

The CLASS Project: A New Zealand Pilot

A thesis

submitted in partial fulfilment

of the requirements

for the degree of

Master of Education

in the University of Canterbury

by

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University of Canterbury

February 2011

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Acknowledgements

This project would not have been possible without the support and involvement of a number of people.

I am grateful to my research supervisor Dr John Church for sharing his passion for, and extensive knowledge of behaviour and for teaching me to write concisely. Thank-you to my co-supervisor Gaye Tyler-Merrick who provided critical feedback, posed insightful questions and was always positive, no matter how steep the hill appeared to be.

Julie Jennings was pivotal to the completion of this project. She was a constant source of good humour, enthusiasm and dedication. To the parents, students and teachers who willingly embraced the opportunity to be involved in this project. I thank you for allowing me the privilege of working with you and your families. I am also extremely thankful to The Ministry of Education and the Christchurch South Intermediate School community for allowing me to have the year to fully focus on this project.

To my good friend Kirsten Petrie who was always interested and available to assist with ICT matters. Her attention to detail and problem solving were extremely valuable. Bridget gave me the inspiration to begin further study and provided a model for how it should be done. I am also indebted to my mum and dad for instilling in me a passion for learning and for encouraging me to extend myself in directions beyond the classroom.

And finally to Amira. Thank you.

Abstract

The aim of this project was to evaluate the Contingencies for Learning Academic and Social Skills (CLASS) programme in four New Zealand classrooms. Four students with antisocial behaviour were nominated by their teachers to take part in an intervention that included differential attention, increased praise and rewards. Direct observations were made of compliance to teacher instructions, on-task behaviour, teacher praise and teacher instructions. Results indicated that on-task behaviour and compliance to teacher instructions increased during the intervention phase and was maintained during follow-up observations. Teachers were also able to increase their rate of praise per hour during the intervention phase and their praise rate remained greater at follow-up than during the baseline phase. In the absence of pre-service and in-service behaviour management training for teachers, the CLASS programme proved to be a useful tool for classroom teachers who work with children with high rates of antisocial behaviour.

Chapter 1: Introduction

Contemporary behaviour management practice is moving away from punitive and retributive methods to more proactive and restorative means of discipline. This often involves the modelling of appropriate replacement behaviours and the use of positive reinforcement and praise in the management of young people in schools. There is evidence to suggest that school suspensions increase subsequent antisocial behaviour (Hemphill, Rey, Herrenkohl, McMorris, & Catalano, 2006) and that the constant use of punitive measures creates a coercive cycle that increases the likelihood of inappropriate behaviour occurring on future occasions (Shores, Gunter, & Jack, 1993). In addition, there is concern that students who are rejected from mainstream schooling seek the company of others in a similar situation. These students have “a lack of concern for others, low academic achievement, and a lack of respect for authority” (Church, 2003, p. 26). Continuing research is needed to identify early interventions, which will be effective in preventing the development of antisocial behaviour in children and youth.

Across health and education, a variety of terms are used to label children who engage in elevated levels of disruptive and antisocial behaviour. In education, the term “children with behaviour difficulties” is often used, while the term “conduct disorder” is more common in the medical field (Fergusson, 2009). Other terms such as oppositional defiant disorder (ODD), attention deficit hyperactivity disorder (ADHD), emotionally disturbed and socially maladjusted are also used to refer to children who frequently engage in antisocial behaviours (Langley, 2009). For the purpose of this study the term children with antisocial behaviour is used.

Antisocial development occurs along two distinct trajectories: early and late onset. Children who present with elevated rates of antisocial behaviour before school entry are commonly referred to as having early onset behaviour difficulties. Children who develop

challenging behaviour in adolescence are commonly referred to as having late onset behaviour difficulties (Moffitt, 1993). This project is concerned with the education of children with early onset behaviour difficulties.

The current New Zealand prevalence of antisocial behaviour amongst children and youth is unknown. In 1996 the number of antisocial children in New Zealand schools was between 4.5% and 5.0% and the same survey found that the proportion of antisocial students in lower decile schools was between three and six times greater than the percentage of antisocial students in higher decile schools (Church, 1996). Langley (2009) has estimated that 40,000 school age children engage in elevated rates of antisocial behaviour. Of equal concern is the fact that New Zealand school principals identify disruptive behaviour as the most common in-school obstacle to learning (Galloway, 2007).

New Zealand teachers currently face a number of challenges when working with disruptive children in schools. In 2007, a national survey conducted by the New Zealand Educational Institute (NZEI) found that more than 50% of teachers had experienced verbal confrontations with students (New Zealand Educational Institute, 2008). Teaching is a stressful occupation (Jepson & Forrest, 2006) and managing students can be one of the biggest challenges of the profession. "Teacher training does not equip teachers with the skills necessary to cope with disruptive students" (Post Primary Teachers Association, 2007, p. 20). In a study of job satisfaction and stress in New Zealand primary schools Prochnow, Kearney and Carroll-Lind (2000) found that working with disruptive students and having a number of disruptive students in a class negatively affected teachers' job satisfaction and stress. In addition disruptive behaviour from students is considered a barrier to entering teaching for young people (Hall & Langton, 2006) and a serious issue for newly qualified teachers deciding whether to stay in the profession (Dewar, Kennedy, Staig, & Cox, 2003).

Since the abolition of corporal punishment in New Zealand schools in 1990 (Wood, Hassall, Hook, & Ludbrook, 2008) a variety of other strategies have been used in an attempt to manage antisocial behaviour in the classroom. These include writing lines, detention, public humiliation (being reprimanded), time out, stand-downs and exclusions. For punishment to be an effective strategy, the punishment needs to be specific to the individual and to be carried out immediately the prohibited behaviour occurs (Alberto & Troutman, 2006). However, teachers who over attend to disruptive students are at risk of inadvertently reinforcing these students' inappropriate behaviour by giving in to their demands for social and adult attention. This can increase the likelihood of them being more disruptive. Perhaps the greatest weakness of punishment is that "punishment is one of the main drivers of antisocial development" (Church, 2003). Nor can punishment teach a child how to behave appropriately.

Whilst some mild consequences for inappropriate behaviour seem widely accepted, the excessive use of punishment has been criticised as unethical and as ineffective in enhancing learning (Stipek, 1998). Children who want to avoid punishment have been found to rush their work to complete it on time, regardless of the quality or even whether it is their own work. Wheeler and Richey (2010) argue that the wellbeing of those who are threatened with punishment is jeopardised and that there is little effectiveness in changing behaviour long term. Punishment can lead to a lack of understanding and learning and, in the case of students with antisocial behaviour, produce even greater gaps in their development both academically and socially.

Patterns of learning and behaviour are clearly established during the primary years and should be positive and rewarding (Patterson, 1996). He suggests that throughout primary school, normally developing peers learn how to co-operate with others and receive and manage feedback, while antisocial children miss out on many of these essential

experiences. This is due to the fact that peers play an important role in socialising each other. Children who already display antisocial behaviour by the time they reach school “are both the instigators and targets of a higher frequency of aversive responses in the peer group than are non aggressive children” (Snyder, 2002, p. 106). This has significant ramifications for these children’s future outcomes and can directly and indirectly affect normal developing children.

Since 1999 New Zealand governments have mandated inclusion. As a result, children who engage in disruptive and antisocial behaviour are educated in mainstream classes and this affects the learning opportunities of other children in the class. Macfarlane (2007) argues that this is one of the most challenging consequences of inclusion. Hayden (1997) reiterates this and says that schools find students with severe emotional and behavioural needs the most challenging to include. Teachers must be trained to work effectively with students with antisocial behaviour as antisocial behaviour manifests itself in varying degrees of “intensity, severity, frequency and duration” (MacFarlane, 2007, p. 18).

In March 2009 the Ministry of Education (MOE) held Taumata Whanonga – a behaviour summit in Wellington. The aim of this summit was to address the way in which challenging behaviour was approached and dealt with in schools and early childhood centres in New Zealand. Following the summit, a Positive Behaviour for Learning Action Plan (PB4L) was produced (Ministry of Education, 2009a). This Action Plan “provides proactive support for parents, teachers and schools that benefits everyone” (Ministry of Education, 2009a, p. 1) and marks a shift in thinking in the management of antisocial behaviour. The Action Plan is based on a dual approach to both behaviour issues and learning difficulties and is based on sound research (Ministry of Education, 2009a). It incorporates five themes that promote both positive behaviour and learning

simultaneously. These include the use of early interventions and interventions that have worked across all sectors including support, evaluation and continual improvement of these interventions; ensuring Maori needs are met; providing teacher training and professional development; and greater collaboration between providers for students with challenging behaviour (Ministry of Education, 2009a).

Research in Antisocial Development

There has been extensive research into how antisocial behaviour develops, the learning processes that are involved and the contexts in which antisocial behaviour occurs (Maughan & Rutter, 1998; Moffitt, 1993; Patterson, 1996). The research evidence suggests that children who develop antisocial behaviour begin to deviate from the normal developmental pathway as early as 3 to 4 years of age (Lahey, Waldman, & McBurnett, 1999; Loeber, 1990; Patterson, 1996). Researchers at the Oregon Social Learning Centre (OSLC) have found that it is a breakdown in the socialisation process in a child's first four years that contributes to the development of antisocial behaviour. In its extensive research spanning 40 years, the OSLC researchers identified a coercion-training model in which parents and children train each other to engage in antisocial behaviour (Patterson, 1982). The process can also occur in the classroom between a teacher and student. For example, a teacher might be trying to get a student to comply with a simple request. The student ignores the request and becomes verbally aggressive. The teacher then stops asking the student to comply and the student stops being verbally aggressive. The teacher has fallen into the negative reinforcement trap (Scarlett, Ponte, & Singh, 2009). This is because in this episode, the student's verbal aggression has been negatively reinforced (by removal of the teacher's request) and, as a result, will be more likely to be verbally aggressive when given a future request. The teacher is also negatively reinforced (when she removed her request) because the student ceased his or her verbally aggressive behaviour. This

increases the likelihood that the teacher will back down the next time the student is verbally aggressive.

Acquisition of age appropriate levels of compliance with adult instructions is a key measure of social and antisocial development (Church, 2003). Most children begin to acquire the ability to comply with parental instructions in the second year (Martin, 1981). A failure to acquire these skills indicates a poor ability on the part of the parents to teach these skills and leads to further manipulative interactions between the child and all other members of the family (Patterson, Reid, & Dishion, 1992). Further studies have found greater levels of aggression in young children whose families lack the ability to teach age appropriate social skills. In a summary of family observation studies, Snyder and Stoolmiller (2002) found that antisocial children are more likely to engage in unprovoked aggression than their normally developing peers. Reid (1993) has also indicated that conflicts between parents and children occur more often in the households of antisocial children. In addition prosocial behaviours have been found to occur less frequently in families with children who are behaving antisocially. For example the parents of antisocial children often accept inappropriate child behaviour, model antisocial behaviour themselves, fail to set limits and fail to expect behaviour to comply with these limits (Patterson, 1982).

In addition to the normal challenges faced by antisocial youngsters in their early years, there are many risk factors that have been identified that can increase the likelihood of antisocial development. These risk factors include parental stress, low levels of parental monitoring and supervision, personal problems of parents (drug and alcohol issues) and a lack of child rearing skills (Henggeler & Borduin, 1990; Stouthamer-Loeber & Loeber, 1986). These factors are consistent with those identified by Fergusson (1994). In his longitudinal study he found that of 15-year olds with multiple problem behaviours had

been raised with family dysfunction, loose or non-existent rules at home and increased levels of negative reinforcement and punishment which had existed from birth.

Research into Effective School-Based Interventions for Children with Persistent Behaviour Problems

Much research has been undertaken into treatment programmes for children who are developing along an antisocial trajectory (Church, 2003). These include parenting skills training programmes such as Triple P Positive Parenting Programmes (Sanders, 2010) and Parent Management Training Oregon Model (PMTO) (Baker, 2010), school interventions and combinations of home and school interventions. If the parents and teachers of children with antisocial behaviour receive help before the child reaches 8 years of age, there is a 65% - 70% chance that antisocial development can be halted (Church, 2003).

Research into how to manage young children in school settings who display antisocial behaviour is extensive (Brestan & Eyberg, 1998; Eyberg, Nelson, & Boggs, 2008; Reddy, Newman, de Thomas, & Chun, 2009). These findings report that contingency management strategies such as differential attention, differential attention with time out, token reinforcement and token reinforcement plus time out procedures are the most effective.

It has been suggested that

low compliance levels of young antisocial children can be brought into the normal range, and elevated rates of antisocial behaviour reduced to appropriate levels by interventions which include a) behaviour monitoring b) high rates of both social and extrinsic reinforcement for appropriate responses, c) a mild consistently applied penalty (such as time out or token loss) for defiance, and d) the intensive incidental teaching of missing social skills (Church, 2003, p. 104).

School Wide Positive Behaviour Support (SWPBS) (Sugai, Horner, & Lewis, 2010) is an evidence-based approach to behaviour management in schools and there is growing interest amongst New Zealand educators in its use in this country (Ministry of Education, 2009b). The SWPBS system is implemented throughout the entire school and its essential features include: clearly defined behavioural expectations; strategies to teach expected behaviour; strategies to encourage and practice appropriate behaviour; and consistency within and across classrooms and public areas (Sugai, et al., 2010). Lewis, Powers, Kelk and Newcomer (2002) found that SWPBS was effective for social skills training across students both with and without disabilities. Furthermore, SWPBS can be implemented at a variety of year levels, reduce disciplinary referrals and increase prosocial behaviour (George, White, & Schlaffer, 2007; Turnbull, et al., 2002). In a study of two American elementary schools catering for high numbers of disadvantaged students, Nelson (1996) found that target students (those who engaged in disruptive behaviour), experienced positive effects in academic performance and social adjustment following the implementation of SWPBS. Teachers also recorded positive outcomes as a result of SWPBS and felt more collaborative and able to work with students who displayed disruptive behaviour (Nelson, 1996).

In order to replace antisocial skills with prosocial skills, functional assessment of the child's use of these skills needs to be carried out. Functional analysis requires direct observation of a child's behaviour to identify the events which happened prior to and directly following the behaviour of interest (Alberto & Troutman, 2006). This information can then be used to analyse patterns of behaviour to discover the function of the antisocial behaviour. These functions include gaining attention (from peers and/or adults); gaining something that the child wants, escape from an undesired task or attention, or escape from

sensory stimulation (Alberto & Troutman, 2006). There is increasing evidence that shows the usefulness of functional assessment in assisting the selection of appropriate interventions for reducing antisocial and disruptive behaviour in the school setting (Bloom, 2009; Wheeler & Richey, 2010).

To date the contingency management procedures appear to be the most successful in increasing prosocial and decreasing antisocial behaviour in pre-school and primary school years (Church, 2003). Contingency management involves ensuring that desired replacement behaviours produce reinforcing outcomes while antisocial behaviours do not.

Planned ignoring is a strategy that can be used to decrease an undesired behaviour. It is especially effective if the function of the student's behaviour is to gain attention (Carney, 2010). Planned ignoring should only be used when no harm can be caused by ignoring the undesired behaviour. As children can't see ignoring, it is important to attempt to engage in another activity whilst the undesired behaviour is being exhibited by a student (Alberto & Troutman, 2006). They suggest praising another student for behaving the correct way, identifying this desired behaviour and giving other students more attention than usual.

Differential attention involves paying more attention to desired behaviour than to inappropriate behaviour. In many situations teacher attention can maintain inappropriate student behaviour because attention is reinforcing for most young learners (Church, 2010). Training teachers to attend to appropriate behaviour can be effective in improving student behaviour (Bloom, 2009). This can be achieved through the use of positive attention such as individual time, assistance and positive feedback. This has been found to be effective in studies investigating the use of positive teacher attention to manage students who display persistent antisocial behaviour (Sutherland, Wehby, & Copeland, 2000; Wood, Umbreit, Liaupsin, & Gresham, 2007).

Several key elements are involved when using praise to increase a desired behaviour. The praise given must be genuine and supported with consistent body language; it must be given in a meaningful way and not for easy tasks and it should not be linked to pleasing the teacher (Stipek, 1998). Praise is more reliable and effective when it is descriptive (Richmond, 2008). She suggests that feedback such as “I like the way you are working quietly” is less effective than “you are working quietly”.

Other contingency reinforcement management procedures include reinforcing desired replacement behaviours with preferred activities, free time, first choice of an activity, games and privileges. Three key principles which underlie effective reinforcement systems are: 1) identification and frequent monitoring of the target behaviour (the desired behaviour); 2) provision of tangible, positive reinforcers when the target behaviour occurs; and 3) ensuring that antisocial behaviours do not generate reinforcement (Petry, et al., 2001). It is also imperative that the child is taught any necessary skills they need in order to achieve the target behaviour. The evidence suggests that contingency management procedures that combine rewards for appropriate behaviour and small penalties for antisocial behaviour are more successful than those that use only rewards (Pffner & O'Leary, 1987; Rosen, O'Leary, Joyce, Conway, & Pffner, 1984).

Access to preferred activities and other rewards can be indicated using tokens such as stickers, stamps or whiteboard counts (Stage & Quiroz, 1997). Sometimes the tokens themselves can become reinforcing and begin to affect positive behaviour change. In a token economy system, coupons, counters or stickers are used to reinforce good behaviour. Students accumulate these tokens and exchange them for treats, toys, privileges such as longer break time or access to desired activities (Alberto & Troutman, 2006). If necessary a response cost can be incorporated which involves the removal of the tokens for inappropriate behaviour. These fines must not involve the loss of any tokens that have

already been earned for desired behaviour or the motivation to earn further tokens will diminish.

Time-out procedures can also be used as a penalty for antisocial behaviour. Time-out removes the child from the current activity for a short period of time (2-3 minutes) (Miltenberger, 2008). When using time-out the teacher should use a calm manner to clearly state the behaviour that was inappropriate, and then guide the child to the time-out area or chair (Alberto & Troutman, 2006). Time-out can only be used in situations where the current activities are reinforcing for the child.

Children who engage in antisocial behaviour often lack social skills and the skills needed to maintain healthy relationships (Pfeiffer, 2010). One of the key competencies in the New Zealand Curriculum (Ministry of Education, 2007) is relating to others. Teaching prosocial or people skills is an important way of ensuring that New Zealand children can relate appropriately to others. Church (2003) says learning through co-operative activities such as role play that involve normally developing peers working in conjunction with antisocial students to achieve a common goal is important. Teaching social skills to children is vital as research suggests a link between poor social skills and academic success (Elskin & Elskin, 1995; Wentzel, 1993).

School-Based Programmes Identified as Effective by the Advisory Group on Conduct Problems

Following the 2009 Behaviour Summit, the MOE is strongly recommending that New Zealand teachers use evidence-based behaviour management programmes in their classrooms. A review of promising evidence-based classroom programmes by the Advisory Group on Conduct Problems (Blissett, 2009) recommended that the following programmes should be piloted in New Zealand to see if they are suitable for New Zealand conditions: School-wide positive behaviour support (SWPBS) (Sugai, et al., 2010), First

Step to Success (Walker, Kavanagh, Stiller, & Golly, 1998), the Incredible Years Teacher Programme (Webster-Stratton, 2009a) and the Good Behavior Game (Barrish, Saunders, & Wolf, 1969). All the programmes have common elements that include the use of praise and positive reinforcement for appropriate behaviour, the teaching of replacement behaviours and the skills of how to decrease inappropriate behaviour by ignoring and redirection.

The Incredible Years programmes offer early intervention programmes for families and for the teachers of young children with conduct problems (Webster-Stratton, 2009a). Webster-Stratton's Teacher Classroom Management Program includes modules on developing a collaborative approach between home and school, reducing and preventing inappropriate behaviour, improving social and emotional skills and developing positive relationships with children (Baker-Henningham, Walker, Powell, & Meeks Gardner, 2009). Training for the programme involves approximately 60 hours, including seven hours of DVD demonstration and instruction (Webster-Stratton, 2009b). At the present time, there are few qualified trainers in New Zealand and the programme's effectiveness is yet to be evaluated in New Zealand.

The Good Behavior Game (TGBG) was developed in the USA by Barrish, Saunders and Wolf (1969). It is a whole class game that aims to encourage appropriate behaviour by the use of rewards and social reinforcement. The game is initially played for 10 minutes during normal class time with the students divided into two even teams. A list of fouls are constructed by the teacher and students and any time a foul is committed, the teacher names the inappropriate behaviour (foul) and records it. Good behaviour is praised and at the end of the day and week, the team with the least fouls receives a prize. Harris and Sherman (1973) found a large reduction in disruptive talking and out-of-seat behaviour across four curriculum areas (math, science, reading and spelling) after playing the Good Behavior Game for 100 days. These findings were echoed by Tingstrom, Sterling-Turner,

and Wilczynski (2006) in a review of the effectiveness of the Good Behavior Game. They found that targeted disruptive behaviours were quickly reduced to acceptable levels in almost all of the 26 studies reviewed.

Only seven of the twelve studies reviewed by Tingstrom et al. (2006) included students who were engaging in high rates of antisocial behaviour. There is a need for further research into the effect of the various elements of the programme such as the specific prizes and the lesson during which the game is played. Barrish et al. (1969) found that one of the main challenges with the game was ensuring that poorly behaved students were in different teams and that they bought into the game. Harris and Sherman (1973) further suggested that teachers had to be very alert to identify inappropriate behaviour. There has been little research into the effect of the Good Behavior Game on academic performance.

The First Step to Success programme is an early intervention programme that uses both home and school strategies to effect positive change in the behaviour of Year 1-4 students (Walker, et al., 1997). The classroom component consists of a teacher training module, Contingencies for Learning Academic and Social Skills (CLASS). CLASS involves a coach (such as a Resource Teacher of Learning and Behaviour) working alongside the classroom teacher to implement an early intervention programme designed to improve the behaviour of a child who engages in persistent antisocial behaviour. When the programme is operating the child receives minute by minute feedback about his or her behaviour in the form of a green or red card shown by the consultant or teacher. If the child is behaving appropriately, a green card is shown and if their behaviour is inappropriate, a red card is shown. If the child continues to misbehave time-out can be applied. The child can also earn privileges at home coupled with positive statements about his or her behaviour from the parents.

The programme is divided into three phases: a coach phase, a teacher phase and a maintenance phase. Throughout the 1-week coach phase the coach introduces and runs the programme in order to model it for the teacher and students. Throughout the teacher phase, the classroom teacher continues to run the programme. He or she awards points and encouragement on a prescribed schedule, provides and supervises whole class activity privileges as they are earned and communicates with the parents of the selected child about the child's performance. During the maintenance phase, the child is rewarded primarily with encouragement and approval from the teacher and the parent(s). During this phase the red/green card is used less frequently and the amount of praise given to the selected student is gradually reduced.

Three evaluations of the CLASS programme have been published. Beard and Sugai (2004) investigated whether the intervention was effective in decreasing antisocial behaviour in the classroom. Two boys aged 5 and one boy aged 6 who attended a morning kindergarten catering for low socio-economic neighbourhood completed the CLASS programme. Both on-task behaviour and a variety of problem behaviours, including talking out, being out of seat, touching others, touching others' property and non-compliance were recorded using direct observation.

For all three students the rate of problem behaviour decreased from baseline once the CLASS intervention was introduced. During the maintenance phases these rates of behaviour remained stable for two of the students. For the third student, a second CLASS-only treatment phase was implemented and this resulted in the rates of behaviour falling to levels similar to the other two students. On-task behaviour also increased for two of the three students and remained stable during follow-up. For the third student (the same one who had an increase in rate of problem behaviour), the introduction of the CLASS-only treatment resulted in increases in on-task behaviour similar to those of the other two

students. Beard and Sugai (2004) recommend the use of booster sessions to re-teach appropriate behaviours post intervention if needed.

Similar results were found by Golly, Sprague, Walker, Beard, and Gorham (2000) when they used the CLASS intervention with two sets of identical twins over a four year period. The twins were aged 5 and in the normal intelligence range for their age. The CLASS intervention was used with the first pair of twins in morning sessions in their kindergarten class of 22 children. The second pair of twins took part in the CLASS programme in the morning sessions of a kindergarten class of 23 children. The intervention resulted in increases in on-task behaviour and marked reductions in the frequency of out of seat, touching, talking out, and non-compliance. Golly et al. (2000) recommended that future research be undertaken into the effects of the intervention on other students in the class and recommended that the question of whether changes in teacher behaviour are generalised and maintained be examined.

The main evaluation of CLASS (Hops, et al., 1978) involved 56 children in 11 experimental classes and 10 control classes. Appropriate classroom behaviour remained stable in the control classrooms, while in the experimental classrooms, the behaviour of the acting-out children improved from 70% to 80% once CLASS was introduced. In a second trial, 16 experimental classrooms and 17 control classrooms took part. Appropriate behaviour of the acting out students in the experimental classroom improved from 62% at baseline to 73% once the programme was terminated and to 82% from termination to follow-up (Hops, et al., 1978).

Of the four programmes recommended by the AGCP, the CLASS programme appears to be the most suitable for introduction at this time. It was designed to be introduced by advisory personnel (such as RTLB) and it includes both child behaviour

management and teacher professional development components. Its effectiveness has been demonstrated in four separate evaluations.

Project Aims

The aim of the present project was to evaluate the feasibility and effectiveness of the CLASS programme in the New Zealand context. The specific research questions were as follows:

1. Does the CLASS programme have a similar effect on compliance and antisocial behaviour in the New Zealand classroom setting as it has been shown to have in the United States?
2. Does the CLASS programme need to be modified to make it suitable for use in New Zealand classrooms?
3. How do teachers respond to the additional work that is required while the CLASS programme is operating in the classroom?

Chapter 2: Method

Participants

For the present project, two primary schools in Christchurch were selected. Within these two schools, the study was conducted in four general education classes. School A was a decile 7, co-educational full primary (Years 1-8), with a roll of 420 students. School B was a contributing (Years 1-6) primary school with a decile rating of 3 and a roll of 338 students.

Ethical approval for the project was granted by the University of Canterbury Ethics Committee. (See Appendix 1.) Once informed consent had been obtained from the Boards of Trustees, the principals and the four participating teachers, student participants were selected using the following procedure. Firstly each school's Resource Teacher of Learning and Behaviour (RTLB) identified possible teachers, (and their students). These RTLB nominated teachers in each school who they thought would be suitable for the present project. Once identified, and having agreed to participate, these teachers were then asked to nominate students in their classes who met the following definition of antisocial behaviour: "Any student who (a) complies with teacher instructions much less frequently than other children of the same age or who (b) engages in antisocial behaviour much more frequently than other children of the same age were selected". Each of the four teachers then completed a Social Development Scale (SDS) (Church, Tyler-Merrick, & Hayward, 2005) for each of the students who met this definition. The SDS was developed to identify Year 1-4 students at risk of antisocial development. The Scale contains 30 items with a Likert style rating of one to five. The first 15 items refer to positive social behaviours, while the second 15 items (which are reverse scored) refer to antisocial behaviours. A combined score of 105 or greater indicates appropriate social development. Students with scores below 105 out of a possible 150 were eligible for participation in this project. In

classes with more than one eligible student, the participating teacher was asked to nominate the one student whom they believed was most in need of early intervention. Each of these students will now be referred to as the 'selected student'. Teachers were informed that, once the intervention had been used with one student, they could replicate it with other students with behavioural difficulties. Four students were selected from a total of nine who met the definition of "antisocial". One student was in Year 2, two students were in Year 3 and one student was in Year 4.

In each classroom, a second student was also selected. These four students will be referred to as the comparison students. These students were selected to provide a measure of programme effects (if any) on students other than the selected students. Each comparison student was selected by identifying the same sex and same year group student next on the class roll following the selected student in that classroom.

Recruiting and retaining selected students was sometimes problematic. Two students who were initially nominated for the project by their teachers withdrew soon after baseline data had been collected. In the first instance, the student and his family moved to another school with no warning. There was no other student in this classroom that the teacher felt met the definition given above so this classroom was withdrawn from the project. In a second instance, Teacher 2 nominated a student in Classroom 2 to be involved in the project and baseline data was gathered. However, the boy's mother withdrew her consent the day before the CLASS programme was to begin. As a consequence, one of the other students with behaviour problems became the selected student. His parents gave written consent for him to be involved.

Table 1 gives the ages, school disruptive behaviours, SDS scores and baseline rates of on-task behaviour, compliance and positive teacher responses for each of the selected and comparison students.

Table 1

Baseline data and types of behaviour for the selected students and comparison students

Name	Age (year)	School	Behaviour	Social Development Scale Score	On-task Behaviour % of Intervals	Compliance %	Positive reactions from teachers Rate per hour
Selected Student 1	8	A	Annoys peers, interrupts, unable to compromise, aggressive towards others	101	76	75	2
Comparison Student 1	9	A	Socially capable, quiet, eager to learn	-	95	93	0
Selected Student 2	6	A	Demanding, lacking sympathy for others, impolite, verbally aggressive to peers	82	57	75	0
Comparison Student 2	6	A	Polite, diligent, gets on well with others	-	96	93	0
Selected Student 3	7	A	Violent, demanding, disruptive, irresponsible	59	43	74	0
Comparison Student 3	7	A	Engaged in lessons, academically capable, role model, popular with peers	-	89	100	1
Selected Student 4	7	B	Disobedient, poor social skills, doesn't compromise with peers	91	58	75	2
Comparison Student 4	7	B	Mature for his age, academically capable, socially confident	-	96	100	0

The teachers, selected students, parents and comparison students who took part in the project were as follows.

Classroom 1. Classroom 1 was a class of 27 Year 4 students in School A. Five students in the class received additional assistance each week.

Teacher 1. Teacher 1 was a female, of Pacific Island descent, who had been teaching for 15 years. She had taught at School A for 14 years. She had experience at all year levels and was currently Team Leader of the Year 3 and 4 syndicate. Teacher 1 led Health in the school and was involved in its school-wide delivery and implementation. She enjoyed teaching. Pastoral care was one of her strengths and she actively utilised specialists to assist with any student who required extra assistance.

Selected Student 1. Selected Student 1 was a Year 4 boy. He was aged eight and had attended four previous schools, both in New Zealand and abroad. He lived with his mother and younger brother and was considered academically capable by his classroom teacher. He enjoyed writing, working on the computer and reading J.K. Rowling novels. He was articulate in both written and oral language. He had a reading age of 10 years on the Prose Reading Observation. Behaviour and Evaluation (PROBE) assessment tool. The PROBE assessment is a non-standardised reading inventory type measure which combines a running record accuracy score and a comprehensions score to produce a reading age. It is a reading assessment commonly used in New Zealand with students aged 7 years and above. Selected Student 1 scored at stanine 9 on the Supplementary Test of Achievement in Reading (STAR). This is a standardised reading comprehension test developed in New Zealand for Year 3 to 9 students. Selected Student 1 was working at stage 6 in Numeracy. On the Social Development Scale he scored 101 out of a possible 150. Scores on specific items indicated difficulties in his ability to take turns, complete set tasks to an acceptable level, compromise and get along with his peers. Teacher 1 commented that he struggled

socially and found group work challenging. He was able to complete set work easily, but tended to become bored when not challenged. He relied on routines, knowing the structure of the day and usually found disruptions quite difficult. He was very dependent on teacher attention and needed frequent reassurance for his behaviour. Attendance at school was excellent.

Parent 1. Parent 1 was a mother in her late thirties. She was provided with information about the project in writing and orally and gave informed consent prior to the start of the programme. Parent 1 was studying part-time and also working part-time. She had two children, Selected Student 1 and a younger son who also attended the same school. Selected Student 1's father lived and worked abroad and contact with him was via email and the occasional phone call. Maternal grandparents assisted with day care at times. Parent 1 walked both sons to and from school each day and had attended school trips in the past. On one trip, according to Teacher 1, Selected Student 1 defied Parent 1 in front of the whole class and other parents and was verbally aggressive towards her. After school the children's time was quite structured and Parent 1 helped the boys with their schoolwork whenever necessary.

Comparison Student 1. This student was a Year 4 boy, aged nine years who had attended the school his whole school life. He lived with his mother and father and had one younger sister who attended the same school. He liked maths, writing and reading fantasy novels. He had a reading age of 11 years on the PROBE assessment and a stanine score of 8 on the STAR test. He was working at stage 6 in Numeracy. His teacher said he was a quiet student who rarely engaged in class discussions, but was always eager to learn. He was socially capable and had a close circle of friends within the class. He attended school regularly and he was involved in both soccer and cricket out of school.

Classroom 2. Classroom 2 was a class of 26 Year 2 children in School A. In the class there was a full-time support worker for a child with life-threatening medical problems and one student had been diagnosed with autistic spectrum disorder. Four children had additional support for remedial reading throughout the day.

Teacher 2. Teacher 2 was a female of Pakeha ethnicity in her fifth year of teaching. She had taught only in the junior school at School A. According to her team leader, she had an excellent rapport with her students and had strengths in art and music.

Selected Student 2. Selected Student 2 was a Year 2 boy. He was aged six and identified as Maori. He lived with his father and two siblings and spent time with his biological mother every other weekend. His elder sister was in Year 3 at the same school and his other sibling was an infant. He loved playing rugby league and doing break-dancing. He had a reading age of 7 years and was working at stage 4 in Numeracy. This is the expected level for this age. His score on the Social Development Scale was 82 out of a possible 150. Individual item scores indicated that he often reacted in a cheeky or impertinent way to requests, disrupted the play of others and often used demands when others would use requests. He was able to associate with a range of typically developing peers, taking turns when others were waiting.

Parent 2. Parent 2 was approximately 25 years of age, Maori and worked as a market gardener. He was provided with information about the project in writing and orally and gave written informed consent prior to the start of the programme with Selected Student 2. He lived with his partner. He had two other children, aged eight and two, but only the 8 year old lived with him. Parent 2 picked up Selected Student 2 from school most days and was always reliable and punctual.

Comparison Student 2. Comparison Student 2 was a 6 year old Year 2 boy. He had an elder brother in Year 5. He lived with him, his mother and father. He played tennis and

soccer outside school and had swimming lessons at aqua gym regularly. His favourite subject was Maths and he was above average in this subject, working at stage 5 in Numeracy. He had a reading age of 9.5-10 years.

Classroom 3. Classroom 3 was a composite class of 25 Year 3 and Year 4 children in School A. It contained six students with learning and behaviour needs all of who had additional assistance, both in and out of the classroom, on a daily basis.

Teacher 3. Teacher 3 was a female, who identified as New Zealand European and who had been teaching for 18 years. She had taught at a range of schools throughout her career and had been in the Senior Leadership Team at her last school. She was studying part-time for her Master of Education through the local university.

Selected Student 3. Selected Student 3 was a male in Year 3 aged seven. He had an older sister in Year 8 at the same school, a twin brother in the same class and a teenage brother who attended the local high school. He was an active boy who loved sport and was a keen cricket and rugby player. He had very few days off school and was involved in Kapa Haka (the performance of traditional Maori song and dance) as an extra-curricular activity. He had a reading age of 8 years and was working at stage 4 in Numeracy. Three times a week he received parent tutoring in reading. Both his mother and teacher were concerned about his listening abilities and general academic progress. He had normal peripheral hearing, but there was some evidence of hearing problems in some complex tasks. His score on the Social Development Scale was 59 out of a possible 150, indicating that he had poor social skills in a number of areas. These included an inability to compromise with his peers when disagreements or conflicts arose; showing little appreciation when others offered to help him; and not being able to show an interest in what others were saying during conversations. Individual item scores also indicated that he

frequently interrupted others when they were speaking and often shoved others and acted violently. However, he was able to associate with a range of typically developing peers.

Parent 3. Parent 3 was a 33 year-old full time mother of four children. She was provided with information about the project in writing and orally and gave informed consent prior to the start of the programme. She lived with her husband, teenage son, Year 8 daughter and twin boys, one of whom was Selected Student 3. The family were very active and had a close extended family. Parent 3 commented that her relationship with Selected Student 3 could be strained at times, but they enjoyed cooking on their own together. She also said that she attempted to give Selected Student 3 early nights, to help him behave more appropriately at school, but found it challenging to think of a variety of ways to reward him for good behaviour.

Comparison Student 3. Comparison Student 3 was a male in Year 2. He was aged seven, identified as Maori and had attended school A in both the previous years. He lived with his mother and older brother, who was in Year 6 at the same school. He attended Kapa Haka as an extra-curricular activity and he was also involved in additional French lessons provided by the school. His favourite subject areas were Art and Physical Education and he played rugby for a club on Saturdays. He had a large group of friends in the class and his attendance was excellent. His teacher said that he was always engaged in lessons and that he often offered perceptive comments in class discussions. She considered him a role model amongst his classmates. His results in assessments showed he was performing above average in Numeracy (stage 5). His reading age was 10.5-11 years.

Classroom 4. Classroom 4 was a composite class of 24 Year 3 and Year 4 children in School B. There were no teacher aides working with the class.

Teacher 4 was a female who was in her first year of teaching. As a beginning teacher she was entitled to one day of classroom release a week. A teacher with eleven years

experience took the class every Friday to satisfy this requirement. Throughout the year and leading up to the programme Teacher 4 had been absent from school with a variety of health problems.

Selected Student 4 was a 6-year old Year 3 boy. He lived with his mother and older sister and spent some time with his biological father in the school holidays. His older sister also attended School 4 and was in Year 5. He enjoyed drawing, lego, playing sport and riding the family quad bike. His reading age was 6 years and he was working at stage 3 in Numeracy. His Social Development Scale score was 91 out of a possible 150. Individual items indicated that he never persisted with set tasks when left unsupervised; never completed required tasks to an acceptable standard; never compromised with others when conflicts or disagreements arise; and never behaved sympathetically when others were upset or embarrassed. He also found it difficult to play with peers and he was very immature compared to his classmates.

Parent 4 lived locally with her two children and was provided with information about the project in writing and orally. She gave written informed consent prior to the start of the programme. She worked part-time as a Teacher Aide at an urban secondary school. She dropped Selected Student 4 at school most mornings and often interacted with his class teacher.

Comparison Student 4. This student was 7 years of age, Pakeha and in Year 3. According to his class teacher, he was quite mature for his age. At the beginning of the year he lived with his parents, but during Term 2 they separated. He now lives with his mother and older sister who was in Year 8 at a local intermediate. His favourite activity at school, apart from sport, was writing stories. He was academically capable and was working at stage 5 for Numeracy and had a reading age of 10-10.5 years.

Recording procedures

One teacher and two child behaviours were recorded using direct observation. These were time on-task, compliance with teacher instructions and positive reactions from the teacher to the selected student. Table 2 gives the definitions of each of these behaviours. On-task behaviour was converted into a percentage of intervals on task. Compliance was converted into a percentage of instructions followed with 25 seconds. Positive reactions from the teacher were converted to number of teacher praises per hour.

Table 2

The dependent measures which were observed and recorded

Behaviour	Definition
Time on task	Attending to and/or working on assigned or expected tasks or activities for at least 6 out of the 10 seconds observed. This learning could be self-selected.
Compliance	Following a teacher instruction that calls for some action on the part of the observed student the student starts the requested action (or ceases the named behaviour) within the current or immediately following the 15 second interval.
Positive teacher reaction	Any verbal or non-verbal expression of approval, admiration or commendation given by the teacher to the selected student or to the comparison student.

These behaviours were recorded using a 10 second / 5 second interval recording procedure. The primary observer was the author, a Masters student who had completed 10 hours practice observations using the CLASS Observers Manual reproduced in Appendix 2. Throughout all phases of the study, 20-minute direct observations of the selected student's behaviour, the comparison student's behaviour and the teacher's behaviour were

recorded in the classroom setting. Teacher instructions and teacher praise, on-task behaviour and compliance to teacher instruction were recorded on the pre-printed recording form reproduced in Appendix 3.

The selected student and the comparison student were observed alternating from one to the other, every 15 seconds. Observations occurred two to three times per week and lasted for 20 minutes each time. Follow-up data in two sessions for all four classrooms was collected by the same method four and six weeks after the programme formally finished.

All of the direct observations occurred in the classroom, except during four sessions when Physical Education lessons were completed in the hall or on the tennis courts (Classroom 3 Session 6; Classroom 4 Sessions 2, 17 and 18). Observations occurred over a variety of teacher-led whole groups, small groups and individual activities. Some direct observations were made while the selected student was working in a small group of two or more people, or on their own on some learning activity or classroom task.

Some data was recorded by the teacher. Each day of the intervention, the teacher completed a red/green card. On certain days the card went home with the selected student and was signed by the parent(s). The monitoring form shown in Appendix 4 was used by the teacher to record progress throughout the 30-day programme. A poster in the class kept a daily tally of the selected student's points and the class rewards.

At the end of the programme each teacher completed an evaluation questionnaire containing a combination of closed and open-ended questions. This questionnaire is reproduced in Appendix 5. It contained questions about aspects of the programme which were easy to administer, aspects of the programme which were difficult to administer, perceived positive and negative outcomes of the programme for both the selected student and the whole class, and the extent of the teacher's understanding of reinforcement principles.

A Resource Teacher of Learning and Behaviour who worked in the participating schools was trained as a second observer. Practice observations were completed prior to baseline data being collected. Once interobserver reliability agreement reached 85%, observations began. Signals on an MP3 player were used to regulate the 10-second observation and 5-second recording intervals. Both observers wore headphones attached to the same MP3 player. Over all phases of data collection, interobserver agreement was computed for 26% of the observations.

The percentage of agreement between the two observers for both the selected students and the comparison students for on-task behaviour was 98%, for compliance to teacher instruction was 97% and for the number of teacher praises per hour was 99%.

Experimental design

An AB design replicated across four classrooms was used. Following the implementation phase a follow-up phase was completed.

Baseline. All four pairs of students were observed in their classrooms during regular classroom lessons. At least six observations were undertaken for each pair of students and in each classroom the baseline phase ceased once stable trends in the targeted behaviour were observed.

Intervention. The intervention phase ran for 20 days in each of the four classrooms. The CLASS programme consisted of the 14 components described in Table 3.

Table 3

Description of the CLASS programme and its components

Component	Description
Coach training	The author was the 'coach'. She spent 12 hours watching the First Step to Success instructional video, reading the corresponding manual and practising using the red/green card with students through role-play.
Screening students	Each teacher completed a Social Development Scale for all of the students in their class who met the definition of antisocial behaviour. Of the students who scored below the cut off point of 105, one student was selected from each class.
Teacher training	Teachers were trained over a 4-hour period by the coach to use the CLASS programme. This involved watching the instructional video, reading the corresponding manual and practising with students. A consent form was signed. The teacher also observed the coach modelling the programme through Days 1-5.
Parental consent	Parents attended a meeting with the coach and teacher prior to the programme beginning. Each of the participant's roles was explained and a letter of consent was signed by the parent(s). Parent(s) agreed to sign the red/green card each night and to reward and praise their child according to the programme schedule.
Student practice	The coach talked through the programme with each selected student. The students practised with the red/green card through role-play for 30-minutes. To further ensure understanding, role-plays where roles were reversed were carried out. This involved the student pretending to be the teacher using the red/green card, while the coach acted as the student.
Whole class meeting	Prior to programme start, the coach met with the whole class and their teacher to explain the programme. The students were able to ask questions and to volunteer whole class rewards for the class. A poster for the wall was displayed outlining class rewards, points gained for each day and the class rewards given when the 80% criterion was met by the selected student. Appendix 6 outlines the points schedule and criterion for each day of the programme.
Red/green card	Throughout the programme the class teacher wore a card around her neck. It was green on one side and red on the other. This was used to give feedback to the selected student about his/her behaviour. Green indicated appropriate behaviour (on-task and

compliant) and red indicated inappropriate behaviour, for example being out of their seat or talking when they were meant to be working quietly. Points could be given to the student when the card was on the green side.

Baseline phase	The class worked as usual and the author collected baseline data for six to eight days. She used direct observation and recorded on-task behaviour, compliance with teacher requests and teacher praise.
Coach phase	Days 1-5 of the programme were implemented by the coach. On Days 1-4 the programme ran for 20 minutes and on the fifth day it ran for 30 minutes. Appendix 6 outlines the time that the programme ran for each day.
Teacher phase	Days 6-20 of the programme were implemented by the class teacher. These sessions ran from 30 to 150 minutes according to the daily schedule in Appendix 6.
Giving points	Each day had a set number of points that the selected student had to gain in order to receive a self selected reward. The teacher awarded the points at random times when the card was on the green side. Points were awarded on average once every five, eight or ten minutes according to the daily summary chart.
Giving praise	The daily summary chart in Appendix 6 prescribed the minimum number of times per day that praise was to be given to the selected student by the teacher.
Meeting criterion	The selected student had to earn 80% of the available points opportunities to meet the criterion each day.
Rewards	Each day that the selected student met the criterion, a whole class reward was given such as a class game outside. The same day, the selected student received an individual reward from his parent such as baking with the parent.

In each classroom the author set up the CLASS programme and monitored completion of each of the components. She met with individual teachers, parents, the selected student and the whole class. She ran the coaching phase of the programme for the first five days. For the first 4 days of the programme, each session ran for 20 minutes duration. On Day 5, the session ran for 30 minutes. On Days 6-30 the class teacher ran the programme. The CLASS programme was implemented for 30 minutes to 150 minutes in

duration throughout this time. The maintenance phase of the programme was implemented from Days 21 to 30. During this time the use of the red/green card was phased out. At the completion of the programme two follow-up direct observations were also completed four and six weeks after the programme formally finished.

In Classroom 1 the programme ran consecutively for 30 days. In Classroom 2 the programme ran for three school weeks. This was followed by a two week school holiday period. Selected Student 2 did not meet the criterion on Session 10 so Session 10 was recycled as prescribed by the CLASS instruction manual. Recycling days occur when the selected student does not meet criterion on any given day. If this happens, the student repeats the last successful day or group of days. In Classroom 3 the programme ran consecutively for the first three weeks. There was a two-week school holiday following Session 11. From Session 17 until the end of the programme, a student teacher took control of the regular classroom programme. The class teacher continued to run the CLASS programme throughout this time. In Classroom 4 the programme ran consecutively for the first 20 days. Following Session 16 the programme stopped for six school days following a severe earthquake which closed the school. This programme ran for 28 days. On Session 9 (Coach Day 3) a reliever taught the class. On Session 16 the classroom release teacher was not wearing the card during the observation.

Follow-Up. After the completion of the programme the author observed the four selected students and comparison students a further two times in their classrooms. These observations occurred at a variety of times in the day and across a range of curricular activities. Selected Student 1 and Comparison Student 1 had follow-up data collected 31 days and 50 days after Session 19. Selected Student 2 and Comparison Student 2 had follow-up data collected 41 days and 43 days after Session 17. Selected Student 3 and Comparison Student 3 had follow-up data collected 34 days and 35 days after Session 17.

Selected Student 4 and Comparison Student 4 had follow-up data collected 32 days and 33 days after Session 18.

Chapter 3: Results

Classroom 1

Figure 1 presents the number of teacher praises per hour used by Teacher 1 across the four phases of the programme and the percentage of compliance to teacher instruction and the percentage of on-task behaviour engaged in by Selected Student 1.

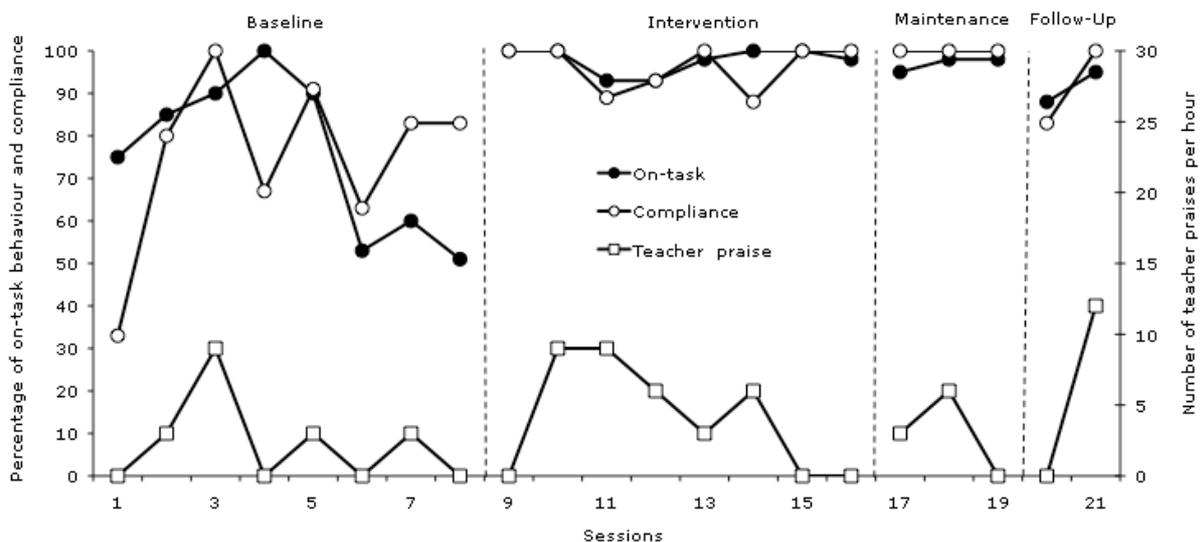


Figure 1. Percentage of on-task behaviour, percentage of instructions complied with and number of teacher praises per hour for Selected Student 1

Teacher 1 praise

As can be seen from Figure 1, Teacher 1 increased the mean number of praises used per hour during intervention and increased this further during the follow-up phase. During the baseline phase, Teacher 1 praised Selected Student 1 on average rate of twice per hour over the eight observations. This varied from no praises per hour (Sessions 1, 4, 6 and 8) to nine praises per hour in Session 3. During the intervention phase the number of teacher praises per hour increased to a mean of four times an hour, varying from no praise

(Sessions 9, 15 and 16) to nine teacher praises an hour in Sessions 10 and 11. During the maintenance phase, the teacher praise rate ranged from no praise per hour (Session 19) to six praises per hour in Session 18. In the follow-up phase there was no praise in Session 20 and 12 per hour in Session 21.

Selected Student 1 compliance

During the baseline phase Selected Student 1's compliance was variable (range = 33%-100%) with a mean of 75%. During the intervention phase, compliance with teacher instructions ranged from 88%-100%, with a mean of 96%. Throughout maintenance, compliance was 100% but at follow-up, the mean compliance with teacher instructions decreased slightly to 92%.

Selected Student 1 on-task behaviour

Selected Student 1 was on-task on average 76% of the time during the eight baseline sessions. This ranged from 53% to 100%. Throughout the intervention phase, on-task behaviour varied from 93%-100% with a mean of 98%. During Sessions 17, 18, 19 in the maintenance phase, on-task behaviour was between 95%-98% with a mean of 97%. During the follow-up phase on-task behaviour decreased slightly to a mean of 92%.

Selected Student 1 aggression

There were no aggressive behaviours observed from Student 1 throughout the 19 sessions.

Teacher 1 questionnaire responses

Teacher 1 found the programme easy enough to implement. She knew about positive reinforcement, but thought that some teachers might find information about positive reinforcement useful before starting the CLASS programme. She reported that Selected Student 1 was better able to complete tasks independently, related better to his peers and

was able to create friendships more easily following completion of the CLASS programme. She also reported that students in her class were more motivated during the CLASS programme and that they were more supportive and communicative with Selected Student 1 during and following the CLASS programme. Teacher 1 would recommend the CLASS programme to others as she believed it helped maintain student behaviour in a positive way and that students responded fairly quickly to it.

Informal observations of Teacher 1 implementation

Teacher 1 was very diligent when implementing the CLASS programme. She was able to award points to Selected Student 1 according to the CLASS schedule and she recorded the daily points and rewards without fail. Teacher 1 usually worked independently from the coach but was proactive in seeking advice whenever she needed. During the baseline phase, Selected Student 1 was observed working with Teacher 1 when the class were required to work in pairs. During both follow-up sessions, Selected Student 1 was observed working with Teacher 1 again when the task required the students to work in pairs. Throughout the CLASS programme, Selected Student 1 was observed working with classmates when the activity required working in groups or with a partner. Teacher 1 was often observed rewarding this group work and commented that she was impressed with Selected Student 1's ability to work with others and also that his classmates were willing to work with him.

Comparison Student 1 data

As can be seen in Appendix 7, Comparison Student 1 received no praise from Teacher 1 throughout the programme. His average compliance to teacher instructions and time on-task were both over 92% throughout all phases of the project.

Informal observations of Selected Student 1

In the third week of the CLASS programme being run in Classroom 1 a duty teacher commented that she saw Selected Student 1 playing nicely in the playground with other children (and she wasn't used to seeing this), and that he seemed much happier. Between Session 18 and Session 19, an experienced relieving teacher took the class and said she enjoyed having Selected Student 1 in the class and that he had been wonderful. One week later, Teacher 1 commented that he had improved with his punctuation and was taking much more care with his work. She also said that he had been extremely helpful sorting out journals for her. Following Session 18, Selected Student 1 appeared very proud of "his card" when Teacher 1 was explaining how the card worked. Teacher 1 said the whole class were very excited about who was going to be doing the programme next and were often helping Selected Student 1 behave appropriately when the card was red.

Informal observations of peers

In Session 12, whilst Teacher 1 was reading to the class, students in Classrooms 1 were overheard telling Selected Student 1 that the card was on red and telling him to stop talking. When activities were to be completed in groups (Session 14) classmates asked Selected Student 1 to join their group. When spelling was to be done in pairs (Session 18), another student in Classroom 1 asked Selected Student 1 to be his partner. Several times throughout the CLASS programme students in Classroom 1 approached the author and asked who would be doing "the game" next.

Classroom 2

Figure 2 presents the results for the number of teacher praises per hour for Teacher 2 and the percentage of compliance to teacher instruction and percentage of on-task behaviour for Selected Student 2.

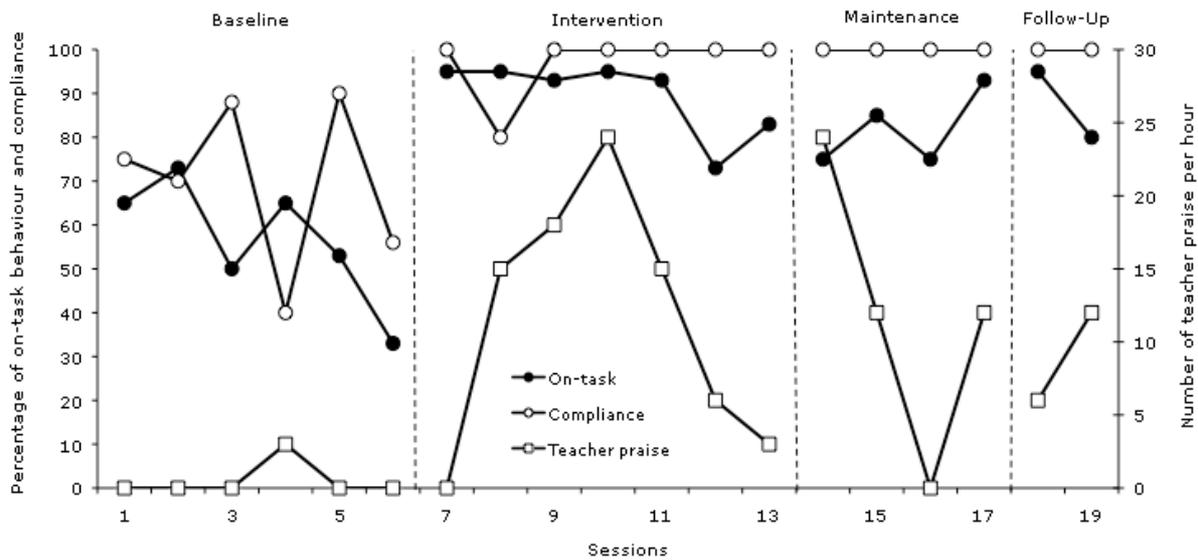


Figure 2. Percentage of on-task behaviour, percentage of instructions complied with and number of teacher praises per hour for Selected Student 2

Teacher 2 praise

The results showed that Teacher 2 increased her mean number of praises over the course of the project. Baseline data indicated Teacher 2 praised Selected Student 2 once in Session 4. Once the intervention was introduced, the number of teacher praises per hour increased to a mean of 12 times per hour. This ranged from zero praises per hour in Session 7 to 24 praises per hour in Session 10. During the intervention, in Session 10, the number of teacher praises per hour was 24 and this decreased in Session 11 to 15 teacher praises per hour. The number of teacher praises per hour decreased further in Session 12 to 6 and even further in Session 13 to 3 teacher praises per hour. During the maintenance phase, both the range (0-24) and the average number of praises (mean = 12), by the teacher per hour were the same as during the intervention phase. In Session 14 the number of teacher praises per hour increased to 24, but decreased to 12 in Session 15 and then to zero

in Session 16. Teacher praise per hour at follow-up was 6 times per hour and two days later it was 12 times per hour (Session 19), producing an average of 9 teacher praises per hour for this phase.

Selected Student 2 compliance

Selected Student 2 increased his mean compliance over the course of the project. At the follow-up observations compliance remained at intervention and maintenance levels. Selected Student 2's average compliance to teacher instructions was 75% throughout baseline. This varied from 40% in Session 4 to 90% in Session 5. Compliance throughout intervention, maintenance and follow-up was constant at 100% with the exception of Session 8 when compliance was recorded at 80%.

Selected Student 2 on-task behaviour

Selected Student 2 increased his mean on-task behaviour over the course of the project. On-task behaviour for Selected Student 2 varied throughout the baseline period from 33% in Session 6 to 73% in Session 2, with an average on-task behaviour of 57%. On-task behaviour increased to an average of 90% during the intervention phase (range 73%-95%) although it decreased to 73% on Session 12 and to 83% on Session 13. During maintenance, the mean on-task behaviour of Selected Student 2 was 82%, (range 75%-93%). During follow-up, Selected Student 2 was on-task on average 88% of the time (95% in Session 18 and 80% in Session 19).

Selected Student 2 aggression

Selected Student 2 was observed using verbally aggressive behaviour once in Session 2 and once in Session 4. He used aggressive behaviour once in Session 1 and once in Session 2.

Teacher 2 questionnaire responses

Teacher 2 thought that the CLASS programme was easy enough to implement and that the positive comments and card were easy to use. The only challenging part of the programme was keeping to the time. She knew about positive reinforcement before the CLASS programme began. She said that Selected Student 2 listened to instructions and respected other students most of the time since completing the programme. Following the programme, the class were looking out for each other's behaviour more frequently. She said she would recommend the CLASS programme to others as she believed the programme had changed the way Selected Student 2 interacts with others and that he now "sees himself as a good boy".

Informal observations of Teacher 2 implementation

Teacher 2 was very enthusiastic about the CLASS programme and completed the programme daily. She always rewarded the class when Selected Student 2 reached criterion and tried to ensure all the class benefited from the experience. On Session 13 Teacher 2 did not always turn the card to red when Selected Student 2 was behaving inappropriately. This occurred again on Session 14 when she did not turn the card to red even though Selected Student 2 was off-task and she awarded him a point when he was off-task. During these two sessions, praise was also given at times when Selected Student 2 was behaving inappropriately.

Comparison Student 2 data

Appendix 7 shows that during the maintenance phase Comparison Student 2 received on average two praises per hour. He received no other teacher praise throughout the programme. Average compliance to teacher instruction and time on-task was greater than 92% throughout all phases of the project.

Informal observations of Selected Student 2

After Session 11 Teacher 2 said that Selected Student 2's manners were outstanding and he was showing others up with his behaviour. Selected Student 2 commented halfway through the CLASS programme "I used to be a bad boy and bully kids in the playground, but now I'm a good boy." During the time the programme was in place Student 2 also received a class award for Student of the Week in assembly. Following a two week holiday, Teacher 2 remarked that Selected Student 2 was "right back into it happily" and two days later that he was "going really well". The day before Session 13, Selected Student 2 said to Teacher 2 "I was going to do something naughty but I won't now", when he saw Teacher 2 watching him about to take a chair from a classmate. She also heard him say to the classmate "you can have it (the chair)". In this session, he was observed helping another student do his work, as the student was being non-compliant. At the end of this session Teacher 2 said "I think this (the CLASS programme) has changed his life". On Session 14, Teacher 2 said that Selected Student 2 was not attention seeking as much and he was listening to her better. On the final day of the CLASS programme Teacher 2 commented that she thought Selected Student 2 was still very settled. Two weeks after the programme ended, Teacher 2 told the author that Selected Student 2's behaviour had decreased a little on the first two days following the completion of the programme, but since then he had been trying to be a role model for the rest of the class. Nine days following the end of the programme Teacher 2 was using a whole class variation of the CLASS programme. During this time Selected Student 2 was behaving better than he had been before the implementation of the programme.

Informal observations of peers

In Session 9, a female student in Classroom 2 ran up to the author when she arrived and said "we've got 10 points". During the same session, students in Classroom 2 were observed pointing to the card and telling Selected Student 2 that the card was red. In

Classroom 2 during Session 11 a student constantly approached the author asking when he would get a chance to do “the card” and “why was he not chosen to do “the card”. Teacher 2 identified this student as displaying antisocial behaviour and throughout the programme he was observed imitating Selected Student 2’s appropriate behaviour.

Classroom 3

Figure 3 shows the results for Teacher 3 (the number of teacher praises per hour), and for Selected Student 3 the percentage of compliance to teacher instruction and percentage of on-task behaviour across the four phase of the experiment.

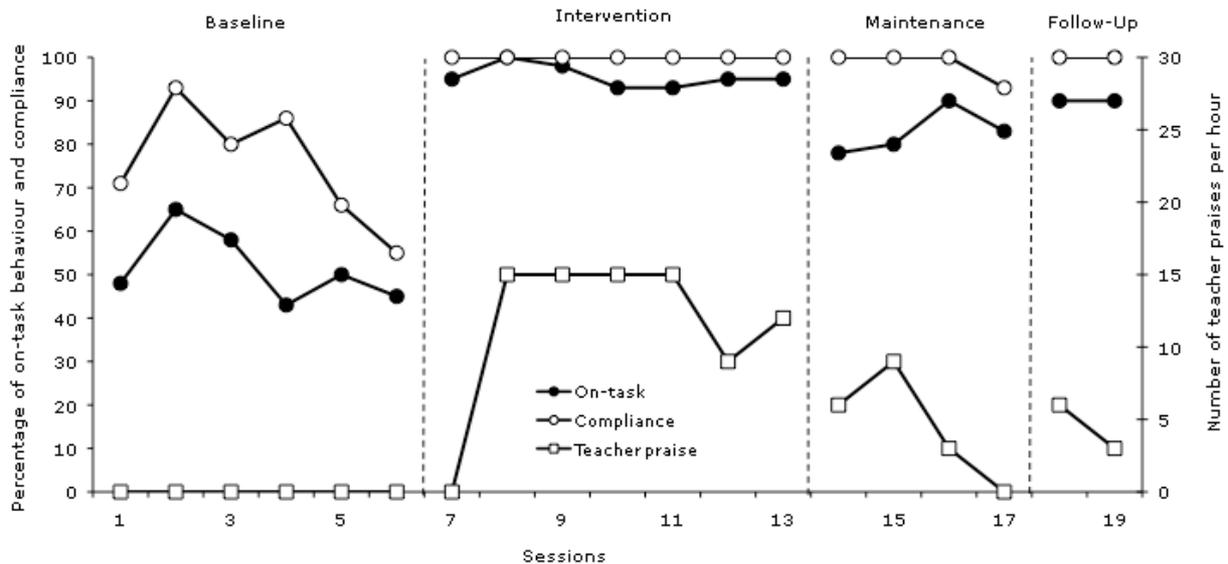


Figure 3. Percentage of on-task behaviour, percentage of instructions complied with and number of teacher praises per hour for Selected Student 3

Teacher 3 praise

Teacher 3 increased her mean number of praises used per hour during intervention. During baseline no teacher praise was recorded. During the intervention phase, the number of teacher praises per hour increased from zero on Session 7 to 15 during Sessions 8 to 11. This then decreased to 9 in Session 12 and 12 in Session 13. The mean praise per hour during the intervention phase was 12. During the maintenance phase (Sessions 14-17), teacher praise per hour declined to zero. Follow-up observations occurred 32 days and 33

days after the intervention ceased during which time the number of teacher praises observed was 6 per hour and 3 per hour.

Selected Student 3 compliance

Selected Student 3 increased his compliance to teacher instructions to 100% during intervention and maintained this at follow-up. During the six baseline sessions, Selected Student 3 complied on average 74% of the time with compliance varying between 55% and 93%. Except for Session 17, compliance to teacher instructions was 100% for the rest of the study.

Selected Student 3 on-task behaviour

Selected Student 3 increased his mean on-task behaviour during intervention and maintained this at follow-up. Selected Student 3 displayed an average of 43% on-task behaviour during the baseline period. On-task behaviour ranged from a low of 43% in Session 4 to a high of 65% in Session 2. Once the intervention was in place, Selected Student 3 was on-task an average of 96% of the time. This varied from 93% during Sessions 10 and 11 to 100% in Session 8. On-task behaviour ranged from 78%-90% during the maintenance phase, with a mean of 83%. During the two follow-up sessions 90% on-task behaviour was observed.

Selected Student 3 aggression

There were no aggressive behaviours observed from Selected Student 3 throughout the 19 observation sessions.

Teacher 3 questionnaire responses

Teacher 3 found the CLASS programme very easy to implement. She found having a set number of points available each day, using the red/green card as a visual prompt and using positive reinforcement made the programme easy to use. She stated that Selected

Student 3 appeared much happier in himself, settled, focussed and much easier to manage after doing the CLASS programme. Parental contact, poor behaviour of another student in the class, less instructional time in the early stages and keeping track of when to allocate points was challenging. Teacher 3 found that the whole class climate improved while the programme was running and that Selected Student 3's classmates were very supportive of him while he was doing the CLASS programme. Teacher 3 would recommend the CLASS programme to others to use.

Informal observations of Teacher 3 implementation

Teacher 3 was very keen to use the CLASS programme and wanted to be involved in the project. In Session 12 she left the small group she was working with to go and praise Selected Student 3. After 14 days of the programme, Teacher 3 chose to run the programme during times of the day when Selected Student 3 was working more independently. There were two days when the programme was stopped midway through as Teacher 3 decided it was not going well and there were several occasions when Teacher 3 had filled out parts of the red/green card, but was unsure what day of the programme she was up to. The daily monitoring form and the poster detailing the rewards for the class and the points obtained each day were rarely completed. However, Teacher 3 was observed giving points and praise according to the schedule some of the time. On Session 14 the card was not turned to red for inappropriate behaviour even though Selected Student 3 was continually fiddling with his pencil. The red/green card was sent home some of the time, but not always collected back in from Selected Student 3. Following this up with Parent 3 was left to the author.

Comparison Student 3 Data

Comparison Student 3 had an average on-task behaviour of 89% and higher in all phases of the project as shown in Appendix 7. He was compliant to teacher instruction

100% of the time. Comparison Student 3 received two teacher praises per hour on average during the maintenance phase and no teacher praise throughout the rest of the project.

Informal observations of Selected Student 3

On Session 11, Teacher 3 and Selected Student 3 shared a joke and appeared more relaxed with each other. During Session 12 a reward system for the whole class was running in conjunction with the CLASS programme. On Session 15, Selected Student 3 asked to stop doing the programme as he said he misbehaved too much. Following Session 15, Teacher 3 commented that she was still finding it challenging to balance meeting Selected Student 3's needs with the needs of the class. Two weeks after the programme was completed, Teacher 3 said that Selected Student 3 called one of his classmates an idiot.

Informal observations of peers

In Classroom 3 during group work for English in Session 10, peers asked Selected Student 3 to join them. His peers also helped him when he was off-task and answered questions about the work they were required to do if he was unsure of this. In Session 12 Selected Student 3 was working independently, but when he needed to borrow a rubber another member of the class lent it to him. Once he had completed his work, he asked to borrow a reading book from another boy and that boy allowed Selected Student 3 to look through his personal collection and choose one. When he was out of his desk and off-task in Session 15, Comparison Student 3 told him to sit down.

Classroom 4

Figure 4 presents the results for the number of teacher praises per hour for Teacher 4 and, for Selected Student 4, the percentage of compliance to teacher instruction and the percentage of on-task behaviour across the four phases of the study.

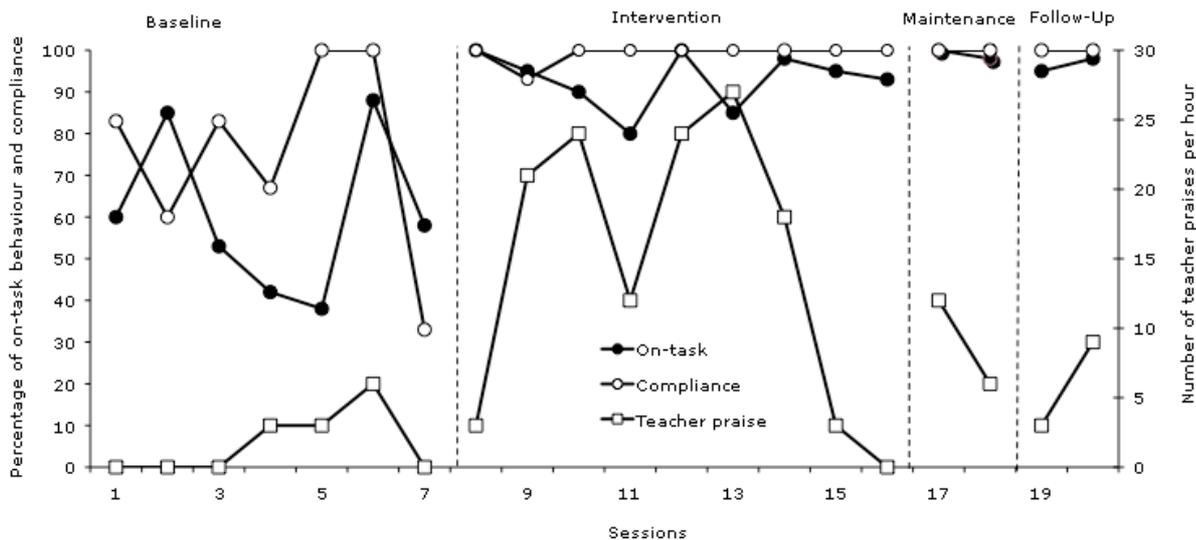


Figure 4. Percentage of on-task behaviour, percentage of instructions complied with and number of teacher praises per hour for Selected Student 4

Teacher 4 praise

The overall mean per hour of praise rate from Teacher 4 initially increased during the intervention but then decreased. Throughout baseline, Selected Student 4 received no praise from Teacher 4 during Sessions 1, 2, 3 and 7. During Sessions 4, 5 and 6 teacher praise ranged from 2 to 6 times per hour but returned to zero on Session 7. The mean rate was 2 praises per hour. Teacher 4 increased her praise rate to an average of 20 times per hour. The range throughout this phase was from 3 on Session 8 to 27 on Session 13 but this had decreased to zero by Session 16. During maintenance, the range of teacher praise per

hour was 5-12 with a mean of 9 praises per hour. During follow-up the mean teacher praise rate decreased slightly to six times an hour with a range of 3 to 9.

Selected Student 4 compliance

Selected Student 4's compliance with teacher instruction was variable over the seven baseline sessions with a range from 33% in Session 7 to 100% in Sessions 5 and 6. The average compliance during the baseline period was 75% per session. During intervention, compliance was 100% , except for the first 2 days. It remained at 100% throughout the maintenance and follow-up sessions.

Selected Student 4 on-task behaviour

Selected Student 4's mean on-task behaviour increased during intervention and was maintained at follow-up. On-task behaviour for Selected Student 4 varied between 38% in Session 5 to 88% in Session 6 with a mean of 61%, during the seven baseline observations. The intervention increased on-task behaviour to a mean of 93% (range 80% to 100%). During Session 11, on-task behaviour decreased to 80% however on-task behaviour increased further during the maintenance phase to a mean of 96%, and remained at this level during follow-up (mean =97%).

Selected Student 4 aggression

There were no aggressive behaviours observed from Selected Student 4 throughout the 20 sessions.

Teacher 4 questionnaire responses

Teacher 4 thought that the CLASS programme was easy enough to implement and might recommend it to others depending on the needs of the child that a teacher was concerned about. She liked being able to implement the rewards into her everyday programme, the increase in writing productivity of Selected Student 4 and the better

teacher/pupil relationships. Teacher 4 found it difficult to keep track of points when children were working in groups, disliked the negative emotions if criterion was not reached and the jealousy of others in the class. She liked the greater responsibility that classmates displayed and enjoyed experiencing the class working towards a common goal.

Informal observations of Teacher 4 implementation

Teacher 4 had classroom release once a week throughout the entire time the CLASS programme was implemented. There appeared to be some communication between the regular classroom release teacher and Teacher 4, but on one day the programme did not run. Also Teacher 4 was absent for several days and a variety of relievers took the class so on these occasions the CLASS programme stopped and resumed when Teacher 4 returned. Teacher 4 was very committed to following the CLASS programme. She was innovative with her timing, using the counter on the interactive whiteboard. Class rewards were almost always given on the same day that criterion was achieved but on the one day she forgot, she gave the reward the following day. In Session 11 Teacher 4 left the room. When she returned she told Selected Student 4 off for being off-task and simultaneously turned the card to red. During this session Selected Student 4 was also off-task five times and the card was not turned to red. She also praised him when the card was red. During Session 12 she praised him whilst frowning and encouraged him using an edgy tone during Session 1 and 11.

Comparison Student 4 Data

Comparison Student 4 received an average of one praise per hour during the intervention phase as can be seen in Appendix 7. He received no other praise throughout the programme. Average compliance to teacher instruction was stable at 100%. On-task behaviour was always greater than 92% during all phases of the programme.

Informal observations of Selected Student 4

Teacher 4 said that Selected Student 4 worked a lot better on the first day of the programme and completed more work than usual. On the first day that Teacher 4 implemented the programme she said that she felt that Selected Student 4's behaviour was much better, especially when reminded of "the game". Parent 4 was also pleased that he was completing more schoolwork at home. As a reward for reaching criterion in Session 11, Selected Student 4 brought the whole class pikelets, that he had made at home with Parent 4. The following day Teacher 4 told the author that Selected Student 4 was continuing to do well and a week later, Parent 4 reiterated this sentiment saying that she was very pleased with the amount of effort he was putting into his homework. After Session 14, the regular classroom release teacher said she felt that Selected Student 4 had become much more confident and that he "seemed like a different child". On Session 18, Teacher 4 said "yesterday Selected Student 4 had a perfect day and did nothing wrong; he was helping others and practising his speech".

Informal observations of peers

Two weeks into the CLASS programme, the author observed Selected Student 4 playing rugby with his classmates before school. Teacher 4 said that this was the first time all year he had interacted so positively with his classmates. Between Session 10 and Session 11, Selected Student 4 was observed by Teacher 4 interacting more positively with his peers and contributing more orally in class. During this period all of Classroom 4 were very happy because they had played "21" (a maths game), as the class reward for Selected Student 4 reaching criterion. In Session 11 Selected Student 4 spoke to the class about his budgie, showed feathers and answered questions. During Session 16, students were required to work in pairs and Selected Student 4 had two people from his class and one

from his 'buddy' class ask him to be their partner. On Session 18 Selected Student 4 helped others with their work

Chapter 4: Discussion

The aim of the present project was to evaluate the feasibility and effectiveness of the CLASS programme in the New Zealand context. The project was designed to answer the following three questions:

1. Does the CLASS programme have a similar effect on antisocial behaviour in the New Zealand classroom setting as it has been shown to have in the United States?
2. Does the CLASS programme need to be modified to make it suitable for use in the New Zealand classroom?
3. How do teachers respond to the additional work that is required while the CLASS programme is operating in the classroom?

Participating teachers were identified by asking local RTLB to nominate teachers who had disruptive children in their classrooms and who might like to be involved. Once identified, these teachers identified students in their classrooms who a) complied with teacher instructions much less frequently than other children of the same age or who b) engaged in antisocial behaviour much more frequently than other children of the same age. Students who were identified by their teachers were then screened using the Social Development Scale (Church et al., 2005) and one child from each classroom was chosen to be the selected student for the CLASS programme.

The CLASS programme, which lasted for 30 days, ran alongside the regular classroom lessons and involved the use of differential attention, praise and rewards. The author ran and modelled the programme for the first five days, while the classroom teacher ran the programme from Day 6 to Day 30. Each programme day had a performance criterion that had to be reached by the selected student. Every day that this criterion was reached, the selected student received a reward at home from his parent(s) and his whole

class received a reward organised by the classroom teacher. From Days 21 to 30 the programme was faded out and the selected student was rewarded mainly with encouragement and approval from their teacher and parent(s).

In the present evaluation the mean rate of teacher praise per hour increased during the intervention phase in all four classrooms and was greater at follow-up than during the baseline phase. Compliance with teacher instructions also increased during the intervention phase and was maintained during the follow-up phase. The mean percentage of on-task behaviour increased when the CLASS intervention began for each of the four participants. This was maintained during the follow-up phase.

These results are consistent with those reported in the USA (Beard & Sugai, 2004; Golly et al., 2000; Hops et al., 1978). In the evaluations where on-task behaviour was recorded (Beard & Sugai, 2004; Golly, et al., 2000) on-task behaviour increased once the CLASS programme was introduced. In the classrooms where maintenance data was recorded, on-task behaviour remained stable although in one classroom this occurred only after CLASS had been reintroduced with one of the students.

None of the studies from the USA observed and recorded praise. In all four classrooms in this project, teacher praise per hour for the selected students increased in the second session after the intervention began. In all four classrooms teacher praise per hour continued to increase throughout the intervention although for Teacher 1 and Teacher 4 the praise rate had decreased to zero by the end of the intervention phase. In Classroom 2 teacher praise per hour decreased at the end of the intervention phase to almost zero and in Classroom 3 teacher praise decreased in the second to last session of the intervention phase, but increased slightly in the final session of the intervention phase.

While the CLASS programme worked well, student attention, compliance to teacher instructions and on-task behaviour was still affected by external events such as the learning tasks selected by the teacher, the presence of relief teachers and where the lessons took place. For example, in Classroom 1, Session 16, the class was working independently building boats. No teacher praise was given throughout the session, but compliance to teacher instruction was 100% and Student 1 was on-task 98% of the time. In another example, in Classroom 4, Student 4 was sitting and listening to a story on the mat. This was followed by an independent writing task. Compliance to teacher instruction was 33% and on-task behaviour was 58%. There were also occasions when a different teacher worked with the class. In Classroom 2, Session 4 for example, when a reliever took the class, Student 3 was hiding behind the sofa during free time. He was verbally aggressive at one point to another student and compliance was 40%. Conversely, in Classroom 4 the classroom release teacher took the class in Session 16 and Student 4 was on-task 93% of the time and complied with 100% of the teacher requests. Changes of environment also affected student behaviour. In Classroom 3 the class joined with two other classes for a Physical Education lesson in the hall (Session 6) Student 3 was on-task 45% of the time and exhibited 55% compliance. In another case, there was an earthquake in Christchurch following Session 16 of Classroom 4 and schools were closed for a week. However the data collected in Classroom 4 from Session 16 onwards did not appear to indicate that these events had had any adverse affect on Selected Student 4's behaviour. These examples indicate that a range of factors other than the CLASS programme could have influenced the change in behaviour of each of the selected students in this project.

Hops et al. (1978) found that the CLASS programme could be generalised across settings. They found that the behaviour of acting-out children was effectively changed using the CLASS programme in 28 different classrooms in rural and urban schools. The

present project implemented the CLASS programme in one urban school with a decile rating of 3 and another urban school with a decile rating of 7. The effect of the CLASS programme in both schools in this project was similar. The data from the present project indicates that the effects of the CLASS programme can be generalised to more than one New Zealand classroom.

Data collected in this project during the week 4 phasing-out period showed that the percentage of compliance to teacher instruction for all four students continued at 100% except in one session for Student 3. These findings parallel those by Beard and Sugai (2004) and Golly et al. (2000) who observed and recorded non-compliance as one of five problem behaviours. Beard and Sugai (2004) collected maintenance data twice a month for five months for their three students. The rate of problem behaviour remained low and stable for both of the 5-year olds. The 6-year old's rate of problem behaviour increased but after the re-introduction of the CLASS programme the rate of problem behaviour decreased to levels similar to that of the other two students. Golly et al. (2000) only collected maintenance data for one of their four participants and found, once the intervention was terminated, that compliance remained as high as it had been during the intervention phase. Hops et al. (1978) did not collect any maintenance data.

Adapting CLASS for the New Zealand setting

The CLASS programme will need to be modified in order for it to be used with New Zealand teachers. The CLASS implementation guide is part of The First Step to Success package and requires translation into the New Zealand idiom. For example the manual refers to federal agencies and these do not exist in New Zealand. The manual will also need to be rewritten to include reference to RTLB and other specialist staff from Special Education being used as coaches. Consulting the RTLB and teachers who were directly involved in this project before re-writing the manual would be beneficial. Including

anecdotal references from selected students, their classmates, the parents of selected students and teachers who have recently completed the CLASS programme could enhance the acceptability of the programme by New Zealand teachers, schools and RTLB.

The screening process could include the Social Development Scale (Church et al., 2005) as it has been developed by New Zealanders specifically for the New Zealand context. At the moment the manual includes guidelines for both the home based and school based part of the First Step to Success programme. A manual could be developed which contained the implementation guidelines for the school based (CLASS) programme only. A brief explanation about differential attention and praise, particularly in relation to positive reinforcement would be useful for teachers to read prior to the implementation of the programme and could be included in the manual. Two of the teachers in this project said they would have valued this.

The video that came with the programme was out of date and filmed in an American setting. A DVD that uses New Zealand teachers, students and parents would need to be produced. New Zealand schools use a range of sanctions for non-compliance and this contrasts with the guidelines for the CLASS programme where a time-out sanction is recommended. Flexibility in the way local schools handle non-compliance throughout the programme is an important consideration.

Two of the teachers in this project felt that keeping track of the time for allocating points was challenging. A stopwatch and digital timer accompanied the implementation guide, but it was felt by two of the teachers that these were difficult to manage. Classroom wall clocks and digital timers on interactive whiteboards were the most user friendly time keeping method. Having at least one, preferably two wall clocks positioned at opposite ends of the classroom would be advantageous.

In this project three of the four teachers appreciated the daily red/green card having the information written on them by the coach. Simplifying the daily summary chart and/or having the red/green cards pre-printed for each teacher day of the programme, in addition to supplying spare blank red/green cards would overcome this obstacle. Finally, the CLAS programme could provide each teacher with a wall chart that could be displayed in the classroom. This would feature in the classroom for the duration of the CLASS programme and would provide students with a visual reminder of the target points for each day, the points gained each day and the corresponding class reward. It could also include a list of possible rewards and allow students to take responsibility for the programme, as they could manage this.

Teacher workload

Teachers in the project responded quite differently to the additional workload of the CLASS intervention. One of the four teachers responded extremely favourably. She read information about the programme both prior to and during its implementation and worked independently of the coach for most of the time. The daily summary chart and red/green cards were always completed and she kept to the schedule fastidiously. The whole class was included in the programme and rewards were varied and given almost immediately. She worked enthusiastically with the parent(s) and selected student throughout the duration of the programme. Relief teachers were told of the programme prior to them taking the class and decisions about whether to proceed or not with the programme were decided collaboratively with the author, relief teacher and classroom teacher. On one occasion in the last week of the programme, Teacher 1 was away. Teacher 1 warned Selected Student 1 the day before that she would be absent the following day. Teacher 1 knew that he could behave appropriately if he was prepared for any changes in his routine. Consequently the

relief teacher commented that “he was wonderful” and she “enjoyed having him in the class”.

Two of the teachers were very enthusiastic about the programme and again encouraged the whole class to be involved. They set up systems to record the points each day on the wall chart provided by the author and to collect and collate the daily summary chart and red/green cards. On most occasions the red/green cards were completed and they often asked for assistance when necessary. Both of these teachers were confident but relied on the coach to guide them in the programme delivery. They did not always appear keen to explore running the programme independently of the coach, even though (in the coach’s opinion) they were capable of doing so. Direct contact with parents was made regularly and positive relationships appeared to exist between both of these teachers and the respective parents. Once the CLASS programme had been completed, one of these teachers modified the CLASS programme for her full-time support worker to use with another student in the classroom. When spoken to, both the student and the support worker were very enthusiastic about using positive reinforcement for appropriate behaviour.

The fourth teacher relied heavily on the coach. Although she was keen and capable, the programme was not implemented as smoothly in her classroom. The classroom was a busy place and on Session 5 there were three additional adults in the room, assisting various students with their work. No systems were in place to collect the card back each day from the selected student and often he did not take the card home. The daily summary chart and green/red cards were rarely kept up-to-date or legible and there were numerous times when they were not filled out at all. The class reward was often repetitive and the wall chart for the class was not completed. On one occasion it was lying on the floor and had been damaged. Parental contact was minimal. Feedback from the coach was readily received by the teacher, but rarely acted upon.

Factors influencing the effectiveness of the CLASS programme

It was expected that the CLASS programme would be effective in improving both teacher management skills and student behaviour because the programme is an evidence-based programme and its effectiveness has been demonstrated in several previous studies (Beard & Sugai, 2004, Hops et al., 1978; Golly et al, 2000). In part the effectiveness of the programme can be attributed to the component interventions which have been included in the programme. These include the use of increased monitoring and prompting, increased teacher positive attention and praise, classroom rewards, parental rewards and a 20 day training programme. The red/green card provided excellent feedback to the selected student and the class. It was both a visual aid for behaviour management and a communication tool between home and school. Increased praise served a dual purpose. It both strengthened the relationship between the teacher and selected student and it strengthened appropriate behaviour and self-control. The use of whole class rewards allowed for whole class buy-in and led to all students working toward a common goal. In addition these changes resulted in three further changes which although less tangible were no less important. These were the changes which occurred in teacher-student and student-student relationships.

Changes in teacher attitude and teacher/student relationships

The importance of positive teacher/student relationships in the classroom has been widely documented (MacFarlane, 2007; Richmond, 2008; Rogers, 2006). In fact, teacher praise probably only functions as a reinforcer if there is a positive relationship between teacher and student (Bloom, 2009; Stipek, 1998). Murray and Greenberg (2001) and Murray and Murray (2004) argue that the antisocial behaviour of the disruptive student often prevents the development of a satisfactory student teacher relationship. Although this was not the case in the present study (Teacher 1 and Teacher 2 had reasonably positive

relationships with their students at baseline), all four students responded well to teacher attention and their relationships with each of their respective teachers developed quickly once the intervention was introduced.

Golly et al. also (2000) found that interactions between the target child and teacher became more positive using the CLASS programme. Anecdotal data from the present project showed that in three of the four classrooms, the teacher's attitudes toward the selected student became more positive once the CLASS programme was implemented with this change in attitude being sustained until follow-up. In the fourth classroom, the teacher appeared to struggle with meeting the needs of both the selected student and all of her other students whilst the CLASS programme was running. Following the completion of the programme, she was the only teacher of the four to make a negative comment about the behaviour of the student who had completed the CLASS programme.

Golly et al. (2000) argue that future research should attempt to track attitude change in order to find out whether changes in attitude toward the target child persist after the programme ceases.

Changes in the relationship between the selected student and his peers

McDowell (1988) reported that many students do not interact with students who engage in persistent antisocial behaviour. This is almost certainly because interactions with students with antisocial behaviour are often considered aversive or less rewarding than interactions with other students (Stormshak et al. 1999). Informal observations throughout the present study suggest that this observation was true for all of the selected students. Teacher 1 reported that Selected Student 1 rarely worked with others and found it difficult to complete any activity that required pair or group work, Teacher 2 commented that Selected Student 2 was often disruptive in groups and behaved in ways that resulted in

other students actively avoiding him, Teacher 3 wrote that Selected Student 3 frequently interrupted others when they were speaking and never compromised with peers or showed interest in what others were saying and Teacher 4 expressed concern that Selected Student 4 lacked empathy for others and never associated with typically developing peers.

One of the most interesting effects of the CLASS programme in the present project was that students in all four classrooms became motivated to work together toward a common goal. There were many examples of students in each of the four classrooms interacting with each of the selected students. These interactions did not occur prior to implementation of the CLASS programme.

When activities were to be completed in groups (Session 14) classmates asked Selected Student 1 to join their group. When spelling was to be done in pairs (Session 18), another student in Classroom 1 asked Selected Student 1 to be his partner. As a result of the CLASS programme the Teacher 1 realised that Selected Student 1 was capable of working with his peers and in fact others in the class were very happy to work with him. She believed this occurred because when the selected student worked with others, she positively reinforced his behaviour by awarding points (as part of the CLASS programme).

Similar changes occurred in Classroom 2. During a maths lesson in Session 13, another student happily joined Selected Student 2 to work with him on an activity.

In Classroom 3 during group work for English in Session 10, peers asked Selected Student 3 to join them. In Session 12 Selected Student 3 was working independently, but when he needed to borrow a rubber, another member of the class lent it to him. Once he had completed his work, he asked to borrow a reading book from another boy. The student allowed him to look through his personal collection and choose one.

In Classroom 4 when the whole class 4 were allowed to have free time on the senior playground as their class reward, Selected Student 4 was observed playing happily with his classmates.

Two weeks into the CLASS programme, the author observed Selected Student 4 playing rugby with his classmates before school. Teacher 4 said that this was the first time all year he had interacted so positively with his classmates. Between Session 10 and Session 11 Selected Student 4 was observed by Teacher 4 interacting more positively with his peers and contributing more orally in class. In Session 11 Selected Student 4 spoke to the class about his budgie, showed feathers and answered questions. In Session 16 students were required to work in pairs. Selected Student 4 had two people from his class and one from his 'buddy' class ask him to be their partner. On Session 18 Selected Student 4 helped others with their work. Three of the four teachers also commented that the implementation of the CLASS programme had seen the students working much better as a whole class and that they were more motivated and supportive of the selected student.

Contribution of peer influence to the success of the programme

Praise from peers can also be influential in changing student behaviour (Bloom, 2009; Skinner, Nedderniep, Robinson, Ervin & Jones, 2002). Anecdotal data suggests that the support from classmates may have been influential in changing the behaviour of each of the selected students. In many instances across all four classrooms students were overheard and observed assisting the selected student with their work and behaviour in order for them to gain the points they needed for that day.

In Session 12, whilst Teacher 1 was reading to the class, students in Classrooms 1 were overheard telling Selected Student 1 that the card was on red and encouraging him to stop talking. During Session 9 in Classroom 2, students were observed pointing to the card and telling Selected Student 2 that the card was red. In Classroom 3 students were often

observed once the CLASS programme began, helping Selected Student 3 when he was off-task or answering questions about the work they were required to do if he was unsure what to do. When he was out of his desk and off-task in Session 15, Comparison Student 3 told him to sit down.

Acceptability to New Zealand teachers in the New Zealand context

For these kinds of changes to occur a programme like the CLASS programme must consist of intervention and professional development activities which are acceptable to classroom teachers. The CLASS programme was selected for this project as it appears to align well with New Zealand classroom practice and “the programme is well-suited for delivery by RTLB in New Zealand” (Blissett et al., 2009, p. 19). According to their post intervention questionnaires, three of the four teachers involved said they would recommend the programme to others and that it was easy enough to implement. The teachers in the project were all able to observe the author model the programme during the first five-day “coach phase” and received feedback on an as needs basis.

In the present project, the author worked closely with an RTLB to implement the CLASS programme. All of the reliability checks were completed by this RTLB and at times the RTLB used the recording procedure for her own work independently of the author. While working alongside the author in this project, the RTLB was trained in how to implement the CLASS programme and specifically the role of the coach. She found the CLASS programme easy to learn and has trialled using it with three other teacher and their classes in schools in her cluster. She reports that these teachers have liked the CLASS programme, as it is non-intrusive and easy to implement alongside their regular classroom programme. She has also spoken to one of the Principals she works for about using the CLASS programme in his school and has shared the CLASS programme aims with her colleagues. Two other RTLB were willing to work with the author for this project and

were very receptive to using the CLASS programme with students that had been referred to them.

Implications

Sustainability of an intervention is affected by the ongoing performance feedback received by the teacher. Rose and Church (1998) argue if a consultant provides performance feedback on a teachers' implementation of an intervention this increases the teacher's use of that intervention and improves treatment fidelity. Han and Weiss (2005) found that teachers often display good treatment fidelity initially, but that this fidelity rapidly decreases when they are left to independently administer the intervention. Noell et al. (2005) agree and state that performance feedback and consultant support over a long duration maybe necessary to maintain treatment fidelity.

In the present project the CLASS programme was implemented in four New Zealand classrooms with students in Years 2, 3 and 4. It has been suggested that the CLASS programme would be ideal in the New Zealand context as the role of the coach, which in this classroom was taken by the author, could be taken by the RTLB (Blissett et al., 2009). The role of an RTLB is to provide assistance for students with moderate learning and behavioural needs and to use evidence-based practice to do so (Ministry of Education, 2010).

In situations where the needs of the student are severe, RTLB refer the student to the Ministry of Education, Special Education (Ministry of Education, 2010). The CLASS intervention could also be implemented through this service and could be included in the training for this role. Resources such as the CLASS training manual and video would need to be updated (DVD) and tailored to the New Zealand setting, although much of this work has already been completed during this project.

Currently there is concern about the lack of training in behaviour management which training teachers are receiving in New Zealand. To meet the Registered Teacher Criteria, the New Zealand Teachers Council (2010b) state that teachers must “promote a collaborative, inclusive and supportive environment” and that this will be indicated by “effective management of the learning environment.” There is no mention in any of the twelve criteria for full teacher registration that teachers need to demonstrate competence in managing the behaviour of the students they teach. Whilst there has been an assumption that teachers will be able to develop management skills on the job and that they will be supported in this, the literature does not support this view (Post Primary Teachers Association, 2007). In the Graduating Teacher Standards (New Zealand Teachers Council, 2010a) there is no requirement that a teacher who is about to become qualified needs to demonstrate that they can manage the behaviour of their students. Balson (1992), Chaplain (2003) and Rogers (2006) state that there is little assistance in both pre-service and in-service training for teachers to work with groups of students with diverse behavioural needs. It is not surprising therefore that many classroom teachers are less than fully competent implementing behaviour interventions with individual students. The inclusion of behaviour management training as one of the key requirements in both pre-service training and at full registration is imperative.

To accomplish this, trainee teachers will need to study the principles of learning on which all the effective behaviour management interventions are based and they will need to feel that they are well trained in the various behaviour management techniques. Mihalic, Fagan, Irwin, Ballard, and Elliott (1998) argue that teachers with a greater understanding of behavioural principles exhibited greater treatment fidelity. This fidelity is increased by the teachers’ understanding of key behavioural principles and is necessary for teachers to adapt the intervention in a way that suits them, but does not lose the integrity of the

intervention (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). In the present project, the teacher with the most experience implemented the programme with the least fidelity. According to the teacher questionnaire she was also the only teacher who would have preferred information about positive reinforcement before the programme began. The other three teachers said that they already knew about positive reinforcement and one indicated that she felt doing the programme “has definitely driven home its importance.”

Han and Weiss (2005) found that teachers were prepared to use more complex interventions if they perceived the severity of the behaviour they are trying to change warrants this and if they feel they have had adequate training. The CLASS programme is relatively easy to administer and each teacher had four hours of training prior to commencing the programme. Additionally, all four teachers in this project understood that they would have the author supporting them throughout the duration of the programme. In each classroom, the teachers nominated at least three students in their classes who met the criterion and selected the one student whose behaviour they considered would benefit the most from an intervention. Teachers who know that an intervention is evidence-based and that it has had some proven success are also more likely to use an intervention effectively (Han & Weiss, 2005). Teachers in this project were informed that CLASS was evidence-based and that it had been recommended by the Advisory Group on Conduct Problems (Blisset et al., 2009) for use with students with antisocial behaviour.

Teachers’ beliefs about how children learn and why children behave in the way they do have an impact on the efficacy of the intervention which they implement. When choosing whether to use a specific intervention programme, teachers must believe that the programme not only meets the needs of their students, but that it complements their teaching style (Han & Weiss, 2005). Teachers are also more likely to adopt an intervention that uses a positive strategy involving praise and differential reinforcement (Martens,

Peterson, Witt, & Cirone, 1986). They must also believe that any positive change in the behaviour of the child is directly related to the intervention which they have implemented.

In the present project all four teachers were very receptive to the CLASS programme. This is consistent with the view of Post Primary Teachers Association (2007) who report that New Zealand teachers are willing to implement a new programme when it is well planned and resourced.

Conclusion

The present project implemented the CLASS programme in four New Zealand classrooms in two different schools. Four students with antisocial behaviour were nominated by their teachers to take part in the project. Praise, differential attention and rewards were used to try and affect positive changes in the behaviour of each of the selected student's. Direct observations were made of on-task behaviour, compliance to teacher instructions, aggression, teacher instructions and praise from the teacher.

The overall results of using the CLASS programme were favourable. Across all four students the overall results of the CLASS programme indicated that on-task behaviour and compliance with teacher instruction increased during the intervention phase and was maintained during the follow-up phase. Mean teacher praise per hour also increased during the intervention phase in all four cases and was more frequent at follow-up than at baseline.

Prior to the CLASS programme, it was noted that each of the selected students struggled to consistently work with and form positive relationships with their classmates. Informal observations throughout the project found that interactions between each of the selected students and their peers became more positive during the CLASS programme and remained this way at follow-up. At the completion of the CLASS programme all four

teachers reported that the students in the class became more motivated to work together as a whole class and to support the selected student. In the future, research that explores whether positive relationships occur for the selected students in other settings, such as the playground, following completion of the CLASS programme should be carried out.

While a small sample of teachers was studied there were signs that the CLASS programme could easily be adapted for use by others. Teacher acceptability of the programme was high with three of the four teachers stating that the programme was easy to implement and the fourth stating it was very easy to implement. Three teachers said they would recommend the programme to others while the fourth said she might. These results now need to be replicated with a larger and more diverse sample of teachers.

The CLASS programme could easily be adapted for New Zealand teachers in the New Zealand context. Most of the groundwork has been completed in this project. RTLB and pre-service providers could be trained to use the CLASS programme as an early intervention tool. Walker (1980) was of the opinion that children showing signs of antisocial development who experienced an effective intervention before age eight had an 80% chance of returning to a normal developmental trajectory. Adapting the CLASS programme to the New Zealand context and then completing studies that explore the use of this adapted version, are important next steps.

Programmes such as CLASS have become very important and will remain important until there is initial teacher education and in-service training for teachers in effective behaviour management strategies. In the meantime programmes such as CLASS can serve a very useful instrument for professional development in schools and clusters of schools because they are manualised, easy to follow and can be modified to suit the New Zealand context.

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Appendix 1 Ethical Approval

Human Ethics Committee

Tel: +64 3 364 2241, Fax: +64 3 364 2856, Email: human-ethics@canterbury.ac.nz



Ref: 2010/09/ERHEC

21 April 2010

Sally Ormandy
School of Educational Studies & Human Development
College of Education
UNIVERSITY OF CANTERBURY

Dear Sally

Thank you for providing the revised documents in support of your application to the Educational Research Human Ethics Committee. I am very pleased to inform you that your research proposal "A CLASS project – a New Zealand pilot" has been granted ethical approval.

Please note that should circumstances relevant to this current application change you are required to reapply for ethical approval.

If you have any questions regarding this approval please let me know.

We wish you well for your research.

Yours sincerely


 PP Dr Missy Morton
Chair
Educational Research HEC

"Please note that Ethical Approval relates only to the ethical elements of the relationship between the researcher, research participants and other stakeholders. The granting of approval or clearance by the Educational Research Human Ethics Committee should not be interpreted as comment on the methodology, legality, value or any other matters relating to this research."

Appendix 2
Observers Manual

**The CLASS Project:
A New Zealand Pilot**

Observers Manual

**John Church, PhD
University of Canterbury**

**Gaye Tyler-Merrick, MEd
University of Canterbury**

**Sally Ormandy, BEd
University of Canterbury**

25 April 2010

Overview of the observation procedure

Throughout the CLASS programme there will be the collection of 19-21, 20-minute observations of the ‘selected’ student’s behaviour in the classroom. The observation procedure involves watching the student for 10 seconds and then recording (during the next 5 seconds) two aspects of the teacher’s behaviour and two aspects of the student’s behaviour on a pre-printed recording form. Where ever possible two children will be observed at the same time, alternating from one to the other every 15 seconds. These observations will occur during all phases of the programme, including baseline, coach phase, teacher phase and maintenance phase. During some phases more than one observation will be made. There will also be times when two observers will record observations of the same students in the same 20-minute period. In this Observation Manual, we have referred to the child or young person who is being observed as “the selected student”. The other student being observed has been referred to as ‘the comparison student’.

When to observe

When observing Year 1 to Year 4 children, observations during the coach phase and initial teacher phase are mostly to be made in the classroom. Observations are to be completed during these phases in both teacher-led whole-class activities and independent work. As the programme progresses, these observations will also be taken during group activities which may also occur outside the classroom.

A variety of teacher-led whole group, small group and individual activities are possible. In junior classes, the very first activity of the day is usually a whole class activity. The term “whole class activity” refers to any activity in which the teacher is explaining, or leading a discussion, or leading a question and answer session and all of the children in the class are expected to listen and/or to participate if called upon to do so. Activities in which children participate in a choral fashion are also acceptable.

Other observations are to be made while the selected student is working in a small group (of 2 or more people), or on their own on some learning activity or classroom task. This means that the student will work independent of the teacher and have their own set of materials for the activity and that they are expected to spend the next time block working on their own or with the small group at their desk, or on the floor, with these materials. Teacher expectation should be confirmed by the fact that many of the children in the class are, in fact, working independently (in a small group or on their own).

How long to observe

Observations of the student’s behaviour should continue for 20 minutes. You must record the student’s behaviour over a minimum of 36 intervals.

What if one of the two children leaves the setting?

If one of the two students who are being observed leaves the setting and cannot be followed, the observer should continue to record the behaviour of the remaining student

every alternate 15-second interval. If either selected student is absent for any part of their 10 second observation interval, draw a line through the entire coding line for that interval and write "OS" in the margin (OS = "out of sight").

If the student who left the room returns, you should immediately begin to record his or her behaviour again and to continue recording the behaviour of both children until you have made at least 20 observations on the child who left the room.

What to observe and record

Two general classes of student behaviour and two classes of teacher behaviour are recorded immediately following each 10-second observation. The child behaviours to be recorded are (a) whether or not the child was on task, (b) whether or not the child complied with any instructions given during the interval and before the completion of the following interval. The teacher behaviours to record are (c) whether any instructions were given to the class or either student being observed and (d) teacher reaction to the class and/or either student being observed.

Observations are recorded on a Recording Form which looks like this.

Selected student _____ **Comparison Student** _____

Interval	Activity	On-Task	Instruction Code (circle) C D S O	Compliance	Teacher reaction (circle) + Pt X Pun	Interval	Activity	On-Task	Instruction Code (circle) C D S O	Compliance	Teacher Reaction (circle) + Pt X Pun
1			C D S O		+ Pt X Pun	1			C D S O		+ Pt X Pun
2			C D S O		+ Pt X Pun	2			C D S O		+ Pt X Pun
3			C D S O		+ Pt X Pun	3			C D S O		+ Pt X Pun
4			C D S O		+ Pt X Pun	4			C D S O		+ Pt X Pun
5			C D S O		+ Pt X Pun	5			C D S O		+ Pt X Pun
Add up at end		% On T	<i>Total</i> C D S O		<i>Total</i> + Pt X Pun			% On T	<i>Total</i> C D S O		<i>Total</i> + Pt X Pun

The definitions of each of these classes of behaviour are as follows. You should begin your training by memorising each of these definitions.

Column 1 and column 7: Interval

This stipulates the time interval that is being observed. Observations alternate consecutively for the selected student and the comparison student. Each interval lasts for 15 seconds – 10 seconds of observation and 5 seconds of recording.

Column 2 and column 8: Activity

Use the following *learning activity codes*:

	<i>Write down</i>
The observed child is working on their own e.g completing exercises, problems, or activity sheets of any kind or silent reading, drawing, painting, and so on. There may be other children close by but the observed child is not an integral functioning member of that group.	<i>SOLO</i>
Any kind of one-to-one activity in which the teacher or a teacher aide works with the observed child.	<i>1 to 1</i>
Peer tutoring or any kind of activity in which the observed child works with another child in the class.	<i>PR (Pair)</i>
Co-operative group work or any other kind of activity in which three or more children are working together on a common activity.	<i>GP(n)</i> where n is the number of students
Any activity involving the whole class (or most of the class)	<i>ALL</i>

When choosing the Activity Code, the following rules apply:

- (a) Do not enter the Activity Code until the group size is clear.
- (b) If the activity code changes during the course of the observation, leave a line and write the new activity code on the empty line.
- (c) The aim is to complete observations during the last (ALL) of these five types of activities. However, the occurrence of the other three kinds of activities within a 20 minute period does not necessarily mean that recording should stop.

(d) Next to each activity code, also include a curriculum code. Select one of the following codes.

Write down

Any kind of <i>reading</i> activity including reading letters, parts of words, words, and stories; reading aloud, silent reading, looking for information in a book, etc.	READ
Any kind of printing practice or <i>handwriting</i> practice. (This will usually involve some kind of copying activity.)	PRINT
Any kind of compositional <i>writing</i> , creative writing, writing to convey a message	WRITE
Any kind of <i>spelling</i> activity	SPELL
Any kind of <i>maths</i> activity from counting to calculus	MATH
Any kind of activity relevant to the <i>social studies</i> curriculum	SOC
Any kind of activity relevant to the <i>science</i> curriculum	SCIENCE
Any kind of activity relevant to the <i>technology</i> curriculum	TECH
Any kind of motor skills activity organised by the teacher including individual practice, aerobics, team games, etc	PE
Any kind of activity relevant to the <i>health</i> curriculum	HLTH
Any kind of <i>art or craft</i> activity including painting, drawing, model making, etc.	ART
Any kind of performance music, listening to music, or talk about music.	MUSIC
Any kind of language learning activity, or language analysis activity. (State the particular language being studied.)	ENGL, MAORI. etc.
Any kind of religious instruction.	RELS
Any kind of outdoor play e.g. carts, scooters, jungle gym, etc.	ODP
Water play	WATER
Sand play	SAND
Carpentry	CARP
Fantasy play, dressing up, etc.	FANT
Play dough	DOUGH
Blocks	BLOCKS
Computer	COMP
Roll, notices, daily news	HOUSE KEEP

Record any changes to the content code (ie activity) in the space in column 2. For example:

Selected student _____ **Comparison Student** _____

Interval	Activity	On-Task	Instruction Code (circle) C D S O	Compliance	Teacher reaction (circle) + Pt X Pun	Interval	Activity	On-Task	Instruction Code (circle) C D S O	Compliance	Teacher Reaction (circle) + Pt X Pun
1	READ ALL		C D S O		+ Pt X Pun	1			C D S O		+ Pt X Pun
2			C D S O		+ Pt X Pun	2			C D S O		+ Pt X Pun
3			C D S O		+ Pt X Pun	3			C D S O		+ Pt X Pun
4	MATH ALL		C D S O		+ Pt X Pun	4			C D S O		+ Pt X Pun
5			C D S O		+ Pt X Pun	5			C D S O		+ Pt X Pun
Ad d up at end		% On T	Total C D S O		Total + Pt X Pun			% On T	Total C D S O		Total + Pt X Pun

Columns 3 and 8: On-task behaviour and off-task behaviour

<p>Definition of on-task behaviour</p> <p>Attending to and/or working on assigned or expected tasks or activities for at least 6 of the 10 seconds. In the Year 1-4 settings the learning task may be self-selected. Use the behaviour of other children as a guide to the activities which are expected, permitted or assigned.</p> <p><i>On task is recorded by placing a tick in the appropriate box on the recording form.</i></p> <p><i>Examples of on-task behaviour</i></p> <ul style="list-style-type: none"> • Listening (during teacher talk) • Listening (during co-operative group activities) • Reading relevant books and materials • Writing • Copying (where this is expected) • Completing exercises from work-sheets, white-board, text-books etc. • Examining diagrams, specimens etc. • Watching a demonstration by the teacher or by another student • Fetching needed materials • Returning materials to their proper location • Consulting with other students about some aspect of the current task • Waiting for the teacher 	<p>Definition of off-task behaviour</p> <p>Attending to or engaged in activities or behaviours other than those which are expected, permitted or assigned by the teacher or person in charge during the current time period.</p> <p><i>Off task is recorded by placing a cross in the appropriate box. The cross should fill the box.</i></p> <p><i>Examples of off-task behaviour</i></p> <ul style="list-style-type: none"> • Day dreaming, gazing into space • Gazing out the window • Engaging in a repetitive activity such as arranging and rearranging materials. • Looking at a book but not turning the pages • Watching what another child (or other children) are doing instead of working on one's own task. • Sleeping, dozing, nodding off • Disrupting or interrupting the work of another student. • Engaging in any of the types of antisocial interactions listed as aggressive behaviour in columns 5 or 11.
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Columns 4 and 10: Instruction Code

Instruction codes are given to any teacher instructions that one or more students, including the observed students, are clearly expected to follow. The term “instruction” includes requests, instructions, directions, reminders and rhetorical questions which call for some immediate action on the part of the student. The term “instruction” includes stop requests, that is, teacher instructions or directions to cease engaging in a given activity or behaviour.

Instruction Code definitions

Instruction Type	Column 3 - examples
C = Everyday classroom instructions	Line up; hats/jacket away; sit on the mat; get comfortable; sit at your desk; notices from home; answering roll call; put activity out/away; hand up; stand up; sit down; come to my desk; homework out; take books out; pens ready; eyes this way; look this way; listening please; walking quietly.
D = Disciplinary instruction	If you don't do this now.....Childs name repeated more than once, Quiet please (with tone); I am waiting; Do it now please; 'look', look at me; listening now.
S = Signal	Clapping; hands on head; using a bell; arms folded; hand up in air.
O = Other	Any type of instruction not listed above

Circle the appropriate instruction type in columns 4 or 10. If more than one instruction is given during the 10-second time period, then circle all relevant instruction types.

Columns 5 and 11: Complying with teacher requests, instructions and directions

Compliance Codes	Column 5 and 11 – definition and examples
T - Compliance	Compliance or non-compliance is recorded for every teacher instruction which calls for some immediate action on the part of the observed student. If the student starts the requested action (or ceases the named behaviour) within the 25 second period elapsing between when the instruction was recorded and the end of the next observation interval for that student, <i>on a two-student recording form</i> , this is recorded as compliance. Note that compliance to an instruction <i>cannot</i> be recorded if more than 25 seconds has elapsed since the instruction was given.
? – No way of knowing	This is used if there was no way of knowing whether the student was compliant or non-compliant. For example, the teacher asks the class to raise their hand if they agree with a particular answer. The observer has no way of knowing if the observed student knows the answer to this, so writes a '?' in the appropriate box.
VA – verbally aggressive	Use this when a child swears at another student or teacher, or calls another student or teacher a name that is considered inappropriate for the school setting.
A = Aggressive behaviour	<p>Under this heading are included all of the pushing and hitting type actions which if engaged in by an adult would qualify as “common assault”. Inappropriate aggressive behaviour includes:</p> <ul style="list-style-type: none"> • grabbing/pulling something that someone else is using or playing with • kicking sand in another child’s face • squirting another child with water • hugging or holding on to someone who doesn’t like it, touching or tickling someone who clearly doesn’t like it. • biting (by young children) • pulling hair • Chinese burns • head holds • arm twisting • pinching and scratching • pushing and shoving • tripping • slapping, hitting, and punching with moderate or less force • kicking • hitting another person with a hard object (such as a wooden toy) • stabbing another person with a hard object (such as a metal ruler) • throwing a hard object at someone (e.g. throwing a wooden block at another child). A thrown object does not need to hit its target. It just has to travel in the general direction. • making as if to hit someone with a hard object (e.g. waving a chair around). • hitting someone so hard that they bleed • knocking, punching or kicking someone on the ground • banging someone’s head on the ground or against a wall • any action which results in an injury sufficient to need first aid • fighting

Notes on recording instructions and compliance

It is important to understand that the students in a centre or classroom will have spent some time learning to comply with the rules of the classroom or centre before you visit as an observer. Student behaviour will be guided by rules and conventions which you may be unaware of.

- (a) Where an instruction consists of a lengthy explanation followed by some kind of “now you can get started” signal, only the start signal should be recorded as a request. The start signal should be recorded in the interval in which it occurs.
- (b) Teacher requests and instructions can take the form of a finger snap, a clicker, a clap, a chime or a specific tune. When the class or group responds in unison to a teacher signal, that signal should henceforth be coded as a teacher request because it has that meaning for the children.
- (c) Teacher requests can be highly abbreviated (e.g. “Clean up time”). When the class or group responds in unison to a short verbal signal, that statement should henceforth be coded as a teacher instruction even although it does not appear to take the form of an instruction.
- (f) If there was no way of knowing whether the student was compliant or non-compliant, then place a ‘?’ in column 5 or 11. For example the teacher asks the class to raise their hand if they agree with a particular answer. The observer has no way of knowing if the observed child knows the answer to this, so must write a ‘?’ in the appropriate column.
- (g) If the child was not compliant, then leave the space blank.

Columns 6 and 12: Teacher reaction

Any reaction by the teacher to any behaviour by the student that the child knows is directed at them. This could be due to proximity of the teacher to the student (standing beside), being named, eye contact between the teacher and the student.

Reaction Codes	Column 6 and 12 – definition and examples
+ = Positive reaction	Any expression (verbal/non-verbal) of approval or admiration, commendation. For example “nice work children”
Pt = Points awarded	Any time interval when a point is awarded by the teacher on the selected child’s red/green card
X = Negative reaction	A response (verbal/non verbal) that is disapproving and/or indicates that the teacher wants a specific behaviour to cease. For example “I would prefer if you put your hands up instead of calling out please”.
Pun = Punishment	Any of the following – the loss of something, time out, deprivation, exclusion from an activity. For example “You can have your magazine back once you have completed all your work”.

Teacher reaction notes

- (a) If the reaction is to the whole class then circle the appropriate reaction code. For example “well done everyone for getting your books out so quickly” would be + with a circle around it.
- (b) If the reaction is to either of the children being observe, then circle the appropriate reaction and draw 2 lines under this.

Completing the header on the recording form

The header of the first recording form for each 20 minute observation is to be completed in full. The various categories of information required are as follows.

CLASS Observational Record

School _____	Observer _____	Date _____	Time _____
Teacher's name _____	Child's name _____	Year Level _____	
Page ____ of ____			

1. School

Record the name of the school that you are observing in.

2. Observer

Write your own name. If everyone has a different first name, first name is sufficient. If this observation includes a reliability check, then write your name first and put the name of the second observer in brackets under your name.

3. Date

Write down the date in the form 9-10-05

4. Time

Record the time to the nearest minute, just before starting the MP3 player and commencing the observation.

5. Teacher's name

Write the teacher's first name, second name, and room number.

6. Child's name

This is a space for you to write down the child's first name and initial together with the identifying information which you used to locate the child in the classroom.

7. Year Level

For all school levels, write Year 1, Year 2, etc.

8. Page number

Always write down the page number “1 of 1”, “1 of 2”, etc. even if there is only one page of recording.

Calculating the totals and percentages

1. Per cent time on task

Add up the total intervals coded “on task”. Divide by the total number of intervals in the observation for that child and multiply by 100.

2. Number of teacher requests

Add up the number of requests, instructions, directions and compliance signals recorded and write down the total for that child.

3. Per cent compliance

Add up the number of occasions when the child complied with a teacher request within 25 seconds, divide this number by the total number of requests recorded, and multiply by 100 to produce a percentage.

4. Praise

Count the total number of praises the teacher gives to each child at the end of the 20-minute session. Multiply this by three to give you the total number of praises per hour.

Procedure for calculating inter-observer reliabilities

Accuracy is the term which we use to describe the extent to which an observational record matches the actual performance of the child. Records of performance may be accurate or inaccurate representations of the responses actually made by the learner.

You will be checking your accuracy by working with a partner to observe the same two children on every 4th observation and then to assess, at the end of the observation, the percentage of agreement between the two separate records of the same behaviour.

In this project you will calculate percentage of agreement for (a) the number of intervals coded on-task and off-task, (b) the number of intervals coded as containing a teacher request and the number of intervals coded as containing a compliance, and (c) the number of intervals coded either positive/neutral social interaction and negative social interaction,

To calculate percentage of agreement, you will use the following procedure. First the records of the two observers will be set out side by side and the number of agreements and disagreements recorded and counted. The following example illustrates.

<i>Interval</i>	<i>On task or off task Observer 1</i>	<i>On task or off task Observer 2</i>	<i>Agreement or Disagreement</i>
1	On task	Off task	D
2	On task	On task	A
3	Off task	Off task	A
4	Off task	Off task	A
5	Off task	Off task	A
6	On task	On task	A
7	On task	On task	A
8	On task	Off task	D
9	On task	On task	A
10	On task	On task	A
Percentage of agreement = 80%			

The percentage of agreement between the records of two observers is calculated as follows:

$$\text{Percentage of agreement} = \frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times \frac{100}{1}$$

In the example above, the percentage of agreement between the two observers with respect to the classification “on task” vs “off task” was 8/10 or 80 per cent. Of the 10 observations made, student behaviour was classified in the same way by both observers on 8 observations and differently on two observations.

General procedures to be followed

1. Carry this observation manual, two pencils and two pens, the MP3 player, the two-way junction box, the headphones, spare recording forms, and spare batteries with you at all times.
2. Before leaving for a school, check that you have written down all teacher names, the principal's name, the school phone number, the school address, and how to get there.
3. When telephoning schools to arrange visits, ring the school out of school hours, that is, before school, after school, or in the lunch hour. If you are working through a specific liaison person, ask him or her when it is convenient to telephone.
4. Once you have made your first visit, try to arrange each subsequent visit, in person, before leaving the school.
5. When visiting schools please dress conservatively and wear your name badge.
6. At least one day before you make the observation
 - visit the school and make yourself known to the teachers of the classes in which you will be working.
 - talk with the teacher to identify the day or days and period or periods of time during which you will be able to complete 15 minutes of whole class activity and 15 minutes of individual, self-directed activity.
 - visit the classroom so that the teacher can identify for you the children that you will be observing.
7. Always remember to introduce yourself to the school secretary, to sign in when arriving at the school and to sign out when you leave.
8. Make your way to the classroom at least 10 minutes before the observation is due to start.
 - Arrange a seat for yourself 2-3 metres away from the observed children. You should be seated at right angles to the front most student. You must be able to see the desk top of both children from where you are sitting.
 - If you are completing a reliability check, then you must also sit at least 1 metre away from the other observer.
 - Always complete the top section of the recording sheet before beginning to observe.
 - Do not make eye contact with either of the children being observed and do not interact with any of the children while observing. Behave like a wallflower - blending into the background - so that the children begin to forget that you are there. If approached directly by a child, say that you are "observing how well everyone works together".
9. If you get lost, simply take a half minute break and then start observing again. Mark the half minute break by putting a line through one row of the recording sheet and write LOST in the margin.

10. At the end of the 15-minute period make a note on the Notes Form to describe any contextual details which need to be recorded. Contextual details include such things as
 - interruptions caused by PA announcements, fire alarms, visitors and so on.
 - a brief description of the learning activity – especially if this was clearly too difficult for the child to complete.
 - the general demeanour of the child. E.g. “actively involved throughout” “spent time turning pages but not reading them”, etc.
 - a note describing the behaviour referred to by any “P*” or “O” codes.
 - any other matters which may be important in interpreting the results of the observation.

On return to the office following a successful observation

1. Check that all parts of the Observation Form and the Notes Form have been filled in.
2. Make a photocopy of the observation sheets.
3. Staple each of the two sets of observation sheets. If observer reliability data was collected then there will be two sets of observation forms for the child that day. Staple together the first observer’s and the second observer’s forms.
4. Add up the number of intervals on task and calculate the percentage of intervals on task for each child.
5. Add up the number of compliances and calculate the percentage of requests complied with by each child.
6. Add up the number of each of the antisocial behaviours and also the total number of antisocial behaviours for each child.
7. If the observation was a reliability check observation, then calculate the several percentages of agreement on the form you have been given using the procedure you have been shown
8. File the two sets of observation forms in the data folders for each of the two children.

Appendix 3
CLASS Observational Record

School _____	Observer _____	Date _____	Time _____
Teacher's name _____	Child's name _____	Year Level _____	Page _____ of _____

Selected student _____ Compliant student _____

Interval	Activity	On-Task	Instruction Code (circle)	Compliance	Teacher Reaction (circle)	Interval	Activity	On-Task	Instruction Code (circle)	Compliance	Teacher Reaction (circle)
1			C D S O		+ Pt X Pun	1			C D S O		+ Pt X Pun
2			C D S O		+ Pt X Pun	2			C D S O		+ Pt X Pun
3			C D S O		+ Pt X Pun	3			C D S O		+ Pt X Pun
4			C D S O		+ Pt X Pun	4			C D S O		+ Pt X Pun
5			C D S O		+ Pt X Pun	5			C D S O		+ Pt X Pun
6			C D S O		+ Pt X Pun	6			C D S O		+ Pt X Pun
7			C D S O		+ Pt X Pun	7			C D S O		+ Pt X Pun
8			C D S O		+ Pt X Pun	8			C D S O		+ Pt X Pun
9			C D S O		+ Pt X Pun	9			C D S O		+ Pt X Pun
10			C D S O		+ Pt X Pun	10			C D S O		+ Pt X Pun
11			C D S O		+ Pt X Pun	11			C D S O		+ Pt X Pun
12			C D S O		+ Pt X Pun	12			C D S O		+ Pt X Pun
13			C D S O		+ Pt X Pun	13			C D S O		+ Pt X Pun
14			C D S O		+ Pt X Pun	14			C D S O		+ Pt X Pun
15			C D S O		+ Pt X Pun	15			C D S O		+ Pt X Pun
16			C D S O		+ Pt X Pun	16			C D S O		+ Pt X Pun
17			C D S O		+ Pt X Pun	17			C D S O		+ Pt X Pun
18			C D S O		+ Pt X Pun	18			C D S O		+ Pt X Pun
19			C D S O		+ Pt X Pun	19			C D S O		+ Pt X Pun
20			C D S O		+ Pt X Pun	20			C D S O		+ Pt X Pun
Add up at end		% On T	<i>Total</i> C D S O		<i>Total</i> + Pt X Pun			% On T	<i>Total</i> C D S O		<i>Total</i> + Pt X Pun

Appendix 5

Teacher Questionnaire

1. How easy or difficult was the programme to implement?

Very easy Easy enough A bit difficult (*please circle one*)

2. Which parts were easy to implement?

3. Which parts were difficult to implement?

4. Name two positive outcomes, if any for the selected student.

1.

2.

5. Name two negative outcomes, if any for the selected student.

1.

2.

6. Name two positive outcomes, if any for the whole class.

1.

2.

7. Name two negative outcomes, if any for the whole class.

1.

2.

8. Would you recommend the *C.L.A.S.S* programme to other teachers? Please give a reason.

Yes Maybe No (*please circle*)

9. This research is based on the results of research into how positive reinforcement helps improve behaviour. Would it have been helpful to have received information about how positive reinforcement works?

Yes Maybe No, I already know about positive reinforcement (*please circle*)

Appendix 6
Daily Summary Chart

Daily Summary Chart

Program Day	Length of Session	Maximum Interval between points/ positive feedback	Total Points Possible	Points Needed	Verbal Praise C=coach T=teacher	Show Card	Reward Earned
Coach Phase (10-second point opportunities)							
1	20 min.	30 sec.	40	32	C: 9 T: 1	1:1	Daily
2	20 min.	1 min.	20	16	C: 7 T: 2	1:1	
3	20 min.	2 min.	10	8	C: 4 T: 3	1:1	
4	20 min.	4 min.	5	4	C: 3 T: 4	1:1	
5	30 min.	5 min.	6	5	C: 3 T: 4	1:1	
Teacher Phase (5-second point opportunities)							
6	30 min.	5 min.	6	5	6	1:1	Daily
7	40 min.	5 min.	8	6	8	1:1	
8	60 min.	5 min.	12	10	10	1:2	
9	90 min.	5 min.	18	15	15	1:2	
10	120 min.	5 min.	25	20	20	1:2	
11-12	120 min.	8 min.	15	12	20	1:3	Second day
13-15	150 min.	8 min.	20	16	15	1:3	Third day
16-20	150 min.	8 min.	20	16	15	1:5	Fifth day
21-30	150 min.	10 min.	15	12	15	Card not shown	Tenth day
31-end	Maintenance	10 min.	none	none	15	No card	Occasional

Appendix 7

Average teacher praise per hour, percentage compliance to teacher instruction and percentage on-task behaviour all four selected students and comparison students in the project

	Teacher praise				Compliance to teacher instructions				On-task behaviour			
	Number per hour				%				%			
	Baseline	Intervention	Maintenance	Follow-up	Baseline	Intervention	Maintenance	Follow-up	Baseline	Intervention	Maintenance	Follow-up
Selected Student 1	2	4	3	6	75	96	100	92	76	98	97	92
Comparison Student 1	0	0	0	0	93	100	100	100	95	97	100	100
Selected Student 2	0	12	12	9	75	97	100	100	57	90	82	88
Comparison Student 2	0	0	2	0	93	100	100	100	96	95	95	94
Selected Student 3	0	12	5	5	74	100	98	100	43	96	83	90
Comparison Student 3	0	0	2	0	100	100	100	100	89	95	99	100
Selected Student 4	2	15	9	6	75	99	100	100	61	93	96	97