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Exploring Effective Play-based Learning Environments that Include Students with Learning Support Needs in New Zealand Primary Schools.

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Caroline Smeed

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Abstract

Play-based learning (PBL) as a teaching pedagogy in New Zealand primary schools is becoming increasingly common. This change in teaching philosophy places emphasis on the child as an active agent in their learning, with teachers capitalising on individual play interests to foster holistic learning and development. Given PBL's focus on children's interests, motivations and needs, and relative abandonment of normative expectations, PBL is potentially well placed to act as a tool to improve the classroom experiences of students with learning support needs. Following international trends, New Zealand research on PBL in the primary school setting is emerging. To date this has not focused on students with learning support needs. This research attempted to do this through the lens of exemplary PBL primary school teachers who include children with learning support needs in their classrooms. This study used a qualitative design with semi-structured interviews conducted with five teachers. The exemplary teachers in this research had positive, solution-based attitudes towards inclusion, strong communication and collaboration skills and valued flexible, open-ended resources and spaces. Teachers were skilled at observing and responding to individual children's play and well-being and explicitly taught social and emotional skills. Teachers used the curriculum and monitored learning in holistic, flexible ways, which enabled them to meet a range of needs. Teachers identified where students found the PBL environment difficult to negotiate and were more present to support these children. There were significant variations between teachers in how additional supports provided for children with learning support needs were used. Results suggest effective inclusive teaching practices in a PBL environment have at their foundation teachers with positive, innovative, can-do attitude towards inclusion that is supported by two-way collaboration with other stakeholders, and engagement with practice enhancing professional development.

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This thesis is dedicated to all the children who feel like square pegs in a round hole at school, and to all the teachers dedicated to carving out different shaped holes so that all might belong.

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Chapter One: Introduction

The present research explored effective teaching practices of New Zealand teachers who teach through play in mainstream early years primary classrooms that include children with learning support needs. In depth semi-structured interviews were completed with six teachers identified as demonstrating exemplary play-based learning (PBL) practice. The interviews captured participant's insights about effective teaching through play that is supportive of all students, as well as how they used specific strategies and supports in the PBL classroom for students with learning support needs. Interviews were analysed through a process of reflexive thematic analysis to identify common themes, and unique context driven pedagogy. Findings identified teaching attitudes, approaches and practices that foster well-being, social participation and holistic learning for students with learning support needs.

To set the context for this research this chapter provides background information on play as a context for learning, with attention to how research on play has positioned children with learning support needs. The evolving interest in PBL in early years primary schooling and rationale behind the movement toward play-based approaches is then explored. This is followed by an overview of current New Zealand policy and provisions for students with learning support needs in the education system. The chapter concludes with a description of the researchers' background and interests, followed by a rationale for the present study and a description of key terms. It concludes with a summary of the thesis chapters.

Play as a Context for Learning

In education, play has been described as a self-chosen, risk-free and engaging activity for children that is mediated by cultural tools such as language, symbols, objects and the social experiences that come from this (Smidt, 2014). Over recent years the concept of play as an avenue for learning in school has grown in popularity (Aiono et al., 2019; Davis, 2018; Jay & Knaus, 2018; Nolan & Paatsch, 2017). This is driven by a large body of research that suggests play is an effective way to support children's holistic learning and development (Walsh et al., 2017; Fisher et al., 2013; Parker & Stjerne Thomsen, 2019).

Play's relationship to learning and development has its roots in constructivist theory (Smidt, 2014). Piaget's early theories challenged the existing beliefs that children's learning and development was a result of passive determinism (Halpenny & Petterson, 2014). Child development, he believed was driven by children's desire to adapt and respond to evolving situations, which lead them to constantly up-date their understandings (Halpenny & Petterson, 2014). Piaget's work has influenced teacher practice that gives prominence and support to child-led, developmentally appropriate

practice such as child-centred learning, discovery learning and observations of children at play (Halpenny & Petterson, 2014).

Vygotsky was a social constructivist who built on the views of Piaget, while highlighting the role of others in child development and learning (Smidt, 2014). He drew attention to the social environment of the child and the influence others can have in play to effect developmental outcomes (Smidt, 2014). Vygotsky's work has influenced a more active view of the teacher in children's play and learning, and in particular in the place between what a child can do for themselves and what they can do with more knowledgeable others (Smidt, 2014).

Research on Play and Children with Learning Support Needs

Research on play with a specific focus on children with learning support needs has emphasised the role of play in assessment and intervention, and the identification of sequential, stages of play (Lifter et al., 2011). Research in this space has tended to emphasise either behaviourist or constructivist perspectives. Although these perspectives overlap in some ways, behaviourist approaches have mostly focused on describing deficits in play skills, functional uses of play and instructional teaching of play skills, while constructivist approaches have focused on how play informs our knowledge of the child (Lifter et al., 2011).

More recently the social model of childhood disability (Connors & Stalker, 2007 as cited in Burke & Claughton, 2019) has been used to provide a perspective that highlights the competence, creativity and agency of children with learning support needs in play. Burke and Claughton (2019) assert that children with learning support needs are often positioned as unskilled in play and have been excluded from childhood studies that present an empowered image of the child. Their research seeks to contrast this by highlighting children with learning support needs agency in deliberate, strategic, creative and complex play worlds that can be used as a starting place for supporting further learning.

The Call for More Play at School

The role of play and formal education has been an evolving one, with play opportunities typically limited to the playground during breaks from the classroom. New Zealand schools have a history of formal teaching and structured learning with limited opportunities for play as a vehicle for learning within the daily classroom timetable (Davis, 2015). In recent times there has been a growing concern that the focus on achievement and outcomes in young children's education has led to an absence of play and declining play skills in children (Miller & Almon, 2009; Bodrova, 2008). Current critique of the declining play levels in primary education has focused on the potential for negative effects on

children's health, well-being and behaviour and the absence of opportunities for children to develop the innovative problem-solving abilities needed for future work life (Miller & Almon, 2009; Pyle & Danniels, 2018).

Neuroscience research suggests that childhood is an optimal and critical time for developing brain strengths or weaknesses related to cognitive abilities and self-regulation has highlighted the importance of ensuring appropriate learning experiences for young learners (National Scientific Council on the Developing Child, 2007). Research comparing different types of teaching practice for young children suggests the use of learning through play is more effective than didactic learning for both short term (Van Oers & Duijkers, 2013; Weisberg et al., 2013) and long term, (Marcon, 2002**;** Schweinhart & Weikart, 1998) outcomes. Formal, performance-based school environments have also been identified as an approach that devalues diversity and limits the possibilities for meaningful inclusion of children with learning support needs (Kearney & Kane, 2006; Stangvik, 2014).

In 2007, the New Zealand Curriculum (Ministry of Education (MoE), 2007) was changed to enable more flexibility in teaching and to broaden the curriculum focus. In doing so, the curriculum included key competencies which aligned to Te Whāriki, the early childhood curriculum (MoE, 1996, 2017). The key competencies were defined as capabilities for living and life-long learning and considered the development of learning dispositions and social skills (Hipkins, 2018). While this was tempered with continued performance-based Ministry guidance (for example ERO, 2018), it did provide the flexibility for more holistic ways of teaching in primary schools (Davis, 2018). Reflecting on her work with teachers' establishing play-based classrooms (PBL), Davis (2018) asserts that New Zealand teacher's interest in PBL is driven by their growing discomfort with academic pressure on young learners, an interest in a holistic curriculum delivery that provides increased continuity in experiences from early childhood education to school and teachers desire to enact new theories and research on learning (Davis, 2018).

Play-based learning aims to engage and hold the interests of children through playful approaches while also making sure learning across the curriculum is taking place (Walsh et al., 2019; Aiono & McLaughlin, 2018). Effective teaching through play practice uses deep knowledge of each child as a starting place for their learning (Aiono & McLaughlin, 2018; Parker & Stjerne Thomsen, 2019). By paying attention to each child and providing responsive teaching, effective PBL is well placed to effectively support children with learning support needs. It allows for the possibility that individual difference and diversity is embraced and used as a valued tool for teaching practice and a central classroom concept (Teschs & McMenninen, 2019).

Supporting all Learners – Current Policy and Provision for Inclusive/Special Education

The rights of all children to enrol and attend their local school has been legislated through the New Zealand Education Act (MoE, 1989) for over thirty years. Recent changes to the Education and Training Act (New Zealand Government, 2020) has extended the focus beyond access to education and asserts that schools must foster genuine participation to be "inclusive of and cater for all students with differing needs". These rights are backed up by international agreements such as the United Nations Convention on the Rights of Persons with Disabilities (2006) which New Zealand signed in 2008, the United Nations Convention on the Rights of the Child (1989) which New Zealand signed in 1993 and reinforced by the New Zealand Disability Strategy (2001,2016).

Supporting students with learning support needs in New Zealand schools has given dual attention to providing supports to address impairment, and considering potential barriers to participation created by the learning environments. Typically, special education provisions have been focused on goals and performance and providing specialist programmes and instructions in the context of transdisciplinary collaboration of professionals (Hornby, 2014). Inclusive education goals have typically focused on establishing belonging, valuing diversity and making provisions suitable for all (Hornby, 2014). Hornby (2014) suggests both a welcoming, barrier free environment and teacher knowledge on a range of practical teaching strategies that address specific needs, alongside strong skills in understanding and implementing available supports effectively, are needed for effective teaching of students with learning support needs.

Inclusion is a multi-faceted process that requires commitment at all levels in education (Mitchell et al., 2010). School leadership plays a key role in supporting teachers by developing inclusive school cultures and facilitating on-going professional development and systems of self-review that critically examine school practices that support or provide barriers for effective inclusion (McMasters, 2012; Rouse, 2006). However it is the teacher that drives the level of inclusion a student with learning support needs will experience in the classroom (Woodham, 2018; Boyle et al., 2011) which will have a significant influence on the overall outcomes for these students (Davis, 2008). Teachers' pedagogical skills and knowledge in when to use accommodation strategies, or modify learning expectations based on knowledge of the student, allow teachers to create effective inclusive learning environments where a range of learner needs are meet and different outcomes are valued (Mitchell, 2015; Rouse, 2006). Teachers also play a key role in developing positive relationships with students, whānau and multi-agency personal, and in creating a classroom climate that develops a sense of belonging for all (Alesech & Nayar, 2019; Mitchell & Sutherland, 2020).

A teacher's attitude to including children with learning support needs in their classroom is a significant determinant in achieving effective inclusive education (Boyle et al., 2011) because it drives their intention to cope with challenge and willingness to differentiate and adapt instruction (Hellmich, 2019). Some authors assert that the use of external special education services has led many teachers to assume that children with learning support needs require expert help from outside the classroom rather than challenging themselves to use active problem solving to address diverse needs (Petriwskyj, 2010; Kearney & Kane, 2006). In this way teachers underestimate the effects of their own pedagogical interventions in improving outcomes for children with learning support needs (Petriwskyj, 2010).

As an indigenous group twice represented in the priority groups identified as being underserved in the New Zealand education system (Education Review Office, 2012), Māori students with disabilities deserve particular consideration in inclusive education. Macfarlane et al., (2012) suggests that differentiated curriculums need to take into account both learning and cultural needs. In setting learning goals, they suggest that those involved keep expectations high and continually notice and challenge any personal cultural bias that may be present in values or practices that may act as a barrier for some learners (Macfarlane et al., 2012). This requires teachers to focus on relationships and engage in two-way conversations which allow them to intimately know and be responsive to those they teach (Berryman et al., 2015). In examining research evidence on meeting the needs of Māori students with learning support needs, Bevan-Brown (2006) suggests, in addition to general inclusive practice recommendation, teachers need to raise expectations of Māori students and incorporate widespread cultural input, learning from the knowledge and resources Māori students and their whānau bring. This approach recognises the strengths of all Māori students and allows Te Ao Māori to be reflected in meaningful and authentic ways in practice (Berryman & Woller, 2011). Effective PBL provides the space for this attentive, relational way of teaching, but requires teachers have a range of attitudes, strategies and skills they can draw on to most effectively respond to diverse learning paths. They also need to have skills in understanding how to effectively use special education provisions, which is considered next.

Many of the provisions available to students with learning support needs today come from the Special Education 2000 initiative (The New Zealand Government, 1997), which provided recognition of and resourcing for learning support needs of students. Current provisions for the delivery of special education in New Zealand inclusive settings focus on collaborative approaches where "enabling learning resources and the advice of experts is provided, but direct teaching of students with special needs is not" (Mitchell & Sutherland, 2020, p. 184). This means that the qualities and

pedagogies of the school and classroom teachers have a large effect on the inclusion experience and learning outcomes of students with learning support needs.

Various funding avenues are provided in New Zealand for students with learning support needs. High and very high needs students are funded through the On-going Resourcing Scheme (ORS) (MoE, 2012). This provision tags on-going funding for specialists, teacher and teacher aide hours to individual students. Students that do not qualify for the ORRS funding but present with behavioural, learning, literacy, vision, hearing or high health support needs are provided with resource teachers who support them and their teachers in the school. The evolution of the resource teacher role in NZ signaled a model of working that considered barriers to learning rather than fixing student deficit (Thomson, 2013). It placed greater scrutiny on teacher practice and modification of teaching provisions for students with learning support needs (Thomson, 2013). An approach to inclusion that emphasizes potential barriers to learning is increasingly evident in MoE's guidance around pedagogy and practice that reflect the goals of universal design for learning (MoE, n.d.). Universal design for learning involves paying attention to individual ways of motivating students, presenting learning content and observing student competencies (Education Gazette, 2017). Although there is little New Zealand research that directly links effective PBL pedagogy to the concept of universal design for learning, the parallels are evident in the attention given to knowing the student, and using flexible teaching and assessment to meet diverse needs.

Significant government investment continues to be made in improving educational practice for students with learning support needs. Recently the MoE (2019) has invested in establishing and implementing the Learning and Support Action Plan 2019-2025.This plan has established the role of Learning Support Coordinators who work in schools/kura to identify, plan and co-ordinate the support needs of children alongside whānau and teachers. They also work to strengthen teachers' capacity to support students with learning support needs in the classroom (MoE, 2019). Alongside this development, influenced by recent falling international achievement rates of New Zealand students in key curriculum areas, the MoE is reviewing Tomorrow's Schools (2000) in search of more effective, evidence-based education practices (New Zealand Government, 2018). Whether or not this will make a difference to policies and guidance that enable PBL to develop further in NZ schools and whether consideration will be given to students with learning support needs at the outset of any new pedagogical developments is yet to be seen.

The rights of students with learning support needs to enrol and receive education in New Zealand state schools has been legislated for over thirty years (The New Zealand Government, 1989; 2020). Since this time, successive governments have invested in policy development and initiatives that

have sought to advance the capacity of schools to engage in effective inclusive practice. Despite these advancements, students with learning support needs continue to be represented in priority groups, reflecting those populations who have historically not been served well in education (ERO, 2012). While attention to setting up effective external systems of support is valuable, consideration also needs to be given to everyday classroom pedagogy, to ensure that advances in educational thinking and practice, generate affordances for students with learning support needs, as well as mitigate potential barriers. At face value, many effective PBL play practices may seem to align well with authentic inclusive practice. However, this does not negate the need to examine PBL practices specifically in light of students with learning support needs. The present research attempts to make a small contribution to this critique by exploring the practice of exemplary teachers in PBL settings who are effectively using this pedagogy to teach students with learning support needs.

Researcher Background

My professional background is as an early childhood teacher, primarily working with children aged three to five years. I have also worked and trained as an early intervention visiting teacher for children with learning support needs, most of whom accessed early childhood education and eventually transitioned into school. On a personal level, I am the mother of three boys, one of whom has disabilities, which has provided me with a parent perspective of special education in New Zealand schools. This thesis has allowed me to combine two areas I feel passionate about; play-based learning and inclusive education. From both a professional and parent point of view I have witnessed how the fixed structure and outcome expectations of traditional school methods can have negative effects on young children's attitude to learning and concept of themselves as learners. I am excited to see PBL emerge in New Zealand schools and with it a growing awareness and increased potential to consider flexible teaching that caters in responsive and adaptive ways for diverse students. I am keen to see this new pedagogy develop in ways that increase school capacity to meet the needs of students with learning support needs in schools and I hope this research contributes some important insights. It was for this reason that I chose to focus on highlighting exemplary practices, with the expectation that while data gathered was context specific, there would be broad themes that could inform practice in wider education settings.

Rationale for the Present Research

The structured, direct teaching history of primary school pedagogy, alongside low levels of government mandated teacher training on meeting diverse needs (Hornby, 2014) presents significant challenges to teachers wishing to implement teaching through play-based practice that is responsive to students with learning support needs. Barton (2015) suggests that effective primary

teacher practice requires a strong knowledge of play and skills in capitalising on play-skills so that the cognitive, social and self-regulation gains inherent in play might be available to all students including those with learning support needs. Yet specific research that explores PBL from the perspective of children with learning support needs is currently limited, particularly within the New Zealand content. This research attempts to illuminate the expertise of exemplary PBL teachers by exploring the attitudes, beliefs, approaches and strategies that are seen to most effectively address the needs of students with learning support needs. It is hoped that this will offer insight of teaching practices and actions that may be useful to consider for other teachers implementing play-based classrooms.

Key Definition of Terms

Students with learning support needs: This term is used throughout this thesis to refer to students who have physical, cognitive, behavioural, sensory, learning, social or emotional differences that require accommodations to be made to the usual learning/classroom environment/teaching practices in order to support holistic learning outcomes.

Mainstream setting: A school that caters for all children in their catchment area. This includes children with and without disabilities.

Play-based learning (PBL): Intentional teaching strategy that utilises play for holistic developmental outcomes. As play and teaching have become more linked, learning through play and teaching through play have become emerging terms for describing PBL and are used interchangeably throughout this thesis.

Differentiated curriculum: Changes made to curriculum materials, resources or expectations in light of learner characteristics.

Learning coach**:** A common emerging term used interchangeably with teacher aide. The use of the term learning coach suggests a high-status image of a teacher aide who is considered a co-educator in the classroom.

Exemplary teachers: Highly effective teachers who provide a model of practice for others.

Overview of Chapters.

The thesis is organised into five chapters. This introduction has highlighted the emergence and rationale for the movement towards play-based learning and provides a summary of education provisions for learners with learning support needs in New Zealand. The second chapter presents a review of the literature which describes effective teaching through play in general, before

considering effective teaching for the specific needs of students with learning support needs, and the integration of specialist supports into the classroom. The third chapter presents the methodological approach adopted in designing and undertaking this qualitative research. In addition to an outline of the research design this section gives attention to research worldview, researcher position and bias, participant recruitment, ethical considerations and the process of thematic analysis. The fourth chapter outlines the findings of the research. This chapter is divided into four key areas; principles for practice; space and resources; implementation of effective practices for PBL that meet the needs of all learners, and; implementation of effective practice that meets the specific needs of children with learning support needs. The fifth chapter presents a critical discussion of the emerging findings in light of the existing literature on effective PBL and inclusive practice and then concludes by summarising key implications for practice and policy, for students with learning support needs in PBL learning environments.

Chapter Two: Literature review

In this chapter, relevant literature for the present study is reviewed and discussed. The chapter begins with an overview of play-based learning (PBL) with a focus on how this pedagogy is developing within the context of primary schools in Aotearoa New Zealand. This overview is followed by a more detailed look at literature that examines effective PBL pedagogy for all students with considerations given to the role of the teacher in providing effective, holistic and inclusive PBL practice. Specific pedagogical strategies for supporting students with learning support needs are then discussed. This considers the use of additional supports, embedded goals and the fostering of acceptance and belonging in the classroom. The literature review concludes with a summary of the implications from the literature discussed and the research questions for the present study.

Using key library search engines, the literature search for this review utilised terms such as play, play-based learning and teaching/learning through play as well as terms such as inclusion, special needs and learning support. Initially literature relating to primary schools was sought, but due to high levels of research on play in early childhood this was frequently drawn on. Due to the small volumes of research that combined play-based learning and learning support needs, these terms were also explored separately to find literature of relevance to draw on.

Play-Based Learning

Play-based learning is a pedagogy that positions play as a valued tool for learning (Ministry of Education (MOE), 2019). There is a strong foundation of theory and research that recognises the opportunity to engage in play as developmentally important for a range of holistic purposes (Walsh et al., 2017; Fisher et al., 2013; Parker & Stjerne Thomsen, 2019). With its emphasis on deep, authentic learning, PBL pays attention to the context of the students and their lives, the supports they need to advance their learning and the range of curricular content they need to experience and apply learning in meaningful ways (Aiono & McLaughlin, 2018; Walsh et al., 2019; Parker & Stjerne Thomsen, 2019). Given this, PBL potentially affords rich opportunity to meet the needs of diverse learners, many of whom required flexible, differentiated, holistic learning experiences to thrive in the classroom (Mitchell, 2015; Hornby, 2014; Rouse, 2006; & Macfarlane et al., 2012).

While primary schools have traditionally adopted more direct teaching pedagogies (Davis, 2018), learning philosophies that have included playful learning, such as inquiry and project-based learning, are increasingly emerging. Parker and Stjerne Thomsen (2019) refer to these integrated pedagogies as the "older siblings of learning through play" (p.6). In a scoping study seeking to understand the impact of learning through play in schools, Parker and Stjerne Thomsen (2019) suggest there is strong support for the developmental benefits of using PBL at primary schools. In describing

effective teaching through play practice, they suggest teachers use strong content and pedagogical knowledge to foster higher level learning, base curriculum teachings on the current knowledge of the child, act as mentors to monitor, question and scaffold during cognitive and social problem solving and using a range of effective co-operative learning strategies. They also suggest effective teaching through play classrooms have flexible timeframes and focus on depth, not breath of learning (Parker & Stjerne Thomsen, 2019). Currently the New Zealand Ministry of Education supports and provides information and examples on many practices that include integrating playful approaches, including a blog on learning through play (MoE, 2019). New Zealand and international research suggests, however, that while socio-cultural philosophies and styles of learning are encouraged through policy and government documentation, the practicalities on how to achieve this are not explicitly provided, leaving teachers to interpret this for themselves (McMasters, 2012; Rattaq & Patrick, 2014).

For many teachers PBL requires the learning of new skills and some reframing of their teaching identity, to support a stance where child's motivations and ideas are given greater weighting in the teacher/child dynamic (Davis, 2018). Australian research (for example Jay & Knaus, 2018; Nolan & Paatsch, 2017) suggests that teachers find it challenging to integrate PBL with the need to justify and prove performance and achieve curriculum outcome expectations. In addition, research suggests that while teachers may support PBL as a means of developing social and emotional skills, they are less sure of their roles in play when supporting cognitive development (Hunter & Walsh, 2014; Pyle & Danniel, 2017). Nolan & Paatsch (2017) assert that teachers new to PBL practice need support to develop a strong knowledge base and a range of effective teaching strategies in order to enact PBL in meaningful and purposeful ways to foster learning. Te Whāriki (2017), the early childhood curriculum, offers explicit understandings on the value of children's play, development of learning dispositions and the promotion of child agency in play. It has, however, been criticised by some for expecting teachers to engage in the sophisticated task of identifying and integrating curriculum and content knowledge into play, without providing teacher guidance on how to do this (Blaiklock, 2009; Cherrington, 2016). Despite changes in the recent revision of Te Whāriki (2017) that have positioned the teacher as more intentional in their teaching interactions, school teachers wishing to begin PBL practice may still find themselves unsure of how use this curriculum to guide their teaching.

Lack of guidance with a specific New Zealand focus for teachers wishing to implement PBL in NZ primary classrooms led Aiono to develop The Play-based Learning Observation Tool (P_BLOT) (Aiono et al., 2018). The P_BLOT identifies effective PBL practices and assists teachers to understand and move towards implementing these in their classrooms through a coaching based model of professional development (Aiono et al., 2018). These practices have also been highlighted in the

Practice Implementation Checklist (PIC) (Aiono & McLaughlin, 2018), a resource available to NZ teachers which provides a list of evidence-based effective teaching in play-based primary classrooms. Similar to Parker & StjerneThomsen (2019), Aiono & McLaughlin (2018) recommend practices that are responsive to learner characteristics and preferences, and have the teacher positioned in an intentional role to foster higher level learning in both academic and social domains. The PIC also pays attention to the use of open-ended spaces and resources, the balance of child-led, teacher guided and direct teaching, strong communication intentions towards whānau, the use of observation of play to guide planning, and formative methods of assessment. Together these areas consider the holistic development of students including, but not limited to, meeting existing academic curriculum expectations (Aiono & McLaughlin, 2018).

Although in its infancy, research on PBL in New Zealand is beginning to inform teacher practice. For example, Blucher (2017) used a single school case study to explore the perspectives of key PBL stakeholders. Her findings suggested that children, teachers, parents and school leaders all held positive views on the value of PBL. For the adults this was noted to be particularly valued in relation to children's well-being and social and emotional skills. In another NZ based study, Maguire (2020) used semi-structured interviews to explore teacher's journey into PBL practices. She found teachers were often pioneering the move to PBL within their schools because of their own research on child development and effective practice. Significant change made by teachers was a shift from learning objectives and outcomes to engaging students through their interests and motivations. They encountered both support and resistance from the wider school.

Additional research and literature has come from collaborative research with New Zealand teachers who have found ways to develop effective, flexible teaching through play pedagogy in PBL classrooms through, for example developing teacher networks (Hiini et al., 2018), utilising innovative, responsive practices aligned to core curriculum areas (O'Neil, 2018), and teacher involvement in facilitated action research projects (Davis, 2015). Davis's (2015) collaborative action research project used Leuven Involvement and Well-being scales with three children and found they were more engaged and appeared happier at PBL times compared to structured learning times. Teachers also perceived children in the PBL classroom had a stronger sense of belonging, easier transitions into school and reduced challenging behaviours compared to children in their previous traditional classrooms (Davis, 2015).

As this section has shown, teaching through play is gaining increased attention in New Zealand primary schools due to research that suggests it is an appropriate and effective way to foster holistic development in young children. Yet is it important to note that teaching through play requires a high

level of teaching skill which for many teachers will require some shifts in the conceptualisation of teaching and learning and what this means for pedagogy and practice. Ongoing research and the development of PBL professional development opportunities within New Zealand will be critical in supporting teachers to develop effective PBL practice in primary schools moving forward.

Effective Pedagogy for all Learners

Effective pedagogy is important for all. *Te Whāriki*, the early childhood curriculum, is gaining increasing recognition within early years primary schooling. *Te Whāriki…*

> …holds the promise that all children will be empowered to learn with and alongside others by engaging in experiences that have meaning for them. This requires kaiako to actively respond to the strengths, interests, abilities and needs of each child and, at times, provide them with additional support in relation to learning, behaviour, development or communication. Offering an inclusive curriculum also involves adapting environments and teaching approaches as necessary and removing any barriers to participation and learning. Barriers may be physical (for example, the design of the physical environment), social (for example, practices that constrain participation) or conceptual (beliefs that limit what is considered appropriate for certain children). Teaching inclusively means that kaiako will work together with families, whānau and community to identify and dismantle such barriers. (Ministry of Education, 2017, p. 13).

This section takes a more detailed look at literature that examines effective pedagogy for all students with attention given to universal strategies that serve children with learning support needs well. The topics addressed include exemplary teacher characteristics and effective teaching through play practice. Attention is then given to guided teaching, effective use of resources and space, and promoting the social competence of children.

Characteristics of Exemplary Teachers.

Exemplary teachers are drivers of effective practice through pedagogical leadership. They have a strong belief in their ability to change their teaching and environment to do whatever is required in any situation that arises (Clinton et al., 2018). Research identifying characteristics of exemplary or effective teachers suggests they are most likely supported by strong, enabling leadership that encourages two-way professional knowledge sharing (Gabriel, et al., 2011). This high trust model of working allows teachers to innovate and use the curriculum in flexible and more responsive ways (Gabriel et al., 2011). Exemplary teachers have a solid understanding of the curriculum and a tendency to notice, question and reflect on student learning which allows them to find alternative

strategies that allow curriculum to be relevant to a range of different learners (Collinson, 1994). Exemplary teachers are drawn to establishing support networks of like-minded teachers and colleagues, leading to feelings of "engaged autonomy" and fostering a contagious enthusiasm for continuous improvements in practice (Gabriel, 2011, p. 39). With these characteristics exemplary teachers are well placed to embrace new pedagogies and meet the needs of a range of learners.

Effective Teaching Through Play

Inclusive play-based settings in the early years support children's holistic learning and development when enacted alongside a variety of teaching strategies. Holistic promotion of learning and development includes access to and progress in the curriculum as well as functional abilities associated with physical, cognitive, language/communication and social-emotional learning. Research on PBL practice has largely come from early childhood settings where PBL has been established for many years. Current knowledge on effective PBL suggests quality settings provide opportunities for child-led free play, alongside more intentional teaching activities (Weisberg et al., 2013; Pyle & Danniels, 2017; Walsh et al., 2017; Siraj-Blatchford & Sylva, 2004). Child-led free play has been found to hold developmental benefits for children's developing social skills, self-regulation and creativity, but on its own has not been found to be the most effective way of developing a student's cognitive abilities (Weisberg, 2013; Pyle & Danniels, 2017). Direct teaching is effective when clear teaching methods and resources are used to target specific skills, when teaching is appropriately paced and scaffolded, and when teaching is used alongside frequent formative assessment (Mitchell & Sutherland, 2020). Recently teaching and play are being considered as complementary rather than opposing practices (Walsh et al., 2017) influenced in part by a British, longitudinal research project seeking to identify quality early childhood pedagogy (Siraj-Blatchford & Sylva, 2004).

The Effective Provision of Pre-school Education study (EPPE) was an English, five year longitudinal research project that followed the progress of 3000 three and four year old children in 141 early years settings, investigating the link between effective ECE provision and child outcomes (Siraj-Blatchford & Sylva, 2004). This was followed by a more detailed qualitative study involving 12 pre-schools from the above cohort identified as being effective to glean insight on what pedagogical strategies lead to the best outcomes for children. Findings from this research showed that pre-schools that were most effective in terms of intellectual, social and dispositional outcomes balanced teacher directed group work with "freely chosen but potentially instructive play opportunities" (Siraj-Blatchford & Sylva, 2004, p.7130). The teacher's ability to differentiate the curriculum for individual students and engage in sustained shared thinking, where the teacher and students work together to collaboratively explore phenomenon or solve problems, was positively correlated with

improved developmental outcomes. This research has challenged a purely developmental, child-led focus in early childhood and suggests an active and varied role for the teacher in children's play (Walsh et al., 2017). It has turned attention to the space in-between free play and direct teaching to a middle ground that has been termed guided teaching (Weisberg et al., 2013).

Effective Practice: Guided Teaching

Guided teaching is where an adult builds from the child's interests, and uses intentional teaching strategies in order to foster higher level learning. This can be done through comments and questions, introducing new objects or ways of viewing interests, and scaffolding to guide the child to new understandings (Weisberg et al., 2015). While the child's perspectives are the starting place for the interaction, guided teaching allows curriculum goals to be embedded into this in a two-way process that involves both child-direction and the teacher directing the child to learning goals (Pramling Samuelsson & Asplund Carlsson, 2008). In this way planned, thoughtful, purposeful actions allow the intentional teacher to capitalize on teachable moments they observe in play (Epstein, 2014). Research supports the use of guided teaching as an effective tool for teaching students in diverse curriculum areas such as maths, (Fisher et al., 2013) vocabulary, (Van Oers & Duijkers, 2013) and active exploration (Bonawit et al., 2011). Current thinking suggests that child-led play, guided play and adult-led instruction should be thought of as a continuum that the play-based teacher moves between during the day to facilitate effective holistic learning outcomes (Cherrington, 2016; Weisberg et al., 2013; Kennedy & Stonehouse, 2012). In this way both planned and incidental intentional teaching interactions (Epstein, 2014) can support learning goals that address the needs of all children. Dickinson et al. (2013) however, caution teachers to pay attention to learner characteristics and the past experiences of students, as this can affect the type of teaching that is most effective for them. In particular, children with less experience of play or who need support to develop play skills may initially require a higher level of direction to facilitate learning through play (Dickinson et. al., 2013).

Effective Practice: Space and Resources

Within an inclusive PBL classroom, play provisions need to be appropriate for all learners. Universal design for learning provides a way of embedding supports for learning into the environment in flexible ways that meet a range of learner needs (MoE, n.d.). This can be achieved with the provision of open-ended resources that are relevant to students lives and interests and foster autonomous, self-monitored engagement with the environment (Gauvreau et al., 2019). Play resources can also be used to provide multiple ways of motivating children, multiple ways of presenting the curriculum and multiple ways of allowing the child to demonstrate what they know (Meyer et al., 2018). While

universal design practices, activities and resources may target students with learning support needs, they are available and likely to be of benefit to many children (Meyer et al., 2018).

The concept of universal design is served well with the use of loose parts play items. Loose parts are open-ended play items that can be used for a range of purposes and functions encouraging creative play opportunities for children within a range of developmental levels (Akar Gencer & Avci, 2017; Bodrova, 2008; Aiono et al., 2018). The theory of loose parts has its origins in creativity and design, but Nicholson (1972) whom the term originates from, had much to say about creating learning and play environments that allow children to be creative and agentic in designing their own play and learning experiences. Research using loose parts in the outside environment suggests outside play areas that use loose parts increase the physical activity of children (Gibson et al., 2017). Sparse research has been conducted on the growing practice of using loose parts in the PBL classroom, but teachers' attraction to them derives from the ability of loose parts to provide rich play focused on innovation, creativity, novelty and on-going discovery (Dillon, 2018).

Forest or nature schools are another recent play-based trend for school-aged children both internationally and within New Zealand (Beatson, 2019). Nature-based learning has mostly emerged outside of schools, but has highlighted the benefits for children in spending time playing in nature, such as hands on experiences with science (Beatson, 2019) and forming richer connections between identity and location (Penetito, 2009)

Effective Practice: Fostering Social and Emotional Competence

PBL aims to adopt a more holistic approach to teaching that acknowledges the whole child and signifies a shift to recognising more strongly the importance of social-emotional competence within the curriculum. Attention to fostering social and emotional skills has been emphasised in the early childhood curriculum, Te Whariki (MoE, 2017) and reflected in the New Zealand Curriculum through the Key Competencies (MoE, 2007). Research on learning and development has provided ample evidence of the link between relationships and learning motivation, much of which has focused on the ability of close relationships to enhance academic performance (Evans & Harvey, 2011). More recently consideration of the child's well-being has been thought of as an educational goal in itself, with networks of supportive relationships central to this (Evans & Harvey, 2011).

Strong support for explicit teaching of social and emotional skills come from a large cohort study by Goodman et al. (2015) which assessed the social and emotional skills of a large cohort of children at ten years old and later assessed their mid-life outcomes. They found that positive social and emotional skills at ten years old were significantly correlated to a wide range of positive adult outcomes in areas of well-being, prosperity and health. Analysis of findings, alongside an extensive

related literature search led them to assert “substantial benefits are likely to be gained across people’s lives if effective interventions can be found to enhance social and emotional skills in childhood” (p.12). The explicit teaching of social and emotional skills is a central concept of PBL philosophy that requires a skill set many teachers may need support to develop. Even in early childhood education where social and emotional learning philosophies have been prioritised, research suggests ECE teachers need support to action these intentions (McLaughlin et al., 2015). This may be particularly true when teachers are supporting children with behavioural challenges, which may also sit alongside identified learning needs (Boyd & Felgate, 2015).

Children with behaviour or self-regulation needs benefit from a secure, healthy relationship with the teacher, but can be the most challenging for teachers to positively relate to (Jennings & Greenberg, 2009). Research suggests that many teachers struggle to build healthy relationships with students with poor regulation, potentially fostering a cycle of increasingly negative behaviour (Jennings & Greenberg, 2009). This downward trend in behavioural control may have both learning and developmental disadvantages for the child and may leave the teacher feeling powerless and at risk of burn out (Jennings & Greenberg, 2009). Research suggests a teacher who is supportive and sensitive in reacting to behavioural challenges, allows a child to develop a secure attachment and sense of connection to the classroom and school, with a lasting and significant impact on the student’s social and emotional development (Lynch & Cicchetti, 1992). Teachers who show support to students with challenging behaviours can have a significant impact on how the student is viewed by their peers with a flow on effect relating to how many play opportunities they have with peers (Hughes et al., 2001).

This gap in teacher’s understanding of how to use strong relationships to underpin all behavioural support lead the New Zealand Ministry of Education to offer the Positive Behaviour for Learning programmes [PB4L], a government funded, opt in, school-wide programme to improve behavioural outcomes at school (MoE, 2020). This programme originated in America, where research suggests it makes a positive difference to children’s behaviour outcomes, and began in New Zealand in March 2009 (Boyd & Felgate, 2015). Schools opting for this programme engage in on-going coaching, develop consistent school-wide behavioural support systems and expectations, and develop local support networks. For teachers of children aged one to eight the Incredible Years programme is offered which provides 14 weeks of training and support, provided to either teachers or parents of children three to eight years with the aim of improving behaviour through strong relationships and support (MoE, n.d.). This school wide programme reflects universal design for learning principles, signalling a move away from punitive measure and viewing child as the problem, to changing the environment to support positive behaviour and explicitly teaching expectations (Boyd & Felgate,

2015). In an evaluation of the programmes' implementation in New Zealand schools, teachers and school leaders indicated their involvement in the programme had led to a more respectful and inclusive school culture, improved school safety and improved school effectiveness in addressing behaviour incidents (Boyd & Felgate, 2015).

Effective teaching through play practice involves teachers balancing free play opportunities with guided teaching in play and direct teaching to foster holistic developmental outcomes. Classroom spacing and play resources that are flexible and open-ended allow all children to choose their play interests and actively participate and engage in learning opportunities. Maintaining supportive relationships with all children is crucial to effective PBL teaching.

Effective Pedagogy for Students with Learning Needs

Effective practice in PBL settings for students with learning support needs will at times require specific pedagogical considerations to allow a child to learn at their best. This section examines the literature that considers differentiated approaches and strategies that may have relevance to children with learning support needs. The topics addressed include differentiated curriculum and effective practices relating to individual plans, embedded learning, teacher aides, teaching play skills and fostering acceptance and belonging in the classroom.

Differentiated Teaching.

Effective inclusive classrooms have teachers that personalise teaching for all students and have pedagogical approaches that are flexible, relevant and adjustable for different developmental levels, allowing multi-level teaching to occur (Mitchell & Sutherland, 2020). This concept aligns well with PBL classrooms, where knowing the children is the basis for the classroom resourcing and differentiated teaching. Hornby (2014) however, suggests use of the general curriculum may still be limiting for some children and suggests a balance is found that identifies relevant links in the general curriculum and supplements this with functional curriculum experiences that align to the specific needs of the child. This, he suggests, is particularly relevant for learners with moderate or severe learning needs to ensure their maximum engagement with learning. In addition to personalising teaching and curriculum experiences, teachers also need to identify and implement environmental differentiation of the PBL environment for some children to learn at their best.

PBL environments have many affordances for inclusive education, but also have factors that may cause barriers to learning for some students. Teachers, therefore require knowledge and skill in removing barriers and teaching creatively in response to individual needs (Benade, 2019). Barriers to learning in a PBL environment need to be identified and planned around. For instance, the lack of

acoustic and visual privacy in a PBL setting may be particularly difficult for students with mild or fluctuating hearing loss, auditory processing difficulties, learning disabilities, attention disorder, language disabilities and English as a second language (Mitchell & Sutherland, 2020). Ensuring the environment is organized to allow for quiet, break out spaces will be important to allow some students to work at their best (Mitchell & Sutherland, 2020; Benade, 2019).

Effective Practice: Individual Education Plans (IEPs)

The MoE suggests Individual Education Plans [IEP's] should be utilised to enrich the learning and participation of a student based on their goals and needs, with input from those that know the child best (MoE, 2011). From an inclusive perspective the IEP should primarily be designed to guide the school in accommodating for diversity rather than expecting the student to fit the existing system (Mitchell et al., 2010). Effective IEP's have strong input from the parents and where possible the student, clearly defined roles for all team members and a focus on resources, supports and adaptations that will enable the student to access the classroom curriculum (Mitchell et al., 2010). IEP's that are strength-based position the learner as a capable, valued participant in the classroom and help develop a supportive community of learners within the inclusive classroom (Elder et al., 2018). The teacher plays a key, skilled role in using the IEP to differentiate the classroom programme and develop appropriate learning experiences and classroom environments that meet diverse student needs (Davis, 2008; Thomson & Rowan, 1995). However teachers may feel unconfident and powerless in the IEP process and may need support to collaborate and engage effectively in the IEP process (Prohm, 2014). Collaboration works best when specialist and support professionals are aware and respectful of the teaching philosophy of the classroom and teachers are aware of the goals and aims of the support professionals (Mitchell & Sutherland, 2020). This allows joint goal setting that is achievable, functional and relevant for the classroom (Mitchell & Sutherland, 2020). A MoE review of IEP's (Mitchell et al., 2010) indicates that not all teachers have the required skills to engage in the IEP process and recommend specific pre- and in-service training to address this. An additional challenge with PBL settings will be ensuring the philosophy of the classroom is clearly communicated to external professionals, so that goals are set that are appropriate to this way of teaching.

Effective Practice: Embedding Goals

Historically, specialised instruction for children with special needs was dominated by highly structured one on one teacher-led explicit training sessions based on behavioural learning principles, in places separated from the child's natural learning environment (Rakap & Parlak-Rakap, 2011; Wolery & Hemmeter, 2011). While these training sessions were found to lead to skill acquisition, the maintenance of these skills and ability to generalise the concepts learned outside of formal training

sessions was found to be low, leading to an interest in naturalistic approaches from the late 1960's onwards (Rakap & Parlak-Rakap, 2011).

Embedding IEP goals into a play-based classroom involves a teacher identifying naturally occurring activities in the classroom that provides the opportunity for instructional interactions for targeted skills (Snyder et al., 2015). In this model, teachers wait for the child to engage in the play and capitalise on this interest by interacting in instructional ways with the children as they practice the skill in a variety of settings with a variety of resources (Snyder et al., 2015). Instructional interactions are often brief and are not disruptive to naturally occurring events, yet have been intentionally planned to occur throughout the day, something Horn et al. (2009) refer to as "dressing up the IEP for the … classroom" (p.211) . Literature reviews on embedded instruction in pre-school classrooms (age two to seven) provides support for this practice, with most children showing improvements with targeted skills when teachers plan and implement embedded instruction (Rakap & Parlak-Rakap, 2011; Snyder et al., 2015). In addition, evidence suggests embedded instruction is effective at teaching most children to generalise acquired skills to a variety of settings and situations, and to maintain targeted skills over the long term (Rakap & Parlak-Rakap, 2011; Snyder et al., 2015).

Embedded goals need to be carefully planned and strategically implemented to ensure teacher interventions are frequent and consistent. Horn & Banerjee (2009) used case studies to support and observe the practice of four teachers as they embedded three IEP goals for a student into their classroom. Observations of teacher practice demonstrated increased instructional behaviours towards students from all teachers, with varying levels of frequency and consistency. All children made progress on targeted goals, but this was more significant for those children who had more frequency and consistency of instructional teacher interactions. Horn & Banerjee (2009) suggests that attention needs to be paid to ensuring the learning goals are achievable for the teacher to implement. They also suggest ensuring the use of strategies for embedded instruction match the child's motivation, the learning goal and that attention is paid to adjusting the support level as the child's responses to the task change. Embedded approaches have been found to be particularly effective for communication, social behaviour and self-help skills (Wolery & Hemmeter, 2011). However research suggests they can be effective in a range of areas such as pre-literacy skills (Grisham-Brown et al., 2006), motor skill development (Apache, 2005) and art imitation (Venn et al., 1993).

While there is support for the use of naturalistic instruction that utilises the self-selected play of children in incidental ways, Wolery and Hemmeter (2011) suggest this needs to be balanced with short, targeted direct instruction for maximum learning to occur. Botts et al., (2014) for example

found using direct instruction during the child's self-selected play can produce superior results over incidental instruction when targeting specific skills such as explicitly teaching phonetics (Botts et al., 2014). Wolery and Hemmeter suggest that both naturalistic instruction and direct teaching can be utilised not only to develop the typical developmental domains in children with learning support needs, but also used to directly develop play skills.

Effective Practice: Fostering the Development of Play Skills

In a PBL classroom it may be of particular relevance to consider the play skills of children with learning support needs, to ensure all children are able to access the intended benefits of the environment. An action research project looking at the development of PBL in a school in Wales observed the large range of starting places for play amongst the children (Wood, 2008). The author noted that although the rooms were set up with considerable attention to the children in it, not all children were able to engage in the unfamiliar freedom and flexibility of the free choice environment without support and guidance from adults. Wood (2008) suggested that teachers need to be constantly aware of the power dynamics in a PBL room and ensure that all children have the support they need to benefit from the resources and play pedagogy (Wood, 2008). Play skills can be viewed as a developmental domain in its own right, which may be particularly relevant for the many children with learning support needs who have delays in play skills, something particularly noted with children on the autism spectrum (Lifter et al., 2011). Research on behaviourist approaches to developing a child's play skills indicates that instructional prompting of incrementally more sophisticated play behaviours can be effective to progress play skills for children with delays (Lifter et al., 2011; Barton & Wolery, 2008, 2010; Movahedazarhouligh, 2018). An alternative approach to developing play skills in children with learning support needs that aligns well with PBL is to focus on existing play competencies.

Claughton (2020) believes that research has focused too much on the play skill deficits of children with impairments while ignoring or overlooking their existing play competencies. Claughton's (2020), critical ethnographic research based in a special education setting explored how teachers can enrich the PBL of children with impairments. Using child participation and observation, alongside teacher and parent interviews she found that when teachers encouraged children to act independently and spontaneously, complex and meaningful play and high levels of child agency were demonstrated. Although a relatively neglected area of research, child agency in play for children with learning support needs has been noted in areas such as negotiation of their presence and interaction with adults (Nind et al. 2010), contributions to the learning of peers (Claughton, 2020) and the construction of nuanced play worlds (Burke & Claughton, 2019). Encouraging child agency for children with learning support needs requires teachers to have a positive attitude toward diversity

with an ability to use child-centred, dialogic communication skills (Olli et al., 2012). Claughton (2020) uses the metaphor of a learning portal as a way to consider how teacher's actions provide a pathway to a range of learning experiences that are accessible for all students. She suggests teachers provide access, time and space for self-chosen play and view all children as active, competent agents in their play, using these compentencies as the starting place for teaching practice. By privileging children's understanding and intent in play while acting in intentional ways to flexibly reconnect and extend play interests towards developmental gains, teachers can provide effective learning opportunities for children with learning support needs (Claughton, 2020).

Effective Practice: Use of the Teacher Aide

Teacher aides have been available in New Zealand classrooms to assist teachers with children with higher needs for teacher supports since the passing of the Education Act in 1989. Initially they were seen as a way of managing children with learning support needs who had previous been mostly absent from mainstream classrooms (Rutherford, 2012). More recently, as attention has turned beyond just access to schooling for students with learning support needs, but also to participation and inclusion in all aspects of school life, the MoE guidelines (2014) has promoted the role of the teacher aide as someone who, under the teacher's guidance, supports all student learning, rather than providing constant individual support. The MoE have developed guidelines for the effective use of a teacher aide and provides on-line modules for schools to independently work with (MoE, n.d.). These are however optional tools and Woodhams' (2018) research suggests New Zealand teachers are often not aware them and the role of the teacher aide remains ambiguous in New Zealand schools.

Strong support for reducing the level of one-on-one support directly provided by the teacher aide to a student comes from a large-scale longitudinal study; The Deployment and Impact of Support Staff project (Webster et al., 2011). Using observations, surveys and case studies this project examined the role of the teacher aides and resulting child outcomes across school levels. They found a negative effect on academic progress for the children with learning support needs who worked most exclusively with teacher aides. In analysing the results they concluded that the teacher aide is often involved in one-on-one or small group learning with a child with learning support needs, something that potentially separates them from the teacher, the curriculum and peer interactions. This model was also found to reduce opportunities to develop independence in learning (Webster et al., 2011), and noted that teacher aides are often left to make pedagogical decisions for complex learners, something they are not trained or prepared for. To address these concerns Webster et al., (2011) suggests teachers ensure that they are responsible for planning and share responsibility for implementing all student learning and specialist programmes. They suggest drawing differentiated

instruction and IEP implementation into their regular classroom teaching rather than having the teacher aide withdraw and implement. The authors suggest the pedagogical role of the teacher aide should be limited to implementing structured, well-planned interventions that they have been well trained for and that there should be constant communication between the teacher and the teacher aide so that the expectations of each are clear and the learning programme well prepared.

Woodham's (2018) recent thesis examined the work of teacher aides in New Zealand primary schools and wrestles with how a teacher aide can both support a child and promote independence and resilience in the classroom. She considers that the model of a teacher aide working as a co-educator with the teacher is the most effective. This involves assigning high status to teacher aides, introducing them to the class as teachers or learning coaches, and involving them in school professional development and team meetings. Co-educating, she suggests involves both teachers and teacher aides being discretely available to students with learning support needs during teachable moments, without obviously attaching themselves to an individual, and sharing responsibility for supporting students who may benefit from increased levels of one-on-one instruction. This approach she suggests is more in line with the student's development of key competencies (MoE, 2007) such as the ability to interact with peers, build independence and self-management, but doesn't neglect paying close attention to the development of learning goals. Rutherford (2012) suggests further professional development is needed for teachers, teacher aides and school leadership to come to a clear understanding of the "pivotal, yet complex and ambiguous role teacher aides play in both helping and hindering disabled student's education presence, participation and achievement" (p. 768). Combining classrooms with universal design with a whole class approach to the use of teacher aides provides opportunities for teachers and teacher aides to embed and support individual planning goals within the PBL classroom.

Effective Practice: Fostering Belonging and Acceptance in the Classroom.

While many children are able to initiate and create play opportunities for themselves, other children will need support to achieve this. This may be particularly important in PBL settings, where social exclusion may separate a child from the potential social, learning and well-being gains of the play-based environment. While many children with disabilities are accepted by their peers around half are not, with rejection more likely where cognitive, social problem solving and emotional regulation capacities affect social competence (Odom et al., 2006). Odom et al. (2006) suggests that facilitating social participation of all is a group process that involves teachers and students. Teachers have a key role in actively facilitating on-going opportunities for students who hold low social positions in the classroom to practice positive social interactions skills and empower all children to "take active participation in the social dynamics of the classroom" (Benstead, 2019, p.44).

Alesech and Nayar (2019) completed 6 descriptive case studies in New Zealand mainstream schools with students aged eight to fifteen with learning support needs to identify strategies use by teachers that helped or hindered classroom acceptance and belonging. Interviews with multiple stakeholders and classroom observations revealed a range of teacher skills that can contribute to acceptance and belonging of students with learning support needs. A significant finding was that effective teachers used a variety of fun cooperative learning opportunities for all to participate, hold responsibility and feel successful in the classroom. Successful inclusive teachers were knowledgeable and flexible with a can-do attitude, a dispositional skill set that Alesech and Nayar (2019) suggests goes beyond required teacher competencies. The effort to use strategies to promote acceptance and belonging has far reaching benefits that include both the children with learning support needs and their typically developing peers. For example, Ogelman and Secer (2012) compared the peer relationships of typically developing five- and six-year-olds enrolled in two pre-schools, one of which did and one which did not include children with learning support needs. Their research suggests social advantages for typically developing children who participate in inclusive preschools such as improved peer relationships and social skills, with lower levels of aggression and victimization and higher levels of self-control and task completion skills.

Summary

Play and its relationship to learning has been well researched, with a growing body of evidence that supports the implementation of effective PBL in New Zealand early years classrooms. PBL aims to promote deep meaningful learning that is relevant to the lives, interests, strengths and needs of all learners. Effective PBL requires teachers to balance the provision of a thoughtful, intentional free-play environment, with guided teaching in play, and short, targeted direct teaching. Effective PBL shares some common pedagogical philosophies with inclusive education, such as valuing of rich relationships, holistic views of learning and development, and a focus on teachers' deep knowledge of the child as a foundation for providing relevant learning experiences. Concepts of universal design for learning are reflected in both PBL and inclusive education in the valuing of open-ended resources that allow for flexible, multi-level teaching of the curriculum.

In addition to effective teaching through play that is supportive of all children, working effectively with children with learning support needs requires teachers to be attentive to students who may need additional support to navigate the play environment and/or experience successful social participation in play. Effective practice in addressing the specific need of children with learning support needs requires teachers to have a deep knowledge of the effective use of additional supports, as well as knowledge of specific learning strategies that address learning, social skills and

social cohesion. Current research on PBL has focused on effective teaching practice in general. While effective teaching is beneficial for all learners, research that considers PBL specifically with a lens on children with learning support needs is required in order to ensure that the affordances for students are maximized, potential barriers are mitigated and that additional supports might be integrated into this philosophy in ways that maximise the inclusive potential of the PBL environment. Given the gaps in the literature examined in this chapter, the following over-arching research question was identified:

"How do exemplary play-based learning (PBL) teachers in New Zealand primary schools facilitate the learning and inclusion of children with learning support needs?"

The following sub questions were then used to guide data collection and subsequent analysis of information from the identified exemplary play-based learning teachers

1. What are teachers' beliefs and approaches to teaching through play for children with learning support needs?
2. How do teachers create play-based learning classroom environments that encourage the active engagement of all learners?
3. What strategies do teachers use to foster social inclusion, holistic developmental learning, and curriculum progression for children with learning support needs when teaching through play?

The following chapter will now outline the methodological decision making that shaped the nature of the study, considering the research approach adopted, participant selection, analysis framework and ethical considerations.

Chapter Three: Methodology

The present research was focused on exploring effective practices of exemplary play-based learning (PBL) teachers working within mainstream primary classrooms that included children with learning support needs. This study is intended to offer additional insight and address gaps in the existing literature as to ways in which children with learning support needs may be included and supported within a play-based primary classroom.

This chapter describes the research methods used in the present study. The chapter explores the worldviews and positioning of the researcher, before exploring the research design, selection of participants, data collection and analysis, and ethical consideration for the study.

World View

A qualitative research design, based on a constructivist world view was used to explore the individual points of view of participant teachers. In particular this research sought to understand the perspectives, attributes and actions of teachers who implement high quality PBL environments that effectively met the needs of students with learning support needs. A constructivist understanding suggests knowledge is of a subjective nature and draws on ideas of relativism which propose that individuals construct realities and that multiple realities are possible (Opie & Brown, 2019). The research was completed with an interpretative lens which views realities as context specific and constructed according to social and experiential factors (Punch & Oancea, 2014).

The constructivist approach guided the research design and supported the selection of a qualitative approach as an effective tool for achieving the research aims of illuminating effective practice in the phenomenon of interest within the context relevant to the teacher participants. Individual semi-structured interviews were used to draw on the context specific expertise of teachers and probe their thinking and teaching behaviours. This provided thick, rich descriptions of teacher's beliefs, approaches and teaching strategies. Thematic analysis of the interviews allowed for the interview information to be analysed, and arranged in ways that facilitated further development of thinking and theories (Opie & Brown, 2019) on aspects of effective practice for children with learning support needs in PBL classrooms. A qualitative methodology allowed prominence to be given to the individual points of views of those involved in the phenomena of interest and gave value to the uncovering and illuminating of these views in order to develop understandings on effective practice for children with learning support needs in New Zealand PBL classrooms.

Researcher Position

Qualitative research uses an interpretative lens, meaning researcher position and bias effects all parts of the research design, execution and analysis. The subjectivity and influence of the researcher position is acknowledged. In particular, the researcher's background in PBL and experience in working with children with learning support need will have shaped the lens through which the research was interpreted. The researcher had no previous association with the teachers or the schools they work at. This decreased the risk of the researcher making assumptions or interpretations in terms of how teacher responses related to specific contexts. The ways in which the researchers own perspectives may have influenced the research are explored in the last section in this chapter.

Research Design and Methods

This research employs an exploratory design. Exploratory research is frequently used when research areas are new and relatively unexplored to gain an initial understanding of the phenomena under investigation (Sarantakos, 2005). This makes exploratory research a good fit for the current study as research exploring PBL environments with a focus on students with learning support needs is scarce. Exploratory studies consider what is happening now and are good for gaining in-depth information about a phenomenon, which can potentially provide a platform for further research (Punch & Oancea, 2014). Because it relies on rich description it is often small scale and doesn't attempt to explain phenomena, meaning findings are not generally applicable to the larger population (Punch & Oancea, 2014). Descriptive studies can however provide insights that others in similar context may find useful (Punch & Oancea, 2014).

This study aimed to highlight the beliefs, approaches and practices of exemplary PBL teachers when working with students with learning support needs in their classrooms. Individual interviews were used to gain the point of view of teachers and illuminate their experiences. Semi-structured individual interviews allowed probing of the attitudes, approaches and practices of exemplary teachers in implementing PBL practice with particular attention to the learning and inclusion of students with learning support needs. Interviews were analysed through a process of inductive thematic analysis (Braun & Clarke, 2006). The intent of the research was to provide rich descriptive detail that would allow researchers and other teachers working in PBL settings to relate to the perspectives, experiences, and actions of the teachers in the present study and inform their work with children with learning support needs.

Participants

Purposeful sampling, whereby participants were recruited according to the aims of the research (Punch & Oancea, 2014) was used to recruit five PBL teachers working in four New Zealand, North Island primary schools. The participants were identified and initially contacted regarding the research by a respected professional development facilitator (PDF) based on her knowledge of high performing teachers who had current or recent experience of including children with learning support needs in their PBL classroom. This PDF was a member of the Massey University Early Years Research Lab also attended by the author of the current research and agreed to act as a mediator.

To be nominated for the study, teachers needed to be involved in implementing a PBL programme in a New Zealand, early years primary classroom (year zero to three) and have current or recent experience of having a child/children with learning support needs in their classroom. A total of five teachers were sought in accordance with Braun et al., (2017) assertion that five or six participants can be enough for a small reflective project where the participants are fairly homogeneous and the research questions are focused.

The final participant group included five registered female teachers who held Bachelor degrees in Education or Teaching (Primary). Participants worked in schools with decile ratings between one and six. Four of the participants identified as New Zealand European/Pakeha and one identified as Māori. The participants had between eleven and twenty-seven years of teaching experience, with an average of seventeen and a half years. All teachers had experience using traditional teaching practices before changing to PBL practices. Four of the teachers had been involved in PBL classrooms for six years. One teacher had been involved in PBL for four years. All of the participants had been involved in professional development relating to PBL. Examples of PBL professional development included workshops, conferences, in school coaching, on-line programmes and personal research and reading. All teachers had completed some professional development relating to the Positive Behaviour for Learning programme or Te Ara Whakamana, a positive behaviour programme with a Māori worldview. Two teachers had completed workshops/training to support leaners with specific learning difficulties.

Data Collection

The data collection approach for this research was individual, in-depth, semi-structured interviews of around one hour duration, conducted via Zoom. Semi-structured interviews allowed for deep probing and expansion of the interviewee's responses, while still ensuring topics related to the research questions were addressed by all interviewees (Opie & Brown, 2019). The interview protocol was developed over a period of time and adjusted according to feedback from the researchers'

academic supervisors and the professional development facilitator. In addition, the researcher used her own networks to pilot the interview protocol with two early years primary school teachers. The pilot interview process and feedback resulted in further modifications.

The aim of the semi-structured interview was to address the research questions through interview questions that sought an understanding of teacher's attitude, approaches and teaching strategies in general and as specifically related to children with learning support needs. The questions were open-ended to allow for rich, context driven data. Probe questions were used where needed to increase the consistency with which teacher addressed core issues related to the research questions. A full interview protocol is provided in Appendix two, which outlines leading questions related to the research questions, as well as probe questions designed to ensure all information needed to effectively analysis the data against the research questions was gained. The use of the term "additional needs" was used in the interview protocol. Following attention to Ministry of Education's current use of terms and in discussions with the research supervisors, the decision was made to use the term "learning support needs", which is reflected in the body of the thesis.

Participants were provided with the leading interview questions (as per the interview protocol but with introduction/conclusion guidelines and probe questions not included) prior to the interview and were asked to complete a background information form that allowed for a collective description of the participant group (see Appendix three). The interviews were recorded via Zoom and later transcribed verbatim by the researcher. Teacher participants reviewed the transcription for accuracy and provided signed permission for the transcription to be used in the research (Appendix four). The data collection took place between September and November 2020.

Data Analysis

The present study used inductive thematic analysis adapted from the six-phase process outlined by Braun and Clarke (2006) in describing reflexive thematic analysis, as described below.

1. *Becoming familiar with the data:* In the first phase, the researcher transcribed then repeatedly read the verbatim transcription of the audio recordings of the interviews and reviewed the videos for familiarization. Rough notes were taken on recurring themes across the interviews.

2. *Generating initial codes:* In the second phase the interview transcripts were summarised individually, looking line by line for information relevant to the research questions. Codes were then developed based on features of the data using a process of inductive thematic analysis (Braun & Clarke, 2006). This data was then collated in ways that related to the codes, with a large number of codes generated for each interview.

3. *Searching for themes*: In the third phase interview data from all teachers was collated, collapsed and synthesised allowing themes relevant to all interviews to be identified. At this stage there were many potential themes.

4. *Reviewing themes:* In the fourth phase over-arching themes that related to the research questions were identified and checked against the codes generated to ensure coverage of the entire data set. Relevant blocks of interview codes were collated under the themes.

5. *Defining and naming themes:* In the fifth phase, following feedback from research supervisors four main themes were developed and defined with pieces of the data linked to these themes in a series of sub-themes.

6. *Producing the report:* In the sixth stage a findings chapter was written in an iterative way. Quotes and extracts were taken from the interview data and merged with the themes as relevant to illuminate answers to the research questions. This allowed for the identification of similar teaching beliefs and practices as well as considering differing perspectives or context related practices.

Ethical Considerations

As with any research study, the ethical considerations of the planned and conducted research should be examined. The following ethical considerations were examined, and the study was determined to meet the criteria for a low-risk ethics study in accordance with the guidelines of the Massey University Human Ethics Committee. A low-risk ethics application was thus completed and approved (See Appendix one). The researcher acknowledged the ongoing obligations to abide by the Massey University Code of Ethical Conduct for Research, Teaching and Evaluation Involving Human Participants (Massey University, 2017), as outlined in the following section.

Autonomy and Informed Consent

Participants in this study were able to make informed, autonomous decisions about their involvement in this research project. Research participants were approached by a third party who provided initial information about the research and sought permission for their details to be shared. Participants were only approached by the researcher once they had expressed interest in being part of the research and had given consent for their details to be passed onto the researcher. This initially allowed a buffer to be provided between the researcher and participants and is likely to have mitigated any pressure to participate. An invitation to participate in the research (Appendix five) alongside a detailed information sheet (Appendix six) was then provided for potential participants with full details of the research purpose, the requirements of research participation including the type of involvement, the time involved and how the information gained from the research would be

used. The information sheet included reassurance of the voluntary nature of their involvement, participant's right to withdraw at any time and outlined the two points in the research process where written consent was required, once for their initial participation in the research (Appendix seven) and once after reviewing the transcription of their interview (Appendix four). Full contact details of the researcher and the Massey University research supervisors were provided in the information letter and teachers were invited to make contact and ask questions about the project if they desired. The letter also provided assurances regarding confidentiality of the research data.

Confidentiality

Confidentiality measures in place for research participants included the ability for participants to remain anonymous and the confidential management of research data. Confidentiality measures include removing all identifiable details, such as the teachers' names or the name of the schools they work at and ensuring confidentiality of information between teacher participants. Use of quotes also took into consideration the need to ensure no identifying information was included. Confidentiality was also enacted through the secure collection and storage of interview video and audio recordings on the researchers' personal computer. The recordings were used only for the purposes of extracting interview data and were destroyed at the conclusion of the research.

Risk, Benefit, and Burden

This research is low risk in terms of potential for harm. Costs to the participants include their time and effort taken to complete the interview. Possible benefits of the research for the participants include the potential for them to contribute to the developing interest in PBL and inclusive practice. The participating teacher and the school have been offered a summary of the research findings at the conclusion of the research project, potentially contributing to their professional development and knowledge sharing. Given that the researcher's background doesn't include working in primary schools, and is located geographically separate from the researched schools, pre-established relationships are not an ethical consideration for this research.

In keeping with the principles of Te Tiriti o Waitangi attention to biculturally appropriate research methods is essential. The Māori ethical framework proposed in Te Ara Tika (as cited in Massey University Code of Ethics, 2017) emphasises Whakapapa (relationships), Tika (purposefulness), Manākitanga (cultural and social responsibility) and Mana (justice and equity). This framework was used to emphasis appropriate bicultural practice. Below is a consideration of how this framework informed my research.

In keeping with the principles of Te Tiriti o Waitangi, attention to biculturally appropriate research methods is essential. Interview protocols were designed to be cognisant of kaupapa Māori. Respect was afforded to all participants, with interviews completed at times suitable for them. Access to the interview questions prior to the interview was intended to support the principle of rangatiratanga and mana ōrite. Offering a summary of the findings at the conclusion of the research intended to support knowledge sharing. In respect of whakawhanaungatanga, attention was paid to establishing connection with teachers. In completing this research attention was also given to contextual practices in each setting. This highlighted the use of bicultural practices and examples of how Te Ao Māori and Mātauranga Māori was being used to inform effective teaching practice.

Researcher Bias

Punch and Oancea (2014) assert that "descriptions are infused with interpretations and meanings" (p.32) requiring self-awareness and reflection on how this may impact all parts of research. During all stages of the research process, I attempted to remained alert to my own bias. While I am familiar with philosophies and pedagogy of PBL and have work and personal experience with children with learning support needs, I am not deeply familiar with the professional workings of the primary school or the philosophical base of structured, outcome-based learning. My awareness of the imbalance in my own knowledge base meant I needed to pay close attention to ensuring my interpretations were driven by the voice of the teachers.

Having no knowledge of the teachers or schools that they work in may have worked to reduce assumptions in interpreting the data in light of individual context, but my early childhood background increased the risk of flavouring my research design, research questions, probes and interpretations. Care was taken to ensure that my own beliefs, teaching philosophies and preference did not dominate or lead the research in the direction that supports my views. Punch and Oancea, (2014) suggest the use of peer debriefing and member checks increases the trustworthiness of the research design and plays a key role in minimising researcher bias. Supervisor revision of my thesis chapters, research questions and designs has been an important step in keeping me focused on relevant data and structuring of my work in ways that clearly communicates the teachers' voice. In addition a mentor from my research lab group with a background in primary school teaching also reviewed my research questions. Charmaz, (2000, as cited in Punch & Oancea, 2014) suggests verbatim recording of interviews and line by line coding of all data during thematic analysis, can help prevent biases coming to the fore, allowing the opportunity for diverse and different perspectives to be revealed. For this reason my initial coding of interview data employed a line by line summarisation of all information relevant to the research questions before moving to more general codes. This ensured I kept true to the data provided by the teachers and included all information in

the findings, including items that did not match my own personal philosophies. These steps increased the trustworthiness and integrity of the findings.

Summary

Guided by constructivist and interpretivist perspectives, this study used qualitative research methods to capture rich data about participant's beliefs and practices. Exemplary teachers were identified through a process of nomination from a respected PBL professional learning facilitator. Teachers' perspectives were explored through semi-structured interviews conducted through the on-line video platform Zoom. The interviews sought to describe the attitudes, experiences and actions of competent teachers implementing PBL practice with particular attention to the learning and inclusion of students with learning support needs. Interviews were analysed through a process of inductive thematic analysis (Braun & Clarke, 2006). Raw interview data was used as a starting point to uncover thick descriptions of exemplary practice. Codes and emerging themes were originally identified separately for each interview, before being collated to allow for patterns of shared meaning, explored in both explicit (as spoken) and conceptual (interpretations of the meanings behind what is spoken) ways. This allowed for the identification and reporting of central ideas and actions of the teachers as a group (Braun et al., 2017) as well as unique, contextual responses of individual teachers. The next chapter focuses on the findings from the research process, by describing the key themes to emerge.

Chapter Four: Findings

This chapter presents the findings from research interviews that address the research question "How do exemplary play-based learning (PBL) teachers in New Zealand primary schools facilitate the learning and inclusion of children with learning support needs?" This chapter aims to identify the beliefs, approaches and pedagogy of exemplary New Zealand PBL teachers who include children with learning support needs in their classrooms.

The narrative to emerge from the findings reveals that teachers in the current research used the flexibility of the PBL philosophy, deep knowledge of content and curriculum, and rich, varied pedagogical strategies to foster learning environments that were welcoming, responsive and engaging for all students. Within this context, implementation of specialist supports for students with learning support needs varied.

The findings are presented under four key areas. The first area is the principles of practice for PBL, where teacher perspectives on learning through play and their attitudes and approach to using this pedagogy to meet the needs of children with learning support needs is explored. The second area explores teacher's intentional use of space and resources to invite active engagement from all learners. The third area considers teacher's pedagogy in the PBL classroom that addresses the needs of all learners through whole class approaches. The last area considers effective practice in PBL classrooms that addresses the specific need of children with learning support needs.

Principles of Practice for Play-Based Learning

This section discusses teachers' positive perspectives on PBL in general and with specific attention to children with learning support needs. It highlights teachers' beliefs in PBL as an appropriate environment for all students, teachers innovative approach to meeting learners needs and their valuing of and contributions to collaborative relationships with a range of stakeholders.

Positive Perspectives on PBL

Some of the general advantages teachers' believed children in PBL settings benefitted from included its familiarity to the early childhood setting: *"that seamlessness coming from ECE to primary…it's familiar, so the anxiety hopefully lowers"* and their ability to build stronger teacher/child relationships: "*I get to play alongside our students and also building relationships".* Teachers believed that children that are happier and more engaged in the learning in the PBL classroom: *"when children chose their activity and it was student led, they were very, very engaged"* and the increased range of curriculum and learning opportunities provided: *"I'm just in awe of the curriculum coverage we're getting".*

Some teachers commented that the change to teaching through play had enabled them to engage in increased levels of social-emotional teaching as one teacher said: *"I could never fit it into my programme until I did learning through play. Then I had the time to socially, emotionally coach children."* Some teachers discussed their belief that children had more opportunities to talk, participate, be creative and imaginative in the PBL classroom and that it gave them more focused teaching time with each child. Some teachers said they worked much harder when teaching through play than they had as a traditional teacher, but all teachers agreed that they would never go back to more traditionally taught practices due to a strong belief that *"It works and it's just what's right for children".*

A common idea expressed by all teachers was that PBL classrooms enabled increased levels of active participation from children with learning support needs compared to traditional classrooms. As one teacher commented: *"play it's so open-ended, so it is so available in so many different ways to children, at so many different levels and stages and ages".* All teachers considered that teaching and learning through a play-based environment led to a greater acceptance, social participation and inclusion of children with learning support needs. One teacher explained *"If you came into our block, you wouldn't be able to spot those children* (with learning support needs) *because they are so involved."* Teachers noticed the strengths and competencies of students with learning support needs, which they felt were easier to identify in the PBL environment. One teacher explained: "*through play you would see them in a different setting and you would see that they had those skills, but they didn't necessarily come out in the academic setting."*

Reflective and Innovative Teaching

A key finding was that teachers used a constant cycle of reflection and innovation to adjust both the organisation of the classroom and the development of individual strategies for children with and without identified learning support needs.

Professional reflection and a desire to improve their early years teaching practice led four of the interviewed teachers to innovate their teaching from traditional classrooms to PBL classrooms, with one teacher coming into an already established PBL classroom. Some teachers continued to be a driving force at their schools for extending PBL across age levels. As one teacher shared: "*Our seniors are getting on board and in a few years I hope to move the senior years and share some of the skills, cause I lead learning through play with another teacher at school".* One teacher was particularly proactive at sharing the PBL approach with the community: *"I've done a lot of parent information evenings for playcentre and ECE and just the general public actually".*

Teachers who had initiated the change to PBL classrooms had all searched for alternative teaching methods after becoming dissatisfied with traditional teaching and in particular National Standards (NS), which teachers linked to increased child anxiety and an "*uneven playing field".* One teacher explained: *"National Standards was quite soul destroying as a teacher, because you get these kids with learning issues and social problems and you knew they wouldn't thrive in that academic environment".*

All teachers discussed or provided examples of their willingness to change their environment or teaching practice if they identified it was not working for an individual child. As one teacher described: *"If what we're doing doesn't work, we need to change and make things better for them* (children with learning support needs) *rather than them fitting in with us and our spaces".* Some teachers reported on their involvement in on-going cycles of reflection and innovation as a team to support and continually improve effective implementation, as expressed by one teacher: *"It's taken us three or four years to trial different things and that's something that we're going to continue next year as well."* Teachers often discussed multiple strategies when dealing with children with complex support needs: *"So it's a matter of thinking of as many strategies as you can".*

Collaborative Teaching Within Schools

All teachers reflected on the critical importance of strong communication and collaboration with a wide range of stakeholders involved with students with learning support needs.

All teachers reported positive, supportive relationships with school leadership who encouraged pedagogical innovation and knowledge sharing. Teachers expressed that they felt trusted and enabled by leadership to innovate their classroom practice. As one teacher recalled: "*he said if you don't like how that is being run and you want to do it differently, start investigating it and go*". Teachers discussed school leadership's pro-active roles with students with learning support needs which included co-ordinating and attending planning meetings, hands on support during challenging behaviours and joint monitoring of children who may need referral for support.

Most teachers reported children with learning support needs were frequently discussed at whole school team meetings, so the full school team had an awareness of them and their needs. Teachers reported whole school understandings were enhance through the heavy use of the school values: *"Our four school values are huge. And it's embedded all day every day".* School values were used as a tool that allowed for consistent, clearly communicated understandings about expectations within the whole school.

In addressing the needs of students with learning support needs teachers expressed a valuing of a team approach with all junior teachers and teacher aides who shared classroom and/or outdoors spaces. All teachers in shared spaces were aware of student's needs, had opportunities to provide input into the individual plan, informally brain-stormed ideas and shared their observations of the students. As one teacher commented:

> *"It's really important that we all know the plan for our students with additional needs……I think communication is so important, that we share what is working well for those students and how can we meet their next goals as well…….. it's taking the time to celebrate what is going well and also work together to provide solutions where there are barriers."*

Teachers valued clear, open communication with early childhood services (ECE) prior to a child with learning support needs transitioning into school, as a tool to assist them to make any needed preparations: "*for the ones that we know are coming from ECE, we have a bit of information from ECE around areas that they might struggle in… we are able to alter things to cater for those needs".* One teacher actively collaborated with a relevant disability community to research and educate themselves and the classroom children on a child with physical differences prior to them starting school.

Teachers expressed a valuing of the expertise of external specialists and worked to incorporate their input into the classroom programme. Some teachers found access to and the logistics of these relationships difficult to negotiate. This is discussed further in theme four.

Collaborative, Supportive Relationships with Families/Whānau

Teachers valued and fostered collaboration with parents/whānau when planning for children with learning support needs. They valued open, honest communication: *"We are very open with families…….I think if you have that open relationship it makes it easier"* and knowledge sharing: "*He'll talk to me about what's happening at home that's bothering him. Or how he can support his boy. So that's been a real bonus for me".* Some teachers discussed their perseverance with multiple strategies to communicate with hard-to-reach families of children with learning support needs through methods such as *"phone calls, texts, trying to follow up, trying to catch them at school when they do drop off."*

In teaming with parents most teachers provided examples of where they had paid attention to parental perspectives, emotions and the aspirations parents held for their child with learning support needs. Some teachers emphasised how important they felt it was to regularly discuss the strengths and positives of the child with the parents: *"Their boy is the most amazing engineer. So I*

sent a lot of photos of their work and videos". Some teachers talked about the need to sometimes begin discussions with families who are not aware that their child has learning support needs and to link families to health services. One teacher emphasised the importance of knowing the child's competencies before doing this by commenting: *"I could get all these people in, but I don't want to do that. I want him to show me what he can do first and then do it."* Teachers mostly expressed a non-judgemental attitude to parents and were happy to accommodate variations to the norm when needed. As one teacher commented: *"We've come to an understanding that when he's there, he's there. She tries really hard to get him there before nine, but sometimes its not like that".*

Space and Resources

Teachers used a range of intentional strategies to design spaces and maximise resources to support the needs of all learners. In this area there is only one key theme, which focuses on describing the intentional strategies used in creating the learning environment.

Intentional Use of Space and Resources to Meet the Needs of all Learners.

A key finding was that teachers developed differentiated spaces for a range of play experiences with resources provided in ways that encourage children to independently meet their play urges: *"all the resources were available and easily accessible for the children".* Spaces in the classroom were open, flexible and versatile: *"so if they want to build a hut or things, they'll just drag furniture to where they need it."* This allowed the environment to constantly respond to the existing and changing preferences and needs of all learners, as well as teacher identified learning possibilities observed in the play.

Teachers all paid attention to the ability of the resources to meet the needs of all learners. All teachers discussed the heavy utilization of loose parts for both indoor and outdoor play. The open-ended nature of loose parts was valued by teachers because of the flexibility this gave them in meeting a range of play interests and developmental levels. As one teacher explained: *"the more closed the resources are the more they become only appropriate for certain children."* Some teachers discussed their focus on quality, natural and real-life resources and in ensuring that resources were presented in aesthetically pleasing ways.

The use of space was manipulated by teachers to mitigate potential barriers play may create for some children. For example, one teacher described when a student with visual impairment began, a clear pathway was developed for them to travel through where other students could not bring play resources. Specific space was commonly used in a strategic way to assist specific children to mitigate sensory overload: "*We had a quiet space for him so if he wanted his own time he could go*

off into the breakout space where he could go sit and work" or encourage a child to self-regulate: *"That's when I instigated my hammock and he could climb in with his earmuffs and a book".*

In facilitating effective PBL classes, most participant teachers worked in a collaborative space with one or more teachers. Classrooms typically had one or two formal tables as well as a variety of spaces, seating and positioning options for play. All teachers had outdoor play available through-out the school day which they considered part of their classroom. Some schools had recently invested in adapting the classroom/decks to be more suitable in allowing for indoor-outdoor flow. Boundaries that the children could move within often related to what was visible to teachers from the shared junior school classrooms. As described by one teacher*: "it's kind of within coooee we call it. They should be able to hear us. We should be able to see them and hear them".*

An identified safety risk of the PBL environment included ensuring the safety of children not yet able to manage outside boundaries, or who engaged in activities or behaviours that could potentially cause injury to themselves or others. Most teachers had a formal roster co-ordinated with other junior teachers and teacher aides who shared the space, which allowed them to monitor supervision levels. As one teacher explained *"throughout the day my buddy and I would tag in and out so one of us would be teaching through play and one of us would be teaching through the deliberate acts of teaching with reading, writing or maths".* Another teacher used a more ad hoc method of supervision where all teachers kept an eye on the play area outside their classroom and noted when they needed to be outside assisting in play alongside roving outside teacher aides: *"So it's kind of like they're all our kids, so we're just keeping an eye on what's going on."*

For all teachers keeping resources well organized was important. As described by one teacher *"the storage of our resources is very tidy and colour coded and we don't have massive of things out…... we make it as manageable as possible"*. All teachers had regular times during the day when children took responsibility for putting things back in place *"The kids know they can get those whenever they want to. They can mix maths equipment with it. But they know that it all goes back to the right place at the end of the day."* Children were actively taught tidy up procedures early on and independently engaged with this. For children who found this difficult, teachers used strategies such as giving small manageable tasks or breaking up bigger tasks into smaller chunks.

Implementation of Effective Practices for Play-Based Learning that Meet the Needs of all Learners

This section explores effective teaching strategies employed by teachers in their PBL classrooms using whole class teaching pedagogy that is supportive of a range of learner needs. Three themes were identified in this area. These are, teachers engaged in responsive teaching based on a deep

knowledge of each child, teachers engaged extensively in the teaching of social-emotional skills and competencies and teachers engaged in curriculum planning, implementation and monitoring that valued different ways of learning and knowing. While these strategies were relevant for all learners, they were perceived by teachers as effective pedagogy for fostering inclusive learning environment for students with learning support needs.

Responsive Teaching Based on a Deep Knowledge of Each Child

For all teachers responsive teaching began with developing a sense of belonging and emotional safety for each child in their classroom. Transition to school was seen as an important time for building relationships with the child "*you've got to have that connection first and the relationship first I feel".* One teacher described the process she went through to settle an anxious child into school:

> *"He came in clinging to his mum not wanting her to go. So mum would sit down with a train set and I'd just sit down with him and we'd start to play…………we probably did the trains with me present for probably a good six, seven weeks".*

Most teachers reported that they encouraged children to get to school early so that they could use self-selected play to ease them into the day. One teacher commented that she did PBL exclusively for the first two weeks of the school year to assist children to understand the culture of the classroom and to teach classroom expectations. All teachers had a morning meeting time (often referred to as Mihi Whakatau) focused on belonging goals with the use of waiata and karakia: *"The bell goes and we do roll, karakia, waiata…………. The kids are all very peaceful once we do that",* and reinforcing of the school values. Many teachers were flexible with when this started. One teacher commented on purposely delaying the meeting time to accommodate the well-being of late arriving children*:*

> *"So the school bell would ring and our children would carry on……we just found that the children who were often late…….. the anxiety just went shhhoooo……….So then as those late comer came in they didn't feel any different, they didn't feel they were late so the anxiety level weren't up".*

Teachers all worked to build a sense of accomplishment in all students. Some teachers reported strategies to encourage children to recognise, acknowledge and utilise the strengths of others. One teacher describes below how she connected children to the strengths of others:

> *"we talk about everyone has different talents and everyone is experts at different things……. If you haven't used a hot glue gun, oh go and see Bob over there cause Bob's our expert in*

> *this class. Or someone was wanting to tie a knot it would be, oh you need to go and see such and such. So it was making kids aware that we are all different and we all have different strengths".*

All teachers encouraged children to understand and accept difference in a range of ways such as educating themselves and children on the specifics of a disability prior to transition, using resources such as books that support inclusivity, and at times targeting social-emotional teaching around including children with differences.

Children's interests, urges and passions were regularly discussed by all teachers as a way of informing planning, the organisation of the play-based classroom and resource provisions: *"it's finding what their urges are, what their interests are and targeting that"* and in individualising learning experiences: *"He's still really into dinosaurs, so if I want him to sit down and listen to a story, it will be a dinosaur story".* Knowledge of the students was highlighted by all teachers as particularly important when planning for students with learning support needs: *"Spending the time to get alongside them. To see how they learn. To see how they play".* As well as understanding children's play preferences teachers discussed how they used knowledge of a child's developmental level to inform their planning of the play environment. As one teacher explained: *"Once I started questioning why they were exhibiting that behaviour, I took it back to the functional stages of play and where they were at developmentally and started providing some things for that".*

Teachers all sought to understand the context of the student's home life and considered the relevance and impact of this to their teaching practice. As one teacher explained: *"you need to know their story".* All participating teachers paid attention to acknowledging each child's culture and incorporated Māori culture and protocols in their teaching practice. Some teacher used whole school programmes developed from Māori world views. One teacher who taught in a school that was *"huge on place-based learning"* discussed using play invitations and provocations based on stories of local Māori history and extending this into many curriculum areas. Some teachers gave examples of where they had encouraged students from other minority backgrounds to share and teach others about their culture.

Explicit Teaching of Social and Emotional Skills and Competencies

A key finding was that teachers implemented and highly valued whole class approaches for coaching children in the development of social-emotional competencies. The focus on social-emotional skills worked to support children with learning support needs by developing their own social-emotional understandings and by focusing on building a class culture of tolerance, acceptance and inclusion.

School values and positive class culture were highlighted by all teachers as foundational in the teaching of social-emotional skills. The centrality of school values to their teaching practice was emphasised by one teacher who said: *"It always come back to our school values and our class treaty and having those expectations set up from the start. But not just sitting there, you have to revisit them every single day"*. Some teachers discussed spending time observing key competencies in new children and intentionally coached children where they identified gaps in these. As expressed by one teacher: *"We don't assume children know how to show respect for things, or they know how to include others. We really look at the needs of the child and then we will teach those skills as required".*

Social-emotional teachings were regularly revisited both formally, through large and small group times and informally, through ad hoc conversations and social problem solving with children at teachable moments during play. All teachers discussed teaching social-emotional skills during play, for example turn-taking, empathy for others, fairness, inclusive play, acceptance of difference, emotional management and understanding of their own impact on others. Some teachers reported using social goals in individual development plans, with one teacher discussing the combining of social and academic goals, such as taking turns with motivating play that targeted a specific learning goal.

All teachers reported extensive use of "*vocabulary modeling"* and "*coaching"* in social situations arising during play. Another commonly reported strategy included revisiting social challenges or effective problem solving that had come up in children's play using people or puppet role play or photographic images, and later reinforcing this learning when similar situations developed during play interactions. As described by one teacher: *"…use your role play to teach those skills. What we find is it's really powerful because then you'll go on and in a few days you'll see the kids mimicking and practicing the skills that you have done."*

Positive reinforcement was used to promote desired behaviours, particularly for children with self-regulation difficulties. For some teachers this included tangible rewards: *"We also give our mana moments and reinforce all the children that are doing the right thing".* Some teachers discussed their use of buddy systems where more experienced children were used as leaders in teaching classroom expectations to newer students or those who took more time to learn them. As one teacher explained

> "*So the kids tell you…the kids tell each other. So lots of coaching, lots of modelling. Very explicit at the start of the year. But then those leaders are built up during the year, so it's kind of just ingrained in the culture."*.

Many teachers discussed involving the children in the social problem solving: *"We might just say to the team "we are noticing that some of this is happening, how do we solve it" and then we ask the kids for solutions"*. Teachers stated that a goal of social-emotional teaching was to move the children to increased levels of independent social problem solving in the classroom: *"When it turns to custard…… they can talk about it themselves. They've got those strategies to do that".*

Curriculum Implementation Values Different Ways of Learning and Knowing

A key finding was that while teachers were attentive to the learning progressions and key competencies of the New Zealand Curriculum, they differentiated learning for all students. Teachers used flexible starting places, resources and expectations for learning with each student and acknowledged learning in a variety of ways. This allowed them to give attention to the learning modifications required for students with learning support needs as a part of their general pedagogical approach.

In changing to a PBL environment all teachers had moved towards a curriculum that encouraged higher levels of child agency. This was seen as an important step in increasing children's engagement with the learning, autonomy, happiness and creativity in the classroom. One teacher reflected on changing to this practice: *"I used to think our students had no imagination. They weren't creative. But it was because I was teacher directed. I was in charge of the topics. I was choosing all the time."*

Although autonomous play was dominant in terms of how the children spent their time in the classroom, during the day teachers moved between roles where they supervised/observed free play, intentionally taught during play and engaged in direct teaching. During free play teachers often discussed taking a back seat with children engaging in independent collaborative play, to avoid *"disrupting the play".* All teachers valued facilitation and observation of play. Teachers frequently took notes, photos or recordings of the child at play. Many teachers discussed the child's active role in documenting their own play through taking pictures on a classroom I-Pad. This more hands off approach to direct involvement in the children's play was balanced with a recognition of the value they could add to play. Teachers discussed the importance of *"learning when to jump in and when to step back",* placing importance on both observing *"where they (the children) take something to"* as well as "*being a teacher and extending them".*

Most teacher provided provocations and invitations which expanded the depth of learning related to children's play urges and interests. As described by one teacher: *"lots of observations, then thinking……. what else could I add in for the next day. What resources could I get the kids to push them further……".* An example of this is provided by another teacher:

> *“one day these children were making these boats with bread trays and we looked at it and they were pretending they were sailing to Samoa. So we got a map out and then we looked at different boats and then we looked at different areas you could sail to”.*

All teachers reported intentionally expanding children’s thinking in play by “*asking those I wonder questions or feeding in vocab from the curriculum to lift the play”,* and by taking a role in supporting learning when opportunities for this were observed during play. As described by one teacher: *“play allows you to get alongside them in the process of doing something or learning to do something and you can scaffold and support that”.* Time in play was considered valuable teaching time. One teacher explained:

> *“when you’re rostered on roving you can have that time to observe learning through play, socially and emotionally coach kids, sit back and really take that time to see learning through play and what you’re going to do to lift it to the next level.”*

All teachers spent some of their classroom time engaged in targeted direct teaching of literacy and numeracy. This was usually done in learning groups of between one and eight children with a time frame of between five and fifteen minutes. The work completed in this time was individualised with differentiated starting places, learning expectations and if required resources and methods of teaching for each student. As one teacher explained: *“the teaching you do within those groups is very focused”.* For most teachers taking part in these structured learning times was an expectation for all children, but flexibility was applied with consideration to the child’s current involvement in the play environment. Teachers were also flexible with the time spent at these tasks according to the child’s interests, focus and developmental stage. As one teacher said: “*I don’t care how long they spend writing. But they know this is the culture in our classroom, we’re all writers.*

For some teachers the starting place for children with lower pre-literacy competencies was one-on-one teaching, hand over hand or use of SATPIN letters to form words. In addition, pre-literacy skills practice was intentionally created in the play environment such as manipulating small objects, crossing the midline, painting on a large easel and being read books linked to children’s interests. One teacher provided intentional teaching of pre-literacy skills as an alternative to structured teaching times where children were deemed not ready for structured learning, as described in the following extract.

> *“so the children that we have identified as not yet ready……. we use provocations for those early literacy skills…….like the pinching activities, you know the crossing the midline……. Lots of gross motor skills that they need to develop for them to get ready to do fine motor.……. So*

> *it's not like your guided writing at a table, it could be that you're outside just setting up that activity……..but then also when the teacher is out there, teaching".*

There were attempts to link children's play interests to the structured learning times and literacy and numeracy goals to the play provisions: *"we withdraw children for literacy and numeracy deliberate acts that link to what they are playing with where possible".* Some teachers did no whole group teaching of literacy and numeracy during morning meeting times while others included some poems or phonetics. One of the teachers included some extra compulsory whole group expectations relating to numeracy and literacy directly after morning meeting time and when first gathered back from lunch.

All teachers engaged in pre-term and emergent curriculum planning. Many teachers discussed examples of their use of curriculum spread sheets, checklists, observation sheets and templates for purposes of identifying play urges and interests, curriculum planning, checking curriculum coverage and tracking curriculum progression: *"We also have checklists of children's urges and things and their interests so it's basically marrying them up and making sure you're getting (curriculum) coverage".* Teachers often used the term emerging curriculum to describe their observation of play and pedagogical response to children's urges and interests in terms of resource provision, provocations and teaching practice. As described by one teacher: *"it's no longer planning for it, it's planning as it's happening".*

Some teachers shared how they made links to whole school learning; as one teacher explained:

> *So our school is big on place-based curriculum……… So the way that we still keep within the realms of the school is to make sure that we are providing provocations within our play that support whatever area of the inquiry the school is in.*

Teachers mostly expressed that the curriculum coverage was wider when using PBL pedagogy than it had been when teaching in a traditional classroom. One teacher commented on play being a great and motivating way to "*sneak in learning with resistant or tricky learners"* and another commented that interest-based play is a *"great way to build attention span and focus."*

Most teachers talked of collecting assessment information formatively which they did by keeping notes during structured, small group instruction or through observing them in play: "*I know exactly what letters they know, I know whether they can form those letters correctly in their writing, I know them intimately"* and at times translating this information into more formal tracking charts as described below:

"So if someone's sitting on the ground and they've got all the dinosaurs out and they say, I've got twenty dinosaurs, I know that they can count to twenty and I know they can one to one match. So I tick that off, I just highlight it off".

Many teachers discussed reporting school wide on the progress of the children in numeracy and literacy and on their coverage of the curriculum. Many teachers expressed their belief that PBL is effective in terms of coverage of the curriculum and learning progressions. As expressed by one teacher: *"for me, when we're gathering our data for example our numeracy and literacy, I am blown away by the acceleration and our progress as well".*

Addressing the Specific Needs of Children with Learning Support Needs

This area considers the pedagogies adopted by teachers to address the specific needs of children with learning support needs. Three themes were identified. These were: teachers give increased attention and support to children who find the PBL environment difficult to negotiate; teachers hold high but differentiated expectations for all learners and; teachers understandings and utilisation of specialist support in the PBL classroom vary.

Supporting Children who Find the Play-Based Environment Difficult to Negotiate

A key finding was that teachers noticed and provided increased levels of support for children who found the PBL environment challenging to negotiate. In particular teachers noticed children who had self-regulation, self-direction, social, or play skills challenges that effected their ability to engage successfully in play and increased the level of support they provided for these children.

Most participant teachers articulated a role for both themselves and teacher aides in settling children into play, encouraging social participation in play and developing play skills where required. An intentional teaching pedagogy was enacted by becoming a play partner one-on-one with a child, encouraging a child's involvement in play near-by, or drawing a child's attention to the play of others with similar interests and "*coaching them"* in making connections. However, an evident tension was that teachers expressed they were reluctant to "*disrupt"* the play of children unnecessarily or to overly direct interactions due to a belief that children should be agentic and autonomous in play. Teachers expressed respect for a child's play choice where they chose to play on their own for much of the day, and still saw potential for learning.

Some teachers discussed that play-based classrooms can be difficult to negotiate for students with self-direction challenges and that there were times when they needed to adjust the level of student/teacher direction in play to reflect the developmental level of the child and how they cope

in play. All teachers acknowledged times where some children needed assistance with play choices. An example of this was provided by one teacher:

> *"We've got a year one boy who flits and he looks a little bit lost. So we just go outside and say… ' so these are your choices, you might like to do'. So we will support them and guide them, but we will also give them time."*

One teacher became particularly aware of the need to give increased teacher direction when she identified a group of around seven boys in the shared junior classrooms who had behavioural needs. To support these children to manage well in the play-based classroom she provided more teacher direction: *"sometimes they need a little direction in knowing what their urges are"* and at times she suggested the need to *"change to a teacher directed role to keep them safe and the activities they choose as well".*

High but Flexible Expectations

Teachers had high expectations for all their students, and in general expected all to take part in classroom expectations and routines. They were however aware of when additional resourcing, support or flexibility was required and were prepared to make exceptions to general rules when needed, as demonstrated by the extract below:

> *"I see it as having high expectations that are appropriate for her. So I knew that she was not going to be able to sit on the mat for ten minutes. But I did know that she could be on the mat for one minute. ……………… so she learnt the routine. Then it was about stretching it and stretching it and stretching it, so that just a little expectation….. and then growing it for her."*

The teachers all discussed their involvement in the school wide Positive Behaviour for Learning (PB4L) programme and heavily referenced this or the associated Incredible Years programme when discussing school expectations. Their approach to behavioural needs was to *"teach the behaviour we expect"* and emphasis *"help and support".* Some teachers discussed the importance of noticing the well-being and emotional state of the child when they come into school, particularly for children with behavioural issues or home life dysfunction. Some teachers also discussed avoiding known behaviour triggers and ensuring basic needs are meet. As one teacher commented: "*Comes down to knowing our children, their background, how they come to school…are they heightened? Do they need a bit of kai?".*

Most teachers discussed their attempts to understand the behaviour from the child's perspective. One teacher explained: *"I found that she couldn't actually articulate what she needed or what she wanted, or what she was feeling",* and intentionally teaching the gaps in skills that were leading to

the behaviour. For example in this case the teacher reported: *“the teacher aide and I did lots of work about teaching her about emotions”.* One teacher reported using mana wheels for every child transitioning into the classroom. Part of this wheel was an emotional management plan co-created by the child and teacher as explained below:

> *“…..we do it with every single child…………. the mana wheel - at the top we also look at when they’re rongomatane they’re peaceful and happy, when they move to māui they are a little bit unsettled. And it keeps going up the scale. We do a mana plan on how to become calm again. So they develop a behaviour plan that fits them personally.”*

Teachers applied a range of strategies to support positive behaviour for students with behavioural needs including ‘in the moment’ strategies such as persistence with expectations, understanding when a student or student group needed in the moment directing, solitary play or separating from others with the same negative behaviour, breaking undesired tasks up into manageable tasks and, for high level behaviours, moving other children into another space while a child finds calm. All teachers persevered with multiple strategies where required to shift negative behaviour towards more positive behaviour, which was reported as being mostly successful. For all children, including those with high level behavioural challenges, teachers worked to keep a strong, positive relationship with the child and whānau and to develop a pragmatic understanding, tolerance and acceptance of the child within the classroom. As one teacher described:

> *“often they’d say ‘why does he hurt everybody, why does he kick people, why do I have to get out of the classroom right now when you say’ ……. ‘oh….that’s just the way that it is. His brain is telling him something different to what your brain is telling you’…..”*

Ambiguous use of Specialist Supports

Teachers reported working with a large range of team members involved in the learning support needs of children included the special needs coordinator, learning support coordinators, resource teachers learning and behaviour (RTLB), occupational therapists, physiotherapists, psychologists, speech language therapists and vision resource teachers. Although external specialist support was valued, some of the perceived barriers to the effectiveness of these services were long wait lists, high criteria for service and inadequate amount of support provided. Some participant teachers also found the demands of working with multiple specialists difficult, with unworkable strategy suggestions or unrealistic demands on teacher’s time during class time causing challenges. One teacher commented,

> *".....they come in and have a twenty minute session with the child or half an hour session with S, and then they want to talk to you about how that session went…….That is the hard part. Cause if you did that for every intervention. It's the time and then you've often got to do reports……..you times that by ten children, it's insane."*

This teacher also commented on how, despite the pressure, it was difficult to hand responsibility for connecting with whanau over to support staff because, *"obviously it has to come back down to the teacher. There's no point in the learning support coordinator trying to make contact because they don't have the relationship".*

Some teachers spoke highly of external professionals, but a disconnect was apparent in terms of a lack of clarity of roles, as one teacher commented, "*she works for the Ministry the lady that comes in. I actually don't know what her official title is*". While some teachers mentioned that a lack of understanding of the PBL environment caused a mis-match between what happened in the classroom and the suggested strategies offered by external professionals, most teachers felt that there was a growing acceptance and respect around teaching and learning through play.

Four of the teachers worked with one or more teacher aides in their shared junior classroom spaces. All teachers highly valued the role of the teacher aide, alternatively referred to as learning coaches (LC's). The learning coaches were considered a full part of the teaching team and were involved in school professional development. All teachers took responsibility for developing the class learning programme for all students. The implementation of the classroom programme was shared between the teacher and teacher aide, however there was considerable variation in the ratio at which the implementation of the learning programme was the teachers' primary responsibility versus the learning coach. A few teachers discussed the importance of discrete, timely provisions of LC support rather than continuous support and encouraged LC's to work in groups rather than with individual children. The rationale for this was described by one teacher, *"that child wouldn't actually realise (the LC was assigned to them). Otherwise we've found in the past we would have children who would, I guess in some ways, develop server helplessness".*

Teacher's sense of ownership of the individual education plan (IEP), and how it might relate to the play-based classroom varied. One teacher talked about combining academic and social goals through the IEP and one teacher talked about having an IEP goal about how to enter play. Some teachers commented on modifying the IEP goals for PBL by *"marrying this (IEP goals) up with how it might look in play".* In this way she suggested that play was an add-on to the goals rather than being an integral part of the goal development. One teacher talked of being *"on the cusp"* of intentionally embedding targeted learning goals into the children's play. Two teachers considered that the play

did not need to be altered in light of a child's learning goals, as they saw learning goals as relating to specific, structured learning times, behaviour or toileting, and play as appropriate to all children in its existing form. When directly asked about IEP's most teachers discussed times where children were withdrawn individually or with a small group of children, to complete learning or specialist programmes with either the teacher or learning coach. This was most commonly discussed as relating to speech language therapy.

Summary

This chapter has outlined the findings of the present study with attention to the research question: "*How do exemplary PBL teachers in New Zealand primary schools facilitate the learning and inclusion of children with learning support needs?"* It gives attention to teachers' beliefs, environmental arrangements, curriculum positioning and pedagogical competencies framed around how the PBL environment might work in the service of students with learning support needs. Teachers held positive views on PBL as a teaching approach that increased their ability to engage responsively to student diversity. Teachers used the PBL environment flexibly and valued open-ended resources as a tool that assisted them to respond to students' individual interests, play urges and needs. Structured numeracy and literacy learning was delivered through short, focused, small group work with differentiated starting places and use of formative assessment. Explicit teaching of social and emotional skills was embedded into each teacher's practice. Teachers were aware of and more interactive during play with students who found the PBL environment challenging to negotiate. The extent to which and the ways that teacher's integrated specialist supports and implemented targeted IEP goals into the PBL environment varied among teachers.

Chapter Five: Discussion and Conclusion

Findings from the present study provide examples of exemplary play-based learning (PBL) pedagogy that fosters the participation, well-being and holistic learning of children with learning support needs. This chapter seeks to address the research questions by critically examining the exemplary PBL practices reported by participant teacher's, in light of the current literature on effective PBL teaching practice and inclusion. It begins by considering effective PBL environments that supports a range of students, such as positive teacher attitude and self-efficacy, flexible classroom environments, collaborative relationships, positive school climate and the explicit teaching of social-emotional skills. The chapter then turns to specific consideration and pedagogy that may support students with learning support needs to successfully negotiate the PBL classroom, and the effective use of additional supports, such as individual education plans, teacher aide hours and specialist impute. Implications of the findings of this research are described. Specifically, the need for wide-based professional development is recommended to allow all stakeholders an understanding of PBL pedagogy and to provide more consistent, effective teaching practice around the implementation of specialist supports. This section of the chapter also encourages teachers new to PBL to consider carefully the integration of child agency goals with intensified classroom strategies and support towards the holistic development of children with learning support needs. The chapter ends by considering the limitations and delimitations before a final summary is presented.

Teachers Attitudes, Beliefs and Approaches

All of the participating teachers had strong beliefs in the benefits of learning through play (PBL) for all children, and in particular for children with learning support needs. This was often highlighted in contrast to the discomfort they had felt in using traditional, structured pedagogy. When discussing their shift from traditional teaching to PBL, teachers reported the children in their PBL classrooms as less anxious and more engaged in the learning. Teachers affirmed how the PBL environment allowed them to observe and capitalise on children's interests and strengths through flexible and responsive teaching. The scope and flexibility in PBL pedagogy was frequently referenced by teachers as a factor that allowed them to cater more effectively for a wider range of learner diversity. The favourable perception of the PBL classroom compared to traditional teaching in the early years is in keeping with other proponents of PBL who assert that an absence of play and play skills in learning environments for young children negatively effects children's well-being (Miller & Almon, 2009; Bodrova, 2008) and that PBL classrooms assist children to be more settled and engaged in learning (Davis, 2015).

Teachers held positive, competence based-views of all learners and had a strong sense of their own capacity and responsibility to improve outcomes for all learners through PBL. They reported implementing a diverse range of teaching strategies to address all learners' needs. A positive teacher attitude to inclusion is foundational in developing effective inclusive classrooms and responsive pedagogical strategies (Boyle et al., 2011; Mitchell & Sutherland, 2020). Teachers' positive attitudes towards inclusion is likely to have driven their intention to cope with the challenge of adapting their teaching to the needs of all students (Hellmich et al., 2019). Like the exemplary teachers in Clinton et al.'s (2018) research, teachers in the present study had a strong belief in their ability to change their teaching and environment to do whatever was required for any situation that arose. They understood and acted on the pivotal role they could play in achieving outcomes for students with learning support needs (Davis, 2008). While teachers in the current research appreciated the support of specialists and support roles, they were not reliant on these and had confidence in the value and importance of their own pedagogy. This was in contrast to the teachers in Petriwskyj's (2010) research, where teachers were found to rely heavily on outside supports in describing inclusion rather than focusing on their own pedagogy.

Teachers valued and fostered strong collaborative relationships within the school, which was perceived as an enabling factor in developing both their PBL practice and in supporting and enabling responsive practices for students with learning support needs. In keeping with McMasters (2012) description of effective inclusive schools, teachers appeared to be part of positive, supportive, inclusive school cultures with strong, enabling leadership. Teachers' feelings of connection to the whole school was in contrast to the teachers in Nolan & Paatsch (2017) research, where teachers new to PBL struggled with the perceived pressure to constantly legitimise the play-based approach within the wider school. For the teachers in the current research, the play-based philosophy had become established as an accepted and encouraged practice, with teachers describing opportunities to facilitate school-wide professional learning on PBL. This collaborative, two-way sharing of knowledge, would have fostered inclusion, by encouraging and enabling teachers to use and innovate the curriculum in looser ways that respond to a greater range of students (Gabriel et al., 2011).

Teachers were aware and pro-active around the pivotal role they played in connecting family/whānau to the school and classroom through strong, positive relationships (Thomas & Rowan, 1995; Davis, 2008). Participants affirmed parents in ways that displayed a positive, non-judgemental regard and appreciation of partnership. Teachers described active attempts to forge on-going relationships, communication and shared planning for children with learning support needs. By engaging in relational and interdependent communication with whānau, teachers

provided space for two-way sharing of knowledge, and for families/whānau to communicate other ways of seeing, viewing and acting that may provide a better fit for the child and their family (Berryman et al., 2015). Teachers valued and were supportive of the role external specialists played. However, at times the logistics and differing philosophies of how support should be applied proved challenging. This is discussed further in the section on specific supports for children with learning support needs.

Supportive Classroom Environments

Teachers' physical classrooms were versatile and dynamic with both teachers and children influencing the resourcing and set up of the environment. Teachers highly valued and utilised open-ended resources which allowed them to target learning for children according to their individual characteristics, developmental levels and interests. Teachers were willing and able to use technologies or specific resourcing to assist students, as well as noticing and planning for accommodations that might be needed to enable learning. Teachers fostered a positive, supportive class culture and worked to develop a sense of belonging and connection to the classroom through thoughtful provisions for all learners, identifying and promoting the strengths of all, and through attention to culturally relevant practice.

The Physical Environment

Much of the PBL environment followed the philosophy of universal design for living (UDL) where resources and spaces can be used flexibly and autonomously to reflect the urges, cultures and interest of the children (Gauvreau et al., 2019; Meyer et al., 2018). Teachers gave several examples of where they were able to take a play resource and use it in a creative and unique ways to highlight a teaching intention relevant to the individual student. All teachers valued and provided loose parts as a core part of the play provisions, allowing children with a range of developmental levels and interests to engage with many different resources in ways that were meaningful for them (Akar Gencer & Avci, 2017). All teachers had access to outside space and provided a range of play activities outside during classroom time. This allowed children to benefit from increased levels of exercise, access to naturally occurring loose parts, observations of science in nature (Beatson, 2019) and provided an opportunity to create deeper, hands-on links to place-based learning (Penetito, 2009).

Benade (2019) suggests that in addition to a teachers' ability to use the environment flexibly and creatively to maximise learning, teachers also need to be able to notice and reduce barriers to learning. Mitchell and Sutherland (2020) suggest break out spaces and supports are put in place in classrooms to support students with lower sensory thresholds to work at their best. Sensory difficulties for some children with learning support needs was identified by most teachers as a

potential barrier in the PBL environment. Teachers in the current research identified when specific children needed a regular quiet space to work at their best and created this within the classroom. At times they created specific space for a child to calm down or engage in solitary play where this was an observed need. Of significance is that this was not a teacher directed timeout, but a move to support the student's preferred way of learning or self-regulating.

Developing Social and Emotional Competence

The explicit teaching of social and emotional well-being and competence alongside cognitive skills in schools has a strong research foundation (Goodman et al., 2015; Evans & Harvey, 2011; Siraj-Blatchford & Sylva, 2004; McLaughlin, et al., 2015). Research suggests multiple benefits across the lifespan for people who develop social and emotional competence in childhood (Goodman et al., 2015). The development of social-emotional skills are currently included in New Zealand education curriculum guidelines (Te Whāriki, 1997, 2017; NZC, 2007). Explicit teaching of social-emotional skills has been linked to creating a positive class culture (Evan & Harvey, 2011), improved behaviour (Jennings & Greenberg, 2009; Raskauskas et al., 2010), and greater acceptance of difference (Alesech & Nayar, 2019). Explicit teaching of social and emotional skills using whole class pedagogy was identified by teachers throughout the interview. A range of social pedagogical strategies were described such as social coaching during play, revisiting social scenarios using photos, puppets or role play, and group problem solving. Such practices were utilised both to highlight pro-social skills demonstrated or encouraged in the classroom, as well as in response to social challenges arising in the classroom. Teachers' explicit teaching of social and emotional competence was described in terms of the development of positive social skills and as a tool to foster a positive class culture. It served to create a foundation of acceptance and respect for others and provided a spring board for teachers to return to if difficulties arose with classroom inclusion.

Building a Positive Class Culture

A key finding was that teachers prioritised building a positive class culture and sense of belonging for all children, frequently referring to the use of the school values to ground this in. The pivotal role that teachers play in building positive, supportive relationships with all students and building student well-being is well documented (Thomas & Rowan, 1995; Davis, 2008; Mitchell & Sutherland, 2020). This may be particularly significant for children with learning support needs, where up to fifty percent of students can have self-regulation or social problem-solving challenges that make them at risk of peer rejection (Odom, 2006) and poor relationships with teachers (Jennings & Greenberg, 2009). Teachers in the current research gave priority to building strong relationships with children and reducing classroom anxiety, particularly during transition to school and for children with home

life dysfunction or behavioural challenges. Teachers discussed emphasising help and support when dealing with challenging behaviour and proactively supported the development of emotional management. They held high expectations for all children, but identified where children needed support, incremental learning opportunities or in the moment support to achieve this. Teachers' commitment to developing positive relationships with all children and promoting their competencies in the classroom will have assisted children with self-regulation and social skill challenges to maintain positive peer interactions and a positive sense of belonging in the classroom and school (Odom, 2006). Ogelman and Secer's (2012) research suggests that in embracing belonging and inclusion for all, teachers are likely to have a positive impact on not only children with learning support needs, but also on the well-being of their typically developing classmates.

Bicultural Practice

Both Te Whāriki (2017) and the New Zealand Curriculum (2007) make explicit the importance of recognising Māori as tangata whenua in Aotearoa New Zealand and the commitment to honouring te Tiriti o Waitangi in education spaces. The curriculum documents affirm the importance of fostering success for Māori students as Māori and being cognisant of the risk being part of a marginalised group and having learning support needs potentially poses to learning and well-being (Berryman & Woller, 2011). Whānautanga (relationships) are at the heart of Matauranga Māori , which was reflected in the teacher's emphasis on strong positive relationships as a foundation for bicultural teaching practice. All teachers reported the incorporation of te reo Māori, waiata and culturally framed values and practices in their classroom. Some teachers reported whole school use of place-based learning which connected children's learning to the local geography and environment through histories, stories and legends (MoE, n.d.). In this way teachers went some way in connecting effective pedagogy with cultural relevance, differentiating the curriculum in culturally meaningful ways (MacFarlane et al., 2012) and recognising how they could use the strengths of Māori to inform the development and implementation of effective practice (Berryman & Woller, 2011).

Differentiated Curriculum

Effective inclusive practice requires flexible engagement with the NZ curriculum to enable it to be adapted to suit a range of different developmental needs (Mitchell & Sutherland, 2020; Rouse, 2006; Siraj-Blatchford & Sylva, 2004). The ability to differentiate teaching begins with a solid understanding of the curriculum alongside an attitude and ability to notice, question and reflect on student learning, so as to find alternative solutions that make curriculum relevant to a range of different learners (Collinson, 1994). It requires teacher knowledge and skills in teaching flexibility and creatively (Benade, 2019). Teachers' skill in resourcing and differentiating the curriculum to reduce learning barriers can have a significant impact on the learning and sense of acceptance and

belonging a child with learning support needs feels at school (Thomas & Rowan, 1995; Davis, 2008; Alesech & Nayar, 2019).

The flexibility and openness of PBL provided teachers with a vehicle for differentiating teaching for all children. By observing children in play, teachers were able to notice and plan according to the interests, play urges and developmental level of all children. In this way differentiation of learning served as a whole class strategy that worked well in the service of appropriate learning opportunities for students with learning support needs. Teachers all commented on how the PBL environment provided the freedom for them to widen the range of resources provided, as well as allowing for flexible use of such resources according to the observed needs of the children. Many teachers commented on how this freedom and responsiveness enabled a more inclusive environment that could actively engage all learners in meaningful and agentic ways. By using a notice and respond approach to all children the gap between meeting the needs of typical child and meeting the needs for a child with more complex learning needs appeared to close, with variation and diversity a more given part of what they expected to find in their teaching role.

Curriculum Delivery: The Teaching Continuum

Recent literature suggests that effective teaching involves a continuum of child-led play, guided play and adult-led instruction (McLaughlin & Cherrington, 2018; Weisberg et al., 2013; Kennedy & Stonehouse, 2012). Teacher's descriptions of their classroom included acknowledgement of the value and use of all three of these teaching formats. Free play was available throughout the day with the play environment set up to allow children to access and engage autonomously with a range of resources and spaces. Although free play encouraged child agency in play, it was thoughtfully and intentionally planned to enhance creative, holistic learning, as well as providing opportunities to practice, revisit or extend specific learning interests and curriculum goals.

Guided teaching, where the child's interest and attention is capitalised on to structure higher level learning (Wiesberg et al., 2015) was frequently evident in the teacher's report of their practice. Teachers reported use of guided teaching for 'in the moment' resource provisions and in their active interactions in play aimed at developing thinking, social skills and learning dispositions. Teachers used guided teaching to support and develop play interests and at times to embed or capitalise on curriculum goals inherent in play, or to inject identified curriculum gaps into the play. In using guided teaching in play teachers had moved beyond an understanding of play as a tool solely for developing social and emotional skills (Hunter & Walsh, 2014; Pyle & Danniel, 2017), and understood how they could also capitalise on play skills in the service of cognitive development (Barton, 2015). Although teachers often referred to *"deliberate acts of teaching"* in terms of structured teaching, they gave

frequent examples of where they worked to sustain and extend children's thinking within children's play in intentional and purposeful ways.

Direct teaching was used for short, whole group interactions where the focus was on belonging, social learning and whole school connections. In addition, the teachers used direct teaching to engage with each child in small groups for short, direct instruction on literacy and numeracy goals. In keeping with Mitchell and Sutherland's (2020) description of effective direct teaching, teachers gave short, targeted lessons, worked in ways that recognised and respected the learning pace of the student, provided a level of support and scaffolding based on their knowledge of the individual learners and collected formative assessment data.

Curriculum Delivery: Assessment

Rouse (2006) suggests inclusive assessment involves using a variety of resources in flexible ways that acknowledge and value different ways of demonstrating knowledge and skills. Teachers in the present research primarily used formative assessment when working with the child, to record observed interests and learning evident during play-based and direct teaching times. This was, however frequently converted into summative assessment when reporting to school leadership. It was evident that although leadership supported a focus on the social-emotional goals of the key competencies in early years primary classrooms, many schools were still driven by what Maguire (2020) calls the "lingering shadow of National Standards", where the meeting of specific literacy and numeracy goals remains highly valued (Maguire, 2020). At times these two aims seemed at odds with one another and led to some contradictory messages, where respecting the pace and developmental level of the child was often set alongside comments with deficit labelling such as *"children of concern".*

Teachers in Jay and Knaus' (2018), and Nolan and Paatsch's (2017) research found the double duty of providing a PBL environment with socio-cultural goals, alongside continued requirements to justify the literacy and numeracy achievement outcomes of children difficult to manage. Teachers in the current research balanced these expectations by prioritising agentic child play while being mindful of curriculum goals in play provisions and teacher interactions in play, and by providing short, individualised direct teaching for each child. Some teachers did, however suggest that PBL creates a bigger workload for teachers and requires greater skill than traditional teaching. Maguire (2020) suggests, as government policy moves towards including greater recognition of social-emotional context in the early years primary curriculum, changes need to be made to the assessment and reporting expectations for this age group. This, she suggests, is not only because of an evolving belief that this approach is more developmentally appropriate for this age group, but

also reflects the need to make the workload of teachers more manageable. With New Zealand currently reviewing many aspects of the education system (Education Conversations/Korero Matauranga, n.d.), the balance and priority of play, social skills and learning dispositions for early primary years students, alongside the push for proof of accelerated learning is likely to be a point of tension for various stakeholders.

Teachers all recognised their accountability to both the key competencies and the learning progressions from the New Zealand Curriculum (MOE, 2007). They appeared to have found a way to attend to the social-emotional goals of the key competencies, while retaining attention to the tracked progress of children in domains of numeracy and literacy. In this way they gave consideration to the use of the curriculum as both a tool to develop conceptual understandings as well as to enhance student well-being (Mitchell & Sutherland, 2020). In addressing the curriculum in the PBL classroom teachers reflected recent thinking that teaching and play can be complementary rather than opposing practices (Walsh et al., 2017).

Specific Teaching Strategies for Children with Learning Support Needs

A further key finding of the present study was that in addition to utilising the affordances of the PBL environment to support diverse student needs, teachers were also able to identify and mitigate challenges the PBL environment might present for some children. While sensory challenges in the environment have been considered above, other barriers discussed by teachers included children with self-direction, self-regulation, social participation or play skill challenges.

Support to Engage Successfully in the Play Environment

Literature suggests while many children thrive in a play-based-learning environment, some children may struggle to function independently or benefit from the developmental intentions without support (Dickinson et al., 2013; Wood, 2008). According to Dickinson et al. (2013) children at risk of not benefiting from the developmental intentions of the play-based setting include children with self-direction/self-management challenges and children with little previous experience of a free choice setting. Teachers in the current research discussed their awareness of children who needed increased levels of direction, and provided prompts and supports to assist them to make play choices and engage in play. Some teachers expressed the need to sometimes increase the amount of teacher direction given to children who find it difficult to settle to activities or who are not making good choices in play. By being aware of the day-to-day abilities of students to manage in a play environment these teachers were able to provide increased structure and scaffolding when needed, while still providing ample opportunities and coaching to foster skills in managing self in play.

Encouraging the active social participation of all children in the classroom allows each child the opportunity to practice and develop social skills. Benstead (2019) suggests that children who do not have opportunities to practice social skills will develop increasing social deficits, which in turn are likely to have a negative impact across classroom learning domains. In response, she suggests teachers need to actively facilitate situations where children that hold low social positions in the classroom have regular opportunities to practice positive social interaction skills. All teachers discussed their role in supporting socially isolated children to make connections with similar others using strategies such as language modelling, drawing attention to others with similar play interests and buddy strategies to teach classroom expectations. At times teachers expressed reluctance to become actively involved in social dynamics of the children's play to avoid "disrupting" or unduly influencing the play. A risk of the PBL classroom is that in the move to support greater child agency during play, the nuanced support that some children may need to gain the intended benefits of the PBL classroom may be lost. The genuine social participation of all, Odom (2006) suggests, requires active and intentional engagement of both teachers and students. Research suggests co-operative learning activities using thoughtful peer groupings and social engineering of positive play experiences for children at risk of social rejection are effective ways of enabling all children to positively participate and contribute to the social dynamics of the classroom (Mitchell & Sutherland, 2020; Alesech & Nayar, 2019). Odom (2006) suggests identifying children with self-regulation and social skill difficulties, and using evidence-based interventions to promote regular, positive and successful social interactions with peers (Odom, 2006).

Lifter et al. (2011) suggests that developing play skills can be a useful and beneficial individual plan goal for some children, particularly those for whom a lack of play skills means they are at risk of missing out on the affordances of the PBL environment. Behavioural research suggests play skills can be taught in targeted, incremental ways (Lifter et al., 2011; Barton & Wolery, 2008, 2010; Movahedazarhouligh, 2018). Teachers in the current research emphasised the importance of knowing and appropriately providing for the child's current developmental level including their play skill level. Although teachers didn't specifically discuss individualised education plan (IEP) goals around the development of play skills, there were many examples in the findings of teachers sitting alongside children with learning support needs to develop their play interest and skills by being a play partner, modelling the use of play resources, or drawing children's attention to the play of others.

Utilising Special Education Resources

Effective teaching of children with learning support needs requires teachers to engage with a range of out of school supports and specialists. Teachers discussed working with a range of different

support services such as therapists, resource teachers and learning support co-ordinators. Teachers valued the role of the specialist services, but of all the collaborative relationships discussed these were considered the most problematic. Issues raised by teachers included philosophical differences in how provisions were delivered, difficulty accessing services and unrealistic expectations of teachers' time during class time visits.

The consultative provision of learning support needs in New Zealand, requires learning support personnel from outside the school to have a strong understanding of how the curriculum is delivered in the classroom they are working in, so that clear, common goals might be established (Mitchell & Sutherland, 2020). Despite assertions that positive collaborative relationships between mainstream teachers and specialist services or education providers supports effective inclusion (Thomas & Rowan, 1995) research on positive collaborative between these groups is sparse (Mitchell & Sutherland, 2020). Developing an understanding of how PBL has shifted pedagogy towards child agency, developmentally appropriate practice and a priority on belonging may require a reworking of how support is enacted in the classroom. An example may be the practice of withdrawing children from the classroom for a set programme, in favour of a more embedded approach which PBL environments support well.

PBL environments provide for many naturalistic learning opportunities where embedded goals aimed at increasing the child's ability to participate in their natural learning environment using their current interests (Snyder et al., 2015) can occur. Naturalistic approaches are most effective when intentionally linked to specific learning goals (Wolery & Hemmeter, 2011) and when an intentional plan is put around how to support the child to engage with the target goals in ways that motivate the child and promote frequent and consistent practice (Snyder, 2015). Teachers in the present study provided for and were aware of opportunities for incidental, naturalistic learning. The most common description of this was as a tool to coach social skills. Two teachers discussed examples of how they used incidental learning opportunities to reinforce cognitive or conceptual learning goals from a child's individual plan during naturally occurring self-selected play. While naturalistic teaching was a key component of much of the learning in the class, there were no discussions by teachers of explicitly linking IEP learning goals to formal embedded plans. A risk is that without a formal plan to embed, observe and/or extend the child in a targeted goal, the targeted skill may not be practiced with enough consistency and frequency to progress the child's skills in the targeted area (Snyder et al., 2015).

Teachers have a key, skilled roles in using individual education plans to differentiate the classroom programme and in developing appropriate learning experiences that meet student needs (Davis,

2008; Thomson & Rowan, 1995). PBL environments provide rich, naturalistic learning opportunities which can provide a strong foundation for targeted and embedded individual plan goals to be reinforced during self-selected play. In the current research teacher's sense of ownership of the IEP and advocacy for goals that fitted the philosophy of the play-based classroom varied. Frequently when teachers discussed IEP's they talked of it as something that existed outside of the PBL environment, or something that needing to be adapted to the PBL classroom, rather than having PBL philosophy as central to the planning process. Prohm (2014) asserts that lack of confidence or sense of efficacy can hinder teachers from actively engaging with the IEP process. She suggests teachers engage in professional development to develop their skills in engaging with the IEP process and to support both teachers and external specialists to develop deeper understandings of each other learning philosophies. This, it is suggested would support teachers and external specialist to work collaboratively towards shared visions and goals (Prohm, 2014; Mitchell & Sutherland, 2020).

The provision of teacher aides in the classroom for students with learning support needs was highly valued. Teachers held high expectation for the learning of all children and assumed responsibility for adjusting the curriculum where required. All teachers were involved in the learning programmes of students with learning support needs, and demonstrated some awareness of the potential for classroom isolation to occur if too much one-on-one teacher aide support is provided (Rutherford, 2012; Gerber et al., 2001). Teachers reports of the balance between teacher versus teacher aide involvement with specialist programmes varied greatly. This supports the findings in Woodham's thesis that the role of the teacher aide remains ambiguous and open to interpretation by schools and teachers (Woodham, 2018).

Summary

There was a clear alignment between the practices reported by teachers in this study and the current research literature on effective practice for both play-based learning and inclusive education. Teachers were passionate with a can-do attitude (Clinton et al., 2018) and were able to use their strong knowledge of the curriculum to differentiate and make learning relevant for all students (Collinson, 1994; Mitchell & Sutherland, 2020). They were part of effective two-way collaborative relationships with a range of stakeholders and had grounded their work with relevant professional development (Gabriel, et al., 2011). Teacher's roles in the classroom reflected current research on best practice where the teacher moves through a continuum of facilitating and observing free-play, intentionally guiding learning in play with, and short targeted direct teaching (McLaughlin & Cherrington, 2018; Weisberg et al., 2013; Kennedy & Stonehouse, 2012). They were skilled at providing play environments that were relevant to the interests, play urges and

developmental levels of all students and prioritised the use of open-ended resources which allowed for multi-level teaching (Mitchell & Sutherland, 2020; Akar Gencer & Avci, 2017). Teachers held high expectations but were attentive to the needs of the child, providing additional supports or reducing learning barriers as appropriate to foster an environment where all children could participate and learn effectively (Benade, 2019). In keeping with a strong research base that supports explicit teaching of social and emotional skills and the importance of positive learning dispositions (Goodman et al., 2015; Evans & Harvey, 2011; Siraj-Blatchford & Sylva, 2004; McLaughlin, et al., 2015) teachers explicitly taught social skills and fostered social cohesion in the classroom. All teachers displayed some knowledge of evidence-based practice in the use of supports and resources for children with learning support needs (MoE, 2011; MoE, n.d.; Mitchell et al., 2010;). Implementation of external provisions for students with learning support needs showed considerable variability.

Implications

The current research suggests that providing PBL classrooms that are responsive to students with learning support needs requires a range of teacher knowledge, competencies and pedagogical strategies. Teachers need to combine knowledge of PBL pedagogy and inclusion, with informed strategies that promote targeted learning goals for a range of learners and maximise the effectiveness of additional supports. Teachers need to be competent collaborators and skilled observers with the ability to adapt resources, environments and teaching according to presenting learner interests and needs. This requires on-going judgement and problem solving to balance independent classroom functioning with intentional supports towards holistic developmental progress. Appendix seven has summarised some recommended practices that emerged from this research for PBL pedagogy that is responsive to children with learning support needs.

Becoming proficient at inclusive PBL pedagogy requires existing teachers to both learn new skills and unlearn others (Davis, 2015; Jay & Knaus, 2018; Aiono et al., 2019). This shift in thinking and practice will need to be supported by intensive, wide-ranging professional development. The teachers in this research had several advantaging factors that had enabled them to create PBL classrooms that were effective for children with learning support needs. These included their possession of the can-do, solution-based disposition of exemplary teachers, being part of collaborative, supportive whole school teams that welcomed innovation, and their engagement in practice enhancing professional development. These enabling factors had supported teachers to make changes, and to continue to work toward improvements in developing PBL pedagogy that was responsive and engaging for all learners. The move towards more wide spread effective PBL classrooms in NZ early years primary

classrooms that respond well to students with learning support needs requires a range of stakeholders, teachers, school leaders, families and specialist support services to develop a deep understanding of its philosophy and pedagogical practices. This would require the Ministry of Education (MoE) to make a significant investment in wide ranging professional development. It is suggested that coaching and other forms of practice-enhancing professional development is made available for in-service early year primary teachers, and that changes are made to initial teacher training to ensure familiarity with effective PBL pedagogy. This training should include attention to how this teaching practice can work in the service of children with learning support needs, as well as the identification and mitigation of potential barriers such environments might inadvertently hold for some learners. Ministry of Education (MoE) professional development workshops should also be offered to school leadership, families and external specialist so that understanding of PBL might foster common understandings and collaborative goals that are appropriate to the PBL philosophies and classrooms.

A finding of the current research was that teachers reported a high level of competence with providing an environment that emphasised universal design for learning principles, such as open-ended resourcing, differentiated learning, promoting a positive class climate, high but flexible expectations and emphasising help and support in challenging situations. In doing so they provided a warm, inviting environment where all students could feel positively connected to the classroom and engage in play and learning that was meaningful for them. For many children with learning support needs this may provide all the support they need. For other children IEP's and teacher aide hours will be required for children to learn at their best.

The current research showed some between teacher inconsistencies around understandings and implementation of the IEP, and in the role of the teacher aide. This is not a surprising finding given all teachers had engaged with in-depth professional development for Play-Based Learning and Positive Behaviour for Learning, programmes that both emphasis whole class, universal design for learning principles. Teachers reported significantly less professional development relating to the specific supports for children with leaning and support needs. This finding supports Hornby's (2015) and Woodham's (2018) assertion that lack of mandated training or statutory guidelines around inclusion has led to a wide variety in how these resources are used. The MoE has a range of resources, guidelines and tools based on evidence-based best practice for use of supports for students with learning support needs. Like Woodham (2018) the current research supports the need to make these resources more readily available for schools. In addition, this thesis supports the use of mandated, in-depth, initial teacher training and in-service professional development that specifically seeks to illuminate and bring consistent knowledge on effective use of additional

resources for students with learning support needs. This will ensure the significant investment the government makes in special education is used effectively. Ensuring the new learning support coordinators are informed in fostering the effective use of the teacher aides and positioned to intentionally support professional practice through coaching, professional development and facilitating mentoring networks will be important future steps.

A tension for teachers was in their desire to promote child agency in play while being aware of when children needed more support in the play environment. Child agency versus teacher intentionality in play is a subject that is currently debated in early childhood with some assertions that early childhood's intense focus on child agency and the passive positioning of the teacher role has been detrimental to children's learning and well-being (McLaughlin & Cherrington, 2018; Hedges, 2000). As primary teachers adopt a play-based approach to learning it will be important to ensure that they do not move to position themselves passively in classroom. This may be particularly important to consider for children with learning support needs, many of whom may benefit from evidence-based nuanced learning opportunities or social engineering. This will require a delicate balancing act to ensure the benefits of child agency and goals of classroom independence are fostered for all learners, while intentionally embedding more intensive learning supports into the PBL environment for students with learning support needs.

Throughout this thesis I have aimed to highlight the need to pay attention to inclusion at the earliest point of educational change. PBL provides a potential pathway to improved school experiences for children with learning support needs because of its shift from normative expectations, and its intention to respond to the individual motivations and characteristics of the learner. Teachers in this research have provided many examples of how this might occur. It cannot however be assumed that wide-spread use of PBL in New Zealand of itself will enable all teachers to improved school experiences for students with learning support needs. A specific examination of how this pedagogy might work for students with learning support needs is required that attends to both the affordances and potential barriers to learning inherent in PBL environments. In addition, previously identified effective teaching for students with learning support needs should be considered in light of how such strategies might be effectively integrated into classrooms in ways that fit with PBL philosophy. This may mean considering how nuanced learning strategies can be implemented in ways that are developmentally appropriate, involve the child's play motivations and retain focus on the children as an active agent in their own learning. There is a paucity of research that considers the play experiences of children with learning support needs in empowering ways (Claughton, 2020). PBL provides an opportunity for children with learning support needs to be viewed as competent, capable learners who positively contribute to their own learning and classrooms. It makes this a rich

environment for further research that promotes a strength-based, empowering image of the play of children with learning support needs.

Limitations and Delimitations

This research focuses on teacher's socially constructed realities and doesn't directly consider the perspectives of other stakeholders involved in the education of children with learning support needs in PBL environments, such as school leadership, teacher aides, special education providers, parents or students themselves. Further research could use case study methodology to explore various stakeholder perspectives on how PBL environments and pedagogy contribute to education that is responsive to students with learning support needs. The research focused on teachers' descriptions of their practice and does not include other sources of information such as observation or other stakeholder report. In the absence of other sources of data, it is important to view these results through the lens of self-reported data. Relying on self-reporting creates a risk that teachers wishing to present their practice in a positive light may give overly positive or socially desirable responses to the questions. The small scale, constructivist nature of the research means achieving clearly defined, replicable outcomes is not possible due to a focus on individual responses (Opie & Brown, 2019). Small scale research using teacher's perspective can still be useful to explore, as other teachers may find something in the research that is useful for their own practice. Transferring lessons learnt from research to other similar settings is possible and it is hoped that this research will highlight practices that others may find useful.

Final thoughts:

The purpose of this research was to explore effective play-based learning in light of how this may enhance the holistic classroom learning of students with learning support needs in New Zealand primary classrooms. This was done by completing and thematically analysing five in-depth interviews with play-based learning teachers identified as exemplary in their practice. The key findings were that teachers had a positive, can-do attitude towards inclusion, were reflective and creative in using resources, space and the curriculum in differentiated ways, used a range of flexible pedagogical strategies to support holistic learning and fostered the social and emotional well-being of all students. Being involved in this research has highlighted the complex role of effective teachers who are in a continuous process of reflecting and innovating practice in order to meet the changing needs and dynamics of the classroom. It has revealed the positive effects of passion, collegial support and professional development, while laying bare some frustrations with a system that has funded specialist supports for students with learning support needs, while failing to communicate effective use of these supports to the teaching profession. I began my thesis because as both a

teacher and a mother I saw how difficult the transition from early childhood to school could be for some children, and saw hope in the emerging trend of PBL in New Zealand primary schools. I leave this journey knowing that the mahi has only just begun, but inspired by the passion and innovation of those finding ways to make our primary classrooms work for all learners through PBL.

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Appendices

Appendix One: Ethics Approval

On 11/08/20, 8:52 AM, "humanethics@massey.ac.nz" <humanethics@massey.ac.nz> wrote:

HoU Review Group

Ethics Notification Number: 4000023146
Title: Effective teaching practices for children with additional needs in New Zealand play-based-learning primary school classrooms.

Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee.

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

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 in this document are responsible for the ethical conduct of this research.
If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Professor Craig Johnson, Director (Research Ethics), email humanethics@massey.ac.nz. "

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish require evidence of committee approval (with an approval number), you will have to complete the application form again answering yes to the publication question to provide more information to go before 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.

You are reminded that staff researchers and supervisors are fully responsible for ensuring that the information in the low risk notification has met the requirements and guidelines for submission of a low risk notification.

If you wish to print an official copy of this letter, please login to the RIMS system, and under the Reporting section, View Reports you will find a link to run the LR Report.

Yours sincerely

Professor Craig Johnson
Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)

Appendix Two: Interview Protocol

Interview questions.

Thanks for agreeing to take part in this interview. As you know my research interest is in classroom strategies of exemplary teachers working in play-based learning environments with a particular interest in how teachers use this pedagogy to support the learning of students with additional needs. For the purposes of this research children with additional needs are defined as those who require significant differentiation in the environment, curriculum or instruction due to their learning and development. The research is being done as partial requirements for a Masters of Education I am completing through Massey University.

The interview will take up to one hour and with your continued permission, will be video and audio recorded. Are you happy for this to occur? After the interview I will transcribe the interview verbatim, which means word for word. You will be given a copy of the transcription and given the chance to review this as a true and accurate record. You will then be asked to sign a transcription form to give continued permission for me to use this transcription for the purposes of my research. For this research you will be given a pseudo name and all identifiable data will be delete at the end of the research. The video will not be used as part of the research.

Do you have any questions?

Warm up:

To start with I would like to ask you to please describe yourself as a teacher and tell me what drew you to teaching through play.

I would like to now move to asking a few questions about how the physical classroom environment is arranged.

1. Can you please describe to me how your classroom is set up?
    a. Can you talk about the play resources you have available and how the children access these?
    b. Can you please describe how the space is arranged.
    c. How is indoor/outdoor flow managed.
2. What would a typical day in your classroom look like?
    a. Could you please give me a brief description of your timetable.
    b. How do you spend your time during the day.
3. What boundaries and expectations do you have in place to guide student behaviour in the classroom?

a. What are your expectations regarding children's responsibility for managing and organising the resources?
b. What support do you provide for a child who needs help to follow routines?
c. What specific behaviour management strategies do you use?

4. In what ways have you altered the environment to accommodate the needs of a student with additional needs?

    a. Have you made any specific modifications or adaptation to materials, activities or the schedule?
    b. In your view what are the most important aspects of the play-based learning environment in terms of enhancing its ability to cater for children with diverse abilities.

Now I'd like to turn to teaching strategies you use to support children's learning in PBL environments.

1. What do you see your role being when children are engaged in learning through play?

2. Considering both the key competencies and all learning areas outlined in the NZ curriculum, how do you ensure that children make progress in all areas of the curriculum in the play-based-learning environment?

    a. What about some of the other curriculum area's/key competencies. How do you ensure these area's are covered in your classroom?

3. For the purposes of the following question differentiation refers to altering teaching strategies, teaching supports or learning expectations in light of learner characteristics.

    In what ways do you differentiate your teaching when supporting children with additional needs?

    a. Tell me more about how you differentiate the curriculum.
    b. What about specific teaching strategies? Are there specific strategies you find to be more useful when supporting students with additional needs?
    c. How do you decide what teaching strategies to use with children?

4. Have you worked with children who have individual plans since you have been using a PBL approach?
    a. Could you please tell me about examples of how you have incorporated a learning goal from the individual plan into your teaching through play approach.

5. How do you approach the needs of children who have lower level play skills than their peers when they engage in learning through play?

Now I would like to move to the general classroom strategies that promote a sense of acceptance and belonging for all students.

1. What do you see your role being in supporting a child who is struggling to socially participate in learning through play?
    a. If a child came to you and told you they don't have any friends, or you notice a child is being excluded, how might you support this student?

2. Are there any specific teaching strategies you have used when teaching through play to promote an understanding of difference or disability?

Now let's talk about working with others to support children with additional needs.

1. Who have you worked with or collaborated with to support children with additional needs in your PBL environment?
    a. Could you tell me about working alongside teacher aides when teaching through play?
    b. What about others such as specialists both internal and external?
    c. What has your experience been working alongside school leadership to address the needs of students with additional needs?
    d. How much involvement do families have in your experience?

2. What benefits or challenges have you experienced when working alongside the wider team to address the needs of students with additional needs.

To wrap up our conversation lets talk about some general barriers or enablers when working with children with additional needs in the PBL environment.

1. Thinking broadly about the whole experience of having a child with additional needs in the classroom, what have been the biggest barriers to supporting children with additional needs with a teaching through play approach?

2. What factors have you found most supportive for students with additional needs when teaching through play?

3. What do you think is most important for teachers to know or do to support children with additional needs when teaching through play?

Thank-you for answering my questions. That is all the questions I have. Did you have anything else that you wanted to say or ask before we conclude the interview?

I'm going to stop the recording now.

I really appreciate your time and the sharing of your expertise. How did you find the interview?

Explain process of the research from here.

Appendix Three: Participant Background Information

Thank-you for agreeing to take part in my research on effective practice in play-based learning settings for young students with additional needs.

Prior to the completion of the interview I would like to collate some participant background information. This information will be used to provide background information about the participant group and is confidential. Please feel free to leave any question unanswered if you are not comfortable providing the requested information.

Background.

Gender:

Ethnicity:

What are your teaching qualifications?

How long have you been teaching?

How long have you been teaching in classrooms that use play-based learning?

What training or professional development have you been involved in with regards to play-based learning?

What training or professional development have you been involved in with regards to meeting the needs of students with additional needs?

Thank-you for taking the time to complete this form.

The return address for this form is: caroline.sm@xtra.co.nz

Appendix Four: Authority for the Release of Transcripts

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Effective Practice for Children with Additional Needs in New Zealand Play-based Learning Classrooms.

AUTHORITY FOR THE RELEASE OF TRANSCRIPTS

I confirm that I have had the opportunity to read and amend the transcript of the interview conducted with me.

I agree that the edited transcript and extracts from this may be used in reports and publications arising from the research.

Signature: .... **Date:** ....

Full Name - printed ....

Appendix Five: Invitation to Participate

11th September 2020

To

My name is Caroline Smeed and I am currently completing a Masters in Education (Early Years) through Massey University. As part of this study I am conducting research that seeks to illuminate the practices of exemplary play-based-learning (PBL) teachers who include children with additional needs in their classroom.

You have been recommended to me by a play-based-learning facilitator as an exemplary play-based learning teacher. As such I would like to invite you take part in a one hour in-depth interview via zoom video conference. I am hoping to interview up to five teachers. The interview will explore PBL teacher practice and how this is used to support students with additional needs.

Full details of this research are included in the information letter attached.

If you are interested in participating in this research please contact me by return e-mail to:

Caroline.sm@xtra.co.nz

With Thanks

Caroline Smeed

Appendix Six: Information Sheet for Participants

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Effective Practice for Children with Additional Needs in New Zealand Play-based Learning Primary Classrooms.

Information Sheet for Participants

My name is Caroline Smeed and I am a student currently enrolled in a Masters of Education at Massey University. In partial completion of my thesis I am drawing on the expertise of experienced play-based learning teachers working in New Zealand primary classrooms. My research interest is the teaching practices of exemplary play-based learning teachers with a particular focus on strategies relevant to addressing the developmental and social needs of students identified as having additional needs.

In my research I am planning to complete in-depth semi-structured interviews with four to six exemplary play-based learning teachers who have current or recent experiences of including a student/students with additional needs in their classrooms. My interest is in exploring how the play-based learning environment is used towards developmental, social and inclusion goals, with a focus on students with additional needs. You have been recommended as an exemplary play-based-learning teacher by a professional development facilitator and I would like to invite you to participate in my research.

Participating in the research would include taking part in an interview up to one hour long. The interview would be conducted by zoom at a time convenient for you. At the beginning of the interview I will ask permission to record the interview. Following completion of the interview the recording will be downloaded and stored securely on my computer. Following the interview, the recording will be transcribed by the researcher verbatim (word for word). A copy of the complete transcript will then be provided for you to review and you will be invited to sign a transcription form identifying this as a true and accurate record of our conversation and give on-going permission for the information in the transcript to be used in the research. The video will not be used in the research in any way and will be destroyed after the transcription process is complete.

The transcription of the interview will be analysed collectively alongside other teacher interviews to identify effective practice of play-based learning teachers who included children with additional needs in their classroom, considering both common themes and unique approaches. The findings from this analysis will be reported in my thesis and may be used to develop articles for relevant early years publications. All identifiable data will be destroyed at the completion of the research. Confidentiality will be provided through the use of pseudo names for participants and no identifiable

details will be included in the findings. A summary of the findings will be available to you at the completion of the research.

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 prior to sign off on the transcript;
- 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.
  Ask for the recorder to be turned off at any time during an interview.

Please feel free to contact me or my research supervisors if you have any questions.

Caroline Smeed
caroline.sm@xtra.co.nz
Ph:0275648085

Tara McLaughlin PhD, MEd, BA
Massey University
Senior Lecturer in Early Years
Institute of Education
T.W.McLaughlin@massey.ac.nz
(06) 3569099 ext 84312

Karyn Aspden PhD, MEd, Bed
Massey University
Senior Lecturer in Early Years
Institute of education
K.M.Aspden@massey.ac.nz
(06) 356 9099 ext84389

"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 Prof Craig Johnson, Director, Research Ethics, Massey University. Telephone 06 356 9099 x 85271, C.B.Johnson@massey.ac.nz

Appendix Seven: Participant Consent Form

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Effective Practice for children with additional needs in New Zealand Play-based Learning Classrooms.

PARTICIPANT CONSENT FORM - INDIVIDUAL

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to the interview being recorded via zoom

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: .... **Date:** ....

Full Name - printed ....

Appendix Eight: Recommended Practice for Play-Based Learning that is Responsive to Children with Learning Support Needs.

Teachers Approach:
Teachers have a positive attitude to inclusion. Teacher have self-belief and a can-do attitude towards positively effecting outcomes for all students. Teachers effectively facilitate and engage in two-way collaboration with a range of stakeholders. Teachers are reflective and innovative in their practice.
Classroom Environments:
Space and play resources reflect all children's play interests and developmental levels. Resources are set up to enable autonomous engagement in play for all students. Resourcing provides opportunities for teacher guidance to extend learning in play. Open-ended resources allow for multi-level play. Systems in place to monitor safety and organisation of classroom.
Curriculum:
Curriculum is adapted based on observations of children's play motivations, developmental level and learning needs. Provisions for curriculum learning, including pre-literacy/numeracy skill development is provided for in the play environment. Formative assessment primarily used, with data gathered from many sources, including play.
Teaching strategies:
Teachers prioritise a sense of belonging and accomplishment for each child. Teachers incorporate bi-cultural practices and worldviews. Teachers have high, but differentiated expectations for each student. Teachers foster a positive, supportive class climate. Teachers explicitly teach emotional management and self-regulation emphasising help and support. Teachers use social and cooperative learning strategies to enable all students to take an active part in the social dynamics of the classroom. Teacher identify and strategise to reduce barriers to learning. Teachers intentionally embed IEP goals into naturalistic learning opportunities in play.
Use of specialist supports:
Teachers communicate PBL philosophy to visiting specialists. Teachers negotiate IEP learning goals and specialist programme implementation towards practice that is reflective of PBL philosophy. Teachers guide teacher aides/learning coaches to provide whole class support within the classroom. Teacher and teacher aide's/learning coaches monitor and support targeted IEP goals embedded in play and share responsibility for implementing nuance learning supports.