

## **Creating play opportunities on the school playground: Educator experiences of the Sydney Playground Project**

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### **Abstract**

**Introduction:** Children with disabilities often experience unsupportive environments that restrict their play opportunities and inclusion on the school playground. This exclusion can perpetuate inequities for children with disabilities, with lifelong implications. The Sydney Playground Project uses a simple, innovative intervention consisting of placing recycled materials on the playground and engaging parents and educators in risk reframing sessions to create increased playground choice, control, independence, and inclusion for all children.

**Methods:** The purpose of this study was to learn from participants about the utility of the intervention for promoting choice and control among children with disability on the school playground. Data included evaluative interviews with 27 school staff (teaching assistants, teachers, therapists, school leadership) across five participating schools after completing of the intervention. Analysis was thematic and explored prominent ideas first within schools, and then between schools.

**Results:** Prior to the intervention, participating school staff focused on active supervision to support play and student needs. During the intervention, school staff experienced role shift and confusion as they allowed the children increased independence while using the recycled materials and learned to navigate how much independence to give the children. Children engaged in increased imaginative and social play, and school staff adopted higher expectations of children's capabilities.

Conclusion: Interventions such as the Sydney Playground Project that collaboratively shift adult perceptions to focus on the capabilities of children with disabilities and increase the supportiveness of the physical environment have great promise in increasing play choice and inclusion on the school playground.

### **Introduction**

Outdoor play affords children opportunities to develop independence, self-determination, and physical skills (Stephenson, 2003), and foster a sense of well-being and belonging (Bundy et al., 2008; Lyons, Brennan, & Carroll, 2016). The inclusion of loose materials, opportunities for risk, and unstructured time can increase the inclusivity of play (Barbour, 1999; Bundy et al., 2008). The placement of recycled loose materials (e.g., tyres, crates, and barrels) on a playground space increases opportunities for physical activity, construction, and imaginative play, and decreases sedentary time (Engelen et al., 2013; Woolley & Lowe, 2013). Increased choice created by loose materials supports greater participation for children with delayed motor skills (Barbour, 1999). Risks in play are fun for children and afford them opportunities to develop self-confidence, and an understanding of their boundaries (Sandseter, Little, & Wyver, 2012). Despite these benefits, caregivers of children with disabilities can perceive that their children have insufficient skill or impulse control to take appropriate risks in play, and restrict risky play opportunities (Olsen, Kruse, Miller, & Brussoni, 2016). Consequently, while typically developing children may be constrained in the developmentally appropriate risks in which they are allowed to participate (Wyver et al., 2010), children with disabilities may be even further restricted (Bundy et al., 2015).

Outdoor play that is structured by children rather than adults affords opportunities for mastery (Missiuna & Pollock, 1991; Sandseter, 2012), self-initiation (Stagnitti, 2004), skill

development, confidence, and risk evaluation (Little, 2010). These opportunities are infrequently available to children with disabilities (Missiuna & Pollock, 1991). Adults directing playground activities can lead to peers engaging less with children with disabilities (Giangreco, Edelman, Luiselli, & MacFarland, 1997; Tamm & Skär, 2000), and children with disabilities not being afforded a break from structured forms of learning during the school day (Ramstetter, Murray, & Garner, 2010).

The 9% of children with disabilities in Australia are five times more likely than non-disabled peers to experience multiple and entrenched disadvantage in resources and participation across areas of occupation, including play (Australian Institute of Health and Welfare (AIHW), 2006; Emerson & Llewellyn, 2013). Despite Australia's ratification of the United Nations Convention on the Rights of Persons with Disabilities (UN General Assembly, 2006) and the development of policies and services related to disability, such as the National Disability Insurance Scheme (NDIS), the gaps in participation and resources between young people with disability and their typically developing peers continue to widen (Tracy & McDonald, 2015). Negative beliefs and attitudes restrict opportunities for people with disabilities across community occupations (Emerson & Llewellyn, 2013). Disability stigma and low expectations are prevalent in the school environment (Campbell, Gilmore, & Cuskelly, 2003). Children with disabilities are often perceived as less capable than other children (Baker & Donnelly, 2001; Emerson & Llewellyn, 2013). Indeed, educator perceptions of children with disabilities is a key challenge to inclusion in Australian schools (Anderson & Boyle, 2015). Awareness of the exclusionary culture in mainstream schools is one of the main reasons many Australian parents opt for special schools rather than mainstream settings (Mann, Cuskelly, & Moni, 2018).

The school playground can be a time during the day for children to build skills, and have increased choice, independence, and inclusion (Murray et al., 2013). However, a negative perception of the abilities of children with disabilities persists on the playground, restricting inclusion in play (Serman, Naughton, Bundy, Froude, & Villeneuve, 2018). Meaningful interventions that aim to increase choice, control, and inclusion of children with disabilities on the playground must tackle widespread and ingrained attitudes toward all children with disability. This requires innovative strategies that change the attitudinal environment of the school, including focusing on the capabilities of children with disabilities, rather than their deficits.

### **Purpose**

This paper reports on school staff experiences of the Sydney Playground Project (See Bundy et al., 2015 for protocol). The Sydney Playground Project intervention included two components. The first component was the introduction of recycled loose materials with no obvious play value on the school playground (e.g., tyres, milk crates, tubes, barrels). Items were selected that 1) encouraged cooperative, gross motor play; 2) had multiple uses; 3) could be used in challenging, creative, and uncertain ways; 4) provided interesting sensory experiences (e.g., from touch or movement); 5) allowed any hazards inherent to the materials to be easily identified and managed by a child; and 6) were, or were made from, recycled materials.

The second aspect of the intervention were collaborative ‘risk re-framing workshop sessions’ conducted with educators and parents to enable them to support children with and without disabilities to have increased independence in manageable risk taking. As a key part of the intervention, school staff were instructed to ‘step back’ and see what the children did with the materials, rather than warning them about dangers or directing play. The purpose of this study

was to learn from participating school staff about the utility of the intervention for promoting choice and control among children with disability on the school playground.

### **Relevance for Occupational Therapy**

School-based occupational therapy intervention in Australia, Canada, and the United States predominantly focus on fine and gross-motor skills, sensory integration, activities of daily living, and family and teacher training in a direct service model (Bayona, McDougall, Tucker, Nichols, & Mandich, 2006; Rodger, Brown, & Brown, 2005; Spencer, Turkett, Vaughan, & Koenig, 2006). Although collaboration has been recommended as a more holistic and effective delivery method for school-based occupational therapy services for a number of years (Bundy, 1995; Villeneuve, 2009), little change has occurred in service delivery in Australia. Article 24 of the United Nations Convention on the Rights of People with disabilities guarantees an inclusive school environment throughout the school day (UN General Assembly, 2006). However, schools must determine how they will support inclusion. To address this mandate, occupational therapists can serve as leaders in collaboratively enabling choice, control, and inclusion at school for people with disabilities (Russi, 2014). Collaborative practices that bring families and educators together to enhance environments for children with disabilities through capacity building have demonstrated positive outcomes for children (Missiuna et al., 2012; Villeneuve & Shulha, 2012), and can increase teacher self-efficacy at implementing inclusive practices (Savolainen, Engelbrecht, Nel, & Malinen, 2012).

Collaborative interventions demonstrate potential to focus on children's school occupations, and their role as a student, rather than remediation of impairments (Villeneuve & Hutchinson, 2015). Occupational therapists can take a leading role in strengths-based

interventions to enable choice and participation across the school day (Eriksson, Welanders, & Granlund, 2007).

Play as an occupation is seldom a focus of school-based occupational therapy (Rodger et al., 2005), and school-based playground interventions rarely focus on the occupation of play (Lang et al., 2011; Machalicek et al., 2009; Martin, Drasgow, & Halle, 2015). The playground is a unique and vital space where children can develop independence, exercise choice and control, and learn to manage risk through play (Murray et al., 2013). However, educators and therapists underutilise the opportunity to leverage the playground as a space for learning and development for children with disabilities (Stermann et al., 2018).

Innovation that brings therapists and educators together to create opportunities to develop children's choice, control, independence, and ultimately inclusion at school supports national and international priorities (May et al., 2018; United Nations, 2006). Occupational therapists' unique skills in modifying environments, understanding play, and school collaboration strategically place the profession in potential leadership roles for creating inclusive spaces on school playgrounds (Bundy et al., 2008; Missiuna et al., 2012).

## **Methods**

### **Approach**

We engaged in evaluative inquiry following the intervention period at each of the participating schools. We followed the core attributes of evaluation quality including: utility, feasibility, acceptability, propriety, and accuracy (Yarbrough, Shulha, Hopson, & Caruthers, 2011).

Participating school staff included teaching assistants, teachers, therapists, and school leadership (Vice Principal, Principal, School Coordinators) (see Table 1).

Table 1: School profiles

School	Funding type	Student population	Students age (years)	Playground environment	Participant school staff roles	Number of students	Supervision (staff:student)
School 1	Independent educational system and private funding	Children with mild to moderate intellectual disability and/or autism	5-12	<ul style="list-style-type: none"> <li>Fixed playground equipment</li> <li>Musical equipment</li> <li>A large grassy hill</li> </ul>	<ul style="list-style-type: none"> <li>2 special education teachers</li> <li>1 teaching assistant</li> </ul>	70	1:23
School 2	Private	Children with autism	5-12	<ul style="list-style-type: none"> <li>Fixed equipment</li> <li>A sandpit</li> <li>A trampoline</li> </ul>	<ul style="list-style-type: none"> <li>4 special education teachers</li> <li>1 occupational therapist</li> </ul>	52	1:2
School 3	Partially funded by the state government	Children with autism	5-12	<ul style="list-style-type: none"> <li>Fixed equipment</li> <li>Soft equipment</li> </ul>	<ul style="list-style-type: none"> <li>1 school coordinator (site lead)</li> <li>3 special education teachers</li> <li>1 teaching assistant</li> <li>1 occupational therapist</li> <li>1 speech and language pathologist</li> </ul>	30	1:6
School 4	Government	Mainstream school, 3 classes for children with intellectual disabilities and/or autism	5-12	<ul style="list-style-type: none"> <li>Basketball/netball court</li> <li>Large grassy fields</li> <li>A canteen</li> <li>Covered area with benches</li> </ul>	<ul style="list-style-type: none"> <li>1 principal</li> <li>1 deputy principal</li> <li>4 general education teachers*</li> <li>2 special</li> </ul>	280	1:30





## **Ethics**

University of Sydney Human Ethics Administration (protocol # 2014/155) and the State Education Research Applications Process (SERAP) approved this study. To protect anonymity, we used pseudonyms and removed school identifying details.

## **Schools**

We included the five schools participating in the Sydney Playground Project. The schools included four special schools for children with disabilities, and one publicly funded mainstream school with three specialist support classes for children with developmental disabilities. The schools were heterogeneous in: geographic location within a major metropolitan area in Australia; types of playground; perspectives on recess; types of school funding; student socioeconomic status; and parent education, and cultural and linguistic background (Table 1). Roles differed between schools. For example, School 1 did not use teaching assistants within their classrooms or on the playground, and School 4 was the only school with general education students and teachers. With the introduction of the play materials, School 4 created a roster system that specified that the loose materials were accessible for children with disabilities every day, and on a rotating basis for other grade years. With this exception, none of the schools used zoning, thus all children within the school could play at the same time, anywhere on the playground, each day.

## **Participants**

Schools and leadership consented to participate in the Sydney Playground Project. Following completion of the study, we invited school staff who had participated in the intervention to be interviewed about their experiences. School leadership knowledge of the school staff supported

identifying differing perspectives and experiences. When possible, we sought a diversity of participants through differing roles, length of time employed at the school, and experiences and opinions of the Sydney Playground Project.

### **Data collection**

To decrease bias, the researchers conducting interviews and analyses of data were not directly involved in the intervention. Data primarily consisted of semi-structured individual interviews lasting between 30 and 60 minutes. Across the five schools, 27 school staff participated in interviews. Interviews were audio recorded and transcribed verbatim by a professional service. Interviews resulted in 315 pages of transcripts.

The first author conducted interviews within 1 month of the conclusion of the intervention with each of the participants. The interview guide focused on the Sydney Playground Project and 1) school staff perception of the utility of the play materials, 2) school staff learning from risk-reframing to guide development of future interventions, 3) perceived student changes (if any) 4) changes (if any) in school staff perceptions of the children's play, and 5) overall perceptions of risk on the playground. Team feedback regarding playground observations informed some questions asked within interviews. For example, knowledge that staff removed certain materials from the playground prompted follow-up questions about the challenges or risks inherent in those materials. Additionally, the research team's awareness of dynamics within the risk reframing session also informed interview questions. For example, in some schools, no parents participated in the risk reframing sessions. The first author asked participants within these schools about the challenges and the potential benefits associated with parent participation in the sessions specifically, and school workshops in general.

**Data analysis**

Consistent with our evaluative stance, the questions we asked of the data for initial data reduction were strengths focused. They were 1) “What did the participants gain from the intervention?” and 2) “How could the intervention be improved?”. Data were managed using NVivo version 10.0 (QSR International, 2012). The first and second author first discussed coding within samples of several interviews for coding consistency. Next, we considered each school individually. The first author coded all data within half the schools, and the second author coded all the data in the other half of the schools. We compared coding for consistency, with no changes required.

Through peer debriefing we identified prominent ideas for each school, and then explored patterns across schools including similarities and differences. Visual displays of concepts present across schools supported data organisation and conceptualisation to create categories (Miles, Huberman, & Saldaña, 2014). These visual displays identified the interaction between categories of care and support for children, educators’ duty of care, perception of the children’s abilities, and the introduction of the play materials before, during, and after the intervention (Figures 1, 2, and 3). Finally, through constant interaction between the categories and data we created five themes: (1) accountability to others guides duty of care, (2) active supervision promotes play and pre-empts meltdowns, (3) novelty of the loose parts and direction to step back made supervision less certain, (4) they can, and (5) changed expectations.

We addressed trustworthiness throughout the research process by considering the four concepts of credibility, transferability, dependability, and confirmability (Nowell, Norris, White, & Moules, 2017). We maintained credibility through triangulating data across participants and schools, using visual displays to explore theme connections, and peer debriefing with authors

who had prolonged site engagement. The reader can determine if there is transferability to their own circumstances through our use of thick descriptions, and description of participating schools as much as anonymity will allow. Finally, we maintained dependability through documenting the research process and using an audit trail, and confirmability through documentation of why theoretical, methodological, and analytical decisions were made.

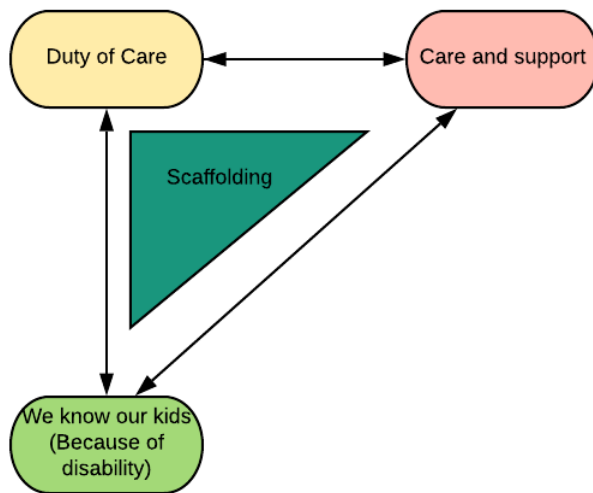


Figure 1: Control visual display

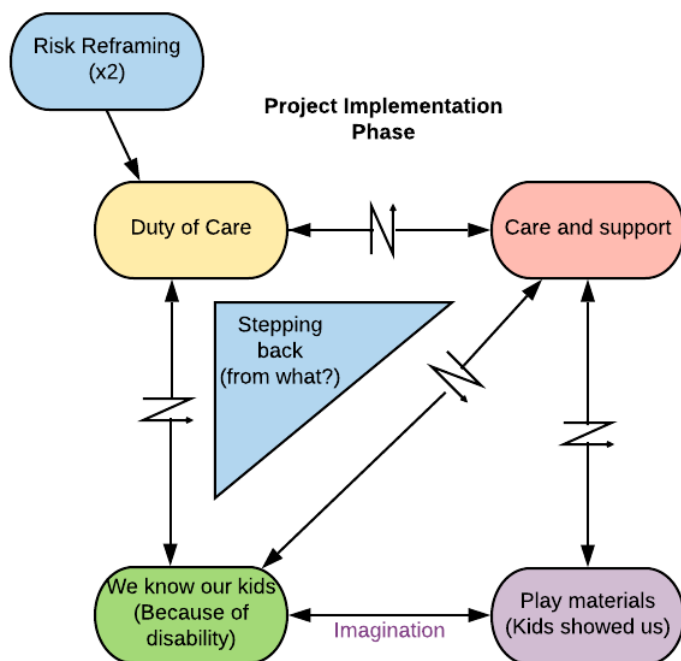


Figure 2: Project implementation visual display

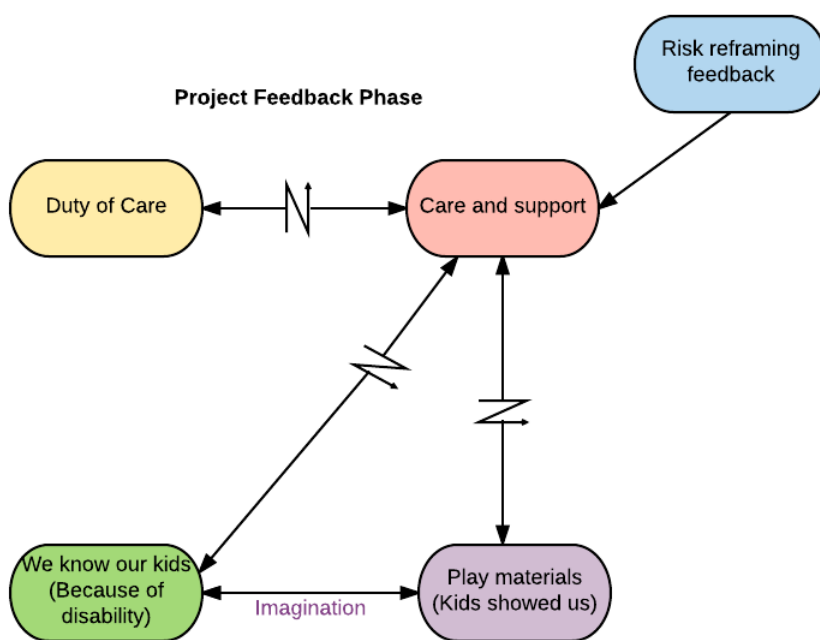


Figure 3: Project feedback visual display

## **Results**

The themes are organised in a continuum across time, from concepts and actions that participants considered at the start of the intervention to shifts in thinking and actions with the introduction of the intervention.

### **Accountability to Others Guides Duty of Care**

Participants' actions on the playground were limited by their accountability to the children, their parents, and other educators, and how their actions were perceived by others. Participants reported that "keeping students safe" guides all aspects of child supervision at school, but is especially prominent on the playground. "You always have duty of care that takes precedence over everything... I'm accountable to myself in one respect; I'm also accountable to parents. If something happened to a child that would be something I would have to live with" (Stephanie, Teacher, School 1). Teachers expressed professional accountability as paramount to their duty of care, even when they personally valued allowing children to take risks. For example,

I know people have said, "What's the worst that could happen? He falls and he breaks his arm." But if he fell and broke his arm, we would be in trouble from parents; we would be in trouble from supervisors. So we would not let him do that. ....You do have the most fun when you're taking risks, but we still have duty of care. (Jill, Teacher, School 3)

Participants attributed the children's ability to judge risk on the playground to their disability, which, in turn, influenced teacher understanding about their duty of care and their supervision tactics for children they viewed as 'vulnerable.'

There is already a reasonably high level of acceptance of risk-taking, but it is definitely balanced with a real understanding that our staff have a duty of care to the students, and they mustn't let them do something where they're going to get hurt. Particularly [these]

children who are more vulnerable may not understand the consequences of unsafe actions that they undertake. It is a real mindset and it does limit risk-taking. (Sarah, School Coordinator, School 5)

### **Active Supervision Promotes Play and Pre-empt Meltdowns**

Because of their perceived accountability to others, participants described taking an active role in playground supervision. Describing safety issues present on the playground and narrating options was one way that participants sought to raise awareness and support student learning about risk. For example, Katie, a teacher at School 2, recounted, I always try and explain why it is that I'm asking them not to do it. Like, "Look you can see there's a really sharp piece of glass, so we really probably shouldn't play over here. Let's play somewhere else." Similarly, Stephanie, a teacher at School 1 narrated her actions when thinking about risk and play.

Where we did have to step in, sometimes it wasn't taking away equipment; it was modelling how to use it in a more appropriate manner. There were times when it seemed more appropriate just to say, "Well, if we use it like this, everybody can be safe," and just showing them. Most of the time those children would go, "okay, we'll do that then." ...There are times when some of our students can make those decisions about equipment, but there are a number of students out there that can't do that.

Participants engaged their knowledge about individual children to anticipate and manage potential playground conflict. Often, participants described using supervisory tactics to support children struggling to manage their emotions and prevent actions of other children that might lead to 'meltdowns'. Emma, a teacher at School 2, stated that, "There are times that I'll step in because I know it's going to cause a meltdown. Because I can see what's going to happen 20

minutes down the track.” Educators used their knowledge of the child and their previous meltdowns to inform actions.

All our kids meltdown differently. Some of them, we can just give them a quiet corner and they're fine, other kids will hit every single kid. We have one child, who things can go wrong and he'll be fine. Then 5 or 10 minutes later he just loses it. So with him we are always walking on eggshells because if things happen we always [think], “Where does he need to be now? Does he need to be in soft swing on his own? Should we get the kids out?” (Margaret, Teacher, School 3)

Educators took an active role on the playground to support play; taking into consideration the children’s characteristics, including their deficits. Mike, a teacher at School 2, stated, “We’re their play partners because we find that they tend not to acknowledge each other. We will initiate play and we’ll invite multiple students into the play, having found that they rarely initiate themselves.” Similarly, Patrick, the school coordinator at School 3 discussed the educators’ skill facilitating and directing play, “We know all of the students really well, so we can engage them in play that we know what they're most motivated by.” Across schools, participants described that students needed support from educators to engage in play, because the adults knew how initiate and expand play, and the children did not. Elaine, a teaching assistant at School 1, described, “I was trying to prompt children to get ideas. If they were sitting there just looking at me, then I would just start silently doing something and that would draw kids to me and they would just join in.” Without adult intervention and scaffolding, participants reported that many children would engage in repetitive activities.

Most of our kids are very good at unstructured activities, [but] it’s not play. It tends to be repetitive movements or speaking, or doing a routine over and over in the playground. If



there's not someone to make something interesting then that's what a lot of our guys will do. (Katie, Teacher, School 2)

### **Novelty of the Loose Parts and Direction to Step Back Made Supervision Less Certain**

With the introduction of the loose materials, participants experienced role confusion and uncertainty of their own playground supervision, others' perception of their supervision, and the aesthetic of their schools' playground. Many participants thought the recycled loose play materials looked like 'junk', and did not expect the children to engage with them. Margaret, a teacher at School 3, recounted, "In the beginning I thought 'Oh gosh this looks like a load of crap.'" Participants often worried how others would perceive the appearance of the materials and how it would reflect on them and their school. "We just thought that people are walking past our school all the time. We don't want them to think it's a complete trash heap" (Mike, Teacher, School 2).

Participants were concerned that the materials were riskier than typical play equipment, or would be perceived by others as riskier. Patrick, the school coordinator at School 3, hypothesized that, "Because [the fixed equipment] is an accepted object, people don't really think about that as a risk," while the novelty of the loose materials made supervision less certain. The fact that the materials were loose, unfamiliar, and without a defined function made them seem riskier to participants. Nathan, the principal at School 4, described potential parental perceptions of risk with the materials.

If we rang to say that a 6-year-old fell off the tyre stack, the first thing the parent would say is, "What on earth were you doing with a tyre stack?" Where if it was, "They tripped in the playground," there would be no question.

Participants were accustomed to anticipating children's needs, actively supervising their play, and managing playground risks. The introduction of loose materials was accompanied by instruction by the research team (at the start of the intervention phase) to step back and see what the children could do on their own with the loose materials.

Participants had difficulty consistently interpreting and understanding how to act on the message to 'step back' on the playground that they heard during risk reframing. They experienced role confusion and an uncertainty in knowing what they 'should' do on the playground. Claire, a Speech Language Pathologist at School 3 described, "[The teachers] were trying not to model or get in too much with the students if they were interacting with [the loose materials], because they weren't really sure what they could do, or what level of modelling they could provide." Participants felt torn between wanting to comply with study expectations, led by a university and researchers that they respected, and their current perceived role expectations, including their duty of care to the children. "There were a few mixed messages about what we were meant to do out there. I kind of stepped back a lot in the playground this year, probably too much" (Mike, Teacher, School 1). Ultimately many participants gained new understandings through the study, but it was coloured by this uncertainty of role and expectations.

The project sought to bring together educators and parents in cross-perspective risk-reframing sessions. When parents were present in the risk reframing sessions, educators experienced greater freedom to allow children independence on the playground. "It was so helpful when the parents said, 'Oh, we understand, kids hurt themselves all the time, it's not a huge concern of ours'" (Molly, OT, School 2). However, this was not always possible due to logistical reasons, school choice, or school's lack of understanding the value of cross-perspective sessions.

I think the most valuable [aspect] was just the conversations that we had about what would parents say, and what's our experience of what parents say. Although we discussed that a lot, I still don't think a lot of people got that message through. It would have been a lot better if we'd had parents there. I think that was a key miss for us. (Patrick, School Coordinator, School 3)

The mutual understanding of parents and educators in risk-reframing may have mitigated some fears relating to accountability to parents.

### **They Can**

Participants described that they initially had low expectations of the children's engagement with the materials because (a) they viewed the materials as 'junk', (b) they were asked to step back from their usual role in actively supervising and scaffolding (or supporting) play, and (c) they underestimated the children's imagination. Marissa, a teacher at School 3, recounted, "When I first saw the playground equipment, I thought, 'the kids are not gonna be interested because it looks like every day random stuff.' But surprisingly the kids were interested." With the introduction of the materials, the children, "had to go up there and do imaginative stuff, because it was junk, right?" (Olivia, Assistant Principal, School 4). Across schools, participants described their surprise of what these children could do with materials that had no obvious function. "I've really seen through just random materials, [play] increase ten-fold because the kids have come up with things I would never have thought of" (Janet, Teacher, School 1). Participants recognised the utility of the loose materials in supporting the children's imaginative play. Bridget, the principal at School 1, stated, "It's due to the materials being non-play materials. I just think the children needed to come up with their own ideas."

The materials also supported peer play. Debra, a special education teacher at School 4 stated, “When I first came, there was no cooperative play, but now they're working together in role play games, using their imaginations, and building block towers together.” The materials served as a focal point for children to support each other. Sally, the occupational therapist at School 3, stated, “I think what happened was that some of the children with further developed play skills were kind of dragging the other ones along, but they were really actually enjoying it.” Similarly, Mary, an Assistant Principal at School 4, said,

There's probably five or six key children in there that really struggle to form friendships.

That equipment has been marvellous for them because it's given them the opportunity to have something different rather than sit by themselves on the buddy seat hoping that somebody comes over and asks them to play. They've been able to go take that equipment and then, someone says, "Oh, I want that piece, can we play together?"

Across all schools, participants reported that children used their imagination and took initiative with the materials. The imaginative play that children came up with varied. At School 1, Janet described, “I had kids in my class who had the sheet and, built tents with it. One of the girls in my class got a crate and was using the sheet as a volcano.” At School 3, Marissa, recounted that she saw, “[a] little boy that was playing cowboys and Indians and hiding behind the crates.”

Towards the end of the project we got a chair, and some big milk crates that were lashed together, so they'd formed a big wall. We had a couple of the students make it into a spaceship and pretend to be blasting off. They were taking turns using the seat as the captain's chair in the rocket. That was some really good imaginative play that I haven't seen on the playground. (Patrick, School Coordinator, School 3)

**Changed Expectations**

Participants described their surprise at the children's ability to play and negotiate risk when the materials were introduced. "It was definitely interesting to see some of the kids who usually don't engage with our play equipment engaging with something" (Margaret, Teacher, School 3). Recognising the children's abilities gave participants more confidence to step back and allow the children to negotiate uncertain situations.

There were a lot of things that I seriously thought the kids would not be interested in but they were interested in. I think it made us push ourselves a little bit in letting go 'cause we're holding on and keeping them safe. It just made you step back and say, "Okay, they can do it. Just let them do it"... You saw that they do it on their own if you give them the opportunity and not step in and say, "Oh, let me help you," Giving them more independence from us. (Marissa, Teacher, School 3)

With the long noodles, they began using [them] as swords. I'd wait over there and have my heart palpitating going, "Oh my gosh." But until I actually took that step back I [didn't] realise "oh, that's how they play". As long as they're not physically hurting each other they're okay. It's definitely changed the way that I supervise those kids. (Christine, EAL teacher, School 4)

In combination with the instruction to step back, the loose materials were a catalyst for participants to learn from the children about their play capabilities. The research shows the potential for play-based interventions to support tangible shifts in the routine ways that adults supervise children with disabilities on the playground, which in turn, expands opportunities for children to learn and develop through play. Molly, an occupational therapist at School 2,

described that, “[we] saw a lot of really cool stuff happen that we didn’t realise those kids would or could do. So it was really good. And we sort of kept it that way since the [intervention].”

Similarly, Rachel, a teacher, at School 3 stated,

The project was definitely a good eye opener. It was a good starting point. I think as a team we need to look at how we can improve [recess] for them and make it such that the kids initiate play a bit more.

### **Discussion**

Participants constantly balanced their duty of care along with care and support for children with disabilities on the school playground. This ‘very real mindset’ required them to adhere to their roles and responsibilities while also allowing the children to learn through mistakes and problem solve. Educators decided for children, managed emotional and physical risk, and supported children’s play because they worried about the skill of the individual children and their play partners, risk, and their own professional accountabilities. Therapists should consider the constraints and professional accountabilities that educators experience on the school playground when making recommendations. Therapists seeking to implement risk-reframing sessions should consider ways to navigate the challenges to cross-perspective sessions such as learning about and being responsive to: school constraints, parent needs for participation, and ways for the school community to value collaborative sessions about play.

Children with disabilities are often perceived as incapable of play without direct intervention (Martin et al., 2015). Similar to previous studies on the school playground (Stermann et al., 2018), at the start of the current study, a culture of low expectations existed where educators thought children did not have the skills to manage their emotions or engage in unsupported play, limiting play choice and control. When adults assess children as being unable

to play without support and thus direct their play more, peers may not view them as valuable play partners, decreasing play choice or leading to unequal social relationships (Baker & Donnelly, 2001; Richardson, 2002).

The introduction of the loose parts challenged educators' low expectations. The loose parts acted as a catalyst to support new understandings of children's abilities and promote play. Similar to previous research on loose materials (Barbour, 1999; Bundy et al., 2008), the introduction of the loose materials increased children's choice on the playground. Children engaged in imaginative, social, and independent play that surprised the educators and challenged their beliefs about the children's current and potential play skills, ultimately increasing the children's independence and control.

Educators often value teaching discrete skills in the classroom and on the playground (Martin et al., 2015). A shift to stepping back and using the loose materials to support play challenged the educators' perception of their playground role. They defined their role through supporting the children, and experienced role loss and adjustment with the instruction to step back. Educators may have been more confident with allowing independence for children with disabilities if they better understood the shifting expectations of their playground role. Despite this uncertainty, children demonstrated previously unseen skills, and the ability to use materials to develop skills. Additionally, peers scaffolded skills for developmentally younger children when given the space and materials to engage in play.

### **Implications/Recommendations**

Results from this study indicate that the loose materials, combined with adults stepping back and letting the children engage on their own, supported children to demonstrate their abilities. The greater play skills this facilitated led to a positive cycle in which educators allowed increasing

amounts of independence, control, and choice for the children as they demonstrated increasingly better play skills (Figure 4). This low-cost intervention may be a powerful way to shift adult and peer perceptions about children's abilities, reducing inequity, and creating more play opportunities for children with disabilities. Shifting from a deficit focus for children with disabilities to what they are able to do (Valencia, 2010) requires creating more opportunities for children to demonstrate their interests, skills, and value as play partners, such as through loose materials interventions. Occupational therapists are well-positioned to lead collaboration with other professionals across school occupations to increase choice, control, and independence of children with disabilities, supporting others to recognise, value, and support their capabilities.



Figure 4: Increasing play opportunities cycle

### Key points for occupational therapy

- Occupational therapists should consider ways to address others' low expectations of children with disabilities on the playground through collaborative interventions.
- The environmental intervention of loose materials can support children with disabilities to play at school.
- Supporting participation through loose parts can also shift adult perceptions of children's capabilities and perceptions of risk.



### **Declaration of Authorship**

All authors contributed to the design of this study, the development of the questions, and discussion of findings. The first author was responsible for data collection and writing the article. The first and second authors were responsible for data analysis and manuscript conceptualisation. All authors had input into the drafting and revision of drafts and approved the final submission.

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### **References**

- Anderson, J., & Boyle, C. (2015). Inclusive education in Australia: Rhetoric, reality and the road ahead. *Support for Learning, 30*(1), 4–22. <https://doi.org/10.1111/1467-9604.12074>
- Australian Institute of Health and Welfare (AIHW). (2006). *Disability updates: children with disabilities*. Canberra.
- Baker, K., & Donnelly, M. (2001). The social experiences of children with disability and the influence of environment: A framework for intervention. *Disability & Society, 16*(1), 71–85. <https://doi.org/10.1080/713662029>
- Barbour, A. C. (1999). The impact of playground design on the play behaviors of children with differing levels of physical competence. *Early Childhood Research Quarterly, 14*(1), 75–98. [https://doi.org/10.1016/S0885-2006\(99\)80007-6](https://doi.org/10.1016/S0885-2006(99)80007-6)
- Bayona, C. L., McDougall, J., Tucker, M. A., Nichols, M., & Mandich, A. (2006). School-Based Occupational Therapy for Children with Fine Motor Difficulties. *Physical & Occupational*

- Therapy In Pediatrics*, 26(3), 89–110. [https://doi.org/10.1080/J006v26n03\\_07](https://doi.org/10.1080/J006v26n03_07)
- Bundy, A. (1995). Assessment and Intervention in School-Based Practice: *Physical & Occupational Therapy In Pediatrics*, 15(2), 69–88. [https://doi.org/10.1080/J006v15n02\\_05](https://doi.org/10.1080/J006v15n02_05)
- Bundy, A., Lockett, T., Naughton, G. A., Tranter, P. J., Wyver, S. R., Ragen, J., ... Spies, G. (2008). Playful interaction: Occupational therapy for all children on the school playground. *American Journal of Occupational Therapy*, 62(5), 522–527. <https://doi.org/10.5014/ajot.62.5.522>
- Bundy, A., Wyver, S., Beetham, K. S., Ragen, J., Naughton, G., Tranter, P., ... Sterman, J. (2015). The Sydney playground project- levelling the playing field: a cluster trial of a primary school-based intervention aiming to promote manageable risk-taking in children with disability. *BMC Public Health*, 15(1), 1125. <https://doi.org/10.1186/s12889-015-2452-4>
- Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual and Developmental Disability*, 28(4), 369–379. <https://doi.org/10.1080/13668250310001616407>
- Emerson, E., & Llewellyn, G. (2013). *Left behind: monitoring the social inclusion of young Australians with self-reported long term health conditions, impairments or disabilities 2001 – 2009. Technical Report*. Retrieved from <https://sydney.edu.au/health-sciences/cdrp/pdfs/left-behind-2013-technical-report-1.pdf>
- Engelen, L., Bundy, A. C., Naughton, G., Simpson, J. M., Bauman, A., Ragen, J., ... van der Ploeg, H. P. (2013). Increasing physical activity in young primary school children — it's child's play: A cluster randomised controlled trial. *Preventive Medicine*, 56(5), 319–325. <https://doi.org/10.1016/j.ypmed.2013.02.007>

- Eriksson, L., Welanders, J., & Granlund, M. (2007). Participation in everyday school activities for children with and without disabilities. *Journal of Developmental and Physical Disabilities*, 19, 485–502. <https://doi.org/10.1007/s10882-007-9065-5>
- Giangreco, M. F., Edelman, S. W., Luiselli, T. E., & MacFarland, S. Z. C. (1997). Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children*, 64(1), 7–18. <https://doi.org/10.1177/001440299706400101>
- Lang, R., Kuriakose, S., Lyons, G., Mulloy, A., Boutot, A., Britt, C., ... Lancioni, G. (2011). Use of school recess time in the education and treatment of children with autism spectrum disorders: A systematic review. *Research in Autism Spectrum Disorders*, 5(4), 1296–1305. <https://doi.org/10.1016/j.rasd.2011.02.012>
- Little, H. (2010). Relationship between parents' beliefs and their responses to children's risk-taking behaviour during outdoor play. *Journal of Early Childhood Research*, 8(3), 315–330. <https://doi.org/10.1177/1476718X10368587>
- Lyons, R., Brennan, S., & Carroll, C. (2016). Exploring parental perspectives of participation in children with Down syndrome. *Child Language Teaching and Therapy*, 32(1), 79–93. <https://doi.org/10.1177/0265659015569549>
- Machalicek, W., Shogren, K., Lang, R., Rispoli, M., O'Reilly, M. F., Franco, J. H., & Sigafoos, J. (2009). Increasing play and decreasing the challenging behavior of children with autism during recess with activity schedules and task correspondence training. *Research in Autism Spectrum Disorders*, 3(2), 547–555. <https://doi.org/10.1016/j.rasd.2008.11.003>
- Martin, C., Drasgow, E., & Halle, J. W. (2015). Training teachers to enhance the play skills of young children with developmental disabilities during outdoor time by embedding instructional interactions. *Journal of Early Intervention*, 37(4), 247–269.

<https://doi.org/10.1177/1053815115620209>

May, T., Roberts, J., Webber, M., Spreckley, M., Scheinberg, A., Forrester, M., & Williams, K.

(2018). Brief history and user's guide to the Australian National Disability Insurance Scheme. *Journal of Paediatrics and Child Health*, 54(2), 115–120.

<https://doi.org/10.1111/jpc.13748>

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage Publications Inc.

Missiuna, C., & Pollock, N. (1991). Play deprivation in children with physical disabilities: The role of the occupational therapist in preventing secondary disability. *American Journal of Occupational Therapy*, 45(10), 882–888. <https://doi.org/10.5014/ajot.45.10.882>

Missiuna, C., Pollock, N. A., Levac, D. E., Campbell, W. N., Whalen, S. D. S., Bennett, S. M., ...

Russell, D. J. (2012). Partnering for Change: An Innovative School-Based Occupational Therapy Service Delivery Model for Children with Developmental Coordination Disorder. *Canadian Journal of Occupational Therapy*, 79(1), 41–50.

<https://doi.org/10.2182/cjot.2012.79.1.6>

Murray, R., Ramstetter, C., Devore, C., Allison, M., Ancona, R., Barnett, S., ... Young, T. (2013).

The crucial role of recess in school. *Pediatrics*, 131(1), 183–188.

<https://doi.org/10.1542/peds.2012-2993>

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to

Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 1–13. <https://doi.org/10.1177/1609406917733847>

Olsen, L. L., Kruse, S., Miller, A. R., & Brussoni, M. (2016). Safety-related concerns of parents for children with disabilities and chronic conditions. *Journal of Developmental and*

- Behavioral Pediatrics*, 37(2), 121–131. <https://doi.org/10.1097/dbp.0000000000000256>
- QSR International. (2012). NVivo qualitative data analysis Software. QSR International Pty Ltd.
- Ramstetter, C. L., Murray, R., & Garner, A. S. (2010). The crucial role of recess in schools. *Journal of School Health*, 80(11), 517–526. <https://doi.org/10.1111/j.1746-1561.2010.00537.x>
- Richardson, P. K. (2002). The school as social context: Social interaction patterns of children with physical disabilities. *American Journal of Occupational Therapy*, 56(3), 296–304. <https://doi.org/10.5014/ajot.56.3.296>
- Rodger, S., Brown, G. T., & Brown, A. (2005). Profile of paediatric occupational therapy practice in Australia. *Australian Occupational Therapy Journal*, 52(4), 311–325. <https://doi.org/10.1111/j.1440-1630.2005.00487.x>
- Russi, M. V. (2014). NDIS and occupational therapy: Compatible in intention and purpose from the consumer perspective. *Australian Occupational Therapy Journal*, 61(5), 364–370. <https://doi.org/10.1111/1440-1630.12138>
- Sandseter, E. B. H. (2012). Restrictive safety or unsafe freedom? Norwegian ECEC practitioners' perceptions and practices concerning children's risky play. *Child Care in Practice*, 18(1), 83–101. <https://doi.org/10.1080/13575279.2011.621889>
- Sandseter, E. B. H., Little, H., & Wyver, S. (2012). Do theory and pedagogy have an impact on provisions for outdoor learning? A comparison of approaches in Australia and Norway. *Journal of Adventure Education & Outdoor Learning*, 12(3), 167–182. <https://doi.org/10.1080/14729679.2012.699800>
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O. P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implications for pre-service and in-service

- teacher education. *European Journal of Special Needs Education*, 27(1), 51–68.  
<https://doi.org/10.1080/08856257.2011.613603>
- Spencer, K. C., Turkett, A., Vaughan, R., & Koenig, S. (2006). School-Based Practice Patterns: A Survey of Occupational Therapists in Colorado. *American Journal of Occupational Therapy*, 60(1), 81–91. <https://doi.org/10.5014/ajot.60.1.81>
- Stagnitti, K. (2004). Understanding play: The implications for play assessment. *Australian Occupational Therapy Journal*, 51(1), 3–12. <https://doi.org/10.1046/j.1440-1630.2003.00387.x>
- Stephenson, A. (2003). Physical risk-taking: Dangerous or endangered? *Early Years: An International Research Journal*, 23(1), 35–43.  
<https://doi.org/10.1080/0957514032000045573>
- Sterman, J. J., Naughton, G. A., Bundy, A. C., Froude, E., & Villeneuve, M. A. (2018). Is play a choice? Application of the capabilities approach to children with disabilities on the school playground. *International Journal of Inclusive Education*, 1–18.  
<https://doi.org/10.1080/13603116.2018.1472819>
- Tamm, M., & Skär, L. (2000). How I play: Roles and relations in the play situations of children with restricted mobility. *Scandinavian Journal of Occupational Therapy*, 7(4), 174–182.  
<https://doi.org/10.1080/110381200300008715>
- Tracy, J., & McDonald, R. (2015). Health and Disability: Partnerships in Health care. *Journal of Applied Research in Intellectual Disabilities*, 28(1), 22–32. <https://doi.org/10.1111/jar.12135>
- UN General Assembly. (2006). *Convention on the Rights of Persons with Disabilities* (Treaty Series 2515 No. 3).
- United Nations. (2006). Convention on the rights of persons with disabilities. Retrieved from

<http://www.un.org/disabilities/convention/conventionfull.shtml>

Valencia, R. R. (2010). *Dismantling Contemporary Deficit Thinking*. Routledge.

<https://doi.org/10.4324/9780203853214>

Villeneuve, M. (2009). Collaborative Consultation. *Canadian Journal of Occupational Therapy*, 76(Influencing Policy Special Issue), 206–218.

<https://doi.org/http://media.proquest.com.dbgw.lis.curtin.edu.au>

Villeneuve, M., & Hutchinson, N. L. (2015). Incorporating Therapy into the Regular Curriculum: Working Together with Occupational Therapists. In D. Chambers (Ed.), *Working with Teaching Assistants and other Support Staff for Inclusive Education* (pp. 65–94). United Kingdom: Emerald Group Publishing Limited.

Villeneuve, M., & Shulha, L. M. (2012). Learning together for effective collaboration in school-based occupational therapy practice. *Canadian Journal of Occupational Therapy*, 79(5), 293–302. <https://doi.org/10.2182/CJOT.2012.79.5.5>

Woolley, H., & Lowe, A. (2013). Exploring the relationship between design approach and play value of outdoor play spaces. *Landscape Research*, 38(1), 53–74.  
<https://doi.org/10.1080/01426397.2011.640432>

Wyver, S., Little, H., Tranter, P., Bundy, A., Naughton, G., & Sandsetter, E. (2010). Ten ways to restrict children's freedom to play: The problem of surplus safety. *Contemporary Issues in Early Childhood*, 11(3), 263. <https://doi.org/10.2304/ciec.2010.11.3.263>

Yarbrough, D. B., Shulha, L. M., Hopson, R. K., & Caruthers, F. A. (2011). *The program evaluation standards: A guide for evaluators and evaluation users* (3rd ed.). Thousand Oaks, CA: Sage Publications Inc.