

Distract, Manage, Encourage, Reward: A Behavioural Intervention for a Primary School Pupil

Catering for children with challenging behaviour is an aspect of school-life that most teachers encounter over the course of their career. This paper reports on the results of a behavioural intervention, implemented with one boy in a mainstream Second Class, in the Irish context. He had acute behavioural problems which were putting his school placement at risk. A bespoke behaviour programme – *Distract, Manage, Encourage, Reward (DMER)* – was designed for him in order to improve his yard-based behaviour. The results of the intervention were positive. A reduction in violent outbursts and an increase in pro-social behaviour were recorded following the programme's implementation. The results had a constructive impact on his school experience.

Keywords: challenging behaviour, fidgets, token-economy, peer groups

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INTRODUCTION

A well-managed classroom environment is an essential component of effective teaching and learning (Westwood, 2015). Most children respond well to teacher-direction, while other children cannot take correction as easily (Bell, Carr, Denno, Johnson and Phillips, 2004). For the latter group – up to 9% of primary school pupils (Turnbull, Turnbull, Wehmeyer and Shogren, 2012) – the words ‘disruptive’, ‘tough’, ‘rude’ and ‘attention-seeking’ may be used to define them (Rogers, 2009, p.10). The key for teachers is in challenging this narrative and understanding that their behaviour is not merely a personality trait, but an outward manifestation of something that is causing them difficulty (Umbreit, Liaupsin, Ferro and Lane, 2007). The teacher's role is to problem-solve with these children and help assuage

their difficulties (Crone, Hawken and Horner, 2010). This article elaborates on that problem-solving process and outlines how the *Distract, Manage, Encourage, Reward (DMER)* programme emerged from evidence-based research, and was implemented systematically to reduce one child's behavioural outbursts.

CONTEXT

Kevin (pseudonym), the subject of the *DMER* programme, was eight years old at the time of its implementation. He was selected for a behavioural intervention, because his school placement was at risk, due to persistent challenging behaviour. This often consisted of kicking, biting, punching, scratching and running from the school grounds onto a busy road. Although a multi-disciplinary assessment (MDA) established that he had significant problems with both socialisation and sensory processing, he was not diagnosed with a behaviour disorder. The MDA concluded that he was of high average intelligence with a good capacity for learning. At the commencement of *DMER*, Kevin was on a shortened day and attended school for ninety minutes only. Yard time was especially problematic, resulting in the school excluding him from this activity for health and safety reasons. The main objective of *DMER* was to improve Kevin's behaviour so that he could be reintegrated back on to yard, without compromising on the safety of other members of the school community.

DEFINING CHALLENGING BEHAVIOUR

Challenging behaviour is generally defined in terms of its effects - both on the person exhibiting the behaviour and on the person or object at which the behaviour is directed (Elgie and Hastings, 2002). Given that the effects of behaviour can be interpreted subjectively, there is 'considerable variability' in the circumstances under which the label 'challenging' may be applied (Elgie and Hastings, p.202). In an Irish education context, the Emerson et al. (1987) definition for *challenging behaviour* has been adopted extensively by schools (Irish National Teachers Organisation, 2004; O'Mahony and Candon, 2006). Under this interpretation, challenging behaviour refers to an act of 'such intensity, frequency and duration that the physical safety of the person or others is likely to be placed in serious jeopardy' (Emerson et al. p.234). In most cases, it limits access to the use of ordinary school facilities and reduces the extent to which the child can participate in classroom activities (Emerson et al., 1987; O'Mahony and Candon, 2006).

Influencing Factors

Some children are more ‘at risk’ of displaying challenging behaviour than others with family dysfunction, intellectual disability, inappropriate television viewing and lack of appropriate role models being amongst the influencing factors (Rogers, 2009, pp.27-28). Although the sphere of research into the behavioural effects of internet usage and online gaming is still evolving, at least one study has established that online activities result in a higher level of physically aggressive behaviour (Lemmens, Valkenburg & Peter, 2011).

Children with sensory processing difficulties (SPDs) often exhibit the most challenging behaviour in schools (Hyche and Maertz, 2014), due to a receptive impairment in their brains, which hinders the ability to process and appropriately respond to stimuli (Molineux, 2017). SPDs may affect any of the senses (Reebye and Stalker, 2007) and depending on the child’s tolerance threshold in each sense, major or minor stimuli could have a significant impact on the child’s ability to regulate (Dunn, 1997). Aggressive outbursts arising from minor classroom scenarios are common in children with SPDs and often these outbursts are ‘misunderstood’ or not viewed in the context of their impairments (Hyche and Maertz, p.9).

School Response: The Three-Tier Approach

The effects for a teacher of having a child with challenging behaviour in a class are broad (Rogers, 2009). Many teachers in this situation report feeling isolated, which highlights the significance of adopting a collaborative approach to dealing with it (Westwood, 2015). As part of that approach, schools need a clear behaviour management policy, which outlines the level of need and supports available

Table 1: Three Tier Approach

‘Three Tier Approach’ adapted from Westwood (2015, p. 71) and Crone et al. (2010, p. 1-4)	
Tier 1 <i>All Children</i>	<ul style="list-style-type: none">• Communicate school rules clearly to all pupils in the school - use of proactive classroom management procedures;• Explicit teaching of self-management skills to all pupils.
Tier 2 <i>Some Children</i>	<ul style="list-style-type: none">• Use of specific programmes to modify behaviour for those at risk of developing patterns of problem behaviour.
Tier 3 <i>Individual Children</i>	<ul style="list-style-type: none">• Provide an intensive intervention to change severe behaviour of an individual pupil with a diagnosed behaviour disorder.

(Crone et al., 2010). Evidence suggests that the *Three-Tier Model* (Table 1) is highly effective in addressing challenging behaviour (Crone et al. 2010; Dunlop, 2013; Jenkins, Oakes, Booker and Lane, 2013; Westwood, 2015). It takes a holistic approach and promotes positive behaviour ‘universally’ (*Tier 1*), on a ‘targeted’ basis (*Tier 2*) and on an ‘individualised’ basis (*Tier 3*) (Crone et al., 2010, p.1). The tiered approach broadly correlates with the Irish *Continuum of Support Model* (Department of Education and Skills, 2007).

EVIDENCE-BASED INTERVENTION STRATEGIES

There are numerous evidence-based interventions to deal with children who present as challenging. Often, the greatest difficulty for teachers is the selection of the most suitable intervention to match the needs of the child (Westwood, 2015). Over the course of this section, research on three relevant *Tier 2* interventions will be examined. The interventions outlined here were selected for Kevin to facilitate socialisation and cater for his sensory processing needs, as these areas were identified in his MDA as significant deficits and potential causal factors for his challenging behaviour.

Token Economy

A token economy is a behavioural management strategy, based on the principles of positive reinforcement, whereby pupils are awarded tokens for displaying desired behaviours (Robacker, Rivera and Warren, 2016). When a child has collected a set amount of tokens, he/she can then exchange them for a reward (Doll, McLaughlin and Barretto, 2013). Although token economies have been the focus of research studies for many decades and their potential to change behaviour is well-established (Chance, 2006; Maggin, Chafouleas, Goddard and Johnson, 2011; Doll et al., 2013; Robacker et al., 2016), they are not without their critics (Kazdin, 1977; Kohn, 1999). It has been suggested that ‘token reinforcement constitutes bribery or blackmail’ (Doll et al., p.142). However, this criticism in a school context appears somewhat overstated because bribery refers to the rewarding of *illegal* behaviour as opposed to children’s *challenging* behaviour (Chance, 2006).

Fidget Toys

Although the popularity of fidget spinners increased exponentially in 2017, fidget toys have been used to aid concentration and calm learners for many years (Isbister, 2017; Schecter, Shah, Fruitman and Milanaik, 2017). While peer-reviewed research on fidget spinners is limited, there is some evidence to

suggest that the concept of a hand-held fidget, distracts children from engaging in undesirable behaviour (Thompson and Raisor, 2013; Murphy, 2014; McGlynn and Kelly, 2017). In order to optimise their use, children must be explicitly taught how to use the fidget for ‘calming impulses’, in order to avoid inappropriate use (McGlynn and Kelly, p.23).

While the available evidence suggests that fidget toys are a useful tool in helping children to regulate their behaviour (Thompson and Raisor, 2013; Murphy, 2014; McGlynn and Kelly, 2017), many schools in Ireland have banned fidget spinners because of the distraction they are deemed to cause in classrooms (English, 2017; Fegan, 2017; Maher, 2017). However, this approach may be misguided because it does not take account of the very purpose of fidget spinners which, to a large degree, *is* to distract (McGlynn and Kelly, 2017). Banning fidget spinners outright may result in more classroom disturbances from children with challenging behaviour, who would benefit from the distraction and stimulation caused by their use (Thompson and Raisor, 2013; Isbister, 2017).

Social Skills Training

Social skills training at a basic level involves the explicit teaching of pro-social behavioural habits and replacing ‘undesirable behaviour’ with a more appropriate alternative (Westwood, 2015, p.91; Combes, Chang, Austin and Hayes, 2016). It is increasingly encouraged in the Irish context to reduce ‘negative processes and behaviours’, and can take numerous different forms (Murphy, 2015, p.3). The two approaches outlined below are the most pertinent, for this research.

(i) Literacy-Based Behavioural Intervention

A literacy-based behavioural intervention (LBBI) is an instructional approach that uses print and pictures to encourage positive behaviours in individuals with disabilities (Bucholz and Brady, 2008). Social Stories™, first developed in 1991 by Carol Gray, are the most common form of LBBIs (Gray, 2010). A Social Story™ is a short account - written using sentences that are affirmative, descriptive and directive - of a scenario that a child may find challenging (Gray, 2000). It is composed from the child’s perspective and prepares him/her for the challenging situation, by outlining a sequence for dealing with it when it arises (Gray, 2000; Anderson, Bucholz, Hazelkorn and Cooper, 2016). Although Gray’s (2010) approach was originally designed for use with children on the ASD spectrum, at least four studies illustrate the effectiveness of Social Stories™ for dealing with behaviours in individuals with other forms of disability (Moore, 2004; Toplis and Hadwin, 2006; Bucholz and Brady, 2008; Anderson et al., 2016).

(ii) Structured Peer Groups

‘Peer influence’ has a significant bearing on the extent to which a child displays pro-social or anti-social behaviour in school (Costello and Zozula, 2018, p.94). This gives teachers useful opportunities for utilising peers to change the behaviour of children who present as challenging (Albrecht, Mathur, Jones and Alazemi, 2015). Bulotsky-Shearer, Bell, Romero and Carter (2012, p.61) have shown that the explicit teaching of ‘peer-play skills’ has an important role in mediating behaviours in children, although the findings of their research must be qualified by noting that their study dealt only with pre-school children. Schroeder’s (2016, p.v) *Socially Speaking* programme endorses the explicit teaching of social skills in a small peer-group setting and teachers have found that, after using the programme, children’s ‘reasoning skills have improved, as has their listening and their ability for turn-taking’. Overall, the efficacy of peer-support systems has been well-established in academic discourse (Laushey and Heflin, 2000; Carter, Hughes, Guth and Copeland, 2005; Jackson and Campbell, 2008).

DISTRACT, MANAGE, ENCOURAGE, REWARD: IMPLEMENTING THE PROGRAMME

The evidence-based interventions discussed above were woven together to create the twelve lessons, which *DMER* consisted of. Each lesson was taught daily by one Special Education Teacher (SET) in a withdrawal setting, immediately prior to a fifteen minute yard break. Kevin’s mainstream teacher contributed to the programme’s design and supported the programme’s implementation in mainstream by offering reminders to Kevin and affirming positive behaviour. The views of both Kevin and his parents were also instrumental in *DMER*’s design. Pupil and parental consent was sought and granted before the programme was initiated. Both Kevin and his parents were given assurances regarding their anonymity, the voluntary nature of their participation and their right to withdraw from the programme at any point. In advance of *DMER*’s implementation, two targets were set by the teachers, parents and Kevin himself:

1. That Kevin would attend yard for 15 minutes daily with his peers, reducing his frequency of violent yard-based outbursts¹ from an average of 1 per day to 2 per week;
2. That Kevin would increase his frequency of initiating positive conversations with his peers on yard from an average of 1 per day to 3 per day.

¹ For the purposes of this intervention, a ‘violent yard-based outburst’, was one where Kevin had to be removed from yard due to the risk posed to himself and others.

To achieve these targets, the instructional sequence outlined in Table 2 was adhered to. A five day pre- and post-intervention period was observed in order to identify any possible changes in behaviour.

Table 2: Instructional Approaches Used in Lessons

Instructional Approaches used in Lessons	
<i>Lessons</i>	<i>Approach</i>
<i>Lesson 1 – 4</i> <i>Techniques to Distract Himself</i> <i>(1-1 withdrawal, direct teaching, teacher-modelling, free play)</i>	<ul style="list-style-type: none"> • Extrinsic Motivation: Token Economy (Robacker et al., 2016) • Effectively using fidget spinners as a means of distraction / satisfaction (McGlynn and Kelly, 2017)
<i>Lesson 5 – 6</i> <i>Techniques to Manage his behaviour</i> <i>(1-1 withdrawal, teacher-modelling)</i>	<ul style="list-style-type: none"> • Social Story™ (Gray, 2010) • Checklist (Crone et al., 2010)
<i>Lesson 6 – 12</i> <i>Techniques to Encourage pro-social behaviour</i> <i>(Group withdrawal, teacher-modelling, pupil-modelling, role-play)</i>	<ul style="list-style-type: none"> • ‘Happiness Chart’ (Schroeder, 2016) • ‘Happiness Certificate’ (Schroeder, 2016) • Dealing effectively with anger (Schroeder, 2016) • Joining a conversation or group (Schroeder, 2016)
<i>All Lessons</i> <i>Each lesson reinforced the Reward system for good behaviour</i>	<ul style="list-style-type: none"> • Token System / Choose Board (Doll et al., 2013) • Positive affirmation (Bell et al., 2004)

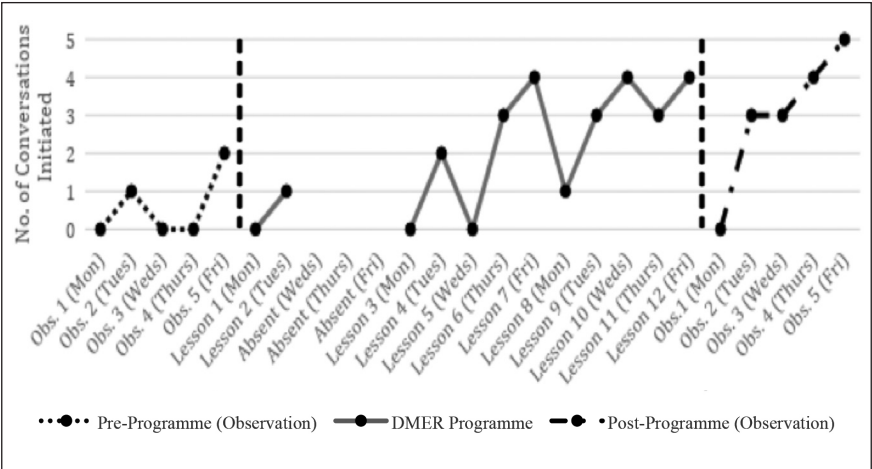
RESULTS

Significant progress was made in relation to both targets set for Kevin. The extent of the progress was gauged by comparing pre-intervention statistics with post-intervention data. For the five days prior to *DMER*, the number of times that Kevin initiated conversation and engaged in violent outbursts on yard was observed. This established a baseline for both targets, and allowed the trajectory of his behaviour over the twelve days of *DMER*'s implementation and the five-day post-intervention observation period to be tracked.

Target 1

The data collected over the research period demonstrated that Target 1 was achieved, following *DMER* (Figure 1). The number of conversations initiated by Kevin increased from an average of 1 during the pre-programme period, to 2.5 initiations during the programme, to 3 initiations during the post-programme period.

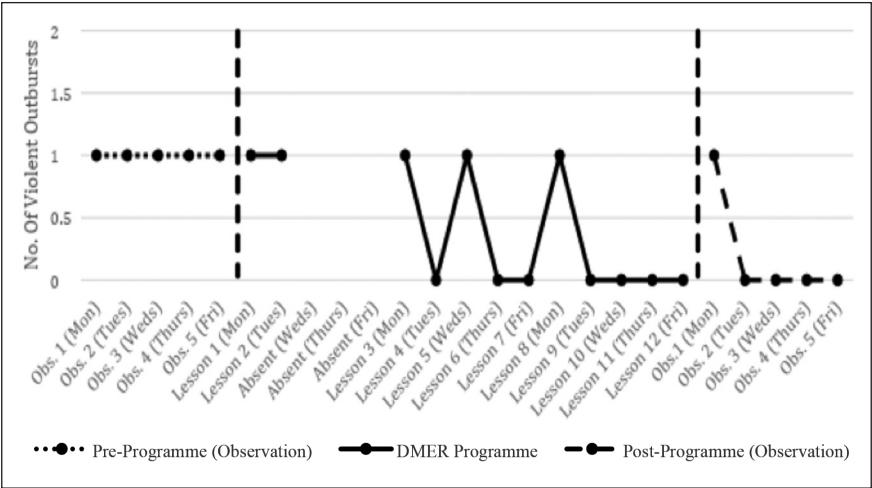
Figure 1: Conversation Initiations



Target 2

The data collected also indicated that *DMER* was successful in achieving Target 2, as Figure 2 illustrates. The frequency of Kevin's violent outbursts reduced from five per week (one per day) before the programme, to one violent outburst in the week subsequent to the programme.

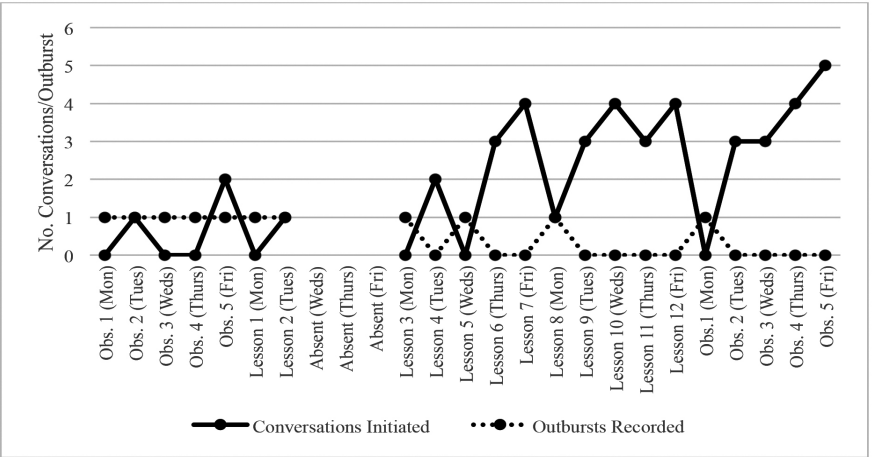
Figure 2: Violent Outbursts



Significant Trend

The data also highlighted an important correlation between the two targets, and in doing so substantiated the connection identified in the literature between positive peer-interactions and positive behaviour (Bulotsky-Shearer et al., 2012; Costello and Zozula, 2018). As Figure 3 illustrates, every day during the programme and

Figure 3: A Comparative Between Conversations Initiated and Outbursts Recorded



post-programme period that Kevin initiated one conversation or less, he engaged in a violent outburst. Every day that he initiated three conversations or more, he did not engage in a violent outburst. This piece of information was critical for his teachers, as it emphasised the important role that initiating positive conversations with his peers had on his general behaviour.

CRITICAL ANALYSIS

The findings of this research demonstrated that there was significant overlap in the factors which influenced the success of each target. This section will critically analyse those factors, using the four themes identified in the intervention's title – *Distract, Manage, Encourage, Reward*.

Using Fidget Toys to Distract

This research corroborated the body of research findings (Thompson and Raisor, 2013; Murphy, 2014; McGlynn and Kelly, 2017) outlining the effectiveness of fidget toys in distracting children from engaging in challenging behaviour. While initially Kevin reacted negatively to their introduction – 'I hate these stupid f**king things' (Day 3) –, ultimately he became a prodigious fidget user. Over the sixteen yard days following their introduction (eleven during the programme and five post-programme), Kevin utilised a fidget spinner on eleven separate days. On seven of these days, Kevin's observable non-verbal and para-verbal communication indicated, that his use of the spinner was in response to escalating behaviour. On five of the seven days, Kevin's behaviour de-escalated after using the spinner for approximately one minute - a 71% success rate in distracting him from engaging in challenging behaviour.

While 71% is impressive, evidence can be extrapolated from the data indicating that its success rate may even have been greater than that percentage figure. While Kevin successfully utilised the spinner to de-escalate on five-out-of-seven occasions, the two occasions in which his de-escalation attempts were unsuccessful occurred *before* Lesson Five. All successful attempts occurred *after* Lesson Five. This is a highly ironic statistic because the lessons on how to use the spinner effectively, occurred *before* Lesson Five. Given Kevin's tendency to rebel against authority, it can reasonably be deduced that the reason for his lack of success with deploying the spinner initially, was related to the fact that the teacher was encouraging him to use it. As soon as the teacher had stopped discussing how effective the spinner was, he started to deploy it successfully to distract himself.

Using Literacy-Based Behavioural Interventions to Self - Manage

Although only two lessons dealt specifically with Social Stories™ (Gray, 2010), the story created for Kevin was reinforced informally every day with his SNA, before he went on yard. Due to Kevin's high abilities in literacy, he reacted well to it. Notwithstanding this, the extent to which it was successful, in limiting behavioural outbursts and encouraging pro-social behaviour, is difficult to quantify. While it is easy to visually observe whether or not a child uses a spinner to de-escalate, the decision by a child to apply a Social Story™ to a given situation is an internal psychological process (Gray, 2010). It cannot be physically seen by an observer. Although many studies have demonstrated the effectiveness of Social Stories™ (Bucholz and Brady, 2008; Anderson et al., 2016) in reducing behavioural issues, the positive results in this research (Figure 2) cannot be completely ascribed to their use. This is because the *DMER* programme also consisted of other interventions – the benefits of which were more readily observable and quantifiable.

Using Peer-Groups to Encourage Pro-Social Behaviour

Activities from Schroeder's (2016) *Socially Speaking* programme were adapted and used extensively in *DMER*. To implement the activities in a real-life context, withdrawal peer groups of between two and four pupils were utilised. This approach proved to be highly successful. As Figure 1 demonstrates, when the modified *Socially Speaking* activities began (Lesson 7), the frequency of Kevin's conversation initiations increased, from an average of less than one per day before, to an average of three per day after Lesson 7.

On every day of the post-programme observation week, Kevin initiated conversation a minimum of three times per yard session, with the exception of Day One - a Monday. This highlights a trend identified over the course of *DMER*. All five Mondays that fell within the research window, were challenging days for Kevin. On each Monday, he had a violent outburst and failed to initiate conversation in all but one of them. Given the importance of fixed routines for minimising challenging behaviour (Rogers, 2009), it could reasonably be argued that the absence from school at the weekend caused the breakdown in behaviour on each of these days. This contention is strengthened, when viewed in the context of the challenging behaviour displayed by Kevin on his return from a three-day midweek absence, as noted in Figure 2. Following all weekend absences, Kevin indicated that he had spent significant portions of the weekend 'on the computer' (Research Diary), which, as studies have shown, may have had a detrimental effect on his subsequent behaviour (Lemmens et al., 2011).

Using a Token Economy to Reward

Notwithstanding the wide array of studies identified earlier outlining the effectiveness of token economies in promoting positive behaviour (Robacker et al., 2016; Doll et al., 2013; Maggin et al., 2011), the system did not work for Kevin. Delayed gratification was a problem for him and he disliked the fact that the teacher controlled the tokens. While the token approach did not work, a reward system of some kind was required to motivate him. He enjoyed the 'Choose Board' and on each day he did not engage in violent behaviour on yard, instead of receiving a token, he immediately selected one activity from the board. Managing the relationship, in the context of the reward system, was a testing balancing act and one of the most challenging aspects of the programme. Kevin could not be rewarded on days when his behaviour was undesirable, while at the same time, the reward could not be so difficult to acquire that Kevin would be unmotivated to achieve it (Doll et al., 2013).

LIMITATIONS

While, overall, *DMER* was successful in improving Kevin's behaviour, its limitations must also be acknowledged. The research occurred over a short five-week window and so the extent to which the behaviour observed during the post-programme observation week will endure long-term, cannot be accurately predicted (Cohen, Manion and Morrison, 2011). In addition, although the interventions selected for *DMER* worked with Kevin, they were specifically selected for him with his needs and personality in mind. The same success cannot be assumed with another child of similar ability, because even a slight change in circumstance may alter the effects substantially (Cohen et al.). Considering this, the overall generalisability of *DMER* is limited. Going forward, there is a need to test the capacity of the programme to change the behaviour of other children displaying similar behaviours to Kevin, in order to justify the use of this format on a widespread basis in schools.

CONCLUSION

To conclude, it is instructive to go back and reflect on the journey taken. Kevin was, and still is, a boy exhibiting very challenging behaviour. School is not easy for him and he frequently acts out. *DMER* dealt successfully with his behaviour on yard at breaktime. Following the programme, his frequency of conversation initiations increased and the volume of his behavioural outbursts reduced. The research also

categorically established a correlation between the frequency of his conversation initiations and his violent outbursts. Although, the *DMER* programme focussed on one portion of his day only, it demonstrated that his behaviour can be changed and improved, especially when structured peer-interaction is built into his routine. As the age-old Chinese proverb reminds us, ‘a journey of a thousand miles begins with a single step’. The success of the *DMER* programme represents that first stride for Kevin in his voyage for a positive school experience.

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