Investigating Sustainability of School-Wide Positive Behaviour for Learning in New Zealand Schools

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Abstract

This research investigated sustainability of School-Wide Positive Behaviour for Learning (SWPB4L) in New Zealand schools. An existing sustainability survey was adapted to fit the New Zealand context and electronically distributed to primary, intermediate, and secondary schools who were implementing SWPB4L; completed surveys were received from 338 school staff who had encountered or been involved with SWPB4L within the schools. The quantitative data strand included respondent ratings of statements relating to key factors of sustainability which have been recognised within relevant literature; these included *prioritisation*, *school leadership*, *external leadership*, programme *effectiveness*, programme *efficiency*, collection and use of *data*, and *capacity building* for staff. Each statement was rated for importance, which provided an insight into which sustainability factors the respondents perceived as important in relation to maintaining SWPB4L, and truth, which provided an insight into how accurately these factors were being applied within New Zealand schools implementing the initiative. The qualitative data strand included short comment answers to two open ended questions relating to SWPB4L sustainability supports and sustainability barriers. Respondent comments allowed for a more in depth analysis of sustainability concepts and identification of unanticipated ideas relating to successful implementation of SWPB4L. Integration of the data strands allowed for meaningful discussion relating to sustainability of SWPB4L in New Zealand schools. The findings suggested that overall the sustainability factors widely considered in existing literature were all considered to be relevant to sustainability of SWPB4L. The respondents placed the highest relative importance on *leadership* within the school and *capacity building* for school staff. Further, *staff commitment*, *communication*, and *consistency* of implementation were also considered to be important for supporting ongoing implementation. The factors of *school leadership, capacity building,* and *effectiveness* were found to be sustainability strengths within the schools. Features of *efficiency* and *external leadership* were found to offer the greatest room for improvement. Conclusions from the current study have led to practical recommendations for understanding and increasing sustainability of SWPB4L in New Zealand schools.

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Chapter One: Introduction

Over the past decade national literature has demonstrated a clear need for an effective behaviour management system in New Zealand schools. There appears to be a twofold challenge, in that students are displaying challenging behaviours that have significant negative effects and the behaviour management methods schools use for managing these behaviours do not appear to be eliciting a satisfactory level of positive change (e.g., Browne, 2013; Parsonson, 2012; Scott, 2005). The literature suggests that the significant number of students who present with challenging behaviours in New Zealand schools is a relevant issue. For example, Gunning (2009) surveyed 575 New Zealand teachers, from 79 primary and intermediate schools, covering 12,787 students, about school behaviours and the impact these behaviours had in the classroom. The teacher responses indicated that on average 21% of students were engaging in behaviours considered to be damaging or disruptive, including behaviours that disrupted the student's learning, disrupted the classroom environment, negatively impacted the social interactions between students, made the student a danger to others, or resulted in damage to property (Gunning, 2009). A further 7% of students were engaging in severe behaviours that included at least three of the behavioural outcomes outlined above (Gunning, 2009). Twenty percent of the teachers reported that the severe behaviours they have encountered in the classroom had negative consequences for their own personal health and wellbeing (Gunning, 2009).

Challenging behaviours in the classroom can disrupt the teaching and learning processes creating a barrier to effective education and long-term academic success for all the students in the class (Browne, 2013; Parsonson, 2012; Ross & Horner, 2007; Scott, 2005; Sugai & Horner, 2006; Sullivan, Long, & Kucera, 2011). In addition, the literature suggested that it is often the low level disruptive behaviours, which occur on a daily basis in the classroom, that can have the greatest impact on the learning environment (Johansen, Little, & Akin-Little, 2011). Students who display behavioural problems are at a higher risk of experiencing negative outcomes than their better behaved peers. Behavioural problems have been linked with negative interactions with teachers, higher rates of school dropout, unemployment, criminal involvement, academic failure, and social difficulties (Browne, 2013; Johansen, Little, & Akin-Little, 2011; Scott, 2005; McIntosh, Filter, Bennett, Ryan, &

Sugai, 2010). Data from the 1977 birth cohort study conducted in Christchurch, found that participants who displayed behaviour problems during childhood, as reported by teachers and parents, had an increased risk of crime, mental health issues, substance use, and social difficulties in adulthood, compared to their well behaved peers (Fergusson, Boden, & Horwood, 2009). Teachers can also experience personal negative effects due to challenging behaviours. For example when faced with problematic behaviour in the classroom it can decrease their confidence, lower their self-efficacy, and contribute to increased stress and professional burnout (Browne, 2013; Johansen, Little, & Akin-Little, 2011; Reinke, Herman, & Stormont, 2013; Ross & Horner, 2007) According to Reinke, Herman, and Stormont (2013) almost half of new teachers give up the profession in the first five years and many do so due to difficult student behaviour. These negative outcomes, associated with behavioural problems, demonstrate the magnitude of the issue.

The New Zealand literature also reported that generally teachers were not adequately prepared to deal with the many and varied behavioural problems exhibited in their classrooms (Browne, 2013; Johansen, Little, & Akin-Little, 2011). Johansen, Little, and Akin-Little (2011) surveyed 42 New Zealand teachers from five primary schools about their perceptions of classroom behaviour management. Their results showed that 84% of their teacher sample felt they had received inadequate, or no, training relating to dealing with behavioural problems. Their review of the course descriptions of teacher training courses offered in five major New Zealand universities, indicated that teachers were not being offered specific training in behaviour management (Johansen, Little, & Akin-Little, 2011).They also found that 88% of their teacher sample reported that classroom mismanagement is *sometimes* or *very often* the cause of problematic student behaviour (Johansen, Little, & Akin-Little, 2011).

According to the literature traditional methods of behaviour management in New Zealand schools often included reactive, punitive, and exclusionary methods, such as office referrals, detentions, suspensions, and expulsions (Browne, 2013; Johansen, Little, & Akin-Little, 2011; Parsonson, 2012; Savage, Lewis, & Colless, 2011; Scott, 2005). These methods involved the delivery of progressively harsher punishments following problem behaviours that tended to result in the student being excluded from the classroom. Rising rates of challenging

behaviours and disciplinary actions in New Zealand schools indicated that these approaches to behaviour management were not providing the long-term positive behavioural change that schools required. Despite their apparent lack of long-term effectiveness such methods had become engrained in the way many teachers were approaching their practice and were often the methods chosen for use because they provided an immediate solution (Browne, 2013; Prochnow, Macfarlane, & Glynn, 2011; Sugai & Horner, 2006). Further, the literature suggested that teachers tended to fall back to these methods when other strategies were not working (Browne, 2013). While these methods are not the only ones being used to try and manage behavioural problems, they are common and concerning.

There is mounting evidence within the literature suggesting that exclusionary techniques such as stand-downs, suspensions, and expulsions, do not decrease problem behaviour and in some cases can aggravate the underlying issues. Further, there is no evidence that exclusionary techniques promote pro-social behaviours or create a positive school environment (Browne, 2013; Collin, 2001; McIntosh et al., 2010; Prochnow, Macfarlane, & Glynn, 2011; Savage, Lewis, & Colless, 2011; Sugai & Horner, 2006; Sullivan, Long, & Kucera, 2011). Suspensions in particular, have been shown to seldom have the desired effect on reducing displays of undesirable behaviours. Hemphill and Hargreaves (2009) found that students who were suspended were 50% more likely to display antisocial behaviours and 70% more likely to display violent behaviours during the twelve months following their suspension than their non-suspended peers. This suggests that suspensions are not a satisfactory method for remediating challenging behaviours displayed by students. Exclusionary behaviour management can create academic difficulties for the student, disengage them from school, alienate them from their teachers and peers, and lead into criminal activity and substance use (Collin, 2001; Hemphill & Hargreaves, 2009; McIntosh et al., 2010; Savage, Lewis, & Colless, 2011; Scott, 2005). The alienation caused by exclusionary techniques can create long term negative effects in relation to social and academic outcomes for students (Collin, 2001; Scott, 2005; Towl, 2013;). The negative effects of exclusionary discipline can also go beyond the suspended student. Exclusionary discipline has been linked with a negative school atmosphere, poor perceptions of school safety by teachers and students, and negative feelings for parents (Hemphill & Hargreaves, 2009). National literature has identified student behaviour as a major challenge faced by New

Zealand schools, and highlighted the fact that traditional behaviour management methods have not been providing an adequate solution, with outcomes for students, teachers, schools, and families at stake, an effective long-term solution is required.

This introduction outlined issues related to challenging student behaviours and unsatisfactory behaviour management strategies in New Zealand schools. The following chapter reviews relevant literature under five key sections. First, the significance of using evidence based practices for behaviour management, in particular those based on applied behaviour analysis. Second, an overview of School Wide Positive Behaviour Support systems which are being used in schools internationally to apply applied behaviour analysis principles as effective behaviour management practice. Third, a discussion of international research relating to sustainability of such practices. Fourth, a brief description of previously used behaviour management services and strategies in New Zealand schools. Fifth, a focus on the School-Wide Positive Behaviour for Learning (SWPB4L) framework being implemented in New Zealand schools. At the conclusion of chapter two the current study and the research questions are introduced. Chapter three (the methodology) outlines the research design and the procedures followed in order to investigate sustainability of SWPB4L in the New Zealand context, including adaptation and delivery of a sustainability survey and collection and analysis of data. In chapter four the results of the current study are presented. Chapter five includes the research implications and conclusions relating to the current New Zealand context. This chapter concludes with a summary of the study limitations, potential directions for future research, and practical recommendations pertaining to sustainability of SWPB4L.

Chapter Two: Review of Literature

Evidence-Based Practices

In order to provide the greatest chance of success, any initiative being employed by schools to address their needs, behavioural or otherwise, should be developed based on evidence-based practices that are linked to desired outcomes. Evidence-based practices are those that are backed up by verified information supporting their effectiveness and suitability (Hicks, Shahidullah, Carlson, & Palejwala, 2014; Hornby, Gable, & Evans, 2013; Sugai & Horner, 2006). The literature recommends that a strong evidence base should include several studies carried out by various independent researchers that demonstrate significant effect of the practice on desired outcomes (Hicks et al., 2014; McIntosh et al., 2010). Ideally, evidence-based practices should be supported by studies that demonstrate replicated positive effects across time, contexts, and settings (Hicks et al., 2014).

The importance of using evidence-based practices was first emphasised in the medical field (Detrich & Lewis, 2012; Wenos & Trick, 2013). Health professionals must use procedures that increase the chance of success and reduce the chance of unexpected adverse effects. Without the demand for evidence-based practices in the medical field using the healthcare system could be like entering the lottery. This sentiment is now being reflected in educational policy and literature (Detrich & Lewis, 2012; Hicks et al., 2014; Hornby, Gable, & Evans, 2013; Wenos & Trick, 2013). For example, in 2001 the United States introduced the No Child Left Behind Act which included a requirement for educational professionals to rely on research based methods to deliver the most beneficial educational services to students (Detrich & Lewis, 2012). New Zealand literature has also recognised the importance of applying research to our educational practices in order to support positive outcomes (e.g., Bourke & Loveridge, 2013; Hornby, Gable, & Evans, 2014; Macfarlane & Margrain, 2011; Smith, 2013).

The primary goal of evidence-based practices in education is to ensure that young people receive the best possible services while being protected from those which are ineffective

(Detrich & Lewis, 2012). *"The assumption is that practices based on sound science are more likely to be beneficial than are practices that have not been rigorously evaluated"* (Detrich & Lewis, 2012, p. 214). Browne (2013) concluded that knowledge and understanding of evidence-based practices can lead to more effective behaviour management in the classroom. Further, Hicks et al. (2014) reported that *"implementation and use of evidence based interventions in school settings can lead to overall school improvement and more specifically may enhance the effectiveness of school psychological services"* (p. 2).

Widespread use of evidence-based practice in education involves identifying suitable practices, providing educational professionals with access to knowledge about those practices, and ensuring that the practices are applicable within school contexts. Identification of evidence-based practices should occur by evaluating the research and scientific analysis of specific practices, focusing on the quality and quantity of the supporting research (Detrich & Lewis, 2012; Wenos & Trick, 2013). Opportunities for regular professional development can provide educators with access to information and training about evidence-based practices. It is hoped that they will use this knowledge to guide their practice based decisions rather than relying on other factors, such as personal taste or cost (Detrich & Lewis, 2012). According to Hornby, Gable, and Evans (2013) schools often rely on anecdotal, rather than empirical evidence to support their practice-based decisions. They suggested that this *"does not help school-based practitioners to differentiate between what really works and what is just well packaged"* (Hornby, Gable, & Evans, 2013, p. 121). Hicks et al. (2014) recommended that specialists such as educational psychologists, can help to bridge this gap by providing schools with expertise and support relating to evidence-based strategies. Accessibility of evidence-based practices must also be supported by their applicability. The effectiveness of any practice will be dependent on its applicability to the targeted behaviour, the desired outcomes, and the situation.

Applied Behaviour Analysis.

A widely accepted form of evidence-based practices used in schools and classrooms are those which rely on the principles of applied behaviour analysis (ABA). ABA is a feature of behavioural science which is interested in interpreting human behaviour and providing meaningful and useful explanations of why people behave the way they do (Alberto &

Troutman, 2009). Alberto and Troutman (2009) define ABA as the *"systematic application of behavioural principles to change socially significant behaviour to a meaningful degree"* (p. 423). ABA methods in classrooms are not a new idea. International literature particularly in the United States, referred to the use of ABA in schools and classrooms from the late 1960s to the present day (e.g., Baer, Wolf, & Risley, 1968; Hanley, 1970; LaVigna & Willis, 2012; Staats & Butterfield, 1965; Staats, Minke, Finley, Wolf, & Brooks, 1964). National literature also contains references to the use of ABA in New Zealand schools dating back to the 1970s (e.g., Ballard, 1983; Glynn & McNaughton, 1978; Glynn & Quinnell, 1971). This has extended into more recent New Zealand literature as well (e.g., Johansen, Little, & Akin-Little, 2011; Savage, Lewis, & Colless, 2011; Parsonson, 2012). ABA provides a method for reducing undesirable student behaviours and for teaching desirable replacement behaviours. ABA emphasises using positive, proactive, and preventative measures in the school environment in order to achieve this change (Savage, Lewis, & Colless, 2011). The literature suggests that ABA can be effectively applied in schools and classrooms in order to create positive behaviour change (Johansen, Little, & Akin-Little, 2011, Lavigna & Willis, 2012; Parsonson, 2012; Sugai & Horner, 2006). Consistent and appropriate use of ABA strategies have been linked with both increased learning and decreased problem behaviours (Johansen, Little, & Akin-Little, 2011; Parsonson, 2012; Sugai & Horner, 2006).

ABA provides guidelines for encouraging desirable behaviours in schools and classrooms. The first step of this process is to identify appropriate replacement behaviours for the undesirable behaviours exhibited and defining what both the desirable and undesirable behaviours look like so that they can be easily recognised (Alberto & Troutman, 2009). An ABA-based behaviour management plan in schools should normally include both positive and negative consequence strategies (Alberto & Troutman, 2009). Positive reinforcement involves delivering desirable consequences, such as points or praise, conditional on displays of desirable behaviours in order to increase the occurrence of positive behaviours (Alberto & Troutman, 2009). Negative strategies involve delivering aversive consequences conditional upon displays of undesirable behaviours in order to decrease the behaviour occurrence rates (Alberto & Troutman, 2009). It is important to note that these 'punishing' strategies are only used in ABA to describe a consequence that decreases the behaviour, unlike traditional behaviour management methods where 'punishment' may be used to

describe any aversive action made in response to problematic behaviour, for example suspension, even when it is not effective for reducing the behaviour (Alberto & Troutman, 2009).

School Wide Positive Behaviour Supports

Positive Behaviour Support (PBS) systems have become a well established methodology for delivering ABA-based behaviour management strategies in an applicable and contextually relevant manner (Coffey & Horner, 2012; Dunlap, Carr, Horner, Zarcone, & Schwartz, 2008; Johnston, Foxx, Jacobson, Green, & Mulick, 2006; McIntosh et al., 2010; Singer & Wang, 2009). Singer and Wang (2009) stated that many of the components of positive behaviour support initiatives originate from ABA and that the two disciplines share the same core theories in relation to behaviour management. PBS systems emerged in the literature in the 1980s and have become embedded in international educational practice over the past decade (Dunlap et al., 2008). These systems were developed in order to provide schools with positive, proactive, and preventative behaviour management initiatives designed to replace the traditional, punitive, reactive, and exclusionary, approaches being taken (Flannery, Sugai, & Anderson, 2009; McIntosh et al., 2010; Sullivan, Long, & Kucera, 2011). The aim of PBS is to create safe and positive school environments, increase prosocial behaviours, and decrease problem behaviours (McIntosh et al., 2010; Ross & Horner, 2007; Sullivan, Long & Kucera, 2011). By doing this, PBS also aims to support academic engagement and positive academic outcomes for students (Lynass, Tsai, Richman, & Cheney, 2012).

Positive Behaviour Support is a three tiered response to intervention framework. The primary tier, known as *School-Wide* Positive Behaviour Support (SWPBS), is a whole school framework designed to support positive behaviours across all students in the school (Safron & Oswald, 2003; Sugai & Horner, 2009; Sullivan, Long & Kucera, 2011). This school-wide tier is designed to deliver preventative behavioural supports which encourage pro-social behaviour and create a positive school climate in order to prevent problem behaviours before they occur (Ross & Horner, 2007; Safron & Oswald, 2003; Sugai & Horner, 2009). This alleviates pressure on the secondary and tertiary tiers, reserving these supports for students with the greatest need. The secondary tier provides more targeted supports to students, or

small groups of students, who do not respond to tier one initiatives. The tertiary tier is reserved for students displaying severe behaviour difficulties and provides intensive individualised supports often delivered by external specialists, such as school psychologists (Safron & Oswald, 2003; Sugai & Horner, 2009). The pyramid diagram which depicts the PBS three tiered response to intervention model is shown in Figure 1. The primary tier which makes up the bottom of the pyramid, is designed to provide adequate support for 80 to 90% of students. The secondary tier is designed to deliver additional supports to 5 to 10% of students. The tertiary tier at the top of the pyramid, is designed to provide intense individual support to 1 to 5% of students with the greatest need (Positive Behaviour Interventions & Supports, 2014). These percentages are designed to represent the relative needs of the general student population.

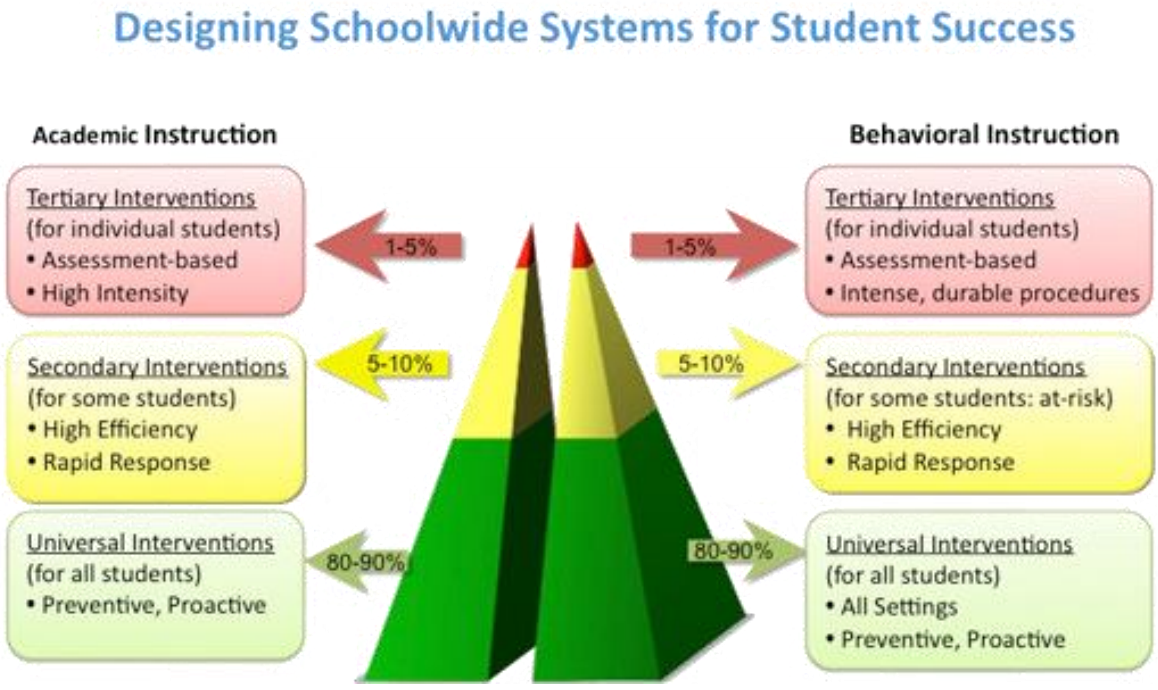

Figure 1. Positive Behaviour Support Response to Intervention Pyramid (Positive Behaviour Intervention & Supports, 2014).

SWPBS is described as a framework because it is designed to be adaptable to the individual school contexts while systematic guidelines ensure that evidence based practices, consistent with ABA, are still being used (Safron & Oswald, 2003; Sugai & Horner, 2009). The levels of behavioural and academic support provided at each tier of the framework are

listed in Figure 1. (Positive Behaviour Interventions & Supports, 2014). The primary tier which will be discussed here, delivers universal interventions for all students and across all settings in the school with a focus on being both preventative and proactive (Positive Behaviour Supports and Interventions, 2014).

The first step of implementation is the creation of a strong support network. In order to achieve this schools are required to establish a team to lead SWPBS in the school (Sugai & Horner, 2006; Warren et al., 2006). Members of this team could include teachers, administrators, parents, and community members (Sugai & Horner, 2006; Warren et al., 2006). The key purpose of the leadership team is to create a proactive action plan for implementation and to monitor progress in relation to that plan (Handler, Rey, Connell, Their, Feinberg, & Putnam, 2007). This leadership team significantly contributes to the success of the framework. They should be representative of the different facets of the school community in order to facilitate effective communication, identify areas of need, connect the school to their wider community, and promote a common goal of overall social improvement (Handler et al., 2007; Sugai & Horner, 2006; Warren et al., 2006). The leadership team should also include people who are credible and reliable and are respected within the school (Handler et al., 2007).

The school leadership team, in collaboration with the wider school community, is usually responsible for developing culturally relevant behavioural expectations. These expectations represent behavioural goals that reflect the values of the school community (Sugai & Horner, 2006). Generally three to five, simple and positively stated, expectations are chosen (Lynass et al., 2012; McIntosh et al., 2010; Warren et al., 2006). *"These expectations help to operationalise the school's mission statement and serve as replacement behaviours for what students are typically told not to do"* (Warren et al., 2006, p.189). For example, *'be safe'*, *'respect yourself and others'*, *'Look after school property'*, and *'be kind'* (Warren et al., 2006). It is useful if the expectations have been operationally defined so that they are identifiable, observable, and measurable by school staff (Sugai & Horner, 2006; Warren et al., 2006). The students should then be actively taught the school expectations so that they are clearly understood (Handler et al., 2007; McIntosh et al., 2010; Warren et al., 2006). Supported methods for teaching the expectations include descriptive posters in classrooms

and school buildings, role playing activities, and relevant reminders from teachers (Warren et al., 2006).

Clear and consistent reinforcement processes must then be put in place in order to recognise when students achieve the behavioural expectations of the school (Handler et al., 2006; Lynass et al., 2012; McIntosh et al., 2010). Reinforcement often involves reward programmes where students earn points or tokens for displaying positive behaviour; often these points or tokens can be 'cashed in' for tangible rewards (Warren et al., 2006). Another common reinforcement strategy is the use of behaviour specific praise, where teachers deliver praise to students that is relevant to their achievement (Warren et al., 2006). Consequences must also be developed and delivered when students display inappropriate behaviours. This may involve specific feedback and/or corrective statements from teachers that identify the undesirable behaviour and provide the student with clear and appropriate alternative behaviours (Warren et al., 2006).

Finally, ongoing data collection is a crucial aspect of PBS systems. This should include the collection of behavioural data such as office referral rates, incident recording, and disciplinary action recording (Newton, Horner, Algozzine, Todd, & Algozzine, 2012; Sugai & Horner, 2009). The data collection process allows schools to monitor their progress, evaluate their implementation efforts, effectively solve problems, and make decisions relating to the framework (Warren et al., 2006; McIntosh et al., 2010). Data collection also supports the use of evidence-based practice (Positive Behaviour Supports and Interventions, 2014).

The foundational principles supporting PBS include selecting practices that have a strong evidence base to support their application and effect, using methods supported by applied behaviour analysis (ABA), and adopting a whole-school approach to behaviour management. These underlying characteristics create a behavioural management system that is preventative, proactive, and positive. There is mounting evidence emerging in the international literature that supports the effectiveness of school-wide positive behaviour support initiatives for decreasing challenging behaviours, reducing office referral and suspension rates, creating a positive school climate, and improving academic achievement in American schools (e.g., Algozzine & Algozzine, 2009; Bradshaw, Mitchell, & Leaf, 2010;

Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008; Chitiyo, May, & Chitiyo, 2012; Reinke, Herman, & Stormont, 2013; Taylor-Greene & Kartub, 2000). As a strong evidence-base for school-wide positive behaviour supports built up in the literature, the research focus shifted towards the need for implementation support in order to produce sustainable success (e.g., Coffey & Horner, 2012; Flannery, Fenning, Kato, & McIntosh, 2014; McIntosh et al., 2010; McIntosh, Mercer, Hume, Frank, Turri, & Matthews, 2013).

Sustainability

Once an initiative satisfies the evidence-based criteria another vital consideration is its level of sustainability. Sustainability is the durable implementation of an initiative over time, to a standard of accuracy that allows desired outcomes to be maintained and reproduced (McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). This definition provides a clearly identifiable and measurable concept of sustainability relevant to educational practices and suitable for research application. Two key mechanisms exist within this definition which contribute to the level of sustainability achieved. First is the use of evidence-based practices which are linked with desired outcomes, such as academic and behavioural success. Second is implementation of these practices with a high level of fidelity. Fidelity refers to the quality of implementation of an initiative. In order for high fidelity of implementation to occur a complete and thorough application of the initiative must take place. This requires accurate use of the practices by educational practitioners in a consistent manner. It is a combination of evidence-based practices and high fidelity of implementation that create sustainable initiatives (McIntosh, Horner, & Sugai, 2009). Thus, sustainability research must consider the effectiveness of a practice, based on empirical evidence linking the practice with desired outcomes, and the correct procedures for accurate implementation, based on a realistic analysis of their practicality and applicability. From such research, conclusions can be made regarding the sustainability of the practice.

High Fidelity of Implementation

International literature emphasises the importance of evidence-based practices being implemented with a high level of fidelity in order to support their sustainability (Coffey & Horner, 2012; McIntosh, Horner, & Sugai, 2009; McIntosh et al., 2011; McIntosh et al., 2013;

McIntosh et al, 2010; Vaughn, Klingner, & Hughes, 2000;). Coffey and Horner (2012) suggested that *"how the innovation is executed (ie., its implementation) is an underemphasised component necessary for transforming the 'promise' of an effective innovation into the outcomes of improved student achievement"* (p.407). According to McIntosh, Horner, and Sugai (2009) a strong evidence base may provide assurance that an initiative is capable of producing a positive effect, while high fidelity of implementation ensures those effects will be sustained. High fidelity of implementation relies on cooperation between research and practice (Browne, 2013; Gersten & Dimino, 2001; Vaughn, Klingner, & Hughes, 2000). If implementation fidelity is poor then an initiative is unlikely to meet the defining requirements of sustainability (McIntosh et al, 2010). This means that evidence-based practices need to be designed to satisfy levels of both effectiveness and implementation fidelity that are required for sustainability (Browne, 2013; Coffey & Horner, 2012; McIntosh et al., 2011; McIntosh, Horner, & Sugai, 2009).

McIntosh et al. (2011) developed a model of sustainability for school-wide positive behaviour support practices being used in the United States and Canada. This model, as shown in figure 2., demonstrates how the key sustainability factors of *prioritisation*, *effectiveness*, *efficiency*, and *continuous regeneration*, play vital roles in supporting high fidelity of implementation and subsequent maintenance of positive outcomes. These concepts have been widely considered in international literature relating to the sustainability of SWPBS initiatives (McIntosh et al, 2013; McIntosh et al, 2010; McIntosh, Horner, & Sugai, 2009).

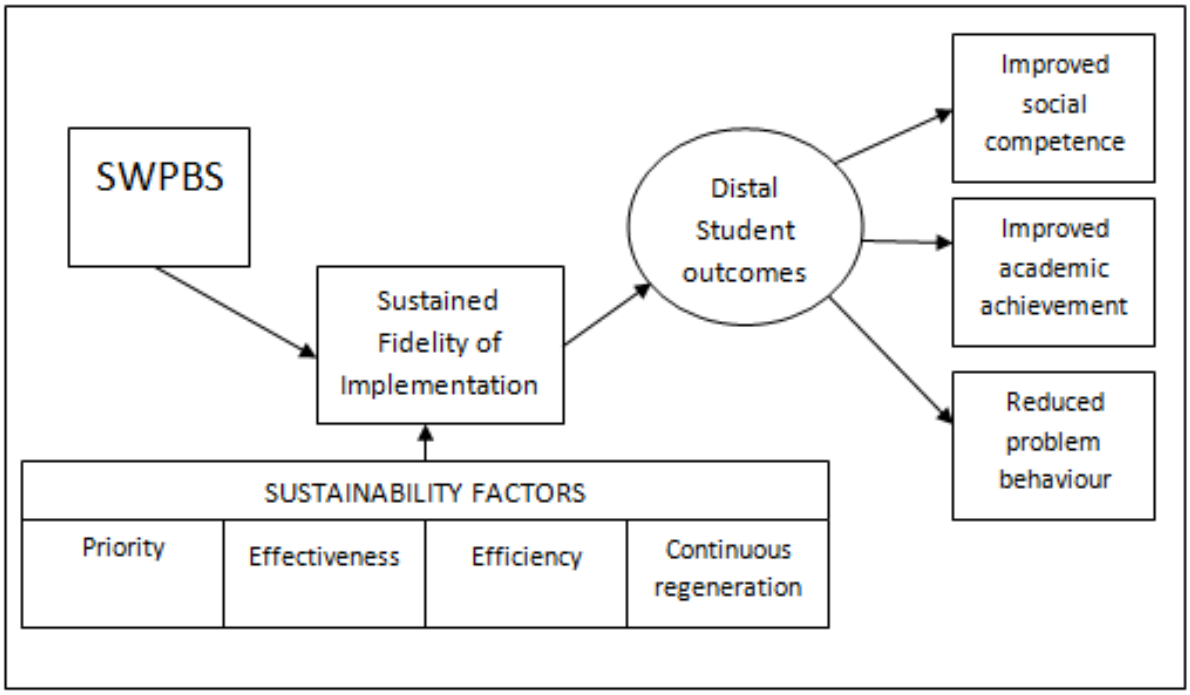

Figure 2. A Model of School-Wide Positive Behaviour Support Sustainability (McIntosh, MacKay, Hume, Doolittle, Vincent, Horner, & Ervin, 2011, p.209).

Consideration and support for these key factors can encourage complete and accurate use of school-wide behaviour support initiatives allowing them to be sustained beyond the initial implementation phase (Sugai & Horner, 2006). It is important to note that in their positive form each of these factors acts on implementation fidelity as a sustainability enhancer, however, in their negative form they are also capable of acting as barriers to sustainability (McIntosh et al., 2011). Relevant international literature relating to each of the sustainability factors included in McIntosh et al's (2011) sustainability model is discussed here.

Prioritisation

Prioritisation refers to the level of importance placed on an initiative compared to other demands and initiatives within the school. According to McIntosh et al. (2013) "(*prioritisation) includes general, often tangible, support for the specific practice amidst a sea of competing initiatives. Priority acts on sustainability by increasing the likelihood that school personnel will engage in implementation activities instead of competing tasks"* (p.294). A high level of priority placed on an initiative motivates schools to continue using

the initiative and improve their practice over time (McIntosh et al., 2010). Conversely, if new initiatives are not prioritised above existing demands and alongside existing initiatives within the school, this can create a barrier to their sustainability (McIntosh et al., 2010; Sugai & Horner, 2006). Prioritisation is effected by several variables including: staff commitment to the initiative, administrative support for the initiative, addressing valued outcomes, and the provision of ongoing financial resources (McIntosh et al., 2013). According to the literature when these variables are achieved an initiative is awarded a high level of priority in schools.

High levels of staff commitment to an initiative are required in order to support high levels of prioritisation. Staff commitment is reliant on their acceptance of the strategies employed within the initiative. According to McIntosh et al. (2013) *"when a practice is aligned with school personnel's personal beliefs, it becomes acceptable, thereby increasing fidelity of implementation and subsequent sustainability of the practice"* (p.294). The literature recommends that at least 80% of staff should 'buy-in' to the initiative before the decision is made to begin implementation (Coffey & Horner, 2012). According to Coffey and Horner (2012) this 'buy-in' should be demonstrated by staff through verbal support for change and actions that allow that change to occur. If staff commitment to an initiative is not established, this may threaten prioritisation and act as a barrier to sustainability.

Internal support for an initiative, coming from key leaders within the school is also closely linked to prioritisation (McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). The literature demonstrates that support from the school leadership team is critical to successfully sustaining implementation of an initiative (Coffey & Horner, 2012; McIntosh et al., 2011; McIntosh et al., 2013). Coffey and Horner (2012) surveyed 117 American schools, from all year levels, regarding the sustainability of school-wide positive behaviour support systems. Their results showed that leadership within the initiative was the most important feature for sustaining practices. This support must be visible to teachers within the school to encourage their continued acceptance and use of those practices (Coffey & Horner, 2012; McIntosh, Horner, & Sugai, 2009; McIntosh et al., 2013). Visible internal support should include open discussion between school staff about the importance of the practices and a shared vision for the overall initiative (Coffey & Horner, 2012; McIntosh et al., 2010;

McIntosh, Horner, & Sugai, 2009). The administrative leaders (e.g., principal, deputy principal, head teachers, support staff, school board members) within a school can support an initiative by providing motivation and direction, emphasising the importance of the initiative, and shielding staff from competing demands to allow time for them to engage in necessary practices (Coffey & Horner, 2012). School administrators can also facilitate prioritisation of an initiative by incorporating it into written policy (e.g. mission statements, school plans, etc.) and by aligning the initiative with existing initiatives in the school (McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). This integration promotes the initiative and allows it to occur more easily within existing school structures (McIntosh et al., 2010). The school team who are responsible for leading implementation of school-wide positive behaviour support systems can also be a vital component of prioritisation and subseqent sustainability (Coffey & Horner, 2012; Sugai & Horner, 2006). It is important that they visibly support the initiative by arranging and attending regular team meetings, sharing outcome data with all staff, and recognising staff achievements (Sugai & Horner, 2006). An internal support system that will enhance prioritisation of an initiative, should include genuine discussion, encouragement, consideration, promotion, availability, and openness from the entire school leadership team for all staff members in the school (Coffey & Horner, 2012; Sugai & Horner, 2006).

In order to be prioritised, an initiative must address outcomes that are highly valued by school staff and the wider school community. *"The priority of a particular practice depends on its perceived value to implementers, recipients, and stakeholders in achieving important outcomes"* (McIntosh et al., 2010, p. 12). Vaughn, Klingner, and Hughes (2000) suggested that evidence-based practices will only have practical value to schools if they can produce outcomes that are meaningful to the staff. Further, teachers are more likely to place importance on practices that deliver valued outcomes (Vaughn, Klingner, & Hughes, 2000). This means that evidence-based practices are only as valuable as the outcomes they can produce (Gersten & Dimino, 2001; Vaughn, Klingner, & Hughes, 2000).

Provision of adequate financial support in order to continue running an initiative is another key aspect of prioritisation and will largely depend on strong support from school staff. McIntosh et al. (2013) suggest that ongoing financial support is a vital component of

sustainability for most schools. According to the literature, in order to support sustainable practice, financial resources should come from a source that is renewed year to year (McIntosh et al., 2013; Sugai & Horner, 2006). If funding is only short-term there is increased risk that the initiative will be abandoned when funding stops (McIntosh et al., 2013; Sugai & Horner, 2006). Once implementation has occurred it is not unusual for attention and resources to be directed to the next priority, often at the expense of the existing initiative, causing implementation fidelity to suffer and making the initiative less sustainable (Sugai & Horner, 2006). It is vital that prioritisation is an ongoing process if quality implementation of an initiative is to be sustained.

Effectiveness

Effectiveness refers to the ability of an initiative to successfully produce desired outcomes (McIntosh et al., 2010; McIntosh et al., 2013; McIntosh, Horner, & Sugai, 2009). Effectiveness is an important aspect of the sustainability model since it is directly linked to the level of implementation achieved by schools (McIntosh, Horner, & Sugai, 2009). It is vitally important that effectiveness is a key consideration for schools when selecting new initiatives. According to Sugai and Horner (2006) schools often considered other factors such as ease of use, cost, or social appeal to inform their decisions and make choices about initiatives. If effectiveness is not established, regardless of other positive characteristics, the initiative may have, it will not be sustained. However the concept of effectiveness, in relation to sustainability, is far more complex than that. Often an initiative will only be effective if high fidelity of implementation is achieved and teachers will only sustain accurate and complete implementation if they observe the practices having a direct effect on desired outcomes, such as improvements in student behaviour and the teaching environment (Gersten & Dimino, 2001; McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). Due to the reciprocal nature of the relationship between effectiveness and implementation fidelity, using evidence-based practices in order to support their effectiveness, is not sufficient to ensure durable implementation. There must also exist a level of perceived effectiveness whereby teachers attribute the positive outcomes directly to the complete and accurate implementation of the initiative (McIntosh et al., 2013; McIntosh et al, 2010; McIntosh, Horner, & Sugai, 2009). Once established, this perceived

effectiveness will continue to be reinforced by ongoing positive outcomes, which will support high fidelity of implementation and sustained use of the initiative over time (McIntosh et al., 2013; McIntosh, Horner, & Sugai, 2009).

The key to perceived effectiveness is observable positive change. Gersten and Dimino (2001) facilitated the implementation of a reading support programme in several American middle schools, kindergartens, and first grade classrooms, and observed factors that enhanced effectiveness and sustained implementation. They concluded that when teachers observed positive change for the students this was a critical factor in their sustained use of the programme (Gersten & Dimino, 2001). Based on responses to their American school sustainability survey, Coffey and Horner (2012) found that visible short-term effectiveness can lead to increased teacher commitment to an initiative and subsequently, sustained implementation. These findings demonstrate the importance of positive results early on in the implementation process. Perceived effectiveness can be further supported through proper training which enhances understanding of the core concepts and practices within the initiative (Gersten & Dimino, 2001; McIntosh et al, 2010). This conceptual knowledge will allow teachers to make cause and effect associations between their practices and desired outcomes, making them more likely to continue implementation efforts to a high standard (McIntosh et al, 2010; McIntosh et al., 2013). Outcome data, collected in relation to an initiative within the school, can also help to increase staff awareness of effectiveness. However, Gersten and Dimino (2001) point out that teachers often find observable changes more convincing than quantitative data and therefore data-based discussion needs to be supported by observable changes within the school in order to have a significant impact on perceived effectiveness and subsequent high fidelity of implementation.

Efficiency

Efficiency relates to the amount of time, effort, and tools required in order to effectively implement a practice that results in desired outcomes (McIntosh et al., 2013; McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). Generally, the more efficient a practice is, or is perceived to be, the more likely it will also be sustainable (McIntosh et al., 2013; McIntosh et al., 2010). In contrast, inefficient practices may lead to poor implementation efforts or complete abandonment by the school staff. In some cases, where evidence-based practices

look good on paper, they may not be so easily translated into practice (Gersten & Dimino, 2001; Vaughn, Klingner, & Hughes, 2000). In order to successfully translate from paper to practice, an initiative must meet certain efficiency criteria. Sugai and Horner (2006) reported that the efficiency of an evidence-based practice should be determined based on *"the costs and benefits of adopting and sustaining the practice"* (p.248). In order to be efficient, the practice needs to have a cost-benefit ratio that is acceptable to schools and their staff responsible for implementation. The cost-benefit ratio concerns the level of expense required to implement the programme in terms of time, effort, and practical resources, against the outcome benefits such as the level of positive behavioural change (Eisner, 1992; Gersten & Dimino, 2001; McIntosh, Horner, & Sugai, 2009; Vaughn, Klingner, & Hughes, 2000). Complete and accurate implementation is more likely to be sustained if schools consider the benefits of the initiative to be worth the resource expenditure associated with implementation. This would indicate an acceptable level of efficiency.

Another vital aspect of efficiency is that the resources required to implement the initiative do not exceed those available within schools (McIntosh, Horner, & Sugai, 2009). This aspect of efficiency is measured by the 'reality principle' which suggests that in order to be efficient, an initiative must include manageable practices that can be realistically carried out alongside the normal daily demands of the school environment (Browne, 2013; Gersten & Dimino, 2001; Gersten, Woodward, & Morvant, 1992; McIntosh et al., 2010). McIntosh, Horner, and Sugai (2009) stated that *"if the resources needed to sustain the practice are so large that they interfere with other practices or exceed the capacity of the school system, the practice cannot be efficient, even if outcomes are immensely valuable"* (p.334). Based on their facilitation of reading support programmes in various educational settings, Gersten and Dimino (2001) concluded that the ability of an initiative to fit the realities of the individual educational context is key to its success. This means that an efficient initiative may look different for each school or year level. Satisfying the reality principle also relies on the initiative becoming easier to implement over time. While initial implementation may inspire greater effort and higher allocation of resources, the initiative must also become integrated in order to be maintained more efficiently over time (McIntosh et al., 2010). Based on this premise, McIntosh et al. (2010) recommended that school leadership teams

should continually seek opportunities to increase efficiency of an initiative such as developing reusable tools and resources.

Continuous Regeneration

Continuous regeneration refers to ongoing adaptation of an initiative in order to improve its fit within the constantly changing school context (Coffey & Horner, 2012; McIntosh et al., 2013). McIntosh et al. (2010) suggested that *"when there is a discrepancy between a practice and the school environment (e.g., student or staff culture), full implementation of the practice is threatened"* (p.11). The challenge arises due to the fact that environments often experience change. The contextual fit of the initiative therefore needs to be an ongoing consideration (McIntosh et al., 2010; McIntosh, Horner, & Sugai, 2009). This involves continually comparing outcomes with practices and recognising how and when those practices need to be adapted or improved in order to continue creating valued outcomes (Coffey & Horner, 2012; McIntosh et al., 2010). However, the literature cautions that during adaptation the essential components of the initiative need to be maintained throughout. If they are lost, then there is a risk that the initiative will be less effective (Coffey &Horner, 2012; McIntosh et al., 2010). According to sustainability literature, all adaptation should be based on relevant data collected within the school and supported by regular capacity building opportunities for staff (McIntosh et al., 2013; McIntosh et al., 2010).

Data should be collected within the school to determine the level of implementation and outcomes achieved (McIntosh et al., 2013; McIntosh et al., 2010). Based on results from their sustainability survey in American schools, Coffey and Horner (2012) reported that the use of such data to guide decision-making and problem-solving processes relating to continued implementation of an initiative, is a key predictor of sustainability. Capacity building for staff can be achieved through regular opportunities for continuing professional development (McIntosh, et al., 2013). Gersten and Dimino (2001) emphasised the fact that in order for sustainability to occur, professional development for staff needs to be ongoing and provided by a knowledgeable source. The quality of the professional development is important and the focus should be on the core principles of the initiative and provide practical solutions and skill-building to address issues within the school, rather than general

or theoretical aspects of the initiative (Coffey & Horner, 2012; Gersten & Dimino, 2001). This form of professional development will more likely support increased staff competence, allowing them to sustain complete and accurate implementation (Coffey & Horner, 2012; McIntosh et al., 2013). According to McIntosh et al. (2013) regular professional development meetings can also help to create a strong support network for the initiative that the staff feel they are a part of. This will more likely provide further support for sustained implementation to a higher standard. McIntosh et al. (2010) recommended the use of demonstration sites, in the form of other local schools who have already established successful implementation of an initiative, in order to provide valuable support for schools during initial implementation. Such demonstration sites can support schools to achieve maximum contextual fit and subsequently be a useful aspect of the continuous regeneration process (McIntosh et al., 2010).

These processes allow an initiative to develop and change, based on the needs of a school. Data collection and capacity building require constant attention in order to allow continuous regeneration to occur and to support sustainability (McIntosh et al., 2013). Coffey and Horner (2012) suggested that school staff should embrace a culture of experimentation, planning, and open and flexible decision-making within an initiative in order to support continuous regeneration. Such regeneration is a vital part of overcoming 'implementation dips' (Coffey & Horner, 2012, p.409), where high fidelity of implementation may wane over time due to changes in school circumstances. Continuous regeneration allows an initiative to adapt in order to continue working alongside changes within a school such as significant turnover of staff or the introduction of competing initiatives (McIntosh et al., 2013).

Importance of Sustainability Research

The importance of sustainability research is highlighted by the fact that many initiatives adopted by schools often do not continue for longer than a few years. For example, Coffey and Horner (2012, p.408) claimed that *"The history of the field of education is littered with the detritus of successful programs that fell out of favour or were just forgotten over time."* New Zealand education has its own history of abandoned initiatives, particularly in relation to behaviour management. Savage, Lewis, and Colless (2011) offered up two examples. First, Lee Canter's Assertive Discipline taken up by New Zealand schools in the early 1990s

and, second, Gary LaVigna's attempt to implement Applied Behaviour Analysis, supported by the Ministry of Education, in the late 1990s, both of which were not continued. Initiatives which are not sustained can result in losses for the school. First, the resources and money spent on setting up, implementing, and daily running of the initiative are not maximised, and are, to a great extent lost, when an initiative is abandoned (McIntosh et al., 2011). Second, the enthusiasm and commitment of school staff is dampened and this can affect their willingness to engage in future initiatives (McIntosh et al., 2011). Repeated abandonment of initiatives may lead to new initiatives being met with cynicism by school staff who may become sceptical about the ability of these initiatives to last (Savage, Lewis, & Colless, 2011; McIntosh, Horner, & Sugai, 2009). McIntosh et al. (2011) suggested that *"hesitant staff realise that if they wait long enough, it is only a matter of time before the new program will join the others in the virtual graveyard of discontinued initiatives"* (p.208). Finally, when implementation of an evidence-based initiative is not sustained the potential positive outcomes for present and future staff and students within the school are lost as well (McIntosh et al., 2011).

The literature also warned that if implementation of an initiative cannot occur in a sustainable way, schools tend to revert back to traditional methods of behavioural management (Browne, 2013; Coffey & Horner, 2012; Sugai & Horner, 2006). This would not be a desirable outcome for New Zealand schools. The reviewed literature recommends that sustainability should be a key consideration when developing and implementing evidence-based practices in schools (e.g., Coffey & Horner, 2012; McIntosh et al., 2013; McIntosh et al., 2011; McIntosh, Horner, & Sugai, 2009). Relevant research, particularly within the first few years of implementation, can identify factors which act as either sustainability enhancers or sustainability barriers. These results can be translated into practical recommendations for schools in order to strengthen their practices and make them more likely to be maintained.

Behaviour Management in New Zealand

Numerous methods of behaviour management have been tried in New Zealand schools. A litany of services and strategies have been introduced that have had limited success on effecting positive behavioural change, particularly in the long term. The continued focus on

behavioural problems reported in the New Zealand literature highlighted the ongoing need for more satisfactory methods to be introduced. During the 1990s suspension rates in New Zealand schools began rising steadily and despite initiatives to reduce these rates, exclusionary methods continued to be used (Drewery & Keckemeti, 2010). Collin (2001) noted that suspension rates increased significantly from just over 4000 in 1991 to almost 12,000 in 1998. According to Hancock and Trainor (2004), these rates continued to rise from approximately 10,000 in 1996 to 22,000 in 2002. The literature offered several possible explanations for these rising suspension rates. One suggestion was that schools were suspending students as a means to access support services that would not have otherwise been made available. Suspension was seen as an indication of need and therefore allowed students to obtain special education supports (Collin, 2001; Hayden, 1997). Another suggestion was that attitudes in New Zealand schools at the time were seen as supportive of increased use of suspensions. Schools often used suspension as an option for difficult students because it offered them a fast solution. Further, after having suspended a student once, schools often increased their use of the suspension process, suggesting that it changed from a last resort practice to a way of temporarily removing a problem from the school (Collin, 2001). During the 1990s, zero tolerance policies were also popular in schools as a means of setting a strong example, indicating that schools were taking a tougher stance towards discipline, with suspensions being delivered more often and for a wider variety of behavioural problems (Collin, 2001). There was further suggestion that the rise could have been linked to changes made to the New Zealand Education Act in 1989 (Collin, 2001). First, schools were given more responsibility for their own marketing and revenue gathering. Suspending students with behavioural difficulties allowed schools to present themselves as safer and therefore more appealing to prospective families and potential financial supporters. Second, the Act (1989) presented suspension as a relevant option for managing harmful or dangerous student behaviours. Use of this option increased as it was seen as a means to protect other students and teachers within the school (Collin, 2001; Towl, 2013). The Act gave schools the authority to stand-down or suspend students who displayed behaviour that either set a dangerous or harmful example to other students, or put other students at risk of danger or harm (Collin, 2001; New Zealand Education Act, 1989).

New Zealand schools were suspending students for various reasons, including violence, verbal assault, drug use, theft, damaging property, and ongoing disobedience (Collin, 2001). Towl (2013) investigated the outcomes for three students who had been stood down from New Zealand secondary schools. The findings indicated that identifying the initial cause of the negative behaviours displayed by the students and reintegrating the students back into the school community should be a vital part of the process (Towl, 2013). Each of the students was able to identify events that had lead to their misbehaviours. As an example, one student had identified unresolved bullying as the reason for his/her original act of violence towards another student (Towl, 2013). Problem resolution strategies that were combined with communication and shared goals between the school, the students and their families were shown to contribute to successful reintegration back into the school communities and a decrease in behaviours that lead to the students being stood down in the first place (Towl, 2013). The ABA approach would suggest that a more preventative model of behaviour management can be implemented in order to identify and satisfactorily resolve environmental issues being faced by students prior to exclusionary discipline occurring. While stand-downs and suspensions are still options available to New Zealand schools, the literature suggests that more proactive methods of behaviour management could provide faster and more satisfactory outcomes (Collin, 2001). Collin (2001) concluded that *"since suspension is meant to be a 'last resort' careful consideration needs to be given to the alternatives to suspension"* (p.21).

During the 1990s restorative justice practices gained popularity in New Zealand schools (Drewery & Kecskemeti, 2010). Restorative justice practices focus on redirecting the target of behavioural management from perceived problems or deficits in the individual student to environmental influences and community structures which are supporting student behaviours (Wearmouth, McKinney, & Glynn, 2007). They also emphasise reparation rather than punishment, with an overall aim of fostering growth for students who are experiencing challenging behaviours (Jansen & Matla, 2011; Macfarlane & Margrain, 2011). Restorative practices have an overall view of utilising fair behaviour management methods that restore student inclusion and participation in the school community in order to mediate behavioural problems (Drewery & Kecskemeti, 2010; Jansen & Matla, 2011; Wearmouth, McKinney, & Glynn, 2007). Often these practices follow a process whereby the circumstances

surrounding behavioural incidents are identified and discussed, the harm associated with these incidents is acknowledged, and the process of repairing the harm is completed to allow all parties involved to move forward (Jansen & Matla, 2011). Restorative justice in schools may take the form of conflict resolution, mediation, or victim-offender conferencing in order to resolve problems in an inclusive way, and which also promotes healing, avoids blame, and restores harmony and relationships (Drewery & Kecskemeti, 2010; Wearmouth, McKinney, & Glynn, 2007). Restorative justice is built on a foundation of respect for everyone involved in the process, including offenders, victims, families, and schools (Drewery & Kecskemeti, 2010). These processes appear to provide a promising positive approach to behaviour management that moves away from more punitive or exclusionary methods (Wearmouth, McKinney, & Glynn, 2007). Restorative justice practices still exist in many New Zealand schools and they support a positive reintegration process following behavioural issues (Towl, 2013). However, they are still a reactionary, rather than preventative approach to behaviour management.

In 1999 the Ministry of Education developed the Severe Behaviour Initiative. *"The severe behaviour initiative involves behaviour specialists working with children and young people displaying severe and challenging behaviour that may endanger themselves or others, damage property, or affect their social interactions and learning"* (Office of the Auditor General, 2009, p.57). The specialists involved in the severe behaviour initiative include educational psychologists, special education advisors, highly experienced teachers, and behaviour support workers (Office of the Auditor General, 2009). The severe behaviour initiative was designed to deliver support to students referred by schools and deemed to have the greatest need in relation to their behaviour (Office of the Auditor General, 2009). Funding is provided through the Ministry of Education and the initiative was being allocated $24-34 million each year (Office of the Auditor General, 2009). While estimates of the number of students displaying behavioural difficulties in New Zealand schools ranges from 2-6%, the severe behaviour initiative was reserved for 1% of students requiring the most intensive support, reaching between 4000 and 6000 students (Office of the Auditor General, 2009). According to the Office of the Auditor General (2009), Ministry of Education staff have witnessed an increase in the quantity and complexity of severe behavioural needs in New Zealand schools. This is overwhelming the services available within the severe

behaviour initiative and burdening other areas of support, such as school-based professionals (Office of the Auditor General, 2009). The literature suggests that, while the severe behaviour initiative serves a purpose for New Zealand schools, additional supports are needed for students displaying lower-level behavioural difficulties (e.g., Johansen, Little, & Akin-Little, 2011; Parsonson, 2012; Scott, 2005). Support at this level might alleviate the pressure on the severe behaviour initiative by preventing student behaviours from escalating to a point where such services are required.

In 1999 the Ministry of Education set up the Resource Teacher: Learning and Behaviour (RTLB) service in order to provide New Zealand schools with itinerant teachers who could support the needs of students experiencing moderate learning or behavioural challenges (Towl, 2007). Regional clusters of RTLBs were assigned in order to provide support to local schools (Towl, 2007). The aim of the RTLB service was to increase student participation and engagement, improve social and behavioural relationships, increase learning, and help teachers manage students with moderate learning and/or behavioural needs (Towl, 2007). RTLBs were designed to be available in schools to assist with students, identified by classroom teachers, who need extra support (Towl, 2007). The Office of the Auditor General (2009) suggested that RTLBs were often left to manage the overflow of students who were overwhelming the severe behaviour initiative. This flow-on effect meant that neither service was able to effectively manage all the students they were designed to support. According to Towl (2007) the 2004 review of the RTLB service carried out by the Education Review Office, indicated that there were inconsistencies between RTLB clusters in the delivery of services and the level of positive change in cluster schools. Towl (2007) further concluded that little evidence of effectiveness and a lack of clarity and consistency in relation to roles and protocols were major concerns in relation to the RTLB service.

School-Wide supports that incorporate all students in preventative and positive ways, are gaining popularity over targeted interventions for individual students (Scott,2005). There is continued focus on using positive strategies, rather than punitive responses, to improve student behaviour (Parsonson, 2012). Behaviour management strategies that utilise ABA methods continue to be supported. For example, through interviews with New Zealand students, Andersen, Evans, and Harvey (2012) found that teacher delivery of rewards and

praise for good behaviours coupled with consistent warnings and consequences for negative behaviours, promoted a positive and predictable classroom environment for the students and supported a positive and empathetic relationship between the teacher and the students. In relation to behaviour management specifically, they found that teachers who delivered positive strategies, with consequences being preceded by positive reminders and opportunities to correct behaviour, the classroom climate was considered more fair and reasonable by the students (Andersen, Evans, & Harvey, 2012). The importance of a positive school climate and good relationships between students and their teachers has been recognised as a key part of encouraging positive behaviours (Anderson, Evans, & Harvey, 2012; Marsh, McGee, & Williams, 2014). For example, Marsh, McGee, and Williams (2014) found that positive student perceptions of their relationships with teachers was positively correlated with positive perceptions of the classroom climate. Further, positive perceptions of classroom climate was predictive of less aggressive behaviour, such as weapon carrying and hurting others, and other conduct problems in the classroom (Marsh, McGee, & Williams, 2014). The desire to reduce the rate of exclusions in New Zealand schools continues to be reflected in the literature (e.g., Collin, 2001; Towl, 2013). A greater appreciation of the importance of evidence-based practices for managing student behaviour has emerged in the literature (Bourke & Loveridge, 2013; Church, 2003; Griggs, Walker, & Hornby, 2011; Macfarlane & Margrain, 2011). For example, Bourke and Loveridge (2013) discussed the importance of engaging with research to inform practice and they concluded that *"to fully understand each child and their learning, our role as educational professionals and teachers requires us to constantly ask new questions and then search for evidence, for solutions, for generating new possibilities of practice"* (p.21). Critically, the literature reflects the need for effective and sustainable behaviour management practices in order to achieve these ideals in the New Zealand educational sector.

School-Wide Positive Behaviour for Learning

In 2009 the Ministry of Education (MOE) held a Student Behaviour Summit (Taumata Whanonga) in order to find a solution for the escalating issue of behaviour and address concerns surrounding behaviour management practices in New Zealand schools (Ministry of Education, 2014). The aim was to bring together teachers from all levels including early

childhood, primary, secondary, school administrators, parents and the Ministry of Education in order to develop a focused approach to behaviour management based on consistency and shared goals. As a result of the Taumata Whanonga the Positive Behaviour for Learning (PB4L) Action Plan was created. PB4L is a series of behaviour management strategies and services made available to New Zealand primary, intermediate, and secondary schools across the country (Ministry of Education, 2013). The New Zealand PB4L initiative is modelled on the international positive behaviour support systems. Further, PB4L is a three tiered response to intervention framework based on a pyramid of need similar to that underpinning international school-wide positive behaviour supports (see figure 1., p.9).

The tiered framework includes numerous programmes and initiatives made available to New Zealand schools by the MOE in order to support students at each level of need. A summary of the support services available at each tier of PB4L are presented in Figure 3.

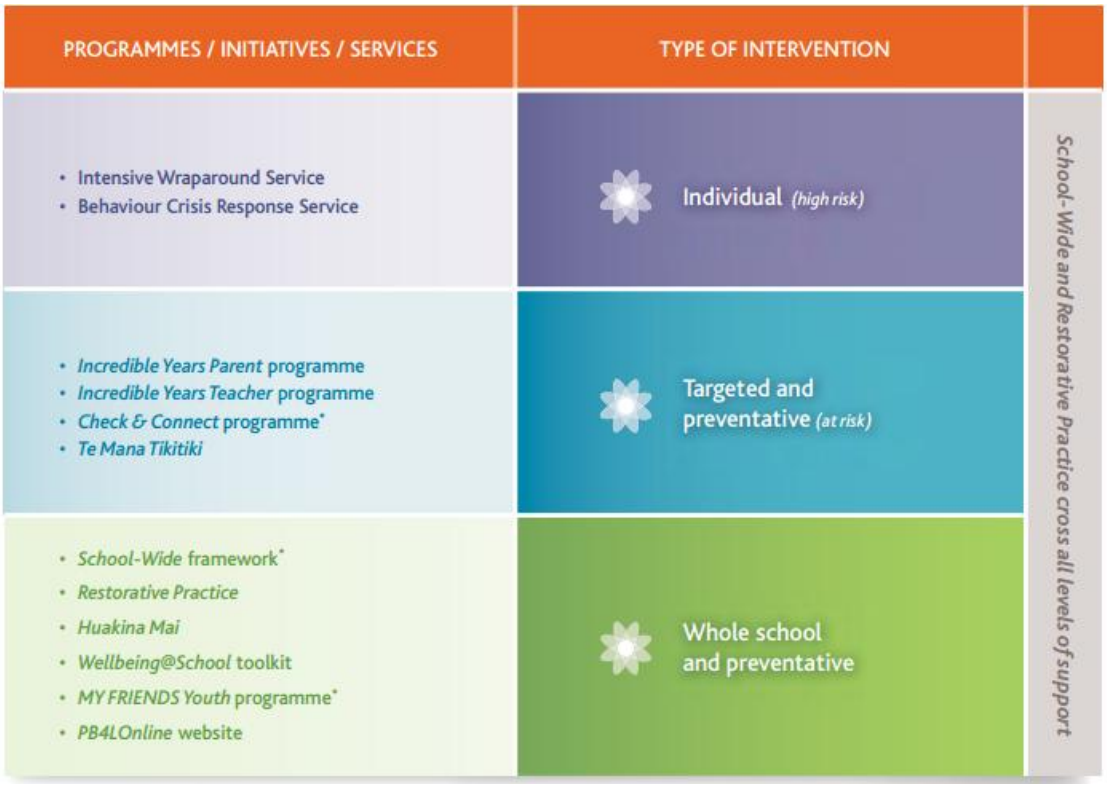

Figure 3. Summary of Positive Behaviour for Learning Initiatives (Ministry of Education, 2013, p.6).

The primary tier focuses on the delivery of school-wide initiatives that provide clear and consistent behavioural support to all students in the school and aims to meet the behavioural needs of the majority of New Zealand students. Tier two provides for approximately 0-15% of students who do not respond to the primary tier school-wide behaviour supports (Ministry of Education, 2014). Often tier two supports include targeted interventions for individual or small groups of students, delivered by in-school specialists, such as Resource Teachers: Learning and Behaviour or Education Support Workers. The MOE provides programmes, initiatives and services to support delivery of supports at each tier. For example, the Incredible Years Parent and Teacher training programmes were designed to support the primary and secondary initiatives. These programmes provide training in best practices for effective behaviour management to parents and teachers. Approximately 2,500 New Zealand teachers of students aged three to eight years participate in the Incredible Years Teacher training programme annually (Ministry of Education, 2013b). The programme provides training in positive relationship building with students, prevention of challenging behaviours, using positive behavioural strategies to change behaviours, motivating children, and helping children learn (Fergusson, Horwood, & Stanley, 2013; Ministry of Education, 2013b). The programme is delivered by special education staff from the Ministry of Education with monthly sessions held for the first six months and a follow up session three months later on completion (Fergusson, Horwood, & Stanley, 2013; Ministry of Education, 2013b). Fergusson, Horwood, and Stanley (2013) evaluated the Incredible Years teacher programme by analysing data gathered on 237 New Zealand primary school teachers who had completed the training. Their results indicated that teacher satisfaction with the content and delivery of the Incredible Years training was high (Fergusson, Horwood, & Stanley, 2013). Further, their evaluation demonstrated that the Incredible Years teacher programme significantly increased the use of positive behaviour management strategies in an effective manner by teachers who had completed the training (Fergusson, Horwood, & Stanley, 2013). Tier three provides for approximately 0-5% of students with the greatest behavioural needs (Ministry of Education, 2014). These supports are delivered by Ministry of Education specialists, such as educational psychologists and special education advisors. For example, the intensive wraparound service which provides high-level specialised support for students with significant needs and the behaviour crisis response

service which is an emergency service that provides initial stabilisation in a school crisis. Each of these programmes and services was developed so that the MOE could provide New Zealand schools with supports that suited the identified needs.

The focus of the present study is the primary tier of supports, known as School-Wide Positive Behaviour for Learning (SWPB4L). The MOE describes SWPB4L as a framework, made up of practices and systems, which can be adapted by schools to meet the needs of their students and community (Ministry of Education, 2013b) This is achieved by providing participating schools with a continuum of behaviour and learning practices, systems, and supports over a three to five year period (Ministry of Education, 2013b). Many of the strategies incorporated in the SWPB4L framework are not new ideas. Instead, tried and tested components of behavioural management have been combined to create a unique framework with a clear implementation process that is adaptable to the values and needs of each individual school community. The overall aim of SWPB4L is to decrease behavioural problems and their associated negative effects. The initiative also offers teachers strategies that encourage them to abandon reactive and punitive responses to problem behaviours, but to increase pro-social behaviours, improve social and academic student achievement, and create positive school environments that are more conducive to successful learning and positive behaviour outcomes (Savage, Lewis, & Colless, 2011).

In order to meet these goals SWPB4L follows similar systematic guidelines for implementation as international positive behaviour support systems. These guidelines are summarised by the Ministry of Education (2014). Schools begin by establishing a leadership team within the school in order to facilitate implementation. Members of this leadership team participate in relevant professional development over the first twelve months in order to support implementation. The school develops behavioural expectations that are relevant to the school and the wider community. In order to encourage students to achieve these expectations positive and negative consequence strategies are put in place in order to reinforce student behaviours. Anecdotal reports, in the form of feedback from schools posted on the Ministry of Education (2014) website suggest that these guidelines have supported changes in the way that behaviour management is approached. For example, school rules which often outlined what students are not meant to do, have been replaced

with positive expectations that help teach students which behaviours are appropriate (Ministry of Education, 2014).

Prioritisation of Positive Behaviour for Learning

The Ministry of Education is currently prioritising the implementation of SWPB4L into as many New Zealand schools as possible. Initial implementation of SWPB4L began in 2010 with 87 primary schools (Ministry of Education, 2013a). As at July 2013, 408 New Zealand schools were participating in the framework; 51% were primary schools, 34% were secondary schools, and 15% were intermediate schools (Ministry of Education, 2013a). According to the Ministry of Education Indicator Report, released in 2013, these figures indicate that they are on track to have 828 schools implementing SWPB4L by 2017. It is important to note that some New Zealand schools had already been implementing independent school-wide positive behaviour support systems, prior to the Ministry of Education creating SWPB4L. Many of these schools were able to successfully integrate SWPB4L into their existing behavioural systems. The Ministry of Education (2013b) has prioritised implementation of SWPB4L into low decile schools and into schools with more than 50% Maori and Pasifika students. This prioritisation was established in order to deliver SWPB4L to the schools with the greatest need. In order to support successful implementation and prioritisation of PB4L, the Ministry of Education (2013a) also emphasises the importance of having full staff commitment and, in line with recommendations in international literature (e.g., Coffey & Horner, 2012), requires support for the SWPB4L framework from at least 80% of the staff before a school can begin implementation. According to the Ministry of Education (2013a) support for SWPB4L remains high among participating schools. During PB4L training sessions 68 SWPB4L team leaders and 40 SWPB4L coaches were asked to rate the likelihood that they would recommend the framework to other schools (on a 10-point likert scale, 10 being *most likely)*; 80% responded with an 8 or higher (Ministry of Education, 2013a). A further 165 SWPB4L school staff members completed the same rating with 72% responding with an 8 or higher (Ministry of Education, 2013a). These results suggested that acceptance of the SWPB4L framework was near 80% among participating schools.

New Zealand literature also demonstrates significant financial prioritisation of SWPB4L. According to the Ministry of Education's Positive Behaviour for Learning Action Plan (2013b, p.4) *"Funding for PB4L came from reprioritisation of $45 million of Ministry of Education funding (2010-2014). The Government provided further one-off additions of $15 million in the 2009 and 2012 Budgets and $63.6 million in the 2013 Budget."* This funding is being used to allow New Zealand schools to adopt SWPB4L and for the Ministry of Education to continually evaluate and improve the wider Positive Behaviour for Learning initiatives (Ministry of Education, 2013b). SWPB4L schools receive $10,000 annually, from the Ministry of Education, for the first two years of implementing the school-wide framework, then an additional $10,000 when the tier two initiatives are established (Ministry of Education, 2014). This funding is provided to support SWPB4L training initiatives within the school (Ministry of Education, 2014).

Positive Behaviour for Learning and Evidence Based Practice.

SWPB4L currently relies quite heavily on the use of ABA strategies and the international evidence-base to support implementation. In 2013, the Ministry of Education released an indicator report outlining their preliminary findings in relation to the effect of SWPB4L in New Zealand schools. According to this report, during the first two years of implementation, stand down rates in SWPB4L schools had decreased significantly, compared to schools not implementing the framework. Prior to the implementation of SWPB4L these schools had 60% higher stand down rates than did the comparison schools. In 2011 this difference had decreased to a 20% higher rate (Ministry of Education, 2013a). In 2009, when SWPB4L implementation began, schools were standing down an average of 4.62% of students in a year, by 2011, three years after initial implementation, this had decreased to an average of 3.86%. In comparison, schools not implementing SWPB4L saw a slight increase in stand down rates from 2.88% in 2009 to 3.22% in 2011 (Ministry of Education, 2013a).

The Ministry of Education (2013a) also compared the NCEA Level one achievement rates in eighteen SWPB4L schools and eighteen comparison schools from prior to SWPB4L implementation in 2009, and again during the first, second, and third years of implementation, (2010, 2011, and 2012). Their results showed that NCEA achievement rates in SWPB4L schools had increased from forty-seven percent in 2009 to an average of fifty-

three percent in 2012, an increase of six percentage points (Ministry of Education, 2013a). In comparison, schools not implementing SWPB4L, only had an increase of two percentage points (from 56% to 58%) in NCEA achievement rates during the same period (Ministry of Education, 2013a). The differences between the improvements made in SWPB4L schools and in comparison schools are particularly impressive in consideration that SWPB4L was initially delivered to schools with the greatest level of need. These results demonstrate promising trends of increased academic achievement and decreased use of exclusionary disciplinary actions in schools participating in SWPB4L.

The Ministry of Education's (2013a) SWPB4L Indicator Report also indicated that conceptual understanding of the framework was high amongst school staff who received official SWPB4L team training. The data that was collected during SWPB4L coach and team leader training, shows that 91% of the participating staff (n=110) either *"agreed or strongly agreed that they had a good understanding of the key features of SWPB4L"* (Ministry of Education, 2013a, p.11). The Ministry of Education (2013a) also asked school staff to rate (on four occasions over a five day training period), whether they had a good understanding of the key features of SWPB4L. On average, 98% of the participants (n=165) either *agreed* or *strongly agreed* across the four ratings. These results indicated that school staff, who had completed SWPB4L training, had a reasonable level of conceptual knowledge relating to the framework. While these preliminary findings are promising, a more substantial evidence-base for SWPB4L, that includes empirical research carried out by independent researchers, is needed to strengthen the use of SWPB4L in New Zealand schools.

There is some national literature that supports the use of school-wide positive behaviour support practices in the New Zealand context. While not directly related to SWPB4L, this research does provide some support for aspects of the framework. For example, Savage, Lewis, and Colless (2011) interviewed staff in two schools who had been implementing school-wide positive behaviour support systems for several years (independently from SWPB4L). These interviews were coded for key themes relating to the implementation of such systems within the New Zealand school context. The researchers concluded that *"all the participants were extremely positive about the impact of school-wide positive behaviour support on behaviour"* (Savage, Lewis, & Colless, 2011, p.31). School data from one of the

schools showed reductions in the number of disciplinary referrals from 452 in 2004 (year of implementation) to 162 in 2007 (Savage, Lewis, & Colless, 2011). Qualitative data from the same school also suggested a reduction in specialist interventions since implementation (Savage, Lewis, & Colless, 2011).

Additional New Zealand educational literature contain reviews that support components of SWPB4L for use in New Zealand schools (e.g., Parsonson, 2012; Scott, 2005). While reviews cannot demonstrate direct effect of these components, they do represent promising academic consideration within the New Zealand context. Scott (2005), focused on the school-wide approach to behaviour management and found that such strategies have been linked with reductions in suspensions and office referrals, as well as improved student belonging, engagement, and overall academic achievement (Scott, 2005). Scott (2005) also suggested that the underlying values of the school-wide approach, for example a shared school vision and an inclusive school community, are aligned with those of the New Zealand school system. Parsonson (2012) discussed evidence-based behaviour management strategies appropriate for use in the New Zealand classroom. Within the review, Parsonson (2012), advocated for the effectiveness of many of the SWPB4L strategies. For example, the use of behavioural expectations, positive reinforcements, and preventative strategies, in order to reduce disruptive behaviours in the classroom. Parsonson (2012) concluded that all of the behaviour management strategies supported within the review are *"consistent with, and complimentary to the New Zealand Ministry of Education's Positive behaviour for Learning School-Wide strategy"* (p.21). As SWPB4L gains momentum in New Zealand schools hopefully more national research evidence, containing empirical findings, will begin to emerge to provide a more contextually relevant evidence base for the framework. While it is sometimes necessary to look towards international educational strategies, a warning from Savage, Lewis, and Colless (2011) emphasises the importance of following it up with our own national data; *"Implementation of overseas behavioural packages without local evidence in New Zealand has in the past resulted in previous lost investment in the system"* (p.36).

Despite these indications of support for SWPB4L, there is some suggestion in the literature that the behaviour management approaches supported by SWPB4L represent a significant

shift from traditional approaches being used by teachers in New Zealand schools. SWPB4L moves away from the traditional behaviour management strategies, discussed previously, and towards more positive and preventative methods, such as teaching school-wide expectations and rewarding desirable behaviours, that are employed proactively in order to prevent problem behaviours from taking place. According to Savage, Lewis, and Colless (2011) this shift can require teachers to change their long held beliefs about behaviour. Their research participants indicated that this presented a significant challenge for most teachers. During their investigation of teacher perceptions of behaviour management, Johansen, Little, and Akin-Little (2011) found that 61% of their New Zealand teacher sample believed that positive behavioural interventions do not work. Qualitative responses from the teachers also indicated that many teachers felt that the individual students were the reason these methods were unsuccessful, for example *"the child does not want to change"* (p.7). The school-wide aspect of SWPB4L also represents a shift in the way many New Zealand school systems work. The school-wide approach emphasises the provision of environmental behaviour supports, from a preventative standpoint, to all students in the school. According to Scott (2005) this differs from traditional behaviour management methods used in many New Zealand schools which tend to see a significant amount of time, effort, and school resources being allocated to providing more individualised supports to a minority of students who display severe behavioural problems. New Zealand literature also suggests that behavioural issues are often seen as a problem within the individual students, rather than as a product of school systems or environments (Johansen, Little, & Akin-Little, 2011; Parsonson, 2012; Scott, 2005). The school-wide approach is about shifting this view and addressing problem behaviour as a whole school issue to be dealt with at a school-wide level (Scott, 2005; Sugai & Horner, 2006). Since teacher commitment is such a vital aspect of prioritisation, which in turn supports sustained implementation, it is important that school staff are provided with support and professional development to help them understand the practices being used within an initiative. If the shift required to align staff values and beliefs with those of an initiative is too difficult, this may represent a barrier to sustainability.

Supporting Successful Implementation

Data collection and professional development aspects of the SWPB4L framework have been carefully developed to support successful implementation in schools. The Ministry of Education have employed regional SWPB4L practitioners to provide implementation support and training to participating schools, as at July 2013 the MOE had 19 practitioners throughout New Zealand and were looking to employ more of these roles (Ministry of Education, 2013a). Data from one region indicated that three practitioners were supporting an average of twenty-four schools each (Ministry of Education, 2013a). These practitioners help schools set up data collection systems in order to gather behavioural data (Ministry of Education, 2013b). They support the school to develop relevant and appropriate behavioural expectations (Ministry of Education, 2013b). They provide training for school staff in positive behaviour management strategies to prevent undesirable behaviours as well as response systems for dealing with undesirable behaviours (Ministry of Education, 2013b). As with the school leadership team, it is important that the SWPB4L practitioners are seen to actively support use of the framework in their local schools. Based on their findings Savage, Lewis, and Colless (2011) strongly emphasised the importance of an external support system including parents, families, and the local community. SWPB4L schools should work with their local community to develop behavioural expectations and positive reinforcers that reflect community values and beliefs (Savage, Lewis, & Colless, 2011). Parents and families should be invited into the SWPB4L process and feel that they are genuinely part of the initiative. This might mean that the school holds community meetings that are accessible and welcoming to parents and families (Savage, Lewis, & Colless, 2011).

The Ministry of Education provides measurement tools for data collection in relation to SWPB4L implementation; the data provided by these measures is useful both to individual schools and at a nationwide level (Ministry of Education, 2013a). These tools include the PB4L School-Wide Evaluation Tool (SET) that is completed annually by all New Zealand schools participating in SWPB4L and measures the extent of implementation (Ministry of Education, 2013a). Another measure is the Benchmarks of Quality (BOQ) rating scales. This measurement is completed by SWPB4L schools once their SET scores indicate an average of eighty percent implementation (Ministry of Education, 2013a). The BOQ scales relate to the universal features of SWPB4L and identify areas of strength and weakness (Ministry of Education, 2013a). According to the MOE (2013b) ongoing evaluation of SWPB4L

implementation will ensure that the framework continues to grow and develop in order to meet the needs of the New Zealand education sector.

Summary

This chapter has discussed evidence-based practices in terms of what they look like and why they are important. Principles of applied behaviour analysis have been presented as a well established and effective methodology for creating positive behavioural change. The conceptual foundations and systematic guidelines that support international School-Wide Positive Behaviour Support systems have been discussed. Research relating to sustainability of these systems has been reviewed and four key sustainability factors have been identified, including *prioritisation, effectiveness, efficiency*, and *continuous regeneration*. The importance of sustainability research has been established. A brief summary of previous behaviour management initiatives used in the New Zealand education sector has revealed that previous methods have not successfully addressed the behaviour management issues that have been highlighted in the national literature over the past decade. The School-Wide Positive Behaviour for Learning (SWPB4L) framework which was introduced by the Ministry of Education in 2009, has been described and considered in relation to evidence-based practice, prioritisation, and support for implementation. This leads into the focus of the current study which aims to investigate the sustainability of SWPB4L in New Zealand schools.

The Current Study

The purpose of this study is to provide an indication of what sustainability of SWPB4L looks like, from the perspective of New Zealand school staff and in the New Zealand school context. Further, through an examination of key sustainability factors recommendations and suggestions have been made that may further enhance the sustainability potential of the SWPB4L framework in New Zealand schools. This was achieved using an adapted version of an existing sustainability survey created by McIntosh, Doolittle, Vincent, Horner, & Ervin (2009). McIntosh et al's (2009) measure is called the *School-Wide Universal Behaviour Sustainability Index – School Teams (SUBSIST)* which they describe as; *"an instrument*

designed to assess the variables that enhance or prevent sustainability of universal tier school-wide positive behaviour supports" (McIntosh et al., 2010, p.210). Their reason for creating the SUBSIST was twofold. First, to test the reliability of their sustainability model for reflecting true features of sustainability of school-wide positive behaviour supports in schools. Second, to provide a measure for use by school teams, that provided information relating to the overall factors affecting sustainability and identified areas for improved sustainability of evidence-based practices. This particular measure was considered to be relevant starting point for investigating the sustainability of SWPB4L in New Zealand as the framework was modelled off the same practices that the SUBSIST was designed to evaluate. The measure was adapted to suit the purposes of the current research and to reflect SWPB4L in the New Zealand context.

Research Questions

In order to investigate the sustainability of the SWPB4L initiative currently supported in New Zealand schools the following research questions were used:

1. What factors are important for sustainability of SWPB4L in New Zealand schools?
2. What are New Zealand schools doing well in order to support ongoing implementation of SWPB4L?
3. What implementation improvements could be made in relation to SWPB4L in order to enhance the sustainability potential in New Zealand schools?

Chapter Three: Methodology

Research Design

The current study examined the perspectives of staff in New Zealand primary, intermediate, and secondary schools, who were currently implementing School-Wide Positive Behaviour for Learning (SWPB4L). This study identified current areas of strength and potential areas for improvement in relation to sustainability, which have been translated into practical recommendations for enhancing successful implementation of SWPB4L. Further, this study supports understanding of sustainability features for evidence based practices, such as SWPB4L, in the New Zealand educational context.

A convergent mixed methods design was used. This mixed methods design allowed for collection of different, yet complementary, data relating to the research questions. This involved concurrent collection of quantitative and qualitative strands of data. These data strands remained independent during the collection and analyses phases of the research and converged during interpretation. The mixed methods design allowed the researcher to utilise the strengths of both quantitative and qualitative data collection in order to provide different insights into the research questions (Bartholomew & Brown, 2012; Caruth, 2013). The convergent mixed methods design was useful for gaining a complete understanding of the research topic. The data strands were given equal priority with each designed to serve a purpose. The quantitative strand of the current study utilised likert rating scales to directly investigate known sustainability concepts based on existing literature (Bartholomew & Brown, 2012; Zohrabi, 2013). The qualitative strand utilised open-ended questions to support, validate, and expand on the quantitative findings (Caruth, 2013; Mayoh & Onwuegbuzie, 2014; Zahrabi, 2013). This resulted in a measure of sustainability that allowed for meaningful analyses and gave the respondents a voice which uncovered novel or contextually specific ideas and elaborated on the current understanding of sustainability concepts. The convergent mixed methods design was considered to be the most appropriate design for the current study in order to elicit in-depth data which strengthened aspects of the data analysis and supported meaningful discussion about the outcomes.

Sustainability Measure

A sustainability survey was designed and used to gather the data (Appendix A). The survey structure and content were based on McIntosh, Doolittle, Vincent, Horner, and Ervin's (2009) *School-Wide Universal Behaviour Sustainability Index – School Teams* (SUBSIST). As described in the summary of the previous chapter, the SUBSIST was designed to evaluate the sustainability of school-wide positive behaviour support systems being used in American schools (McIntosh et al., 2010). The SUBSIST evaluates the ability of a school to sustain positive behaviour support initiatives at a school-wide level; the content of the survey reflects key factors that support or prevent sustainability as discussed in the review of relevant literature (McIntosh et al., 2010). Based on expert panel ratings of the SUBSIST content the instrument has high reliability (*r* =.94) and strong validity (content validity index = .95) (McIntosh et al., 2010). This suggests that the SUBSIST is a consistent and true measure of school wide behaviour support system sustainability. McIntosh et al. (2010) also carried out a pilot study which demonstrated high test-retest reliability (*r* = .96) and inter-rater reliability (*r* = .95) for the SUBSIST. The pilot study also showed a reasonable level of concurrent validity between the SUBSIST and, another widely used measure of school-wide support systems, the School-Wide Evaluation Tool (SET) (*r* = .68) (McIntosh et al., 2010). McIntosh et al. (2010) concluded that the SUBSIST is a suitable instrument for measuring the key factors of sustainability in relation to school wide behaviour support systems to inform research; they acknowledged that due to the length of the measure it is impractical for regular use by schools.

For the purposes of this study, while retaining all of the original sustainability factors evaluated by the SUBSIST, the survey was significantly shortened in order to make it more user friendly. The statements were also adapted to specifically reflect SWPB4L in the New Zealand context**.** For example, references were made to New Zealand specific school supports such as the Ministry of Education and school Boards of Trustees. The ratings scales were simplified. For example the SUBSIST asked respondents to give current and retrospective ratings on four separate scales for each statement, the current study reduced this to current ratings across two scales.

There were ten sections in the survey including an initial section for collecting relevant demographic data; followed by eight quantitative sections regarding *prioritisation, school leadership, external leadership, effectiveness, efficiency, data collection, capacity building*, and *potential barriers,* which pertained to the key factors of sustainability. A final section included two open answer questions for collection of qualitative data. Within the eight quantitative sections there were 33 statements relating to SWPB4L. The respondents rated each statement on two 5-point likert scales; first '*How true is this statement for your school?'* and second, *'How important do you think this is for sustainability of SWPB4L (keeping the framework going)?'.* The five point likert scales ranged from *'not at all (0-5%)'* to *'completely (90-100%),* with a *'Don't know/NA'* option for each statement. The first set of ratings provided truth scores relating to the accuracy of the sustainability factors within the respondents' schools. This identified which key factors were sustainability strengths and which represented potential areas for improvement. The second set of ratings provided sustainability importance scores for each key factor and also acted as an internal validation and reliability measure of the sustainability factors included. Where relevant, the respondents were also asked to indicate, on a multiple choice basis, what they based their ratings on. This provision was included in order to examine the sources of information being used by the respondents. Each statement also included an optional comments box to allow the respondents to elaborate on their ratings. This was included to widen the data gathered and to provide more insight for discussion.

The demographic information included eight multiple choice questions relating to general information, such as the respondent's role in the school, the characteristics of each school, and the initial year of SWPB4L implementation within each school. These questions were an important part of the survey as they provided variables for data grouping and analysis while allowing the respondents and the participating schools to remain anonymous. The two final open answer questions allowed the respondents to provide their perspectives on *'the most important factors for sustaining SWPB4L'* and *'the most significant barriers to sustaining SWPB4L'.* These questions were designed to elicit further relevant information or elaboration relating to SWPB4L sustainability that may not have been adequately reflected in the rating scales. These questions also provided an insight into which factors were

considered to be the most influential overall in relation to SWPB4L sustainability. Completion of the survey was estimated to take between 10-15 minutes.

Survey Review and Pilot Study

The survey was reviewed by a regional Positive Behaviour for Learning practitioner from the Ministry of Education and was considered to be representative of factors related to sustainability of SWPB4L in New Zealand. This process also assisted with the adaptation of the terminology used in order to align the language of the survey with that used in the SWPB4L framework. Prior to distribution of the survey an informal pilot study was conducted with a small sample of staff (*n* = 5) at one school in the central North Island. The aim of the pilot study was to evaluate the survey suitability for data collection. The participants were asked to review each question based on clarity, relevance, and ease of understanding. The participants were also asked to consider the appropriateness of the survey presentation, the amount of time and effort required to complete the survey, clarity and completeness of the introduction information, and general ease of use and understanding. All of the participants felt that the survey was easy to understand and relevant to the SWPB4L framework. The length and ease of completion was considered reasonable. The final survey was considered to be clear and understandable to staff working in SWPB4L schools.

Participants

The participants were from New Zealand primary, intermediate, and secondary schools who were implementing the SWPB4L framework at the time of the study. A list of 516 relevant schools was obtained from the Ministry of Education. Initial contact was made via email to the school principals, inviting them and their staff to participate (see Appendix B). This email introduced the research purpose and process, outlined participation requirements, discussed consent procedures, and provided contact details for the researchers and research supervisors. An attached information sheet provided a more detailed account of the necessary information for full informed participation (see Appendix C). The email provided the school principals with a web-link to the sustainability survey for distribution to the school staff at their discretion. The survey respondents included any member of the

school staff who had encountered SWPB4L within the school; there was no limit placed on the number of responses accepted from an individual school. A total of 433 responses were received, 338 of which were deemed eligible for analysis, where at least 80% of the questions were answered. The respondents were not asked to supply any identifying information in order to encourage complete and honest disclosure in responses, limit bias, and reflect ethical practice. It was, therefore, unknown exactly how many schools responded. Details of the respondents' demographic data are included in the results chapter.

Ethics

Standard university ethical protocols were followed as this research was carried out in accordance with the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants (Massey University, 2014). A low risk notification was submitted to and accepted by the Massey University Human Ethics Committee (see Appendix D). The low risk notification statement was included on all public correspondence.

At each stage of the current study consideration was given to the Massey University (2014) guidelines for carrying out ethical research. A number of steps were taken to ensure that the current research project was carried out in accordance with these guidelines. The principals of all schools invited to participate in the research received a full explanation of what the research involved in the initial email sent (3.11 *Informed and Voluntary Consent).* The principals of schools invited to participate were informed that distribution of the electronic survey link to their staff was at their discretion and indicated consent to participate (3.11 *Informed and Voluntary Consent*). Further, the principals of participating schools and the survey respondents were informed that no school or individual identification data would be requested and that survey submission was anonymous (3.12 *Respect for Privacy and Confidentiality)* The survey respondents were clearly informed about the nature of the study and the use of the data collected (3.11 *Informed and Voluntary Consent*). It was made clear that completion and submission of the survey indicated consent for the responses to be included in the final data set (3.11 *Informed and Voluntary Consent*). All respondents were informed that a summary of the results would be provided to all schools invited to participate (4.26 *Formulation and Publication of Results*). All respondents

were assured that this study was not designed to evaluate individual schools or school staff, but would provide an overall picture of SWPB4L sustainability in the New Zealand context. The researcher expressed appreciation for the time and effort of the respondents upon completion of the survey (3.9 *Respect for Persons*). The respondents were informed that the findings of this study could create greater awareness of the sustainability strengths and areas for improvement in relation to SWPB4L in New Zealand Schools and that this knowledge would likely benefit all schools implementing the framework (3.16 *Justice*).

Data Analysis

Quantitative

The quantitative data included ordinal data from respondent ratings of the sustainability statements, within each sustainability factor, for truth in their school (truth ratings) and general importance for sustainability (importance ratings). These ratings provided the dependent, or outcome, variables for analysis. The quantitative data also included categorical data relating to the respondents' demographic characteristics. These data provided the independent, or predictor, variables for analysis. The quantitative analysis was completed using IBM Statistical Package for the Social Sciences (SPSS) 22.0. Due to the number of statistical procedures being carried out the confidence interval selected was 99% for all tests and the threshold for significance was .01 in order to reduce the risk of Type I errors (Field, 2013). Based on precedents set by previous research (e.g., Wigley, 2013) and the large number of responses (Field, 2013) the ordinal data were analysed using parametric tests. Further, in several cases the results were compared with non-parametric test results and the outcomes were similar. As there were no specific hypotheses relating to the outcomes two-tailed tests were used for all statistic analyses.

Importance scores for each sustainability factor were calculated for all of the respondents. These scores were calculated by taking each respondent's mean importance rating across all statements within each factor. A series of paired samples *t*-tests were carried out to compare the mean importance scores between the sustainability factors, in order to identify significant differences in the perceived importance of each factor for supporting sustainability of SWPB4L. Initially, one way analyses of variance (ANOVAs) were carried out

between the importance scores for each sustainability factor based on the respondents' roles, the years of SWPB4L implementation, and the school deciles in order to identify significant differences in perceived importance of each sustainability factor. These initial variables were considered to be the most relevant for analysis. However, since it was the first time that the current survey had been used and SWPB4L sustainability has not been previously investigated in the New Zealand context, further ANOVAs were also carried out based on the remaining demographic variables in order to identify any unanticipated differences. Where the Levene statistic was significant (p <.05), and homogeneity of variance could not be assumed, suggesting that the parameters within the sample varied significantly, the Welch alternative f-score is reported. The Games-Howell Post Hoc test was used to identify where significant differences were occurring. This test was considered appropriate as it does not rely on assumptions of equal sample sizes or homogeneity of variances.

Truth scores for each sustainability factor were also calculated for all of the respondents. These scores were calculated by taking each respondent's mean truth ratings across all statements within each factor. A series of paired samples *t*-tests were carried out to compare the mean truth scores for each sustainability factor in order to identify significant differences between the perceived accuracy of each sustainability factor in relation to SWPB4L in the respondents' schools. One way ANOVAs were carried out to compare the mean truth scores across the demographic variables in order to identify significant differences in the perceived truth of the sustainability factors based on school and respondent characteristics. As with the importance scores, where the Levene statistic was significant (p <.05), and homogeneity of variance could not be assumed, the Welch alternative *F*-score was reported. The Games-Howell Post Hoc test was used to identify where significant differences were occurring. A series of paired samples *t*-tests were carried out to compare the mean truth scores with the mean importance scores, for each factor, in order to identify any significant differences between the perceived importance of a factor for supporting sustainability of SWPB4L and its perceived accuracy within New Zealand schools implementing SWPB4L. These results are presented in the following chapter.

Qualitative

The qualitative results included responses to two open ended questions at the end of the survey. The first question asked the respondents to comment on which supporting factors they believed were important for sustaining SWPB4L. The second question asked respondents to comment on what they believed the most significant barriers to sustaining SWPB4L were. The responses were analysed through thematic coding. A deductive code, based on the key factors of sustainability identified in the literature, was created to guide the initial coding process. The researcher colour-coded the comment responses for the themes of *prioritisation, school leadership, external leadership, effectiveness, efficiency,* collection and use of *data*, and *capacity building*. The coding was based on key words and phrases within the comments. If a comment could not be categorised within the deductive code themes it was initially coded as 'other'. The 'other' category was then coded to inductive, or purely data-based categories, based on key word patterns. In some cases the comments made by the respondents clearly alluded to more than one theme and were subsequently coded to both; for this to occur the comment had to include two clearly separate points relating to sustainability. Clear separation had to be demonstrated by a full-stop, a comma representing listed points, or (joining) words such as 'and' that indicated a new point was being made. Some respondent comments, that contained unclear meanings, were labelled 'ambiguous' and were not coded to any theme.

An inter-rater was used to test the validity of the initial coding. The inter-rater agreed with the coding of frequently reoccurring key words, for example 'funding' and 'buy-in' as aspects of *prioritisation*, and 'time' and 'resources' as aspects of *efficiency*. Coding was then compared for more complex responses, including those categorised as 'other' and those not containing identified key-words. Inter-rater reliability of coding was high, suggesting that the initial coding was valid. Where the coding between the researcher and the inter-rater did not match discussion took place until an agreed theme was identified. Based on this discussion the coded themes for four comments were changed and one comment was considered ambiguous when agreement could not be reached. The results from the thematic coding are presented in the following chapter.

Chapter Four: Results

This chapter outlines the results, which are presented in two sections. First, the quantitative results are described followed by the qualitative results. As the analyses for the two research strands (qualitative and quantitative) were carried out independently they are not integrated or compared within this chapter.

Quantitative Results

The demographic data, which provided the independent, or predictor variables, for the analysis are presented and described. The respondent's importance scores, which are their average importance ratings across each set of relevant statements, are examined for each of the sustainability factors. This is followed by an examination of the respondent's truth scores, which are their average ratings of truth in their schools for the statements within each sustainability factor. The SPSS output for comparisons within the sustainability factors and across the demographic variables are presented and explained. The SPSS comparisons between the importance and truth scores are also presented and explained.

Demographic Data

The demographic data provided by the respondents are shown in Table 1. The wide range of demographic variables indicated that the sample was representative of many different school characteristics within the SWPB4L school population. This allowed for in depth analysis of SWPB4L sustainability within various New Zealand school contexts. All 338 complete responses are represented in all of the demographic categories, except for the primary role of the respondents (21 non-responses), the year level of the respondents' schools (15 non-responses), and the initial year of SWPB4L implementation (10 non-responses). Where respondents held more than one 'role' they were asked to choose the first applicable role on the list. The list in Table 1 is ordered the same as the survey.

Table 1

Respondent Demographic Data

Role	Principal	Administrator	SWPB4L Team Leader	SWPB4L Team Member	Classroom Teacher	Teacher Aide	Non-responses	Total
n	65	18	41	45	142	6	21	338

Region (North)	Northland	Auckland	Wai-kato	Bay of Plenty	Gis-Bourne	Hawkes Bay	Tara-naki	Manawatu Wanganui	Welling-ton	Total
n	9	44	29	31	4	4	20	27	34	202

Region (South)	Tasman	Nelson	Marlborough	West Coast	Canterbury	Otago	Southland	Total
n	2	1	5	5	85	36	2	136

Decile	1	2	3	4	5	6	7	8	9	10	Total
n	21	38	61	35	67	30	39	31	15	1	338

Year Level	Primary (Years 1-6)	Full Primary (Years 1-8)	Intermediate (Years 7 & 8)	Secondary (Years 7/9-13)	All Levels (Years 1-13)	Non-responses	Total
n	57	72	48	146	0	15	338

Com-munity	Rural	Semi-Rural	Suburban	City	Total
n	53	68	101	116	338

Enrol-ment	1-50	51-100	101-150	151-300	301-500	500+	Total
n	3	21	16	80	123	95	338

Start Year	2006 or earlier	2007	2008	2009	2010	2011	2012	2013	Non-responses	Total
n	8	0	4	8	33	76	80	119	10	338

In order to give an indication of the minimum number of schools that participated in the research the demographic variables were categorised to look for differences. Due to the complexity of accurately sorting the responses into demographic levels of difference this was limited to four variables including school deciles, regions, communities, and enrolment. The data was first sorted by decile indicating at least ten schools participated, then this data was sorted by region in order to calculate how many different schools were from different deciles within different regions. The data were further sorted by community and enrolment variables in the same fashion. Based on variations in these demographic variables at least 178 schools were represented. This represents 34% of the total schools invited to participate. While satisfactory, this calculation only provided an estimate of the minimum number of participating schools, due to the limitations placed on the categorised

demographic variables and the fact that it cannot account for more than one school within each identical set of demographic categories.

Within the sample 43% of the respondents were from secondary schools, this may be due to the fact that secondary schools tend to have a higher number of staff than other schools and therefore more responses could be collected from each individual school. The high number of responses from secondary school staff may have also contributed to the fact that 42% of the respondents held the primary role of classroom teacher and 89% of the schools had more than 151 students. Thirty-six percent of the respondents were from low decile (1-3) schools, 51% were from medium decile schools (4-7), and 14% of the respondents were from high decile (7-10) schools. The majority (35 %) of the respondents' schools began implementation of SWPB4L in 2013. This may have been due to the fact that SWPB4L was a fresh initiative within these schools making school staff more enthusiastic towards relevant tasks. Overall the level of response received was a significant strength of the current study and supported meaningful outcomes within the data.

Importance Scores

The descriptive statistics, including the total number of analysed responses and the mean and standard deviation for the importance scores are listed for each sustainability factor in Table 2. These results show that on average *school leadership* (*M*=4.68, *SD*=.53) was perceived to be the most important factor for sustainability of SWPB4L compared to the other factors. This was followed by the other factors in the following order; *capacity building* (*M*=4.53, *SD*=.61), *efficiency* (*M*=4.40, *SD*=.68), *effectiveness* (*M*=4.38, *SD* =.66), *data* (*M*=4.37, *SD*=.37), and *prioritisation* (*M*=4.30, *SD*=.67). On average, *external leadership* (*M*=4.37, *SD*=.73) was perceived to be the least important factor for sustainability of SWPB4L compared to the other factors. Despite these differences all of the mean importance scores are relatively high (range = 4.37 – 4.68). This demonstrates that, on average, the respondents considered all factors to be 'mostly' (70-80%) to 'completely' (90-10%) important in relation to sustainability of SWPB4L in New Zealand schools.

Table 2

Descriptive Statistics for Sustainability Factor Importance Scores

	Priority	School Leadership	External Leadership	Effectiveness	Efficiency	Data	Capacity Building
n	335	335	335	335	333	331	335
mean	4.30	4.68	4.27	4.38	4.40	4.37	4.53
Std. Deviation	.67	.53	.73	.66	.68	.37	.61

Comparisons between the mean importance scores for each sustainability factor are shown in Table 3. These results demonstrate some significant differences in the average perceptions of importance across the factors. The sustainability factors are ordered, from highest to lowest, based on their mean importance scores in order to identify those factors perceived to be significantly more important for sustainability of the SWPB4L initiative. Each cell contains the results of a two-tailed paired sample *t*-test comparing the mean importance scores of the sustainability factor in the left most column against the one listed in the top row. Each cell contains the difference between the mean importance scores for the two compared factors (Diff), the 99% confidence interval (CI), the t-score (*t*(*df*)), the significance of the result (*p*), and Cohen's effect size value (*d*). Asterisks mark highly significant outcomes (<.005).

Table 3

Results from t-tests Comparing the Mean Importance Scores between the Sustainability Factors

	Capacity Building	Efficiency	Effectiveness	Data	Priority	External Leadership
School Leadership *n = 335* *M = 4.68* *SE = 0.03*	Diff = 0.15 CI (.08, .23) *t*(334) = 5.60 *p* <.001 ***** *d* = 0.31	Diff = 0.29 CI (.20, .37) *t*(332) = 8.93 *p* < .001 ***** *d* =0.49	Diff = 0.30 CI (.24, .37) *t*(334) = 11.91 *p* < .001 ***** *d* = 0.65	Diff = 0.32 CI (.23, .40) *t*(329) = 9.77 *p* < .001 ***** *d* = 0.54	Diff = 0.39 CI (.32, .46) *t*(334) = 14.08 *p* < .001 ***** *d* = 0.77	Diff = 0.41 CI (.32, .50) *t*(334) = 12.46 *p* < .001 ***** *d* =0.68
Capacity Building *n = 335* *M = 4.53* *SE = 0.03*		Diff = 0.13 CI (.05, .21) *t*(332) = 4.10 *p* < .001 ***** *d* = 0.22	Diff = 0.15 CI (.08, .22) *t*(334) = 5.37 *p* < .001 ***** *d* = 0.29	Diff = 0.16 CI (.08, .24) *t*(329) = 5.15 *p* < .001 ***** *d* = 0.28	Diff = 0.23 CI (.15, .32) *t*(334) = 7.15 *p* < .001 ***** *d* = 0.39	Diff = 0.26 CI (.16, .35) *t*(334) = 6.83 *p* < .001 ***** *d* = 0.37
Efficiency *n = 333* *M = 4.40* *SE = 0.04*			Diff = 0.01 CI (-.07, .09) *t*(332) = 0.35 *p* < .728 *d* = 0.02	Diff = 0.03 CI (-.05, .12) *t*(329) = 0.94 *p* < .348 *d* = 0.05	Diff = 0.10 CI (.01, .19) *t*(332) = 2.94 *p* < .004 ***** *d* = 0.16	Diff = 0.12 CI (.02, .22) *t*(332) = 3.18 *p* < .002 ***** *d* = 0.17

Effectiveness *n = 335* *M = 4.38* *SE = 0.03*	Diff = 0.02 CI (-.05, .10) *t*(329) = 0.72 *p* < .474 *d* = 0.04	Diff = 0.08 CI (.02, .15) *t*(334) = 3.38 *p* < .001 ***** *d* = 0.18	Diff = 0.11 CI (.02, .19) *t*(334) = 3.33 *p* < .001 ***** *d* = 0.18
Data *n = 331* *M = 4.37* *SE = 0.04*		Diff = 0.08 CI (-.01, .17) *t*(330) = 2.40 *p* < .017 *d* = 0.13	Diff = 0.10 CI (.01, .20) *t*(329) = 2.48 *p* < .014 *d* = 0.14
Priority *n = 335* *M = 4.30* *SE = 0.04*			Diff = 0.02 CI (-.06, .11) *t*(334) = .709 *p* < .479 *d* = 0.04

Average perceptions of importance were significantly higher for some factors compared to others. On average the respondents perceived *school leadership* (*M*= 4.68, *SE*=0.03) to be significantly more important (difference, 0.15, 99% CI [.08, .23], *t*(334) = 5.60, *p* < .001) for sustainability of SWPB4L than *capacity building* factors (*M*=4.53, *SE*=0.03). Further, the average importance scores for *capacity building* factors were significantly higher (difference, 0.13, 99% CI [.05, .21], *t*(332) = 4.10, *p* < .001) than *efficiency* factors (*M*=4.40, *SE*=0.04). The average importance scores for *efficiency* factors of sustainability (*M*=4.40, *SE*=0.04) were slightly higher than for *effectiveness* factors (*M*=4.38, *SE*=0.03), but this difference, 0.01, 99% CI [-.07, .09], was not significant *t*(332) = 0.35, *p* < .728. The average importance scores for *effectiveness* were slightly higher than for *data* factors (*M*=4.37, *SE*=0.04). Again, this difference, 0.02, 99% CI [-.05, .10], was not significant *t*(329) = 0.72, *p* < .474. Further, the difference, 0.03, 99% CI [-.05, .12], between importance scores for *efficiency* factors (*M*=4.40, *SE*=0.04) and *data* factors (*M*=4.37, *SE*=0.04) was also not significant *t*(329) = 0.94, *p* < .348. The average importance scores for *data* factors of sustainability (*M*=4.37, *SE*=0.04) were higher than for *prioritisation* factors (*M*=4.3, *SE*=0.04). This difference, 0.08, 99% CI [.01, .17], was not significant *t*(330) = 2.40, *p* < .017. The average importance scores for *prioritisation* factors were slightly higher than for *external leadership* factors (*M*=4.27, *SE*=0.04). This difference, 0.02, 99% CI [-.06, .11], was not significant *t*(334) = .709, *p* < .479.

In practical terms, these results indicate that the respondents perceived leadership within the school to be significantly more important in relation to sustainability of SWPB4L compared to the other factors. The respondents also perceived capacity building

opportunities for staff to be highly important for sustainability compared to the remaining factors. On average, the respondents perceived programme efficiency, effectiveness, and collection and use of data to be of similar importance, as the differences were not significant. However, efficiency and effectiveness were perceived to be significantly more important for sustainability than prioritisation and external leadership. Perceptions of importance for the collection and use of data, prioritisation, and external leadership were similar in relation to sustainability of SWPB4L. While the average importance scores for all factors were high, these results demonstrate that some factors were perceived on average to be more important for SWPB4L sustainability than others.

The results from the One-Way Analyses of Variance (ANOVAs) between importance scores for each of the sustainability factors and each of the demographic variables were examined. Significant comparisons are presented and results from the Games-Howell Post Hoc test are provided to identity where the significant difference occurred within the demographic categories. Due to the number of tests carried out, the significance threshold (for the Games-Howell Post Hoc tests) was .01, in order to reduce the risk of Type I errors. Any results that exceed this significance criteria (p>.01) have not been reported.

ANOVAs carried out between the importance scores for each sustainability factor and the primary roles of the respondents indicated there were significant differences between the average importance scores for *prioritisation* (Welch's $F(5, 40) = 3.76$, $p < .007$), *school leadership* (Welch's $F(5, 34) = 6.00$, $p < .001$), *external leadership* ($F(5, 308) = 3.07$, $p < .010$), *effectiveness* (Welch's $F(5, 34) = 7.99$, $p < .001$), *data* (Welch's $F(5, 39) = 4.07$, $p < .004$), and *capacity building* (Welch's $F(5, 34) = 5.55$, $p < .001$) within this demographic category. No significant difference for the importance scores for *efficiency* ($F(5, 306) = 0.95$, $p < .451$) were found based on this category. According to the Games-Howell Post Hoc test the mean importance scores for SWPB4L team leaders were significantly higher than for classroom teachers in relation to *prioritisation* (difference, 0.39, 99% CI [0.07, 0.71], $p < .001$), *school leadership* (difference, 0.34, 99% CI [.12, .56], $p <.001$), *external leadership* (difference, .43, 99%CI [.05, .81], $p <.002$), *effectiveness* (difference, .52, 99% CI [.23, .80], $p <.001$), *data* (difference, .50, 99% CI [.13, .88], $p <.001$), and *capacity building* (difference, .40, 99% CI [.14, .66], $p <.001$). Further, the mean *effectiveness* importance scores for SWPB4L team

leaders were also significantly higher (difference, .30, 99% CI [.03, .58], p< .002) than for school principals.

Based on the results from ANOVAs comparing the importance scores for each sustainability factor across the year levels of the respondents' schools there were significant differences between the average importance scores for *effectiveness* (Welch's $F(4, 138) = 4.57$, $p < .002$) and *data* ($F(4, 39) = 4.75$, $p < .001$) within this demographic category. The Games-Howell Post Hoc test indicated that the mean importance scores relating to *effectiveness* (difference, .37, 99% CI [.05, .69], p <.002) and *data* (difference, .45, 99% CI [.09, .82], p <.001) were significantly higher for respondents from Intermediate schools (years 7 & 8) than from secondary schools (years 7/9-13). The differences in the average importance scores for *prioritisation, school leadership, external leadership, efficiency*, and *capacity building* were not found to be significantly different based on the year level of the respondents' schools.

The ANOVA results identified significant differences between the average importance scores for *school leadership* (Welch's $F(6, 29) = 2.93$, $p < .023$) based on the year of SWPB4L implementation in the respondents' schools. According to the Games-Howell Post Hoc test the mean *school leadership* importance scores were significantly higher (difference, .34, 99% CI [.02, .67], p <.005) for respondents from schools where SWPB4L implementation occurred in 2006 or earlier than in schools where implementation began in 2012. No significant differences were found for perceptions of importance relating to *prioritisation, external leadership, effectiveness, efficiency, data,* and *capacity building* based on the implementation year of SWPB4L in the respondents' schools.

One way ANOVAs, carried out between the importance scores for each sustainability factor and the demographic variables of region, school community, enrolment, and decile found no significant differences between the average importance scores for any sustainability factor within these categories.

Truth Scores

The descriptive statistics relating to the truth scores for each sustainability factor are listed in Table 4. On average *school leadership* (M=4.36, SD=.69) was perceived to be the most

true sustainability factor within the respondent's schools compared to all other factors. This was followed by the other factors in the following order; *capacity building* (*M*=4.05, *SD*=.81), *effectiveness* (*M*=3.98, *SD*=.78), *priority* (*M*=3.82, *SD* =.78), *data* (*M*=3.77, *SD*=.1.03), and *efficiency* (*M*=3.68, *SD*=.87). *External leadership* (*M*=3.65, *SD*=.88) was perceived to be the least true sustainability factor for the respondent's schools compared to the other factors. Overall, the average truth scores were between three and five. This indicated that on average the respondents rated the factors as 'generally' (40-60%) to 'completely' (90-100%) true.

Table 4

Descriptive Statistics for Sustainability Factor Truth Scores

	Priority	School Leadership	External Leadership	Effectiveness	Efficiency	Data	Capacity Building
N	338	338	333	338	335	326	338
Mean	3.82	4.36	3.65	3.98	3.68	3.77	4.05
Std. Deviation	.78	.69	.88	.78	.87	1.03	.81

Differences between the mean truth scores have been compared and the results are listed in Table 5. The sustainability factors are ordered, from highest to lowest, based on their mean truth scores, in order to identify those factors which the respondents perceived to be significantly truer for their schools. Each cell contains the results of a paired sample *t*-test comparing the mean truth score of the sustainability factor in the left most column against the one listed in the top row. Each cell contains the difference between the mean truth scores for the two compared factors (Diff), the 99% confidence interval (CI), the t-score (*t*(*df*)), the significance of the result (*p*), and Cohen's effect size value (*d*). Asterisks mark the significant results (>.01).

Table 5

Results from t-tests Comparing the Mean Truth Scores between the Sustainability Factors

	Capacity Building	**Effectiveness**	**Priority**	**Data**	**Efficiency**	**External Leadership**
School Leadership *N = 338* *M = 4.36* *SE = 0.04*	Diff = 0.31 CI (.21, .40) *t*(337) = 8.13 *p* < .001 * *d* = .44	Diff = 0.38 CI (.30, .47) *t*(337) = 11.54 *p* < .001 * *d* = .63	Diff = 0.54 CI (.45, .64) *t*(337) = 15.29 *p* < .001 * *d* =.83	Diff = 0.59 CI (.48, .71) *t*(325) = 13.52 *p* < .001 * *d* = .75	Diff = 0.68 CI (.56, .80) *t*(334) = 14.96 *p* < .001 * *d* =.82	Diff = 0.72 CI (.61, .83) *t*(332) = 17.09 *p* < .001* *d* = .94
Capacity Building *N= 338* *M = 4.05* *SE = 0.04*		Diff = .0.08 CI (-.02, .18) *t*(337) = 2.02 *p* < .045 *d* =.11	Diff = .24 CI (.13, .34) *t*(337) = 5.86 *p* < .001 ** *d* = .32	Diff = .30 CI (.17, .43) *t*(325) = 6.12 *p* < .001 ** *d* = .34	Diff = .38 CI (.25, .50) *t*(334) = 7.69 *p* < .001 ** *d* = .42	Diff = .42 CI (.30, .54) *t*(332) = 8.96 *p* < .001 ** *d* = .49
Effectiveness *N = 338* *M = 3.98* *SE = 0.04*			Diff = 0.16 CI (.08, .24) *t*(337) = 5.15 *p* < .001 ** *d* = .28	Diff = 0.22 CI (.10, .34) *t*(325) = 4.90 *p* < .001 ** *d* = .27	Diff = 0 .30 CI (.20, .41) *t*(334) = 7.42 *p* < .001 ** *d* = .41	Diff = 0.34 CI (.06, .29) *t*(332) = 7.87 *p* < .001 ** *d* = .43
Priority *N = 338* *M = 3.82* *SE = 0.04*				Diff = 0.07 CI (-.05, .19) *t*(325) = 1.46 *p* < .144 *d* = .08	Diff = 0.14 CI (.02, .26) *t*(334) = 3.06 *p* < .002 ** *d* = .17	Diff = 0.17 CI (.06, .29) *t*(332) = 3.99 *p* < .001 ** *d* = .22
Data *N = 326* *M = 3.77* *SE = 0.06*					Diff = 0.07 CI (-.06, .19) *t*(324) = 1.36 *p* < .176 *d* = .08	Diff = 0.11 CI (-.02, .26) *t*(323) = 2.06 *p* < .040 *d* = .11
Efficiency *N = 335* *M = 3.68* *SE = 0.05*						Diff = 0.03 CI (-.09, .16) *t*(329) = .760 *p* < .448 *d* = .04

The respondents' average perceptions of truth for *school leadership* factors (*M*= 4.36, *SE*=0.04) were significantly higher (difference, 0.31, 99% CI [.21, .40], *t*(337) = 8.13, *p* < .001) than for *capacity building* factors (*M*=4.05, *SE*=0.04). The average respondent truth scores for *capacity building* were higher than for *effectiveness* (*M*=3.98, *SE*=0.04). Although this difference, 0.08, 99% CI [-.02, .18], was not significant *t*(337) = 2.02, *p* < .045. However, the difference, 0.24, 99% CI [.13, .34], between the average truth scores for *capacity building* and *prioritisation* (*M*=3.82, *SE*=0.04) was significant *t*(337)=5.86, *p* < .001. The respondents also perceived *effectiveness* (*M*=3.98, *SE*=0.04) factors to be significantly more true in their schools (difference, 0.16, 99% CI [.08, .24], *t*(337) = 5.15, *p* <.001) than *prioritisation* factors

(*M*=3.82, *SE*=0.04). *Prioritisation* factors were perceived to be slightly more true on average in the respondents schools (*M*= 3.82, *SE*=0.04) than *data* factors (*M*=3.77, *SE*=0.06), however this difference, 0.07, 99% CI [-.05, .19], was not significant $t(325) = 1.46$, $p < .144$. The respondents perceived *data* factors to be slightly more true than *efficiency* factors (*M*=3.68, *SE*=0.05). This difference, 0.07, 99% CI [-.06, .19], was also not significant $t(324) = 1.36$, $p < .176$. However, the difference, 0.14, 99% CI [.02, .26], between the average truth scores for *prioritisation* factors (*M*=3.82, *SE*=0.04) and *efficiency* factors (*M*=3.68, *SE*=0.05) was significant $t(334)=3.06$, $p < .002$. On average the respondents perceived *efficiency* factors to be slightly more true in their schools (*M*=3.68, *SE*=0.05) than *external leadership* factors (*M*=3.65, *SE*=0.05). This difference, 0.03, 99% CI [-.09, .16], was not significant $t(329) = .760$, $p < .448$. Further, the difference, 0.11, 99% CI (-.02, .26) between the average truth scores for *data* (*M*=3.77, *SE*=0.06) and *external leadership* (*M*=3.65, *SE*=0.05) was also not significant $t(323) = 2.06$, $p < .040$.

These results suggest that on average the respondents perceived factors relating to leadership within the school to be more true in their schools than any other factor. Average perceptions of truth in the respondents' schools for staff capacity building and programme effectiveness were similar, however on average perceptions of truth for both of these factors were higher than for factors relating to prioritisation of the programme. Perceptions of truth for factors relating to prioritisation and data collection suggest the accuracy of these factors is similar within SWPB4L schools. Further, perceptions of truth for data factors were similar to those for efficiency factors. However, the respondent's average perceptions of truth in their schools for priority factors were significantly higher than for efficiency factors. On average the respondents perceived data, efficiency, and external leadership factors to hold similar levels of truth for their schools.

ANOVAs carried out between the truth scores for each sustainability factor and the primary roles of the respondents indicated there were significant differences between the average truth scores for *prioritisation* (Welch's $F(5, 40) = 3.44$, $p < .011$), *school leadership* (Welch's $F(5,39) = 3.26$, $p < .015$), *effectiveness* (Welch's $F(5, 39) = 4.89$, $p < .001$), *data* (Welch's $F(5, 40) = 3.81$, $p < .006$), and *capacity building* (Welch's $F(5, 39) = 8.76$, $p < .001$). No significant differences were identified between the average truth scores for *external leadership* or

efficiency across the various respondent roles. Results for the Games-Howell Post Hoc test found that the mean truth scores for school principals were significantly higher than for classroom teachers in relation to *prioritisation* (difference, .41, 99% CI [.04, .77], p <.003), *school leadership* (difference, .33, 99% CI [.03, .64], p <.003), *effectiveness* (difference, .41, 99% CI [.08, .74], p < .001), and *capacity building* (difference, .64, 99%CI [.30, .98], p <.001). Further, the average truth scores for SWPB4L team leaders were also significantly higher than for classroom teachers in relation to *data* (difference, .67, 99% CI [.12, 1.20], p <.001) and *capacity building* (difference, .54, 99% CI [.09, 1.00], p <.001). In addition, SWPB4L team members also had significantly higher average truth scores in relation to *effectiveness* (difference, .47, 99% CI [.05, .90], p <.003) and *capacity building* (difference, .59, 99% CI [.15, 1.02], p <.001) than classroom teachers did.

Significant differences were identified based on ANOVA results between the average truth scores for *prioritisation* (F(4, 318) = 6.97, p < .001), *effectiveness* (Welch's F(4, 135) = 7.40, p < .001), and *efficiency* (Welch's F(4, 135) = 4.62, p < .002) based on the year level of the respondents' schools. According to the Games-Howell Post Hoc test the average *prioritisation* (difference, .47, 99% CI [.09, .84], p < .001), *effectiveness* (difference, .48, 99% CI [.12, .84], p < .001), and *efficiency* (difference, .45, 99% CI [.04, .87], p < .004) truth scores were significantly higher for respondents from primary-intermediate (years 1-6) schools than for respondents from secondary (years 7/9-13) schools . On average truth scores for respondents from intermediate (years 7 & 8) schools were significantly higher in relation to *effectiveness* (difference, .45, 99% CI [.02, .87], p < .006) than for respondents from secondary schools. The differences in the average truth scores for *school leadership, external leadership, data*, and *capacity building* were not found to be significantly different for this demographic category.

Based on the ANOVA results the average truth scores for *prioritisation* (Welch's F(6, 25) = 5.61, p <.001) and *school leadership* (Welch's F(6, 25) = 3.31, p < .015) were significantly different based on the year SWPB4L was implemented in the respondents' schools. The Games-Howell Post Hoc test showed that the average *prioritisation* (difference, 1.05, 99% CI[.32, 1.78], p < .001) and *school leadership* (difference, .58, 99% CI[.03, 1.12], p < .006) truth scores were significantly higher for respondents from schools who implemented

SWPB4L in 2006 or earlier than for respondents from schools who implemented SWPB4L in 2012.

One way ANOVAs, carried out between the truth scores for each sustainability factor and the demographic variables of region, school community, enrolment, and decile found no significant differences between the average truth scores for any sustainability factor within these categories.

Comparing Importance and Truth Scores

The results already presented have examined the relationships within the scores for truth and importance. This section of the results focuses on the relationship between these scores. The mean importance scores and mean truth scores for each sustainability factor are presented for comparison in Figure 4. The factors are listed from the highest average perceptions of importance to the lowest, based on the mean importance scores.

Figure 4. Mean Truth and Importance Scores for the Sustainability Factors

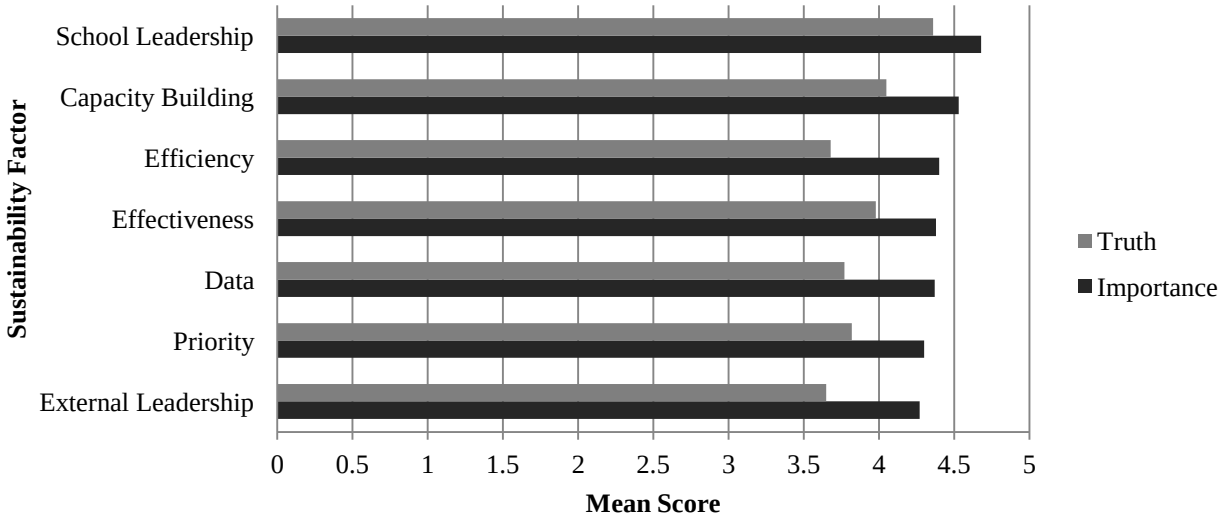

Figure 4. Mean Truth and Importance Scores for the Sustainability Factors.

Across all of the sustainability factors the average perceptions of importance are higher than the average perceptions of truth, Figure 4. clearly demonstrates this trend. The results shown in Table 6 demonstrate the significance of these differences. For each factor the

number of valid responses analysed in the *t*-test are listed (*n*), as well as the mean (*M*) and standard deviation (*SD*) for the truth and importance scores of each factor. Below these descriptive statistics are the results of the *t*-tests. This includes the mean difference between the average scores, the 99% confidence interval, the t score (*t*(df)), the significance of the results (*p*) and Cohen's effect size (*d*). As with the previous analyses the confidence interval has been set to 99% and the threshold for significance is $p<.01$ in order to reduce the risk of type I errors.

Table 6

Results from t-tests Comparing the Mean Truth and Importance scores within each Sustainability Factor

Sustainability Factors	*t*-test results
School Leadership Importance **School Leadership Truth**	*n* = 335, *M* = 4.68, *SD* = .53 *n* = 335, *M* = 4.37, *SD* = .68 Mean difference = 0.31, 99% CI [.22, .40], *t*(334) = 8.87, *p* <.001, *d*=.48
Capacity Building Importance **Capacity Building Truth**	*n* = 335, *M* = 4.52, *SD* = .61 *n* = 335, *M* = 4.07, *SD* = .81 Mean difference = 0.46, 99% CI [.36, .57], *t*(334) = 11.29, *p* <.001, *d*=.62
Efficiency Importance **Efficiency Truth**	*n* = 332, *M* = 4.40, *SD* = .68 *n*= 332, *M* = 3.68, *SD* = .86 Mean difference = 0.71, 99% CI [.59, .84], *t*(331) = 15.33, *p* <.001, *d*=.84
Effectiveness Importance **Effectiveness Truth**	*n* = 336, *M* = 4.37, *SD* = .66 *n* = 336, *M* = 3.98, *SD* = .77 Mean difference = 0.38, 99% CI [.29, .47], *t*(335) = 10.90, *p* <.001, *d*=.59
Data Importance **Data Truth**	*n* = 324, *M* = 4.36, *SD* = .75 *n* = 324, *M* = 3.77, *SD* = 1.03 Mean difference = 0.59, 99% CI [.46, .73], *t*(323) = 11.33, *p* <.001, *d*=.63
Priority Importance **Priority Truth**	*n* = 336, *M* = 4.29, *SD* = .68 *n* = 336, *M* = 3.83, *SD* = .77 Mean difference = 0.46, 99% CI [.38, .55], *t*(335) = 14.02, *p* <.001, *d*=.76
External Leadership Importance **External Leadership Truth**	*n* = 332, *M* = 4.27, *SD* = .73 *n*= 332, *M* = 3.65, *SD* = .88 Mean difference = 0.62, 99% CI [.50, .74], *t*(331) = 13.28, *p* <.001, *d*=.73

Overall the results show that the differences between the average truth and importance scores for all sustainability factors were highly significant *(p*<.001). The greatest difference (0.71, 99% CI [.59, .84], *t*(331) = 15.33, *p* <.001) occurred between the average truth (*M*=3.68, *SD*= 0.81) and importance (*M*=4.40, *SD*=0.68) scores for *efficiency* of SWPB4L. The smallest difference (0.31, 99% CI [.22, .40], *t*(334) = 8.87, *p* <.001) was found between the truth (*M*= 4.37, *SD*=0.68) and importance (*M*=4.68, *SD*=0.53) scores relating to *school leadership* of SWPB4L. These results highlight the potential for improvement in relation to sustainability of SWPB4L as the perceived truth of the sustainability factors are significantly lower than the perceived importance of the factors within their schools. The practical implications of the results will be discussed in the following chapter.

Qualitative Results

The following section presents and describes the qualitative strand of the data. Statements from the respondents' comments are categorised based on themes of sustainability support and sustainability barriers for SWPB4L in New Zealand schools. While individual statements could only be coded to a single aspect of a theme, some comments included several statements that could have been coded to various themes and aspects within those themes.

The first open answer question asked the respondents to comment on the supporting factors they believed to be important for sustaining SWPB4L. The coding for each of the themes relating to sustainability supports including *prioritisation, school leadership, external leadership, effectiveness, efficiency, data,* and *capacity building* are presented in separate tables (7-13). Aspects of each theme have been labelled and explained. Where applicable the theme explanations include supporting ideas from the literature in order to clarify the relevance of each aspect to the relevant theme and to sustainability. Examples, in the form of respondent quotes, are provided which allude to aspects of each theme. The total number of statements relating to each theme is listed. These numbers are provided to indicate the strength of the theme within the data.

The theme of *prioritisation* includes features that support the ongoing importance of SWPB4L within the school and allow the initiative to be maintained as a key element of the

daily running of the school. The results from the qualitative data strand in relation to the theme of *prioritisation* are presented in Table 7.

Table 7

Explanations and Examples of Respondent Statements Coded to Aspects of the Priority Theme

Theme	Code Label	Code Explanation	Examples	*n*
Priority	Staff Buy In	Staff support and commitment to SWPB4L supports prioritisation of the framework within schools. The literature suggests that at least 80% of school staff should 'buy-in' to the framework prior to implementation commencing (e.g., Ministry of Education, 2013; Coffey & Horner, 2012).	*"All staff on board"* [R33] *"commitment from all staff"* [R39] *"you need all staff to believe in it"* [R65] *"almost 100% buy-in from all staff"* [R280] *"That the staff "buys-into" the programme fully"* [R305] *"Positive staff support"* [R326]	80
	Integration	Aligning SWPB4L with existing initiatives and integrating it into school policy and culture supports sustained implementation within the school. According to the literature this supports prioritisation of the practices within the framework (McIntosh et al, 2010, McIntosh, Sugai & Horner, 2009).	*"To embed practices so they are owned by all and therefore sustained"* [R5] *"Incorporation into regular school life"* [R83] *"embedding PB4L-SW into the school charter so that it becomes the way we do things"* [R190] "*tying it into the (school) curriculum"* [R246]	15
	Funding	Provision of adequate funding to support sustained implementation of SWPB4L is a key aspect of prioritisation. According to the literature when an initiative is prioritised within a school financial support is more likely to be sufficiently sustained (McIntosh et al., 2013; Sugai & Horner, 2006)	*"have a budget to cover small things"* [R30] *"financial support to continue to sustain the programmes"* [R 64] *"ongoing financial support"* [R168] *"money is critical"* [R192] *"keeping it adequately funded"* [R303]	37
			Total	132

R = Respondent

A total of 132 statements from the respondents' comments were coded to aspects of the *prioritisation* theme. Within this theme 80 statements were coded to *staff buy-in*, making this the most highly recognised aspect of *prioritisation*. These statements suggested that staff within the school need to support SWPB4L in order for it to be sustainable. The

provision of ongoing *funding* was recognised as a sustainability support within 37 of the statements. A further 15 statements referred to the importance of full *integration* of SWPB4L within existing school systems in order to support sustainability.

School leadership refers to elements of internal support from the key leaders within the school and within the SWPB4L initiative. The coded features of *school leadership* are described in Table 8.

Table 8

Explanations and Examples of Respondent Statements Coded to Aspects of the School Leadership Theme

Theme	Code Label	Code Explanation	Examples	N
School Leadership	Management Support	Support from the senior leadership team in the school, particularly the school principal, helps to support sustainability of the SWPB4L framework. According to the literature if the framework is supported by the school leaders this can enhance prioritisation by motivating school staff, emphasising the frameworks value and importance, and supporting adequate provision of resources and funding (Coffey & Horner, 2012; McIntosh et al., 2013).	*"committed senior leaders – esp principal"* [R37] *"a supportive principal"* [R158] *"Principal champion – getting staff into it"* [R238] *"Principal sees it as a priority and allocates funding and PD time at meetings"* [R282] *"senior leadership members must be completely behind the initiative"* [R 323]	43
	SWPB4L School Team	The SWPB4L school team plays a key role in implementing the framework and keeping it going in schools. According to the literature a school leadership team can actively support and promote implementation of an initiative by school staff and enhance prioritisation within the school (Coffey & Horner, 2012; Sugai & Horner, 2006).	*"A strong team to initiative new staff and continue to inspire existing staff"* [R12] *"having a school team driving it and communicating what is needed"* [R 149] *"A team that is in touch with what is happening in the school"* [R180]	33
			Total	76

R = Respondent

A total of 72 statements were coded to the theme of *school leadership.* Within this them two key aspects were recognised by the respondents, support from senior management and

a SWPB4L team to lead implementation. Statements relating to *management support* suggested that the senior leadership team needs to get behind SWPB4L and provide their full support and commitment in order for the framework to be sustainable; 43 respondents recognised this aspect of *school leadership*. The remaining 29 statements emphasised the importance of the *SWPB4L School Team* and referred to the need for a suitable team to lead implementation efforts within the school in order to support sustainability.

Three aspects of *external leadership* were identified within the respondents' comments, these are described in Table 9. This theme relates to leadership provided to the schools by external supports and services in order to strengthen ongoing implementation of SWPB4L.

Table 9

Explanations and Examples of Respondent Statements Coded to Aspects of the External Leadership Theme

Theme	Code Label	Code Explanation	Examples	N
External Leadership	Ministry of Education	Ongoing support from the Ministry of Education is important for sustainability of SWPB4L in schools. According to the literature the Ministry of Education is providing schools with financial support, access to training, and local practitioners to support implementation of SWPB4L (Ministry of Education, 2013).	*"ongoing MOE support"* [R16] *"The consistent personnel from the MOE working with PB4L-SW"* [R255] *"our schoolwide practitioner through the MOE"* [R267] *"Good facilitation from the MOE"* [R 310]	13
	Community and Families	Understanding and engagement from local families and the community can help to support sustainability of SWPB4L. According to the literature the framework should aim to reflect the values and beliefs of the families and the local community in order to be relevant to the schools needs (Savage, Lewis, & Colless, 2011)	*" community engagement"* [R19] *"Getting community and family support and knowledge about the programme"* [R102] *"Community involvement. Parent and whanau involvement and that they know what PB4L is"* [R 241]	7
	General	Ongoing support from external sources can help to support sustainability of SWPB4L.	*"external help"* [R37] *"external support to continue until implementation is sound or it will not work"* [R 75] *"(ongoing) outside support"* [R167]	10
R= Respondent			**Total**	30

Within this theme 13, from a total of 30 statements relevant to *external leadership*, were coded to the *Ministry of Education* aspect. These statements highlighted the need for ongoing support from the Ministry of Education in order to enhance sustainability of SWPB4L. A further 7 statements were coded to the *community and families* aspect. These statements suggested that support and knowledge from families and the local community can help to sustain SWPB4L. A *general* aspect relating to *external leadership* was included and 10 statements were coded to this aspect. These statements alluded to the importance of external or outside support for sustaining SWPB4L without specific mention of where the support should come from.

The *effectiveness* of SWPB4L is dependent on the ability of the initiative to support positive outcomes for schools and students. No separate aspects emerged for the theme of *effectiveness*. A summary of the coding for this theme is shown in Table 10.

Table 10

Explanation and Examples of Respondent Statements Coded to the Effectiveness Theme

Theme	Explanation	Examples	Total
Effectiveness	In order to support sustainability it is important that SWPB4L has a positive effect on desired outcomes in schools. The literature suggests that effectiveness should be a key consideration for any new initiative and is a vital feature of sustainability (Sugai & Horner, 2006; McIntosh, Horner, & Sugai, 2009).	*"Need to see it as effective"* [R1] *"proof (data) that its working"* [R158] *"has worked well for some groups of students to teach and manage social responses"* [R195]. *"if it works"* [R254]	20

R= Respondent

Effectiveness was recognised within 20 of the respondents' statements as an important support feature for sustainability of SWPB4L. These statements reported that the ability of SWPB4L to effectively bring about desired outcomes, is important for maintaining ongoing implementation of the framework.

The *efficiency* theme includes ideas relating to the costs associated with implementation of SWPB4L. Three aspects of *efficiency* were represented in the respondents' comments

including *time, ease of use,* and *resourcing.* Explanations of these aspects of *efficiency* are presented in Table 11.

Table 11

Explanations and Examples of Respondent Statements Coded to Aspects of the Efficiency Theme.

Theme	Code Label	Code Explanation	Examples	N
Efficiency	Time	Having enough time for planning and implementation is important for supporting sustainability of SWPB4L in schools. According to the literature the amount of time required for implementation is a key aspect of efficiency, further making sure that this does not exceed the time available is a key aspect of sustainability (McIntosh et al., 2010; McIntosh et al., 2013).	*"time"* [multiple respondents]. *"time for all teachers to implement"* [R56]. *"time to arrange systems"* [R 315]. *"time to properly implement change and lead programme"* [R326].	21
	Ease of use	In order to support sustainability SWPB4L needs to be applicable and easy to carry out. According to the literature these considerations are key features of an initiatives efficiency and subsequent sustainability (Gersten & Dimino, 2001; Vaughn, Klingner, & Hughes, 2000)	*"ease of use"* [R85] *"needs to be achievable and easy to carry out"* [R 236]. *"Make is relevant for classrooms teachers ie the majority of people that will be implementing it. Make it easily applicable."* [R276]	6
	Resourcing	Having sufficient resources to carry out SWPB4L is important for supporting sustainability. According to the literature the resources required for implementation of an initiative must be realistic in order for the sustainability to be sustainable (McIntosh, Horner, & Sugai, 2009; Sugai & Horner, 2006)	*"resourcing"* [R8]. *"A good bank of accessible resources"* [R116]. *"adequate resourcing"* [R162]. *"There needs to be adequate resourcing for ongoing implementation and development"* [R 323].	10
			Total	37

R= Respondent

A total of 41 statements, from within the respondents' comments, were coded to the theme of *efficiency*. Within this theme, 21 statements were coded to the aspect of *time*. This accounted for approximately half of the statements in this theme, making *time* the most highly recognised aspect of *efficiency*. These statements suggest that adequate time in order to complete implementation is an important support for sustaining SWPB4L. A further six statements were coded to the *Ease of Use* aspect of the *Efficiency* theme. Statements relating to *ease of use* emphasised that in order to support sustainability SWPB4L needs to be achievable and easy to carry out. A total of 10 statements were coded to *resourcing*. According to these statements the provision of adequate resourcing is required in order to support sustainability of SWPB4L.

Coding of statements relevant to the theme of *data* are listed in Table 12. No separate aspects were identified for this theme. The *data* theme includes any statements relating to the importance of collecting and using data relevant to the SWPB4L framework within the school in order to strengthen ongoing practices.

Table 12

Explanation and Examples of Respondent Statements Coded to the Data Theme

Theme	Explanation	Examples	Total
Data	Ongoing collection and use of data is important for supporting sustainability of SWPB4L. The literature suggests that using gathered data for problem solving and decision making within an initiative supports continuous regeneration and subsequent sustainability (Coffey & Horner, 2012; McIntosh et al., 2013).	*"basing everything on the data gathered"* [R40] *"using the data to drive the decisions made in our whare"* [R104] *"Regular data collection and analysis"* [R116]. *"use of data to inform practice and celebrate successes"* [R141]	21

R= Respondent

A total of 21 respondents commented on the importance of *data* within SWPB4L. These respondents recognised that using data-based practices within SWPB4L was an important feature for sustainability of the framework within their schools.

A summary of the coding for the theme of *capacity building* is presented in Table 13. No separate code aspects emerged for the *capacity building* theme. This theme related to opportunities for school staff to engage in ongoing professional development in relation to SWPB4L in order to build their capacity and support continued implementation.

Table 13

Explanation and Examples of Respondent Statements Coded to the Capacity Building Theme

Theme	Code Explanation	Examples	Total
Capacity Building	Ongoing professional development and training are important for capacity building and supporting sustained use of SWPB4L in schools. According to the literature professional development builds the capacity of school staff, therefore supporting the process of continuous generation and subsequent sustainability (Gersten & Dimino, 2001; McIntosh et al., 2013).	*"continuing regional PD support for teachers"* [R55] *"Ongoing PD"* [R 98] *"We were able to involve a number of staff in professional development opportunities that met the goals of our PB4L action plans"* [R177] *"continued training and staff up skilling"* [R 216]	61

R = Respondent

A total of 61 statements were coded to the *capacity building* theme; this suggested that the respondents recognised ongoing professional development opportunities as important supports for sustainability of SWPB4L.

Statements that were considered novel or unexpected and did not directly reflect the deductive themes are described in Table 14. These comments were coded to themes that emerged based on key word patterns. Each of these emergent themes has been allocated a theme label. Each theme is explained based on its representation in the comments from the respondents. Examples are provided, in the form of respondent quotes, for each emergent theme. The total number of statements relevant to each theme is listed.

Table 14

Identification, Explanations, and Examples Relating to Coding of Emergent Themes

Emergent Theme	Theme Explanation	Examples	Total
Consistency	Consistency of procedures and implementation is important for supporting sustainability of SWPB4L.	*"consistency of approach by ALL staff"* [R3] *"consistency of application across the school"* [R156] *"Teacher consistency of teaching PB4L"* [R181]	41
Student Factors	Factors relating to the students in a school can support sustainability of SWPB4L.	*"support from the student body"* [R 39] *"student involvement with planning"* [R50] *"Having criteria for success that are meaningful to the students you wish to target. For example criteria for a year 7 student would be very different to a year 13 one"* [R 283]	17
Higher level supports	The provision of higher tier supports for students can support sustainability of SWPB4L.	*"For teachers we need a 'where to next' for students who are highly challenged by behaviour that stops them from learning"* [R228] *"Ensuring that there is support for the top tier of the pyramid as these students are the hardest to manage as they are disengaged"* [R 309]	10
Communication	Communication between staff and schools can support sustainability of SWPB4L.	*"the opportunity to share information and ideas with other schools"* [R18] *"staff discussions"* [R29] *"Talking as a team and then as a whole staff. Open clear communication"* [R105] *"Regular meetings to share ideas, problems, chns behaviour etc."* [R214].	45
Reflection, Review and Maintenance	Ongoing reflection, review, and maintenance of the core practices within the SWPB4L framework can support sustainability.	*"regular reflection on PB4L and what it looks like"* [R59] *"regular checkpoints"* [R141] *"continuing to review the policy and procedures"* [R214]	28
		Total	141

R= Respondent

Several emergent themes were identified and a total of 141 statements were coded to these themes. While these themes do tie into the deductive themes they are considered to contain novel or unexpected ideas relating to sustainability support recognised by the respondents. The largest emergent theme was *communication,* 45 respondent statements recognised ongoing communication and regular meetings as important supports of SWPB4L

sustainability. A total of 41 respondents recognised that *consistency* is important across the procedures and practices of SWPB4L in schools in order to support sustainability. The theme of *reflection, review, and maintenance* was identified by 28 respondents. Statements for this theme alluded to the importance of ongoing reflection, review, and maintenance of the SWPB4L practices and procedures for supporting sustainability of the framework. A further 17 respondents reported that sustainability of SWPB4L could be supported by *student factors*, including their support and knowledge of the purpose and principles of the framework and involvement in planning processes. Ten respondents referred to the need for *higher level supports*, for students whose behaviour was not adequately supported at the school-wide tier of PB4L in order to support sustainability of the framework.

The second open answer question asked the respondents to comment on what they perceived to be the most significant barriers to sustaining SWPB4L. A total of 20 themes relating to sustainability barriers were identified within the respondent comments. These themes are summarised in Table 15, their meaning is explained, examples in the form of statement quotes are included, and the total number of statements coded to each theme is listed.

Table 15

Identification, Explanations, and Examples of Coded Themes Relating to Sustainability Barriers

Theme	Explanation	Examples	N
Staff Buy in	A lack of staff commitment and support for SWPB4L can act as a barrier to sustained implementation. If a majority of the staff do not support an initiative it is less likely to be prioritised, and subsequently sustained.	*"Lack of buy in"* R23 *"poor staff support" R*89 *"ensuring all continue seeing the value of PB4L"* *"not all staff committed to PB4L"* R301	**28**
Staff attitudes to change	Negative staff attitudes towards SWPB4L, such as resistance, complacency and apathy, can act as a barrier to sustaining the framework.	*"Resistance to change from adults"* R50 *"Staff having to change habits to be positive"* R192 *"Unwillingness of staff to change long held practices"* R 219 *"Teacher apathy"* R 253 *"complacency"* several respondents (e.g., 226)	**49**

Staff Knowledge and Understanding	A lack of knowledge and understanding about SWPB4L amongst staff members can act as a barrier to sustainability of the framework.	*"knowledge"* R 89 *"staff not understanding exactly what it is"* R129	**18**
Implementation Challenges	Achieving full integration of SWPB4L and developing consistent practices across the school represent significant implementation challenges; these challenges can act as a barrier to sustained implementation of the framework.	*"Inconsistency of implementation. Lack of clarity at critical times"* respondent 5 *"Doing the job properly and seeing it through"* R111 *"systems not being fully implemented"* R310 *"a poor integration of the programme to school life"* R127	**65**
School Leadership	A lack of support for SWPB4L from senior staff in the school can act as a barrier to sustainability of the framework	*"lack of commitment by leadership in the school"* R15 *"lack of management support"* R114 *"not having a big push by SMT"* R329	**18**
School Team	The characteristics and stability of the SWPB4L leadership team can influence the sustainability of the framework; if the team is unstable, inexperienced or not well respected within the school this can act as a barrier to sustainability of SWPB4L.	*"The team not working effectively so that only a few are doing all of the jobs"* R192 *"lack of quality of personnel who lead PB4L"* R265 *"The people we have running it. The team leading the program at our school do not have the respect of the staff therefore there is little buy in."* R283	**25**
Staff turnover	A high level of staff turnover and new staff members can act as barriers to sustainability of SWPB4L	*"The possibility of a large turnover of staff who need to be brought on board and who weren't apart of the original development process."* R18 *"New staff , staff leaving. Need to buy in."* R258	**26**
Family and Community Factors	A lack of support for SWPB4L principles and processes from parents, families, and the community can act as a barrier to sustainability of the framework.	*"traditional values of whanau that do not support PB4L"* R 11 *"There is not a lot of the wider staff community input"* R65 *"Not having support from parents"* respondent 286	**19**
External Support	If the support offered by the Ministry of Education is not provided by knowledgeable and experienced personnel then this can act as a barrier to sustainability of SWPB4L.	*"consistent MOE support from appropriate staff who have some in school experience"* R334	**3**

Costs and Funding	The costs of running SWPB4L and a lack of adequate funding (particularly after the 3 year implementation funding stops) can act as barriers to sustainability of the framework.	*"After 3 years cost as funding is key in delivering messages, rewarding students etc."* R25 *"ongoing costs"* R189 *"the lack of on-going financial support from MOE - previous experience has shown that unfunded initiatives are often dropped by the school as something else takes their place."* R270	**46**
Ineffectiveness	If SWPB4L is not seen as being effective in bringing about the desired outcomes then this can act as a barrier to sustainability of the framework.	*"Not yet seen as being effective for an increasing number of students"* R1 *"That the programme doesn't change to target students it has not yet engaged in or helped to modify behaviours that are extreme"* R 82	**26**
Competing Initiatives	Competing initiatives within the school can act as barriers to sustainability of SWPB4L. If there are other initiatives competing for time and attention within the school then a new initiative is less likely to be prioritised to a satisfactory level to ensure sustainability	*"All the other initiatives and tasks that teachers are expected to get involved with"* R21 *"Multiplicity of tasks required from schools, competition for time"* R168 *"competing initiatives"* R281	**23**
Time	The amount of time required for implementing SWPB4L compounded by a lack of adequate time available can act as a barrier to sustaining the framework in schools.	*"time"* multiple respondents (e.g., 3, 58, 109, 274, 322). *"lack of time"* R114 *"It is time consuming and can eat into teaching time"* R178 *"Time for teachers to discuss, share and learn - not just another meeting squeezed in"* R277 *"*	**63**
Workload	A large workload for school staff relating to the implementation of SWPB4L can act as a barrier to sustainability. According If an initiative is not easily applicable by school staff then it is less likely to be sustained.	*"overwork"* R91 *"Adding major workload to teachers every week, having to count up the reward slips, entering the data into the system, choosing students of the week, writing out the reward slips"* R119 *"teacher overload" R* 281	**12**
Professional Development	If SWPB4L professional development is insufficient this can act as a barrier to sustainability of the framework.	*"Lack of whole staff PD"* R 250 *"Getting the right training and support to guide you"* R 252 *"insufficient PD"* R 303	**6**
Resourcing	A lack of sufficient resources for daily running of SWPB4L can act as a barrier to sustainability of the framework.	*"resourcing or lack of"* R 35 *"Lack of ongoing resourcing"* R126 *"having to re-create a lot of the tools/resources ourselves"* R 208	**11**

Communication and Sharing	A lack of communication and sharing within SWPB4L schools can act as a barrier to sustainability of the framework.	*"Lack of communication"* R60 *"Lack of regular sharing of ideas and observations about how the programme is progressing"* R214	**9**
Data collection and analysis	If the SWPB4L data collection and analysis procedures are too difficult or do not occur then this can act as a barrier to sustainability of the framework.	*"Continuing to evaluate the data, making changes where pertinent"* R128 *"Data collection and analysis"* R306 *"seemingly meaningless collection of data"* R 311	**8**
Student Involvement	A lack of student support for SWPB4L can act as a barrier to sustainability of the framework within schools.	*"Lack of student buy-in - very negative feedback to date"* R81 *"Continuing to gain student buy in"* R102	**6**
Higher tier supports	A lack of support for tier 2 and 3 students within SWPB4L can act as a barrier to sustainability of the framework.	*"Lack of Tier 2 and Tier 3 interventions strategies support"* R26 *"Slow process in order to get to top tier of students"* R29	**5**
			466

R= Respondent

The total number of comments coded to each theme provided an indication of each themes relative importance as a potential barrier to sustainability of SWPB4L in New Zealand schools. Themes which were identified in a high number of statements ($n > 25$) were considered to be strong themes within the data. Based on this criteria, strongly recognised themes included *implementation challenges* (*n*=65), *time* constraints (*n*=63), *staff attitudes to change* (*n*=49), *costs and funding* (*n*=46), a lack of *staff buy-in* (*n*=28), *staff turnover* (*n*=26), and *ineffectiveness* (*n*=26) as barriers to sustainability of SWPB4L. Themes which were found in fewer of the respondent comments ($15 < n < 25$) were considered to have relatively moderate recognition within the data. These themes included statements relating to *competing initiatives* (*n*=23), the *school team* (*n*=19), *family and community factors* (*n*=19), *staff knowledge and understanding* (*n*=18), and *school leadership* (*n*=18) as barriers to sustainability of SWPB4L. Themes that were considered to have received comparatively low recognition ($n < 15$) within the respondent comments included *workload* (n=12), *resourcing* (*n*=11), *communication and sharing* (*n*=9), *data collection and analysis* (*n*=8), *professional development* (*n*=6), *student involvement* (*n*=6), *higher tier supports* (*n*=5), and *external supports* (*n*=3) as barriers to sustainability of SWPB4L.

In the following chapter the results from the quantitative and qualitative strands of the research are integrated in order to provide a full and meaningful overview of sustainability of SWPB4L in New Zealand schools and are discussed in relation to the research questions.

Chapter Five: Discussion

The School-Wide Positive Behaviour for Learning (SWPB4L) framework which is being implemented in New Zealand schools, aims to provide these schools with proactive and preventative strategies for delivering positive behavioural supports to all students. These strategies were designed to encourage the application of evidence-based practices in order to address growing concerns surrounding challenging student behaviours and traditional behaviour management methods. The current study investigated factors relating to sustainability of the framework. Several sustainability factors relevant to similar school-wide support programmes were identified in the international literature and an examination of these factors was achieved using an adapted version of an existing sustainability survey (the SUBSIST McIntosh et al., 2009). The factors considered included *prioritisation* of the initiative, *leadership* within the school, support and leadership from *external* sources, *effective* implementation and outcomes, *efficient* systems and strategies, collection and use of *data*, and *capacity building* for school staff.

The sustainability survey used in the current study followed a mixed methods design allowing collection of both quantitative and qualitative data. The quantitative data strand provided an insight into staff perceptions of levels of both importance and truth for each sustainability factor in relation to the SWPB4L programme in their schools. The qualitative data strand provided an insight into how school staff conceptualised these factors and how aspects of each factor were seen to either support or act as barriers to sustainability of the framework. Data from the qualitative strand also identified several unanticipated factors that the respondents perceived to have been important and relevant in relation to whole-school sustainability of SWPB4L. This chapter will discuss the implications of the research in relation to the research questions. These implications will be translated into practical recommendations for understanding, enhancing, and carrying out future research of sustainability of SWPB4L in New Zealand schools. Limitations of the study will also be identified and discussed.

Discussion of the Key Findings

Research Question One: What factors are important in relation to sustainability of SWPB4L in New Zealand schools?

Based on the quantitative data strand, school staff placed relatively high importance on all of the examined factors in relation to sustaining the SWPB4L programme. Each of the factors examined including *school leadership, capacity building, efficiency, effectiveness, data, priority,* and *external leadership* were also evident in the qualitative data strand, within the respondent comments relating to sustainability barriers and supports. This provided a deeper understanding of critical aspects within each factor and allowed for more meaningful recommendations to be made in relation to sustainability. These results suggested that the sustainability factors for the SWPB4L programme identified in the current New Zealand study confirmed the findings from the international literature (e.g., McIntosh et al., 2011; McIntosh et al., 2010; McIntosh et al., 2013; Coffey & Horner, 2012; Sugai & Horner, 2006). Furthermore, these findings suggest that valid assumptions relating to sustainability of the initiative can be made based on examination of these factors.

Supportive *leadership* of the initiative within the schools was considered to be the most important factor for sustainability of SWPB4L. This trend was evident in both the quantitative and qualitative data strands. These findings highlighted the importance of gaining active support from the school management team and having a knowledgeable and skilled SWPB4L leadership team who met regularly to discuss issues related to the running of the initiative, in order to ensure ongoing sustainability of the framework. Particular importance was placed on the role of school principals for committing to the initiative and supporting the staff during implementation. For example, respondent one stated that *"You must have a strong belief by a significant group of people to get this off the ground. The principal is crucial, as they can scuttle an initiative."* Certain characteristics of the SWPB4L leadership team were considered important in order to support ongoing implementation of the programme. The respondents reported that members of a successful SWPB4L leadership team should include energetic, committed, inspirational, knowledgeable, and respected personnel who are familiar with the school. These results reflect those from

international sustainability literature (Coffey & Horner, 2012; McIntosh et al., 2013; Sugai & Horner, 2006). Coffey and Horner (2012) also concluded that school leadership factors were potentially the most important for supporting sustainability of school-wide initiatives.

The extent to which *capacity building* was fostered and encouraged was also found to be highly important for supporting sustainability of SWPB4L. The level of understanding that was held by the staff of the critical features and practices within the framework was perceived as a highly significant feature of sustainability. Ongoing access to professional development that was relevant to SWPB4L and provided goal-oriented direction was reported to be the key feature of *capacity building* opportunities that could enhance sustainability. The reviewed literature suggested that *capacity building,* which was supported by ongoing collection and use of *data*, contributed to the process of *continuous regeneration* and subsequent sustainability of an initiative (McIntosh et al., 2013; McIntosh et al., 2010). The current study demonstrates that *capacity building,* through opportunities for regular professional development, is a key element with directly supports sustainability of SWPB4L in New Zealand schools.

An unanticipated discrepancy occurred between the findings in the data strands in relation to the importance of initiative *prioritisation* for supporting sustainability. The findings from the quantitative data strand indicated that this factor was perceived to be one of the least important sustainability supports. In contrast, aspects of *prioritisation* received the greatest recognition within the qualitative data strand. A possible explanation for the difference is the relative impact that individual aspects of *prioritisation* had on the outcomes from the data strands. Within the respondent comments *staff buy-in* which is an aspect of *prioritisation*, received the greatest recognition out of all aspects across all factors as an important sustainability support. This overwhelming identification of a single aspect of *prioritisation* heavily influenced the relative results for the qualitative strand. In comparison the average respondent importance ratings for statements relating to *prioritisation* gave less weighting to a single aspect and instead provided a more general overview of the importance of the factor as a whole. Further, the sustainability survey examined concepts relating to leadership and support both within the school and from external sources, as separate factors relating to sustainability. In contrast, the literature considered *school*

leadership and *external leadership* as features of *prioritisation*; extraction of these factors for isolated consideration may have taken away from the general features of priority as they were originally established in sustainability research. Therefore, the current discrepancy within *prioritisation* may suggest that this feature either needs to be considered across all aspects or that instead, commitment and support from school staff is a further feature needing to be considered separately. In addition, this may suggest that once the key features of have been extracted, *prioritisation* might be better understood as a cumulative desired result than a standalone sustainability support. These findings do demonstrate that it is important for schools to establish significant *staff buy-in* to support sustainability of the SWPB4L programme within schools. This adds value to the recommendations within the literature that commitment and support for an initiative should be demonstrated by at least 80% of the school staff before implementation begins (Ministry of Education, 2013; Coffey & Horner, 2012). In addition, the recognition of a *lack of staff commitment* and negative *staff attitudes towards change* within the qualitative data as significant barriers of ongoing implementation of SWPB4L further supports the need for these conditions to be considered by schools adopting the framework.

The quantitative data strand also allowed examination of the demographic variables relative to the importance of each sustainability factor. Overall the demographic categories appeared to have little effect on the average perceptions of the respondents in relation to the importance of each of the factors. However, there were some significant differences identified. The most meaningful differences in perceived importance of the sustainability factors occurred based on the primary roles of the respondents within the schools. Leaders of the SWPB4L team placed significantly higher importance on all of the factors except *efficiency*, in comparison with classroom teachers. These differences in perceived importance may be indicative of the respondents' investment in the programme based on their primary role. SWPB4L team leaders are likely to be highly invested in the overall running and maintenance of the framework within the school, perhaps explaining why they perceived *prioritisation*, *school leadership*, *external supports, effectiveness,* collection and use of *data*, and *capacity building* to be of greater importance than classroom teachers did. In addition, features of *efficiency* are likely to have a more significant impact on the daily lives of classroom teachers within the school than the other sustainability factors; therefore

it is not surprising that this was the only factor that they did not consider significantly less important than SWPB4L team leaders did. Further, members of the SWPB4L school team placed greater importance on the *effectiveness* of the framework in relation to sustainability than school principals did. These findings indicated that the SWPB4L school team who are involved in the daily running of the framework, placed greater importance on the outcomes. As discussed, the literature suggested that schools often base implementation decisions regarding new initiatives on factors other than effectiveness (Sugai & Horner, 2006). This may explain why the current study found that on average, school principals who are often responsible for selection of new initiatives, placed less importance on *effectiveness* than SWPB4L team members did.

One or two other significant differences in perceived importance based on respondent variables were identified, however these provided little scope for deeper interpretation. The perceived importance of *effectiveness* and the collection and use of *data* in relation to sustainability of SWPB4L were found to be significantly higher for respondents from intermediate schools than from secondary schools. These differences may be related to the increased mobility and autonomy of students in secondary schools compared to intermediate schools. Respondents from schools where implementation of SWPB4L took place in 2006 or earlier placed more importance on *school leadership* than respondents from schools who began implementation in 2012. Since *school leadership* was considered to be the most important factor relating to sustainability of SWPB4L it is not surprising that schools who have been implementing the framework for longer had greater recognition of this importance. However, the lack of any further significant differences in perceptions of importance based on the length of time implementing SWPB4L is surprising. This indicates that the remaining features of sustainability hold similar importance in relation to ongoing implementation over time.

Emergent themes within the qualitative data strand also allowed for identification of novel or unanticipated ideas relating to sustainability. While some of these ideas may fit into the recognised sustainability factors their prevalence or difference was considered sufficient to set them apart. *Communication*, the largest emergent theme, was recognised as an important support for sustainability of SWPB4L. The respondents reported that

communication and sharing of ideas needs to be occurring within the school in order for SWPB4L to be sustained. For example, one respondent claimed that *"Communication with staff - what is working, needs adapting and sharing ideas"* is an important sustainability support. Further, some of the respondents recommended that communication with other SWPB4L schools can support sustained implementation of the framework. For example, one respondent stated that *"cluster meetings with regional schools"* supports sustainability. These comments support recommendations made by McIntosh et al (2010) who suggest that schools who have had more experience with an initiative can act as demonstration sites for those schools undertaking initial implementation efforts. Overall, these comments indicate that regular meetings and discussions amongst school staff are important for supporting sustainability of SWPB4L. A theme of *consistency* also emerged with respondent comments reflecting this as an important support for SWPB4L sustainability. Many of these comments simply stated 'consistency' in response to the question relating to sustainability supports. Some comments alluded to *consistency* of approach and others to *consistency* of application. This theme presents opportunities for further research to understand the conceptual meaning of *consistency* in relation to sustainability of SWPB4L and subsequently how it might be supported and enhanced.

While the greatest recognition was given to the emergent themes of *communication* and *consistency* the respondents also identified several other unanticipated ideas that can positively contribute to sustainability of SWPB4L within their schools. The respondents recognised the roles of *reflection, reviewing, and maintenance* strategies within SWPB4L as all being important for ongoing support of sustainability. The respondents also referred to *student factors* such as support for the initiative and involvement in delivery and planning, which can enhance the successful ongoing implementation of SWPB4L. The need for *higher level supports*, for those students who do not respond adequately at the school-wide tier of the framework, was also identified as an important feature of sustainability at the school-wide level. These emergent themes identify ideas relating to sustainability of SWPB4L in New Zealand schools that are not directly reflected in existing sustainability literature. These ideas deserve attention in ongoing research. Since they are novel they need to be investigated further in order to understand their deeper meaning and exactly how they impact sustainability of practices within the framework.

Question Two: What are New Zealand Schools doing well in order to Support Ongoing Implementation of SWPB4L?

Overall, perceptions of truth were high for all of the sustainability factors. This is a promising outcome which indicates that on average New Zealand schools are doing fairly well in relation to SWPB4L implementation and incorporating key features of sustainability support into their implementation efforts. Factors which received higher levels of perceived truth for practice within the schools and had smaller discrepancies between their truth and importance scores were representative of relative strengths in relation to SWPB4L sustainability levels. Further, these factors were less evident within the respondent reports of sustainability barriers indicating they were not major challenges being faced during implementation.

School leadership was perceived to be the truest sustainability factor in relation to SWPB4L in the respondents' schools and, while still significant, the difference between the perceived truth and importance of *school leadership* factors was the smallest compared to all other factors. Features of *school leadership* were seen by some respondents as barriers to sustainability within their schools. This highlights the need for ongoing attendance to the roles of leaders within the schools and within SWPB4L. However, overall these findings suggest that SWPB4L has received a high level of support from senior management teams and that the SWPB4L leadership teams have been knowledgeable and highly skilled in relation to the framework. Based on these outcomes *school leadership* within New Zealand schools implementing SWPB4L appears to be the most important and most true feature of sustainability support. *Capacity building* and *effectiveness* were also considered to be highly true factors of sustainability by the respondents. Further, *effectiveness* and then *capacity building* had the smallest discrepancies between perceived truth and importance compared to all other factors except *school leadership.* A high level of *capacity building* suggests that many of the respondents felt that they had good understanding of the critical features and practices of SWPB4L and that professional development and expertise relating to SWPB4L was highly accessible to their schools. High ratings of truth in relation to *effectiveness* indicates that SWPB4L was providing effective outcomes across the school for a high proportion of students and that these outcomes were occurring fairly quickly with visible

affect within six months of implementation. It is important to note that a lack of sufficient professional development (a feature of *capacity building*) and ineffective practices were identified by some respondents as barriers to sustainability within their schools, suggesting that ongoing improvement could be made to further strengthen these features of SWPB4L.

Question Three: What Implementation Improvements could be made in relation to SWPB4L in order to enhance Sustainability Potential in New Zealand Schools?

While the average perceptions of truth were relatively high they were found to be significantly lower than the average perceptions of importance for all of the sustainability factors. This demonstrates that there is potential room for improvement in relation to all of the examined factors. Those factors which received the lowest perceptions of truth and had the greatest differences between their perceived levels of truth and importance, reflected the areas which offered the most significant room for improvement in order to support enhanced durability of SWPB4L implementation. In some cases key aspects of these factors were also recognised by numerous respondents as sustainability barriers providing potential directions for improvement.

The respondents gave the lowest truth ratings to *efficiency* and *external leadership* factors of sustainability. Low *efficiency* ratings indicated that SWPB4L was not considered to be entirely cost effective or easy to carry out. While *external leadership* and involvement from families and the local community for SWPB4L was considered incomplete. In addition, the largest discrepancies between perceived truth and importance were found for the factors of *efficiency* and *external leadership.* This highlighted these factors as having the most significant room for potential improvement in relation to strengthening SWPB4L sustainability. Aspects of *efficiency* were also reflected within the qualitative data strand as barriers to sustainability of SWPB4L. This enabled more specific consideration of potential areas for sustainability improvement in New Zealand schools. Based on the number of respondent comments, *implementation challenges,* which can negatively impact efficiency of practices was the most recognised barrier to sustainability of SWPB4L. This suggested that a lack of full and accurate implementation in a clear and consistent way has acted as a barrier to sustainability of SWPB4L in schools. For example, one respondent stated that the challenge of *"getting consistently agreed upon practices up and running in the school"* could

threaten sustainability. These findings imply that schools required support in order to achieve full and accurate implementation of SWPB4L in order to enhance sustainability potential. This also supports the need for further research relating to consistent and effective implementation strategies including what they entail and how they can be supported. The quantitative findings also implied that a combination of the amount of time required for implementation and the lack of time available to schools, which are key aspects of *efficiency,* acted as a significant barriers to sustainability of the framework. The respondents referred to the time consuming nature of SWPB4L and to a lack of time within their schools for implementation to take place. These findings are not surprising as a lack of time is a common complaint from school staff attempting to implement new initiatives on top of existing demands.

Additional barriers identified in the qualitative data strand also provided an insight into potential aspects of SWPB4L that could influence the levels of sustainability achieved. *Staff attitudes* towards change were also seen as a significant barrier to sustainability of SWPB4L. The respondents reported that negative staff attitudes threaten ongoing implementation of the framework; teacher apathy and complacency were seen to act as barriers to sustainability. Further, an unwillingness of staff to change their attitude to align with SWPB4L was also considered to be a barrier to sustained implementation. For example, one respondent reported that *"teacher resistance and/or defensiveness regarding usual practice prior to PB4L"* can act as a barrier to sustained implementation. These findings supported those of Savage, Lewis, and Colless (2011) who suggested that teacher attitudes may represent a barrier to effective on going implementation of positive school-wide behaviour management supports in New Zealand schools. Further, these findings supported conclusions within the literature that SWPB4L requires a significant shift in the way some school staff think and act (Savage, Lewis, & Colless, 2011). Funding expenses were also reported as barriers to sustainability of SWPB4L. This indicated that there was a lack of adequate funding for the framework. Particular concerns were raised regarding the finite nature of the funding from the Ministry of Education. For example, one respondent reported that *"after the three funded years there will need to be a system to fund the sustained programme"* and another respondent reported that *"no funding after the first 3 years"* was seen as a barrier to sustainability. This supports the emphasised need for

ongoing and renewable funding in sustainability literature (McIntosh et al., 2013; Sugai & Horner, 2006). A lack of funding could be considered a common and somewhat anticipated complaint in relation to any new initiatives within schools. However, a reviewed funding strategy, perhaps at a lower rate over a longer period than the current plan, may help alleviate some of these concerns.

In relation to the second and third research questions, the findings from the current study demonstrate that *school leadership, capacity building,* and *effectiveness* are all strong features of SWPB4L implementation in New Zealand schools. In contrast, *efficiency* and *external leadership* represented the areas for greatest improvement for enhancing the sustainability levels of SWPB4L within schools. The remaining factors of *prioritisation* and *data* collection appear to have been relatively well considered but based on comparatively moderate discrepancies between truth and importance neither of these factors was identified as a significant strength or weakness within the framework. Ongoing improvement to these features of SWPB4L could enhance sustainability. However, they do not appear to pose an immediate threat to ongoing implementation efforts in New Zealand schools.

The quantitative analysis also allowed for identification of different perceptions of truth for each of the sustainability factors based on demographic variables related to respondent and school characteristics. These findings suggested that variables within the school such as different staff roles, the year level, and the number of years implementing SWPB4L, are linked to significant differences in perceived truth of the sustainability factors. However, sociological factors including community, context, and socio-economics did not appear to affect the perceived truth of sustainability factors. These were promising trends as within school factors were more easily controlled than sociological factors. Different perceptions of importance according to the roles of the respondents provided insight into how implementation of SWPB4L is viewed within New Zealand schools. Those features of sustainability that were found to be relatively well considered within the schools (based on current findings) including *school leadership, capacity building, effectiveness, prioritisation,* and *data* are viewed as less true by classroom teachers than other personnel within the school. Perhaps suggesting that classroom teachers, who are responsible for the practical

application of SWPB4L are more aware of the potential for improvement in these areas in order to support their practice. It is interesting that the areas of *efficiency* and *external leadership* which were found to offer the greatest potential for improvement were viewed similarly by all respondents regardless of their role. This apparent consensus across all school staff adds to the need for greater support and focus in these areas.

Levels of *prioritisation, efficiency,* and *effectiveness* were perceived to be higher in primary-intermediate schools than in secondary schools. Further, *effectiveness* was also found to be perceived as more true in intermediate than secondary schools. Further investigation into how these factors can be enhanced in secondary schools could identify reasons for these differences and offer focused strategies for overall enhancement of SWPB4L implementation at secondary school level. The current study also found that schools who began implementation of SWPB4L in 2006 or earlier had higher levels of *prioritisation* and *school leadership* than schools that began implementation in 2012. As with similar differences found relating to perceptions of importance, it is interesting that more differences were not indicated based on implementation year. Future research could focus on the apparent lack of perceived improvement in areas of sustainability over time.

Limitations of the Study

There are two major limitations relating to the method of data collection used in the current study. The first is that the sustainability survey is a new measure which has not been used previously. Therefore, repeated use of the measure is required in order to strengthen reliability and validity and provide outcomes that can be compared over time. The second limitation is that the measure used in the current study relied on self-report from school staff and therefore the reported importance and truth of sustainability factors are based on respondent perceptions rather than observed measures. This limitation could be overcome through longitudinal research that involves observation of the various features that promote the implementation and the sustainability of the SWPB4L initiative in the schools over time. It is therefore recommended that the measure used in the current study is used

in future research and used alongside direct observations of the factors as they occur in New Zealand schools.

Another limitation of the present research is that the factors examined within the quantitative data strand had already been identified in existing sustainability research and therefore the results and subsequent recommendations were limited to common concepts which arise frequently in relation to new initiatives. The quantitative data strand did provide some insight into unanticipated ideas surrounding sustainability. However, focused research examining these ideas is required before practical implications can be identified. The current study was also limited to a very general overview of the existing sustainability factors. While this is useful for providing a starting point for ongoing research, it does not allow for specific recommendations to be made.

Recommendations

The findings from the current study suggest that *school leadership, capacity building, efficiency, effectiveness, data, prioritisation*, and *external leadership* are all important factors in relation to sustainability of SWPB4L schools. Furthermore, it is possible that these same factors affect the ongoing sustainability of any new initiative that schools choose to take on. However, in the context of the current study, it is therefore recommended that regular ongoing research is carried out to understand and assess these concepts in relation to implementation of the framework in New Zealand schools. The findings from the current study demonstrate that *school leadership* and *capacity building* factors appear to hold the greatest importance for sustainability. Therefore it is recommended that these factors are promoted during implementation of SWPB4L and that schools are provided with guidance on how to strengthen these elements in order to support ongoing implementation.

The current study also indicated that *staff buy-in* is an extremely important feature of sustained implementation of SWPB4L. It is therefore also recommended that commitment and support for the initiative by school staff is well established when schools undertake implementation of SWPB4L. Currently the Ministry of Education requires buy-in from 80% of the school staff before SWPB4L can be implemented; the current study supports this

requirement and suggests that this should be continually monitored throughout the implementation process.

The current study also found that there were several unanticipated features which support sustainability of SWPB4L. The most important of these features being ongoing *communication* and *consistency* during implementation. It is recommended that further research is undertaken in order to enhance understanding of these concepts and how they affect sustainability. Further, it is recommended that these features are recognised by SWPB4L schools throughout implementation of the framework. The current study suggests that *communication* requires regular meetings and discussion between staff; *consistency* relates to approach and application of SWPB4L procedures. Therefore, it is recommended that these features are actively attended to by the Ministry of Education during delivery of the framework and by senior management and the SWPB4L school leadership team during implementation.

The study suggests that there is room for improvement in relation to all of the identified factors of sustainability. As the truth of these factors appear to be connected to their perceived importance, it is recommended that these factors are explained and widely promoted to SWPB4L schools. The findings from the current study imply that *efficiency* and *external leadership* factors are areas that offer the greatest room for improvement. It is therefore recommended that further research is carried out in order to investigate how these factors can be enhanced. In line with recommendations from the literature it recommended that schools inform and involve families and the local community in relation to SWPB4L and that wherever possible opportunities are taken to make implementation of SWPB4L more efficient in order to support sustainability. Further, the current study implies that *implementation challenges* and *time* factors are the most significant barriers to sustained implementation of SWPB4L. It is therefore recommended that schools are offered guidance in how to overcome these factors during implementation. Such guidance could focus on clarifying implementation procedures and supporting consistent understanding of the framework through whole school professional development. It is also recommended that schools are offered additional funding in order to support teacher release options to free up time and wherever possible, SWPB4L procedures are refined to make them easier to

implement on a timely basis. Implementation challenges and time factors provide areas for future research relating to overcoming these challenges and reducing the key barriers to sustained implementation of SWPB4L by New Zealand schools.

The current study is the first to directly consider features of sustainability in relation to SWPB4L in New Zealand schools. The results have provided valuable baseline data relevant to the sustainability of the framework at the time the data were collected. It is recommended that ongoing research focuses on expanding these findings. This could be achieved using observations, face-to-face interviews, and/or focus groups in order to gain better insight into SWPB4L at the school level. Ongoing examination of the sustainability factors investigated in the current study could also provide opportunities for comparative research that looks at how these factors evolve within SWPB4L schools over time.

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Appendices

Appendix A: Sustainability Survey

PB4L: School-Wide Sustainability Survey

Welcome

Thank you for participating in this research, your time and effort are greatly appreciated. This survey should take 10-15 minutes to complete.

Your responses will provide valuable information about how sustainable the Positive Behaviour for Learning School-Wide (PB4L-SW) framework is in New Zealand schools. Sustainability relates to the ongoing potential for a program to be maintained successfully and to produce desired outcomes in the long-term.

This research is important because, as you will know, a lot of resources, including time, effort, knowledge, and money, are being allocated to PB4L-SW. The researcher hopes to identify ways in which these resources can be maximised. The data collected will be incorporated in the researcher's Masters Thesis for the Educational Psychology program at Massey University.

This survey is anonymous, therefore a summary of the research findings will be provided to the Principal's of all schools invited to participate.

PB4L: School-Wide Sustainability Survey

Survey Instructions

You will be asked to provide some general demographic information about your school, but you will NOT be asked to provide any identifying information and your individual answers will not be discussed or shared with anyone.

You will be presented with statements about PB4L-SW and asked to rate them on 2 scales;

First, based on your personal perspective as to how true the statement is for your school and;

Second, how important you think the statement is in relation to keeping PB4L-SW going.

A rating is required for each statement before you can move on to the next.

There are also optional comment boxes for each question which allow you to provide extra information and examples or clarify your personal ratings.

Please note: Submission of this electronic survey implies consent to participate in the research and for your responses to be included in the final research data set.

If you have any questions or concerns please feel free to contact the researcher or the research supervisors (contact details below).

Thank you,

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PB4L: School-Wide Sustainability Survey

Demographic Information

Respondent's Role **(if more than one applies please select the first relevant title on the list):**

Other (please specify)

School Region **(please select the most applicable):**

	North Island	South Island
.		

School Community:

Rural Semirural Suburban City

Demographic Information

School Level:

◯ Secondary (Years 9-13)
◯ Primary (Years 1 – 6)
◯ Primary Intermediate (Years 1 – 8)
◯ Intermediate (Years 7 & 8)
◯ Secondary (Years 9 – 13)

Other (please specify)

School Enrollment:

◯ 1 to 50 ◯ 51 to 100 ◯ 101 to 150 ◯ 151 to 300 ◯ 301 to 500 ◯ 500+

School Decile:

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 ◯ 8 ◯ 9 ◯ 10

In what year did your school begin implementing PB4L-SW?

◯ 2006 or earlier ◯ 2007 ◯ 2008 ◯ 2009 ◯ 2010 ◯ 2011 ◯ 2012 ◯ 2013

PB4L: School-Wide Sustainability Survey

PRIORITY

PB4L-SW serves a critical need for the school

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L-SW addresses outcomes that are highly valued by school personnel

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

A vast majority of school personnel (80% or more) support PB4L-SW

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

Parents/caregivers are actively involved in the PB4L-SW effort

(e.g., consultation during implementation, as part of the PB4L-SW team, or as a member of the school BOT/PTA)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

PB4L-SW is a top priority for the school.

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

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PB4L: School-Wide Sustainability Survey

School Leadership

The school administrators (principal and/or vice-principal) actively support PB4L-SW

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

The school administrators actively support school personnel when implementing and aligning initiatives to allow PB4L-SW to occur

(e.g., shield staff from competing demands, change language to align PB4L-SW with new initiatives)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

The school PB4L-SW team has regularly scheduled time to meet

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

External Leadership

There are adequate resources allocated for PB4L-SW by the Ministry of Education.

(e.g.,funding, time, and support)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L-SW is promoted and visible to the local community

(eg. Parent groups, local businesses, youth organisations etc.)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

The PB4L-SW expectations within the school reflect local community values.

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Effectiveness

I am aware of the principles and evidence-base supporting PB4L-SW practices and strategies

(i.e., I have read research about the techniques being used in the school under the PB4L-SW framework and/or the principals and the supporting evidence for PB4L-SW components being used in the school has been presented to me and I understand them)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L-SW is effective in helping achieve desired outcomes

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

There is an immediate (within 6 months) effect of PB4L-SW after implementation

(e.g., reduction in referrals/suspensions, improved school climate, improved student success)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

I based this answer on:

- ☐ Official School PB4L-SW Data
- ☐ Personal Experience and/or Observations
- ☐ Classroom Data
- ☐ Other (please comment)

Optional Comments:

PB4L: School-Wide Sustainability Survey

The effects of PB4L-SW cross over to areas other than just behaviour

(e.g., improved academic achievement, improved attendance)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

I based this answer on:

- ☐ Official School PB4L-SW Data
- ☐ Personal Experience and/or Observations
- ☐ Classroom Data
- ☐ Other (please comment)

Optional Comments:

The school-wide tier of PB4L-SW is effective for a large proportion of students

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

I based this answer on:

- ☐ Official School PB4L-SW Data
- ☐ Personal Experience and/or Observations
- ☐ Classroom Data
- ☐ Other (please comment)

Optional Comments:

PB4L-SW is implemented consistently based on agreed strategies within the school

(i.e., it is used as intended)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

The school team implementing PB4L-SW is knowledgeable and skilled in PB4L-SW

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Efficiency

PB4L-SW is easy to carry out

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L-SW is cost effective

(in terms of money, time, and effort)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L-SW data collection is easy and does not interfere with teaching

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Use of Data

There is regular measurement to make sure PB4L-SW is being carried out correctly by school personnel

(e.g., team checklist, set benchmarks of quality)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

There is regular measurement of student outcomes – for example through review of office discipline referral data, achievement data, school surveys, student/parent surveys

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

Data are reviewed regularly at team meetings

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

Data are regularly shared with school staff and invested parties.

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Capacity Building

I have a basic understanding of PB4L-SW

(i.e., know the critical features and practices)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

The school team has regular access to district PB4L-SW expertise

(e.g., MOE support staff)

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

School teams and new personnel are provided with professional development in PB4L-SW

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Potential Barriers

PB4L-SW goes against some of my personal values

(e.g., "rewarding" students, teaching "compliance")

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

Our school has other initiatives (e.g., academic, behaviour, etc.) that compete (for time, resources or content) with PB4L-SW

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

There are high levels of turnover of school personnel who served as key leaders ("champions") of PB4L-SW (i.e., within three years) in your school.

	Not at all 0-5%	Somewhat 10-20%	Generally 40-60%	Mostly 70-80%	Completely 90-100%	Don't know N/A
How true is this statement for your school?	◯	◯	◯	◯	◯	◯
How important do you think this is for sustainability of PB4L-SW (keeping the program going)?	◯	◯	◯	◯	◯	◯

Optional Comments:

PB4L: School-Wide Sustainability Survey

Final Questions

The following two questions provide you with an opportunity to comment on factors that you believe act as supports or barriers to sustaining PB4L-SW within your school.

What supporting factors do you believe are important for sustaining PB4L-SW?

What do you believe are the most significant barriers to sustaining PB4L-SW?

PB4L: School-Wide Sustainability Survey

Survey Complete

Thank you! *Have a great day.*

Appendix B: Email to Principals

Dear [Principal],

PB4L:SW Sustainability Research: Invitation to Participate

I would like to invite [School] to participate in my Educational Psychology Masters research project relating to the sustainability of Positive Behaviour for Learning: School-Wide in New Zealand schools.

Participation requires completion of a 10 minute online survey. This can be completed by any [School] staff member who has been exposed to the PB4L:SW initiative within the school. The more responses received the greater the depth of data collected and the more representative the results will be. The data will be used to create an overall picture of PB4L:SW in New Zealand schools, with particular relevance to key sustainability factors.

This survey is anonymous. No identifying data will be requested. Respondents will not be required to identify themselves or the school which they are representing. Some demographic data will be collected in order for the data to be categorised. As participation is anonymous a summary of the findings will be sent to all schools who have been invited to respond. **Please see the attached information sheet for more details relating to project procedures, participation, consent and privacy, and how the data will be managed**

If you are happy for [School] to participate please distribute the following survey link to all staff:

https://www.surveymonkey.com/s/HBGL2PJ

The survey is now open and will be available until 5pm, Friday July 4, 2014.

Your time and effort is greatly appreciated. I hope that the research will provide useful information relating to the on-going use of PB4L-SW in New Zealand schools. Your participation allows [School]'s experiences to be represented in the national data and strengthens any conclusions or recommendations made based on this research.

If you have any questions please do not hesitate to contact myself or my research supervisors. All contact details are listed below or you can simply reply to this email.

Kind regards,

Katie Elder.

Project Contacts:

Researcher:	Research Supervisors:	
Katie Elder Massey ID#11232957 Email: k.j.elder@outlook.com Ph. 06 324 8833	**Dr. Jane Prochnow** *Massey University Institute of Education* Email: j.e.prochnow@massey.ac.nz Ph. 06 356 9099 ext. 84463	**Dr. Keith Greaney** *Massey University Institute of Education* Email: k.t.greaney@massey.ac.nz Ph. 06 356 9099 ext. 84461

Appendix C: Information Sheet

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Institute of Education | Cnr Collinson Rd and Albany Dr | Turitea Campus | Palmerston North 4474 | New Zealand | Ph. 06 356 9099

Investigating the Sustainability of Positive Behaviour for Learning: School-Wide in New Zealand Schools.

INFORMATION SHEET

I would like to thank you for taking the time to consider my project. This information sheet aims to provide you with a clear explanation of my research focus and the process involved, in order for you to make a well informed decision about participation. This research is being undertaken as part of the Thesis requirements for the Masters in Educational Psychology degree at Massey University.

Please take some time to read through this information so that you have a clear understanding of what this project is about, the project procedures, what your participation would involve, consent and privacy, and how the data will be managed. Your time is greatly appreciated.

Kind regards,

Katie Elder
Massey University
Student ID 11232957

Project Summary:

The aim of this project is to investigate the sustainability of Positive Behaviour for Learning: School-Wide (PB4L:SW) in New Zealand schools. Sustainability research is important for two key reasons; first, no matter how effective a program may be if it cannot be realistically maintained in the long term then it will not be successful and second, as you will well know, significant resources are being invested into PB4L:SW and long term success helps to support and maximize those investments. I also hope that this research will help to contribute to the evidence base for PB4L:SW in New Zealand; there is a significant amount of international literature supporting such programs, however it is important to evaluate PB4L:SW within the New Zealand context and from a national perspective. In order to do this the researcher has created a sustainability rating survey, which reflects factors relevant to PB4L:SW in New Zealand. The survey responses will provide data relating to the key components linked to sustainability of school-wide positive behaviour programs. This data will be used to create a picture of the long-term sustainability potential of the program. The researcher hopes to identify current strengths of PB4L:SW, as well as potential areas for improvement in order to support long-term success of the initiative.

Invitation to Participate

The researcher would like to invite you to participate in this project. The researcher appreciates that your time is incredibly valuable and has made an effort to make participation as easy as possible without impacting on the quality of the data collected. Please read through the information below that provides details on what participation would involve.
The survey is now open and will be available for responses until 5pm, Friday, 4 July.

Participant Identification and Recruitment

A list of schools implementing PB4L:SW was obtained from the Ministry of Education. The researcher made initial contact by email to the school Principal. An online link for the sustainability survey was provided for distribution to school staff at their discretion.

Any staff members who have encountered PB4L:SW are welcome to respond. There will be no limit on the number of responses accepted from each school. The greater the number of responses received the greater the depth of the data and the more representative it will be. The researcher does not anticipate that participation will result in any discomfort or risk.

Project Procedures

Participation will require completion of a 10 minute online rating survey that will be distributed electronically via SurveyMonkey. Clear directions on how to complete the ratings are included in the survey and the respondent will be guided through the process at each stage. The survey begins with 7 generic multi choice questions relating to demographic data about your school. Following this there are 32 statements relating to sustainability. For each statement you will be asked to rate the relevance for your school, and also, how you perceive the statement to impact overall sustainability of PB4L:SW. There are also 2 questions that require short comment responses. Throughout the survey there is space provided for optional comments; the researcher encourages you to use this space if you wish to provide more information or details.

Privacy and Consent

Distribution of the survey link by the school principal implies consent for the school to be represented. At any stage during completion respondents can cancel out of the survey and no information will be submitted. Final submission of the completed survey by individual respondents implies consent for their responses to be included in the final data set. Participating schools and individual respondents will not be identifiable within the data. The demographic data provided is generic in order to avoid identification of an individual participant. School names will not be included at any stage in the data collection or within the final document. The representative respondent will not be asked to disclose any personal information, except their role in relation to the PB4L:SW framework, in order for the researcher to accurately describe the respondent characteristics within the final document.

Data Management

The data collected will be collated by the researcher. The raw data will be viewed by the researcher and the research supervisors. Data from all responses will be used to compare ratings for each statement. The demographic information will be used to identify trends between schools with similar characteristics. The short comment answers will be reviewed to look for any patterns between responses. The data will be stored in a non identifiable way by the researcher. Once it has been collated and analysed the data will be included in the researcher's Master's thesis for submission to Massey University. Following submission of the report the data will be deleted permanently. Once the report is finalised all school's who were invited to participate, whether they did or not, will be sent a summary of the results.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- *decline to answer any particular question;*
- *withdraw from the study within 2 weeks of submitting your responses;*
- *ask any questions about the study at any time during participation;*
- *provide information on the understanding that your name will not be used unless you give permission to the researcher;*
- *be given access to a summary of the project findings when it is concluded.*
- *Completion and return of the survey implies consent. You have the right to decline to answer any particular question.*

Project Contacts

Researcher:

Katie Elder
Massey ID#11232957
Email: k.i.elder@outlook.com
Ph. 06 324 8833

Research Supervisors:

Dr. Jane Prochnow
Massey University Institute of Education
Email: j.e.prochnow@massey.ac.nz
Ph. 06 356 9099 ext. 84463

Dr. Keith Greaney
Massey University Institute of Education
Email: K.T.Greaney@massey.ac.nz
Ph. 06 356 9099 ext. 84461

Massey University Research Ethics:

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researchers named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researchers, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz".

Appendix D: MUHEC Low Level Ethics Acceptance Letter

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

30 October 2013

Katie Elder
68 Gate Pa Avenue
Ohakea
BULLS 4816

Dear Katie

Re: Investigating the Sustainability of Positive Behaviour for Learning (PB4L) in New Zealand Schools

Thank you for your Low Risk Notification which was received on 4 October 2013.

Your project has been recorded on the Low Risk Database which is reported in the Annual Report of the Massey University Human Ethics Committees.

The low risk notification for this project is valid for a maximum of three years.

Please notify me if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

> *"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.*
>
> *If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06 350 5249, e-mail humanethics@massey.ac.nz".*

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to provide a full application to one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

J. O'Neill

John G O'Neill (Professor)
Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)

cc Dr Jane Prochnow
Institute of Education
PN500

Mr Keith Greaney
Institute of Education
PN500

Assoc Prof Sally Hansen, Director
Institute of Education
PN500

Mrs Roseanne MacGillivray
Institute of Education
PN500

Massey University Human Ethics Committee
Accredited by the Health Research Council

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