19].

In the 2050s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [20]. In the 2060s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [21].

In the 2070s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [22]. In the 2080s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [23].

In the 2090s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [24]. In the 2100s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [25].

Appendices:

Appendix 1	Information letter to all parents	p.16
Appendix 2	Parental Consent form	p.19
Appendix 3	Child information sheet and consent form	p.20
Appendix 4	Interview Schedule for eliciting constructs of focus children	p.22

Dear Parent,

My name is Alexandra Sewell. I am a Trainee Educational Psychologist on placement with [REDACTED] Educational Psychology Service and a Doctoral Researcher at the University of Birmingham. I am writing to you today to inform you of some research I will be conducting with Year Five at [REDACTED] Primary School, in partnership with your child's class teacher, ([REDACTED] [REDACTED]), as part of my doctorate degree.

What is the research about?

The research will focus on helping the pupils in Year Five get along better together by being kinder and nicer with each other. It will trial and evaluate a group intervention known as 'The Good Behaviour Game' which aims to teach and increase positive social interactions among a group of children. 'The Good Behaviour Game' is an evidence-based group intervention which has been successfully trialled with many school children around the world to help support the development of a variety of positive behaviours.

The research will also evaluate the effects of the group intervention on a few focus pupils, to see whether, from their own perspective, the intervention has changed the classroom climate, helping individual pupils become kinder and more socially positive with their peers. It will investigate whether focus pupils think that they enjoy more positive social interactions as a result of being part of the group intervention, and will also investigate how these children perceive themselves as sociable and friendly towards their peers.

What will happen during the research?

The research is scheduled to take place during the Spring and Summer term. During this time 'The Good Behaviour Game' intervention will be run in the classroom, as part of the [REDACTED] behaviour management strategy, and its impact will be evaluated.

The intervention involves telling the whole class to work together as a team to try to win 'The Good Behaviour Game'. The intervention, or 'game', will be played during selected lesson periods. During the time that the intervention, or 'game', is played, the whole class receives a point every time any person in the group shows positive social interaction behaviour. Such behaviours may be something like smiling at a peer, making a kind or thoughtful comment, or asking politely to borrow a piece of equipment. At the end of the game if the class have got more than a pre-specified number of points, they have 'won' the game, and everyone in the class receives a small reward.

Evaluation of the success of the intervention will involve observing the whole class to see if rates of positive social interaction increase as a result of the intervention. Observations will be made before the intervention is put in place, whilst the intervention is in place and after it has finished.

The research will also investigate the effects on the intervention on focus pupils within the group. If you consented for your child to be one of the focus children the following would happen:

- (1) Your child would be asked if s/he were willing to be one of the focus children, and offered a detailed explanation of what this would entail, along with opportunities to ask any questions before deciding.
- (2) Your child would be observed during the running of 'The Good Behaviour Game' intervention to see what effect it has on her/his positive social interactions with others. This would be done discreetly so the child would not be singled out to the rest of the class. The child would be informed of their involvement after the research had finished.
- (3) Your child would be interviewed before and after the intervention. This interview would explore her / his perceptions of classroom life, and her / his self-concepts about her / his social interactions and as her / himself as a friend.

All this information would be treated confidentially, so that no-one would know which of the participating children said what! The children would not be named in an write-up or other communications about the research.

What will happen to the data collected during the research?

As noted above, the data collected during the research will be kept confidential. This means that individual children will not be identifiable, so their identity will remain private. The name and location of the school will also be kept confidential.

Confidentiality is ensured by keeping any paper records safely in a locked cabinet, and any electronic data on password-protected computer systems.

The only people who will have access to the data are my university tutor and the class teacher and senior leadership team at [REDACTED] Primary School ([REDACTED] and [REDACTED]) and me. Again, no pupil would be identifiable to these colleagues.

What are the risks and benefits of my child taking part in the research?

There are no expected risks in taking part in the research.

The main benefit of taking part is that, if successful, the intervention will help all the children develop more positive social interactions with each other. This could potentially make the classroom and learning experience more positive for pupils by improving the overall social climate, through increasing the amount of positive social interaction that occurs during lessons. Pupils will be able to interact positively with each other and engage socially with happily with all their class-mates.

For the focus children, the structured interviews will help build their confidence and give them the opportunity to share their experiences and views with safety. This is recognised as a benefit to children by current national and local policy which emphasises the importance of consulting with children and providing opportunities for children to contribute to decisions made about them.

What should I do if I want my child to take part in the research?

If you are willing for your child to be a focus child, to be observed and interviewed, please fill in the consent form below and return to school.

Can I withdraw my child from the group research or my child's data from the research at a later date?

'The Good Behaviour Game' is a whole class intervention which will be implemented as part of [REDACTED] Primary School behaviour management policy. It will not be possible to withdraw your child individually, as 'the game' will take place with everyone during lessons.

As data collected relate to the whole group, it is not possible to identify individual children to remove their data.

You may, however, withdraw your child from being individually observed.

Can I be informed of the results of the research?

Yes, you will be informed of the results of the research. Upon completion of the research, a summary report of the results and evaluation of the intervention will be made available to interested parents.

The results of the research will also be communicated with the Year Five class in a child-friendly presentation.

Who should I contact if I have any further questions?

If you have any further questions please feel free to contact me via email at [REDACTED] or my Research Supervisor at the University of Birmingham, Sue Morris via email at [REDACTED] or 'phone: [REDACTED]

Thank you for your time in reading this information letter.

Yours sincerely,

Alexandra Sewell

Appendix Two: Parental Consent form:

Please tick each of the following statements to signal your agreement.

Do not tick those statements with which you do not agree!

1. I have read the participant information letter and have understood the research: [☐]
2. Any questions have been sufficiently answered: [☐]
3. I agree to my child taking part as one of the 'focus children' in the research study: [☐]
4. I understand that (where a parent signals agreement for their child to take part at (3) above), my child will be invited to participate. S/he would only participate if s/he also agrees and would like to take part: [☐]
5. I understand that, should I or my child change our mind about her / his participation , either of us can withdraw our consent, and request that data collected for her / him are not used in the analysis or write-up of the study: [☐]
6. I understand that once data have been analysed, it would not be feasible to withdraw my child's data, since responses from all of the focus children will have been integrated, making it problematic to identify and withdraw information provided by any particular child: [☐]

Child's Name:

Parent's name (print):

Parent's Signature:

Date:

Please return the completed form to *Primary School By*

Appendix Three: Child information sheet and consent form

Dear Pupil,

My name is Alexander Sewell. I am a Trainee Educational Psychologist studying at the University of Birmingham. I am writing to you because I will be conducting a piece of research in your classroom and want to tell you about it and invite you to be involved.

As your teacher Mr [REDACTED] has already told you, Year Five will be playing 'The Good Behaviour Game'. This game will be played by all children in your class and aims to help the class get on better together.

A few children in the class will be selected to be interviewed about their experiences of 'The Good Behaviour Game'. You have been selected as one of these children and I would like to interview you to find out about how you have found taking part in 'The Good Behaviour Game'. I would also like to find out about your thoughts about yourself as a friend to others.

Taking part in the interview will involve meeting with me twice. Once before 'The Good Behaviour Game' begins in class and then a second time next term. If you would like to be interviewed please sign the consent form below. If you have any questions you can ask me now or your teacher later.

You do not need to take part in the interviews if you don't want to. If you did agree, but then alter changed you mind, this would be fine! I will make regular checks with you!

If you do take part, the things you say will be confidential; this means that no-one would know which of the children who took part, said what!

Best wishes,

Alexandra Sewell

Pupil Consent Form:

I am willing to be interviewed for Alexandra's research: []

I don't really want to be interviewed: []

If I agree to be interviewed, I can change my mind at a later stage, if I want to; Alexander will make regular checks about whether I've changed my mind and would rather not take part, after all: []

No-one will know which information comes from me! Any information will be confidential. Alexandra has explained what this means: []

Child's name:

Child's signature:

Researchers name:

Researchers Signature:

Date:

Appendix Four: Interview Schedule for eliciting constructs of focus children

Step one: The pupil is welcomed to the interview session. The process (below) and rationale is explained. The pupil is given the opportunity to have any questions answered.

Step two: Constructs regarding social interaction and friendships are elicited.

The pupil is asked to name three peers from their class whom they admire / like and three whom they don't admire / don't like so much.

The names of the peers are written on cards, labelled A - F. Three cards are presented together at the same time. The pupil is asked in what way are two of these alike and one different? (This process is described as 'triadic elicitation', and is easily managed by most children within the target age range). The responses of the pupil are recorded as a bipolar construct (e.g. friendly – always angry).

Step three: Constructs are entered in the repertory grid. The grid is then filled in by the pupil, with the support of the interviewer. The pupil firstly rates each of the six elements (A-F) along each construct, and also positions her / himself on each construct, to indicate her / his own evaluation of her / his position on a five point Likert scale.

Step four: The completed grid is discussed between the pupil and the interviewer.

	Pupil's Name					
Preferred pole of construct	1	2	3	4	5	Non-Preferred pole of construct
Construct 1						
Construct 2						
Construct 3						
Construct 4						
Construct 5						

Step five: (post-interview), factor analyses are undertaken on the pre-and post-intervention grids

REFERENCES:

Kelly, G. A. (2002) *The Psychology of Personal Constructs: Volume One: Theory and Personality*. London: Routledge

Kelly, G.A. (2003) *The Psychology of Personal Constructs: Volume Two Clinical Diagnosis and Psychotherapy*. London: Routledge

Appendix 10: Content analysis using the Feixas, Geldschläger and Neimeyer (2002) construct classification system conducted by rater one

Moral	Emotional	Relational	Personal	Intellectual/ Operational	Values / Interests
<i>good - bad</i>	<i>visceral - rational</i>	<i>extroverted - introverted</i>	<i>stable - weak</i>	<i>capable - incapable</i>	<i>ideological, political, religious, social, moral and gender values</i>
	(48) Gets upset for a good reason / gets upset for a bad reason	(2) Interacts and makes friends / lonely (7) Joker and has fun / doesn't have fun and lonely (9) likes conversations and starts a chat /doesn't say anything (12) Welcoming / doesn't talk to people (20) Someone who			

		<p>gets along with people / someone who liked to be alone</p> <p>(24) Has lots of friends / doesn't have lots of friends</p> <p>(27) Plays with everyone / lonely</p> <p>(31) Really friendly / unfriendly</p> <p>(36) Friends with everyone / unfriendly and unconfident</p> <p>(37) loved / quiet</p> <p>(39) outgoing / keep to themselves</p> <p>(40) bright person /</p>			
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		<p>keep to themselves</p> <p>(42) outgoing / quiet</p> <p>(43) confident / shy and needs comforting</p>			
<i>altruist - egoist</i>	<i>warm - cold</i>	<i>pleasant - unpleasant</i>	<i>active - passive</i>	<i>intelligent - dull</i>	<i>values and specific interests</i>
(23) Shares things with you / Says no if you ask them to share	(10) Talks about problems / someone who gets wound up	<p>(1) kind and loving with a good attitude / naughty</p> <p>(4) Being friendly / disgusting behaviour</p> <p>(6) Kindness / disgusting behaviour</p> <p>(8) having a good close friend / knowing someone</p>	(30) Excited / a bit sarcastic		<p>(18) Likes sport / doesn't like sport</p> <p>(21) Loves their learning / doesn't like to learn</p> <p>(29) Reads a book / Plays video games</p> <p>(28) Likes to make up games / is not very well co-ordinated</p>

		<p>who is a bully</p> <p>(11) Makes people laugh / annoys people</p> <p>(13) Nice / nasty</p> <p>(16) Nice / mean</p> <p>(22) Kind / says nasty things</p> <p>(25) Funny / boring</p> <p>(32) Helpful / unhelpful</p> <p>(34) Doesn't hurt people / hurts people</p> <p>(41) Kind / sassy</p>			
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<i>humble - proud</i>	<i>optimist - pessimist</i>	<i>direct - devious</i>	<i>hard working - lazy</i>	<i>cultured - uncultured</i>	
			(38) Energetic / lazy		
<i>respectful - judgemental</i>	<i>balanced - unbalanced</i>	<i>tolerant - authoritarian</i>	<i>organised - disorganised</i>	<i>focused - unfocused</i>	
	(5) Calm and self-disciplined / have exciting moments (44) Calm and down / hyperactive	(33) Doesn't leave people out / Leaves people out			
<i>faithful - unfaithful</i>	<i>specific emotions</i>	<i>conformist - rebel</i>	<i>decisive - indecisive</i>	<i>creative - not creative</i>	
	(14) Ok / sad (47) Cheerful – moody				
<i>sincere - insincere</i>	<i>sexuality</i>	<i>dependent - independent</i>	<i>flexible - rigid</i>	<i>specific abilities</i>	
<i>just - unjust</i>		<i>peaceable - aggressive</i>	<i>thoughtful - shallow</i>		
<i>responsible - irresponsible</i>		<i>sympathetic - unsympathetic</i>	<i>mature - immature</i>		

		<p>(3) Sticks up for friends</p> <p>(26) Helpful / careless</p> <p>(35) Understands / doesn't understand</p> <p>(46) Cheers others on / thinks they're the best.</p>			
		<i>trusting - suspicious</i>	<i>self-acceptance - self- criticism</i>		
		<i>Others:</i>	<i>Others:</i>		
		<p>(15) Helpful / unhelpful</p>	<p>(17) Has a good sense of humour / doesn't have a good sense of humour</p> <p>(19) Have a good laugh / someone who doesn't have a good laugh</p>		

Appendix 11: Content analysis using the Feixas, Geldschläge and Neimeyer (2002) construct classification system conducted by rater two

Moral	Emotional	Relational	Personal	Intellectual/ Operational	Values / Interests
<i>good - bad</i>	<i>visceral - rational</i>	<i>extroverted - introverted</i>	<i>stable - weak</i>	<i>capable - incapable</i>	<i>ideological, political, religious, social, moral and gender values</i>
<p>(48) Gets upset for a good reason / gets upset for a bad reason</p> <p>(33) Doesn't leave people out / Leaves people out</p>	<p>(43) confident / shy and needs comforting</p>	<p>(2) Interacts and makes friends / lonely</p> <p>(9) likes conversations and starts a chat /doesn't say anything</p> <p>(12) Welcoming / doesn't talk to people</p> <p>(20) Someone who gets along with people / someone who liked to be alone</p>			

		<p>(24) Has lots of friends / doesn't have lots of friends</p> <p>(27) Plays with everyone / lonely</p> <p>(31) Really friendly / unfriendly</p> <p>(36) Friends with everyone / unfriendly and unconfident</p> <p>(37) loved / quiet</p> <p>(39) outgoing / keep to themselves</p> <p>(40) bright person / keep to themselves</p> <p>(42) outgoing /</p>			
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		quiet			
<i>altruist - egoist</i>	<i>warm - cold</i>	<i>pleasant - unpleasant</i>	<i>active - passive</i>	<i>intelligent - dull</i>	<i>values and specific interests</i>
(23) Shares things with you / Says no if you ask them to share	(10) Talks about problems / someone who gets wound up	<p>(1) kind and loving with a good attitude / naughty</p> <p>(4) Being friendly / disgusting behaviour</p> <p>(6) Kindness / disgusting behaviour</p> <p>(8) having a good close friend / knowing someone who is a bully</p> <p>(11) Makes people laugh / annoys people</p>		<p>(7) Joker and has fun / doesn't have fun and lonely</p>	<p>(18) Likes sport / doesn't like sport</p> <p>(21) Loves their learning / doesn't like to learn</p> <p>(29) Reads a book / Plays video games</p> <p>(28) Likes to make up games / is not very well co-ordinated</p>

		<p>(13) Nice / nasty</p> <p>(16) Nice / mean</p> <p>(22) Kind / says nasty things</p> <p>(25) Funny / boring</p> <p>(32) Helpful / unhelpful</p> <p>(34) Doesn't hurt people / hurts people</p> <p>(41) Kind / sassy</p> <p>(30) Excited / a bit sarcastic</p>			
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<i>humble - proud</i>	<i>optimist - pessimist</i>	<i>direct - devious</i>	<i>hard working - lazy</i>	<i>cultured - uncultured</i>	
			(38) Energetic / lazy		
<i>respectful - judgemental</i>	<i>balanced - unbalanced</i>	<i>tolerant - authoritarian</i>	<i>organised - disorganised</i>	<i>focused - unfocused</i>	
	(5) Calm and self-disciplined / have exciting moments (44) Calm and down / hyperactive				
<i>faithful - unfaithful</i>	<i>specific emotions</i>	<i>conformist - rebel</i>	<i>decisive - indecisive</i>	<i>creative - not creative</i>	
	(14) Ok / sad (47) Cheerful – moody				
<i>sincere - insincere</i>	<i>sexuality</i>	<i>dependent - independent</i>	<i>flexible - rigid</i>	<i>specific abilities</i>	
<i>just - unjust</i>		<i>peaceable - aggressive</i>	<i>thoughtful - shallow</i>		
<i>responsible - irresponsible</i>		<i>sympathetic - unsympathetic</i>	<i>mature - immature</i>		
		(3) Sticks up for			

		<p>friends</p> <p>(26) Helpful / careless</p> <p>(35) Understands / doesn't understand</p> <p>(46) Cheers others on / thinks they're the best.</p>			
		<i>trusting - suspicious</i>	<i>self-acceptance - self- criticism</i>		
		<i>Others:</i>	<i>Others:</i>		
		<p>(15) Helpful / unhelpful</p>	<p>(17) Has a good sense of humour / doesn't have a good sense of humour</p> <p>(19) Have a good laugh / someone who doesn't have a good laugh</p>		

Appendix 12: List of participant's construct

- (1) kind and loving with a good attitude / naughty
- (2) Interacts and makes friends / lonely
- (3) Sticks up for friends / doesn't stick up for friends
- (4) Being friendly / disgusting behaviour
- (5) Calm and self-disciplined / have exciting moments
- (6) Kindness / disgusting behaviour
- (7) Joker and has fun / doesn't have fun and lonely
- (8) having a good close friend / knowing someone who is a bully
- (9) likes conversations and starts a chat / doesn't say anything
- (10) Talks about problems / someone who gets wound up
- (11) Makes people laugh / annoys people
- (12) Welcoming / doesn't talk to people
- (13) Nice / nasty
- (14) Ok / sad
- (15) Helpful / unhelpful
- (16) Nice / mean
- (17) Has a good sense of humour / doesn't have a good sense of humour
- (18) Likes sport / doesn't like sport
- (19) Have a good laugh / someone who doesn't have a good laugh
- (20) Someone who gets along with people / someone who liked to be alone
- (21) Loves their learning / doesn't like to learn
- (22) Kind / says nasty things
- (23) Shares things with you / Says no if you ask them to share
- (24) Has lots of friends / doesn't have lots of friends
- (25) Funny / boring
- (26) Helpful / careless
- (27) Plays with everyone / lonely
- (28) Likes to make up games / is not very well co-ordinated
- (29) Reads a book / Plays video games

- (30) Excited / a bit sarcastic
- (31) Really friendly / unfriendly
- (32) Helpful / unhelpful
- (33) Doesn't leave people out / Leaves people out
- (34) Doesn't hurt people / hurts people
- (35) Understands / doesn't understand
- (36) Friends with everyone / unfriendly and unconfident
- (37) loved / quiet
- (38) Energetic / lazy
- (39) outgoing / keep to themselves
- (40) bright person / keep to themselves
- (41) Kind / sassy
- (42) outgoing / quiet
- (43) confident / shy and needs comforting
- (44) Calm and down / hyperactive

Appendix 13: Output for Euclidian distances analysis for all eight participants

Bivariate Statistics for Participant One

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I would not like to be	Best Friend	Mum	Dad	Brother
How I am now	0.00							
How I was	3.74	0.00						
How I would like to be	5.48	6.48	0.00					
How I would not like to be	9.49	6.78	11.22	0.00				
Best Friend	5.57	4.36	4.12	8.89	0.00			
Mum	5.83	7.07	2.83	12.41	4.12	0.00		
Dad	4.00	5.10	4.00	9.90	5.57	5.66	0.00	
Brother	2.24	4.36	6.56	9.22	6.93	7.42	3.87	0.00

Bivariate Statistics for Participant two

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I would not like to be	Best friend	Grandad	Brother 1	Brother 2	Brother 3	Friend
How I am now	0.00									
How I was	2.65	0.00								
How I would like to be	3.61	4.90	0.00							
How I would not like to be	10.58	8.54	12.12	0.00						
Best friend	5.20	6.00	3.74	11.27	0.00					
Grandad	5.83	6.56	3.32	12.49	3.87	0.00				
Brother 1	5.00	5.10	2.83	10.44	2.83	3.00	0.00			
Brother 2	4.12	5.10	3.16	10.72	4.00	5.00	3.46	0.00		
Brother 3	5.83	6.40	4.36	10.86	2.65	3.16	3.00	3.87	0.00	
Friend	3.16	3.74	3.16	8.94	4.58	5.57	3.16	3.16	5.39	

Bivariate Statistics for Participant Three

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I would not like to be	Best friend	Mum
How I am now	0.00					
How I was	3.74	0.00				
How I would like to be	5.92	8.66	0.00			
How I would not like to be	6.86	3.87	12.00	0.00		
Best friend	3.74	6.00	3.00	9.64	0.00	
Mum	5.92	7.94	2.00	11.14	3.00	0.00

Bivariate Statistics for Participant four

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I wouldn't like to be	Best friend	Middle brother	Younger brother	Sister	Mum	
How I am now	0.00									
How I was	3.16	0.00								
How I would like to be	3.16	4.24	0.00							
How I wouldn't like to be	12.17	10.86	14.42	0.00						
Best friend	2.83	2.00	3.46	11.58	0.00					
Middle brother	3.00	1.00	4.12	11.27	2.65	0.00				
Younger brother	3.61	1.73	5.20	10.72	3.00	2.00	0.00			
Sister	3.46	2.00	4.90	11.14	3.16	1.73	1.73	0.00		
Mum	3.32	2.24	4.36	12.29	3.00	2.00	2.00	1.73	0.00	
Dad	1.41	3.74	2.45	12.88	3.16	3.61	4.58	4.47	4.12	

Bivariate Statistics for Participant five

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I wouldn't like to be
How I am now	0.00			
How I was	6.08	0.00		
How I would like to be	4.24	6.24	0.00	
How I wouldn't like to be	10.39	10.82	11.58	0.00

Bivariate Statistics for Participant six

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I wouldn't like to be	Best friend	Mum	Dad	Big brother	Little B
How I am now	0.00								
How I was	3.00	0.00							
How I would like to be	3.00	4.69	0.00						
How I wouldn't like to be	11.96	10.95	13.93	0.00					
Best friend	3.16	2.65	4.80	11.62	0.00				
Mum	3.16	4.58	1.00	14.32	4.69	0.00			
Dad	2.65	4.00	1.41	13.93	3.87	1.00	0.00		
Big brother	3.46	3.32	2.65	12.85	4.47	2.45	2.65	0.00	
Little Brother	2.00	1.73	3.87	11.27	2.00	4.00	3.32	3.46	0.00

Bivariate Statistics for Participant Seven

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I wouldn't like to be	Best friend (1)	Mum	Dad	Brother one	Brother two	Best friend (2)
How I am now	0.00									
How I was	2.24	0.00								
How I would like to be	3.16	4.12	0.00							
How I wouldn't like to be	8.72	7.81	10.95	0.00						
Best friend (1)	3.32	4.69	2.65	9.75	0.00					
Mum	3.32	3.74	1.73	9.85	2.45	0.00				
Dad	2.65	3.46	2.65	10.25	3.46	2.83	0.00			
Brother one	3.32	3.16	3.32	8.66	3.16	2.00	2.83	0.00		
Brother two	4.80	4.24	7.00	3.87	5.92	6.40	6.78	5.92	0.00	

Best friend (2) 4.24 5.00 4.90 8.94 3.32 4.36 4.36 3.32 6.71 0.00

Bivariate Statistics for participant eight

Element Euclidean Distances

	How I am now	How I was	How I would like to be	How I wouldn't like to be	Best friend	Little sister	Mum	Dad	Cousin
How I am now	0.00								
How I was	4.47	0.00							
How I would like to be	8.06	5.92	0.00						
How I wouldn't like to be	4.58	6.40	10.86	0.00					
Best friend	4.00	4.90	5.00	7.68	0.00				
Little sister	6.00	3.16	6.56	8.66	6.32	0.00			
Mum	7.81	6.24	4.00	11.14	4.58	6.56	0.00		
Dad	5.29	4.24	3.87	8.19	2.45	6.16	4.12	0.00	
Cousin	5.57	1.73	5.83	7.07	5.92	3.32	7.07	5.00	0.00

Appendix 14: Example of Personal Construct Psychology repertory grids

Participant Eight ELEMENTS											
PREFERRED POLE	How I am now	How I was	How I wold like to be	How I would not like to be	Best friend	Little Sister	Mum	Dad	Cousin		NON PREFERRED POLE
Loved	4	3	2	6	4	1	4	4	2		Quiet
Energetic	4	4	4	7	3	3	1	3	5		Lazy
Outgoing	5	2	1	5	4	2	2	2	1		Keep to themselves
Bright person	4	4	2	6	3	2	1	4	4		Keep to themselves
Kind	5	6	1	7	2	7	2	4	6		Sassy
Outgoing	6	3	1	6	4	3	1	3	3		Quiet

Participant seven ELEMENTS											
PREFERRED POLE	How I am now	How I was	How I would like to be	How I would not like to be	Best friend (1)	Mum	Dad	Brother one	Bother two	Best friend (2)	NON PREFERRED POLE
Kind, loving with a good attitude	3	3	1	6	2	1	3	2	5	3	Naughty
Interacts / makes friends	1	1	1	5	3	2	1	3	2	5	Lonely
Sticks up for friends	2	4	2	5	1	3	3	4	/	2	Being offensive and causing verbal damage
Being friendly	3	4	2	7	2	2	1	2	6	2	Disgusting behaviour
Calm / self-disciplined	4	4	2	5	2	2	3	3	/	4	Have exciting moments
Kindness	2	2	1	7	2	1	1	2	5	1	Disgusting behaviour