

Improving Student Wellbeing in Te Pae Here Schools: Further Reading

Contents

Background	4
Taakaro Ora	
Vision	
Key Outcomes	
Hauora/Wellbeing	
Our Avenues for Support	
Te Pae Here	
Vision	
Values	
Aims	
Student Wellbeing/the Whole Child	
Data Collection	
Senior Leadership Teams	
Barriers to Teaching HPE	
Barriers to Student Wellbeing	
Areas of Growth/Support Identified	8

Staff Voice	8
Barriers to Teaching HPE	8
Barriers to Student Wellbeing	8
Wishlist	8
NZCER	9
Main points from teacher survey	9
Main points from student survey	10
What the research says - Domestic	11
New Zealand State of Play Survey	11
Recommendations	12
The Importance of Play	12
Recommendations	13
University of Otago Play Study	14
Recommendations	14
What the research says - International	16
Educating the Student Body: Taking Physical Activity and Physical Education to Schoo	l16
International Play Association	17
Learning Through Play: A Review of the Evidence	18
Managing Risk in Play Provision	20
Risk in Play & Learning	22
Strategies for Recess in Schools	22
The Association Between School-Based Physical Activity, Including Physical Education Performance	
The Crucial Role of Recess in School	24
The Importance of Play in Promoting Healthy Child Development and Maintaining Str	•
The Importance of Play in Promoting Healthy Child Development and Maintaining Str Bonds: Focus on Children in Poverty	•
The Power of Play, A Pediatric Role in Enhancing Development in Young Children	26
What works in schools and colleges to increase physical activity	27
What the research says - Summary	28
General Benefits	29
Further Benefits Specific to 'Academic' Learning	29
Recommendations	30

Play	30
Physical Activity	
Recess (i.e. break times)	33
Risk Taking	34
Additional Research	35
Risk is Essential for Health and Wellbeing	35
Learning through Experience (a.k.a Play)	36
Beneficial Risk	37
Additional Domestic Research	38
Books of Interest	39
References	40

Background

Taakaro Ora

Taakaro Ora is an initial three-year pilot working in partnership with Te Pae Here Kaahui Ako (the north-east Hamilton Community of Learning) to help support and develop a connected community that supports the holistic wellbeing/hauora of tamariki and whaanau. It brings together concepts from Play.sport (a Sport NZ initiative) alongside the existing Waikato DHB funded Sport Waikato programme, Project Energize.

Vision

A connected community supporting the holistic wellbeing/hauora of tamariki and whaanau.

Key Outcomes

- Schools value health and physical education, physical activity, sport, mindfulness and play as vehicles to enhance tamariki wellbeing/hauora
- Teachers are confident and competent in the planning and delivery of Health and Physical Education
- Communities are well connected and put the needs and wants of tamariki at the heart of what they do
- Tamariki are provided with quality opportunities for participation, support and experiences to improve their overall wellbeing/hauora

Hauora/Wellbeing

Taakaro Ora identifies the need for a holistic approach to student wellbeing and therefore uses Mason Durie's Te Whare Tapa Whaa model to achieve the best possible outcomes.



Our Avenues for Support

Taakaro Ora has two key areas of support: In-school curriculum support for teachers and enhancing community connections:

HPE Curriculum Support

Schools and teachers will have the opportunity to:

- Engage in cross-school collaboration, the sharing of information, ideas, questions and best practice, with each other and the Taakaro Ora team.
- Receive support and guidance around their delivery of the health and physical education curriculum and cross-curricular integration.
- Receive relevant professional development from the Taakaro Ora team and/or others.

Community Connections

Schools will have the opportunity to work with Taakaro Ora to:

- Strengthen wellbeing-based relationships between each other, their families, outside providers, and the wider community.
- Support schools in knowing what wellbeing opportunities exist within their community.
- Develop wellbeing-based projects to support students and families.

Te Pae Here¹

Te Pae Here is the Community of Learning or Kaahui Ako in north-east Hamilton. The Te Pae Here High-Level Plan explains more:

Vision

As a diverse group of schools, we work together to achieve the best possible outcomes for all learners.

Values

To achieve our goals and collaborate effectively we need to value: Inclusiveness, respect, trust, relationships, integrity, manaakitanga, whaanaungatanga, openness to learning, being future focussed, and mutually challenging.

Aims

We aim to achieve outcomes by:

- Engaging teachers, students and whaanau and empowering them to achieve the best possible outcomes.
- Creating an environment where learners feel empowered and have the skills to learn, succeed, achieve.

¹ Content is quoted directly from the <u>Te Pae Here High-Level Plan</u>.

Student Wellbeing/the Whole Child

Since the initial meetings to form our Kaahui Ako, the Principals have been steadfast in their belief that successful student learning and achievement has to be built on the physical and emotional wellbeing of all learners. Crucial to this wellbeing is the quality participation of parent/whaanau/iwi. We will all work to ensure that student wellbeing will be at the forefront of our actions and programmes to underpin success for all.

Data Collection²

In order to get a thorough understand of the needs of Te Pae Here and the individual schools involved in the pilot, the Taakaro Ora team collected data from schools through several means:

- 1. Sit-down surveys of senior leadership (typically principals or deputy principals, and sometimes a sport or wellbeing lead teacher). Occurred for 14 out of 15 schools as one principal emailed their response to the survey.
- 2. Workshopping with whole-school staff (30 to 60-minute sessions) in 12 of 15 participating schools
- 3. Independent surveying of 155 staff from 13 schools, 1462 students from 12 schools by NZCER (New Zealand Council of Education Research).
- 4. PTA workshops in four schools, informal conversations with parents from one school, and a small parent survey from one school.³

Senior Leadership Teams

Barriers to Teaching HPE

- Time, crowded curriculum
- Limitations based on health and safety
- Parental barriers
- Teacher confidence, knowledge, capacity, etc.
- Curriculum priority
- Lack of resources, equipment, transport, or access to facilities

Barriers to Student Wellbeing

- Parental barriers
- Anxiety
- Low-socioeconomic community challenges
- Mental/emotional challenges
- Learning difficulties
- High expectations for success
- Screen time
- Behavioural issues
- Resilience

² SLT and staff typically identified all elements of HPE and wellbeing opportunities in their school/environment as a 'strength' rather than highlighting only provisions of note. This report, therefore, only references the barriers and areas of growth/support identified.

³ This data collection is still ongoing and is therefore not included in this report.

Areas of Growth/Support Identified

- Support for improving student anxiety, resilience, self-regulation
- Teacher HPE PLD (improve knowledge, confidence, competence, language, curriculum integration, planning support)
- Networking (improve school-school and school-family connections)
- School garden and/or 'garden to table' development
- Mindfulness education
- Gross motor/fundamental skills programme
- Linking HPE to school values
- More non-traditional sport focus

Staff Voice

Barriers to Teaching HPE

- Not enough time in the day
- Lack knowledge, skills, and confidence to deliver quality HPE
- Inconsistencies or misunderstanding of health and safety/playground rules e.g. tree climbing
- Priority is on physical wellbeing, physicality is prioritised, or focus is on results rather than effort
- HPE delivery is prescribed and event based, rather than responsive and holistic

Barriers to Student Wellbeing

- General parent education, driving kids to school all the time, opting kids out
- Sedentary lifestyles
- Poor community interactions
- Poor attendance, fixed mindset instead of growth mindset, modern technology
- Financial inequality/inequity
- Student wellbeing lack of resilience, fundamental fine and gross motor skills, anxiety, lack of sleep, social media/device overuse, lack of imagination, scared to fail/won't try new things, overcompetitive, lack of risk taking, lack of social skills, lack of teamwork, lack of student agency

Wishlist

- Organised, specific, or prescribed playground or sport facilities, including waterplay features and outdoor/bush classrooms
- Non-traditional HPE equipment, loose parts and storage for it
- Resources for mental health/anxiety, for getting kids moving, keeping up to date with the latest info, variety of modified games to mix things up

- PLD in student mental wellbeing/anxiety, general modelling
- Cross-curricular integration, better curriculum coverage/balance
- Reduce staff stress/duties
- Management to give more time and support for HPE
- Free play and lunchtime activities
- HPE to have more variety and be more non-competitive
- Planning support and co-construction with Taakaro Ora, suggested topics based on school and year levels
- Daily fitness all year long
- More cultural input, opportunities, and ideas broadly and for HPE
- Parent education to support children's resilience, child behaviour, mental wellbeing, reinforcing HPE messages, managing conflict
- Sport specific delivery of martial arts, rock climbing, yoga, dance, parkour, gymnastics, etc.
- Improve community engagement, school home connection/engaging whanau, community lead activities, more parent coaches and sport volunteers
- Student mental health support, including resilience, anxiety, self-management, student agency and problem solving, self-esteem, coping mechanisms, sharing/working together, emotional awareness

NZCER

Main points from teacher survey

- Around 40% of teachers felt their students learned ways to solve problems or challenges and manage risks only *once or twice a term*.
- Over 80% of teachers felt students got to make up their own games, rules, strategies and movement patterns either *hardly ever* or *once or twice a term*.
 - o Hardly ever or once or twice a term was overwhelmingly when teachers felt students:
 - Learn about games, dance or movement from a range of cultures.
 - Try games, dance or movement activities that are popular in their local area.
 - Learn about movement or topics relating to their cultural knowledge.
 - Learn that families and cultures have lots of different ways of being active
 - Visit local places where they can be active (like parks, fields, pools).
- Fewer teachers agreed that within their school...
 - They have connections with community organisations or people who support physical activity.
 - o There was a strategic approach to external providers, so they support PE learning goals.
 - There was a co-ordinated approach to active ways of getting to school.
 - They had a system for identifying students who do not participate in sports or physical activities, and then find activities that match the interests of those students.

 There was a formal process for consulting students about new physical activities and sports they would like to try.

Main points from student survey

- More students feel like they DON'T have a say about which sports or active games they would like, than those who feel like they DO have a say.
- Fewer students get to think and talk about how they can make their games better; or make up their own active games, rules or movement patterns than those who do although the percentage of Maaori students who feel they do is higher than that of their Paakehaa peers.
- Most students like doing active things and playing sports and a little more so for Maaori students than Paakehaa students.
- Regarding "I learn how to keep safe when I am doing active things at school", a much higher percentage of Maaori students agreed with this statement than Paakehaa.
- Most students got to school by car or motorbike (opposed to bike/skateboard/scooter or walking), and this was significantly higher for Paakehaa students (61%) compared to Maaori students (48%).
 Obviously, this will predominantly be outside of the control of students though.
- Most students prefer to walk around or do active things like games in their lunch or break times, opposed to standing around or sitting around. This was the same for both Maaori and Paakehaa student groups.
- Relating to "after school" activities, there was a higher percentage of "inactive" compared to
 "active". The difference in percentage was about the same for both Maaori and Paakehaa students
 with 12% more inactive activities than active ones for Maaori and 11% more inactive activities
 than active ones for Paakehaa.

What the research says - Domestic

New Zealand State of Play Survey¹

The New Zealand State of Play Survey, citing other research, states that "the importance of quality play experiences for children's physical, social, and emotional development is well established. Play provides opportunities for children to be physically active, and enhances motor, social and communicative skills, cognitive abilities, resilience, wellbeing, and creativity" (pg 5). Of specific relevance to schools is that over the last 30 years "children in the developed world have shifted from mostly unstructured, unsupervised, outdoor play to structured, supervised, and/or indoor activities. Modern outdoor public and school playgrounds are typically static structures designed by adults to support a predetermined set of activities that prioritise injury prevention above all else. Furthermore, as parental efforts to safeguard their children increase, opportunities for children to engage in risky and unstructured 'real' play diminish. Play spaces created by adults habitually align with their own perspective of children's play preferences, with safety being a key factor. This frequently leads to brightly coloured and highly structured play spaces, whereas it appears that children prefer to play in natural outdoor environments." (pg. 5).

They explain that the many benefits above are only the case if it is 'real play'. 'Real play' is "described in the literature as any play that involves risky play (play involving rough-and-tumble, speed, heights, natural elements, tools, or independent exploration) and object play (play that uses loose parts or objects to construct, move, or interact with others). Real play is associated with a range of positive physical and mental health outcomes, including increases in physical activity, social skills, resilience, creativity, risk management skills, and a decrease in anxiety. Recently, real play was linked to increased executive function in children, an advanced cognitive system essential for planning, problem solving, inhibitory control, and managing novel or potentially dangerous situations. Furthermore, there is evidence that providing real play opportunities for children does not increase the prevalence of injuries" (pg 5).

The authors state that "it is clear that children are naturally drawn to real play, especially to the thrill and excitement of risky play" (pg 25) and that *finding opportunities to provide for risky play throughout childhood "may prove more effective at engaging children and parents than traditional health promotion messages centred on physical activity, sport, and exercise"* (pg 26). The survey shows that "most NZ parents recognise the potential development benefits of real play: climbing trees, using loose objects, riding bikes or scooters, rough-and-tumble, messy play, using adult tools, and (in older children) roaming the neighbourhood unsupervised by adults." (pg 25). However, "parental beliefs do not necessarily translate into actual real play practices. The majority of children do not often participate in a wide range of real play activities; in fact, a reasonable proportion do not engage in real play at all." (pg 25).

The survey results show that *perceived risk is much greater than actual risk*, and although the reasons are understandable; "children are the most important thing in parents' lives and they are therefore naturally cautious when it comes to calculating odds of injuries or incidents. Nonetheless,

when the perceived risks become elevated well beyond reality, opportunities that would otherwise be beneficial to children's development disappear" (pg. 25). Therefore, there is "growing concern that our increasingly risk averse society is contributing to a generation of 'bubble-wrapped' children that have limited opportunities to play creatively, instigate physical activity, overcome challenges independently, and learn to manage risks appropriately" (pg 4).

Recommendations

The report is clear that "the time to act is now - the current generation of NZ parents is likely to be the last to have experienced a 'free-range' independently mobile childhood, and so may be the last to be amenable to initiatives that promote independence and managed risk in their own children. As a nation, we need to re-evaluate how we are raising our children. We need to find ways to reengage children with their communities, promote healthy living, and unlock their full potential. We believe NZ parents are ready and willing to adopt the philosophies of real play. The next step is to make it happen" (pg 26).

They also make a novel and specific recommendation: "Playing in the rain is an excellent opportunity for children to connect with natural elements – water, wind, mud – and builds a resilience in children that can be beneficial as they age. Staying indoors when it's raining not only limits the amount of outdoor opportunities children have (especially in winter), but could decrease the fun and learning that comes with playing in the wild weather" (pg. 25)

The Importance of Play²

Sport NZ define play as "intrinsically motivated – it is spontaneous and will happen anywhere, personally directed – it has limited or no adult involvement, free chosen – it is self-determined and has no pre-determined outcome" and is "fun, accessible, challenging, social and repeatable" (pg 1). They identify the following benefits of play:

- being physically active in a fun way that develops fundamental movement skills
- encouraging self-directed creativity and innovation
- improving social and emotional connection
- improving a young person's understanding of their relationship with the physical environment
- improving resilience, independence and leadership by determining their own outcomes
- aiding better decision-making based around elements of challenge and risk (pg 1).

Despite these myriad benefits of play to children's wellbeing, "many Kiwi kids aren't having the same playful upbringing enjoyed by previous generations." They identify the following reasons for this:

- Time: Young people's lives are increasingly structured, reducing the free time in which to play.
- Space: Changes to both the built and natural environments have changed access to traditional play spaces (for example, streets and driveways are no longer considered play spaces).

- Health and safety: Parental and societal perceptions of young people's safety have changed when and where children can play.
- Societal changes: A need for instant satisfaction is challenging the journey of discovery learning through play.
- Technology: Increases in screen time and the ability to live life in a 'virtual world' are removing young people from real life cause and effect.
- Adult awareness: Parents lack understanding of their role in play as enablers quality play experience involves limited adult input. (pg.2)

Recommendations

Ultimately, Sport NZ believe that children need the "time, space, and permission to play" (pg 2). They outline the following play principles:

- 1. Play is important to the wellbeing of young New Zealanders
 - It is vital in ensuring young people have the best possible start in life and develop a lifelong love of community sport and being physically active.
- 2. Play is a cornerstone of our Physical Literacy Approach
 - Play is a crucial part of physical, cognitive, social/emotional and spiritual development for young people.
- 3. Play is the shared responsibility of everyone
 - It needs clear and strong leadership from those who can enable play. This includes the views and opinions of young people.
 - It is equally important in the settings of home, school and community.
- **4.** Young people must have access to enriched and varied playful experiences within their local environments
 - A variety of play types
 - As an individual and with others
 - Space and place man-made and natural
 - Sensory rich
 - A sense of an escape from realism
 - Physical movement
- 5. Adults must understand what their role is in enabling play
 - Quality play experience involves limited adult input.
- 6. Young people need the opportunity to experience risk and challenge through play
 - The provision of opportunities for all children to encounter or create uncertainty, unpredictability and potential risks (including physical, cognitive, social/emotional and spiritual) as part of their play.
 - We do not mean putting children in danger of serious harm.
- 7. Wherever possible, play should include the opportunity to be active. (pg 3)

University of Otago Play Study³

Citing others, Farmer et al (2017) espouse that "play positively affects the cognitive, social and emotional development of children, and should be varied, be imaginative and include graduated exposure to 'risky' play opportunities" (pg. 1). Farmer et al (2017) conducted a two-year randomised controlled trial that involved "changing the school play environment to one that promoted more 'risky' and imaginative play... For example, schools could introduce more rough-and-tumble play, allow children to climb trees, relax the rules and utilise loose parts (tyres, logs, ropes, etc.). Incorporating risk and challenge were achieved by making changes to the environment, equipment and policies" (pg 2).

The study found that "although activity was seen as important and all schools wanted the best for children at their school, there was little knowledge of how the rules or practices were impacting on children's play experiences. By questioning the school rules and the motivation behind them, the schools began to reflect upon why they were enforcing certain systems and realised that often there was a default position of 'no' rather than simply allowing children to play" (pg. 7). "All of the schools mentioned positive changes that they observed in their school and in their students as a result of the PLAY Study" including "children's personal characteristics (better behaviour, increased activity, responsibility, cooperation and confidence)" (pg 7) outside and inside the classroom "and ones that would be more evident as an atmospheric change in the playground (use of recreational equipment, playground vitality and unstructured play)" (pg 7).

Involvement in the study "created more opportunities for play and virtually all intervention schools saw this as a major improvement". The value and relevance of the intervention for New Zealand schools was made clear when "no intervention school indicated they were going to change their play environments back to the way they were before the PLAY Study began" (pg 15). Although no formal injury statistics were recorded, these were not a theme raised by schools. Indeed, one school made specific reference only to highlight the fact that entries on their accident register had halved.

Recommendations

Farmer et al (2017) suggest that *New Zealand schools should "reduce the number of rules children are exposed to during play, emphasising opportunities for increasing exposure to risky and challenging play"* (pg 15). They suggest that any projects to make changes to a school in this way should be "malleable to fit within the school context or already existing curricula" (pg 16) and that in their study this increased sustainability. Further, "introducing initiatives that do not involve additional teacher time also provides a greater chance of success; some schools felt that teachers had to do less, rather than more, playground supervision" (pg 16).

Ultimately, they recommend that schools should "re-think their understanding of play and widen the range of activities in which children could take part during break time. The intervention schools said that the enlightenment moments of realising a different attitude towards play were, for them, some of the most inspiring and empowering parts of the study. It therefore may not be as challenging as initially thought to incorporate more risk and challenge within schools in this setting" (pg 17).

What the research says - International

A selection of high profile and respected international organisations and professionals and their research, reports, and guidance on the importance of play, risk, recess, and physical activity are highlighted below (in alphabetical order). There is significant additional research on the importance of risk and play for development and learning in the <u>Additional Research</u> section.

Educating the Student Body: Taking Physical Activity and Physical Education to School⁴

This report by Kohl is "to highlight the central need not only to provide quality physical education for all youth, but also to implement other evidence-informed methods schools can use to help all children and adolescents [experience] vigorous or moderate-intensity physical activity . . . to improve health, development, and academic performance" (pg. ix).

<u>Recommendation #1:</u> District and school administrators, teachers, and parents should advocate for and create a whole-of-school approach to physical activity.

- Students should engage in additional vigorous or moderate-intensity physical activity throughout the school day through recess, dedicated classroom physical activity time, and other opportunities.
- Additional opportunities for physical activity before and after school hours, including but not limited to active transport, before- and afterschool programming, and intramural and extramural sports, should be made accessible to all students.
- Because the vast majority of youth are in school for many hours, because schools have important infrastructure and are critical to the education and health of children and adolescents, and because physical activity promotes health and learning, it follows that physical activity should be a priority for all schools, particularly if there is an opportunity to improve academic achievement.
- Interscholastic and intramural sports are another traditional opportunity for physical activity, but they are unavailable to a sizable proportion of youth. Schools are being underutilized in the ways in which they provide opportunities for physical activity for children and adolescents.
- A whole-of-school approach encompasses all segments of the school day, including travel to and from school, school sponsored before- and after-school activities, recess and lunchtime breaks, physical education, and classroom instructional time. Beyond the resources devoted to quality daily physical education for all students, the whole-of-school approach means that other school resources, such as classroom teachers, staff, administrators, and aspects of the physical environment, are all oriented toward physical activity. Intramural and extramural sports programs are available to all who wish to participate, active transport is used by substantial numbers of children to move from home to school and back again, recess and

other types of breaks offer additional opportunities for physical activity, and lesson plans integrate physical activity as an experiential approach to instruction. (pg 82-83).

For school districts and schools, potential actions include:

- Continuing to strengthen policies by requiring time for physical education and recess that aligns with the national recommendations.
- Increasing the amount of time youth spend in physical activity through brief classroom breaks or incorporating physical activity directly into academic sessions.
- Offering intramural sports and physical activity clubs before or after school and helping such programs be accessible to all students.
- Adopting joint or shared use agreements allowing school facilities to be used for physical activity programs during non-school hours.
- Identifying key champions in schools to lead efforts.
- Working with parent groups and parent-teacher associations to create a demand for physical activity and mobilize this effort. (pg. 83-84)

<u>Recommendation #2:</u> Because physical education is foundational for lifelong health and learning, it should be designated as a core subject.

- Physical education in school is the only sure opportunity for all school-aged children to
 access health-enhancing physical activity and the only school subject area that provides
 education to ensure that students develop knowledge, skill, and motivation to engage in
 health enhancing physical activity for life.
- Physical education as a core academic subject would receive much-needed policy attention that would enhance its overall quality in terms of content offerings, instruction, and accountability. The enactment of this recommendation also would likely result in downstream accountability that would assist in policy implementation. (pg 85-86)

International Play Association⁵

The IPA "promotes the right of all children and young people to time, freedom, and space to play in their own way" (pg 1)

- Play is a fundamental part of life; it is a biological, social, cognitive necessity for individual children, but also has benefits for society and the human species. (pg 1)
- Play aids emotional regulation, by helping children understand and moderate primary emotions (anger, fear, disgust, shock, sadness and joy) into more nuance and subtle forms (grief, pleasure, displeasure, affection, contentment, exasperation, disappointment). (pg 1-2)
- Play is the way humans develop efficient brains; playing enhances cortical connections and neural organisation; when humans play, the nerve signals the body generates create neural pathways that help with brain development and brain plasticity (flexibility). By so doing

- playing contributes to developing 'effective Systems for learning' rather than particular learning outcomes.
- Playing helps children to become individuals and independent, self-sufficient and autonomous.
- By playing children learn what works and what does not; it is creative, flexible and adaptable; it helps with the development of flexible, adaptive strategies to the problems that life offers children. Understanding the life is not always 'fair' or 'good' helps children to adapt to problems in life and develop resilience and optimism to deal with stressful or traumatic events in the future.
- Play is chaotic and transformative; it helps children be spontaneous, highly creative, original, and open.
- Play is a vital and fundamental part of the human experience; it is important to the lives of children in that it gives them pleasure in being alive and is essential to their healthy physical and mental growth, able to function in the culture and society in which they are born.
- Yet there is a widespread lack of understanding of the value of play, and it is often considered a trivial part of children's lives or dismissed as an unnecessary distraction from 'more important' activities such as preparedness for adult life, work and formal education.
 However growing evidence shows that playing especially up to the age of seven years can enhance educational achievements and life chances when children leave school. (pg 2)

Learning Through Play: A Review of the Evidence⁶

Zosh et al (2017) "summarise current evidence on the role and importance of children's learning through play" (pg 3):

- Learning through play is crucial for positive, healthy development, regardless of a child's situation.
- Learning through play supports overall healthy development, acquisition of both content (e.g., math) and learning-to-learn skills (e.g., executive function). (pg 3)
- "Learning through play is about continuity; bringing together children's spheres of life home, school and the wider world, and doing so over time." Susan MacKay, Director of
 Teaching and Learning at Portland Children's Museum (pg 4)
- Learning-to-learn skills encompass a wide variety of abilities that help children learn information, acquire skills, and deal with new situations (e.g. Care, Kim, Anderson, & Gustafsson-Wright, 2017; Deci & Ryan, 2000; 2012; Dignath, Buettner, & Langfeldt, 2008; Harvard CDC, 2011). They include the ability for children to be motivated drivers of own experiences. This involves focus and attention to avoid distractions that pop up, the curiosity and motivation to seek out new opportunities and information, the willingness to take risks, have confidence, and have a love of learning. Additionally, children benefit from having the skills necessary to be a self-starter namely autonomy, persistence, and goal setting and

- the ability to rise to meet new challenges. This requires imagining innovative and creative solutions to problems and adapting those solutions if the first try fails. (pg 10)
- The tools for enhancing and strengthening children's learning are already available in our homes, communities, and classrooms. The answer is, in essence, as simple as child's play.
 (pg 12)
- Whether adults are supporting or not, a critical requirement for learning through play is that children must experience agency and be supported rather than directed.
 - Agency is about the balance of initiative in the child adult relationship: Are children's interests listened to? Are they consulted on decisions that concern them? Do they initiate an activity and invite adults to join them in play and decision-making? In other words, what opportunities do children have for exerting their thinking and actions in a social context where others hold the same rights? Two dimensions may be helpful to consider: How planned the learning environment is, and how much the child and adult control the evolving 'flow' of activities (Sinclair, 2004; Toub, Rajan, Golinkoff, & Hirsh-Pasek, 2016; Cheng, Reunamo, Cooper, Liu, & Vong, 2015). (pg 14)
- Play captures many of the features that we know from research lead to deeper learning, and
 thus provides an optimal environment to develop the skills and knowledge that children
 need to thrive and succeed as adults. Children are intrinsically motivated to play, which makes
 it fertile ground for learning and developing new skills. (pg 15)

Managing Risk in Play Provision⁷

Ball, Gill, and Spiegal (2012) developed this guide to show "how play providers can develop an approach to risk management that takes into account the benefits to children and young people of challenging play experiences, as well as risks" (pg 70). It highlights:

- Children and young people need to encounter some real risks if they are to respond positively to challenging situations and learn how to deal with uncertainty. This cannot be achieved by limiting them to supposedly safe environments. Therefore, providers of play opportunities have no choice but to offer situations in which children and young people can experience real, not make-believe, hazards. (pg 99)
- Striking the right balance between protecting children from the most serious risks and allowing them to reap the benefits of play is not about eliminating risk. Nor is it about complicated methods of calculating risks or benefits. In essence, play is a safe and beneficial activity. Sensible adult judgements are all that is generally required to derive the best benefits to children whilst ensuring that they are not exposed to unnecessary risk. (pg 6)
- A more forgiving society is required that admits that *the health and welfare of children and* young people is not synonymous with injury prevention.
- There are benefits from this approach at all levels and for all those involved in play, but above all for the children, who will have happier and more satisfying experiences of childhood with richer opportunities for healthy growth and development into competent and confident adults. (pg 102)
- A well-conducted risk-benefit assessment process that is properly acted upon should provide a sound and reasonable defence against liability claims and prosecutions relating to health and safety matters. (pg 10)
- Confusion may also arise from difficulties in applying workplace risk management systems to
 play and other public settings. The primary aim of health and safety in the workplace is
 reducing risk. It has been argued that these principles cannot be applied without
 modification and thought to play provision, where the focus is on providing a variety of
 experiences, some of which may be challenging and involve risk. (pg 11)
- Altering playground design in an attempt to remove as much risk and challenge as possible, prevents providers from offering important benefits to the vast majority of children and young people. It may also lead more adventurous children to seek physical challenges in other, less well-managed environments, while others settle for sedentary activities. (pg 13)
- There is growing concern about how safety is being addressed in children's play provision. Fear of litigation is leading many play providers to focus on minimising the risk of injury at the expense of other more fundamental objectives. The effect is to stop children from enjoying a healthy range of play opportunities, limiting their enjoyment and causing potentially damaging consequences for their development. This approach ignores clear evidence that playing in play provision is a comparatively low risk activity for children. (pg 110)

- Play provision is uniquely placed to offer children the chance to learn about risk in an environment designed for that purpose, and thus to help children equip themselves to deal with similar hazards in the wider world. (pg 112)
- It is the job of all those responsible for children at play to assess and manage the level of risk, so that children are given the chance to stretch themselves, test and develop their abilities without exposing them to unacceptable risks. This is part of a wider adult social responsibility to children. If we do not provide controlled opportunities for children to encounter and manage risk, then they may be denied the chance to learn these skills. They may also be more likely to choose to play in uncontrolled environments where the risks are greater. (pg 111)
- Providers should strike a balance between the risks and the benefits. This should be done on the basis of a risk assessment. Crucially, this risk assessment should involve a risk-benefit trade-off between safety and other goals, which should be spelt out in the provider's policy. Given children's appetite for risk-taking, one of the factors that should be considered is the likelihood that children will seek out risks elsewhere, in environments that are not controlled or designed for them, if play provision is not challenging enough. Another factor is the learning that can take place when children are exposed to, and have to learn to deal with, environmental hazards. (pg 112) Striking the right balance does not mean:
 - All risks must be eliminated or continually reduced.
 - Every aspect of play provision must be set out in copious paperwork as part of a misguided security blanket.
 - o Detailed assessments aimed at high-risk play activities are used for low-risk activities.
 - o Ignoring risks that are not beneficial or integral to the play activity, such as those introduced through poor maintenance of equipment.
 - Mistakes and accidents will not happen. (pg 17-18)
- Safety in play provision is not absolute and cannot be addressed in isolation. Play provision is
 first and foremost for children, and if it is not exciting and attractive to them, then it will
 fail, no matter how 'safe' it is. Designers, managers and providers will need to reach
 compromises in meeting these sometimes-conflicting goals. These compromises are a
 matter of judgement, not of mechanistic assessment. The judgements should be based on
 both social attitudes and on broadly-based expert opinion informed by current good
 practice. They should be firmly rooted in objectives concerned with children's enjoyment and
 benefit. (pg 113)
- Play is great for children's well-being and development. When planning and providing play opportunities, the goal is not to eliminate risk, but to weigh up the risks and benefits. No child will learn about risk if they are wrapped in cotton wool. (pg 18)

(In the UK, the Courts have made clear that when health and safety law refers to 'risks', it is not contemplating risks that are trivial or fanciful) – Play Safety Forum and Health and Safety Executive (pg 17)

Risk in Play & Learning⁸

ISGA describe themselves as a "global network of organizations and professionals working to enrich children's learning and play by improving the way school grounds are designed and used". In 2017 the issued the Risk in Play & Learning Declaration to highlight the importance of risk for the development of healthy young people. See below:

Risk in Play & Learning | UBUD-HÖÖR DECLARATION SEPTEMBER 2017

RISK-TAKING OPPORTUNITIES are an essential component of a well-functioning school ground. Adults and institutions have a responsibility to use common sense in providing and allowing risk-taking activities for children and young people.

Risk is Essential for Health and Well-Being

IF YOU DON'T TAKE A STEP you will never learn to walk. Children and young people need to take risks in order to develop cognitive, social, physical and psychological competencies.

CHILDREN AND YOUNG PEOPLE of all abilities have an equal need and right to have opportunities to take risks and realize these benefits.

THIS IS SUPPORTED by the United Nations Convention on the Rights of the Child (Article 31, General Comment 17).

Learning through Experience

RISK-TAKING ALLOWS children and young people to learn vital lessons about themselves and their world. These are lessons that cannot be taught and can only be learned through experience. Caution, resilience, courage, knowledge about one's own abilities and limitations, and the self-confidence to reach beyond them are learned through self-chosen action.

SINCE THE WORLD IS FULL of risks, children need to learn to recognize and respond to them in order to protect themselves and to develop their own risk assessment capabilities.

Beneficial Risk

RESEARCH SHOWS that an indiscriminate 'risk-minimization' policy can be a source of harm, not benefit.

HURT CAN PROVIDE A POSITIVE experience. Children and young people learn by mistakes and therefore need opportunities to fail.

Call to Action: As Safe as Necessary

EDUCATORS ARE RESPONSIBLE for providing children and young people with opportunities to develop life competencies such as common sense, problem solving and confidence.

PARENTS AND ADULT FAMILY MEMBERS, school boards, administrators, legislators, legal authorities, and insurers should all devise policies and processes that permit schools to provide activities with beneficial levels of risk.

THOSE WHO PLAN, design, manage, supervise and maintain school environments should be encouraged to take benefits of risk into account.

SCHOOL GROUNDS should not be as safe as possible but as safe as necessary.

Strategies for Recess in Schools⁹

"This document . . . describes strategies for planning and providing recess in school to help increase participation in physical activity and improve academic achievement" (pg 1)

Recess benefits students by:

- Increasing their level of physical activity.
- Improving their memory, attention, and concentration.
- Helping them stay on-task in the classroom.
- Reducing disruptive behaviour in the classroom.
- Improving their social and emotional development (e.g., learning how to share and negotiate). (pg 2).

Guidance for recess includes the following:

- Prohibiting the replacement of physical education with recess or using recess to meet time requirements for physical education policies.
- Providing schools and students with adequate spaces, facilities, equipment, and supplies for recess.
- Ensuring that spaces and facilities for recess meet or exceed recommended safety standards.
- Prohibiting the exclusion of students from recess for disciplinary reasons or academic performance in the classroom.
- Prohibiting the use of physical activity during recess as punishment.
- Providing recess before lunch.
- Providing staff members who lead or supervise recess with ongoing professional development. (pg 3)

The Association Between School-Based Physical Activity, Including Physical Education, and Academic Performance¹⁰

The CDC conducted this review to synthesise the scientific literature to understand the impact of physical activity and physical education on cognitive skills and attitudes, academic behaviours, and academic achievement. They highlight:

- School boards, school administrators, and principals can feel confident that maintaining or increasing time dedicated for physical activity during the school day will not have a negative impact on academic performance, and it may positively impact students' academic performance.
- Researchers reported that participating in physical activity was positively related to
 outcomes including academic achievement, academic behaviours, and indicators of
 cognitive skills and attitudes, such as concentration, memory, self-esteem, and verbal skills.
- The study results suggest that school-based physical education either leads to a positive result or is associated with no change in academic performance.

- The studies also suggest that increased time spent in physical education is not likely to detract from academic performance even when less time is devoted to subjects other than physical education . . . No negative associations were found.
- The studies in this review also suggest that physical activity [during recess and activity breaks
 during standard classroom instruction] can impact cognitive skills and attitudes, important
 components of improved academic performance. This includes enhanced concentration and
 attention as well as improved classroom behaviour. None of the studies found negative
 associations.
- Ultimately, schools should continue to offer or increase opportunities for physical activity. There is evidence that physical activity may help improve academic performance (including grades and standardised test scores) in some situations. Increasing or maintaining time dedicated to physical education does not adversely impact academic performance.
- To enable students to meet these recommended levels of physical activity, the National Association for Sport and Physical Education recommends . . . implement[ing] a comprehensive school physical activity program, which includes quality physical education; physical activity before, during, and after school, including recess and other physical activity breaks; extracurricular, non-competitive physical activity clubs; interscholastic sports; and walk- and bike-to-school initiatives.

The Crucial Role of Recess in School¹¹

In the US, there is a "growing trend toward reallocating time in school to accentuate the more academic subjects has put [recess] . . . at risk" (pg. 183). The AAP therefore, provide this policy statement that highlights:

- Recess is a necessary break in the day for optimising a child's social, emotional, physical, and cognitive development. In essence, recess should be considered a child's personal time, and it should not be withheld for academic or punitive reasons.
- Cognitive processing and academic performance depend on regular breaks from concentrated classroom work. This applies equally to adolescents and to younger children.
 To be effective, the frequency and duration of breaks should be sufficient to allow the student to mentally decompress.
- Recess is a complement to, but not a replacement for, physical education. Physical education
 is an academic discipline. Whereas both have the potential to promote activity and a healthy
 lifestyle, only recess (particularly unstructured recess) provides the creative, social, and
 emotional benefits of play.
- Whether structured or unstructured, recess should be safe and well supervised. Although
 schools should ban games and activities that are unsafe, they should not discontinue recess
 altogether just because of concerns connected with child safety. Environmental conditions,

- well-maintained playground equipment, and well-trained supervisors are the critical components of safe recess.
- Peer interactions during recess are a unique complement to the classroom. The lifelong skills
 acquired for communication, negotiation, cooperation, sharing, problem solving, and
 coping are not only foundations for healthy development but also fundamental measures of
 the school experience. (pg 186)

The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds¹²

Ginsburg's clinical report, although aimed at paediatricians, has significant value for teachers and parents:

- . . . promote free play as a healthy, essential part of childhood . . . recommend that all children are afforded ample, unscheduled, independent, non-screen time to be creative, to reflect, and to decompress. They should emphasize that although parents can certainly monitor play for safety, a large proportion of play should be child driven rather than adult directed.
- . . . emphasize the advantages of active play and discourage parents from the overuse of passive entertainment (e.g., television and computer games).
- . . . emphasize that active child-centred play is a time-tested way of producing healthy, fit young bodies.
- . . . emphasize the benefits of "true toys" such as blocks and dolls, with which children use their imagination fully, over passive toys that require limited imagination.
- . . . educate families regarding the protective assets and increased resiliency developed through free play and some unscheduled time.
- . . . reinforce that parents who share unscheduled spontaneous time with their children and who play with their children are being wonderfully supportive, nurturing, and productive.
- . . . discuss that, although very well intentioned, arranging the finest opportunities for their children may not be parents' best opportunity for influence and that shuttling their children between numerous activities may not be the best quality time.
- . . . remind parents that the most valuable and useful character traits that will prepare their children for success arise not from extracurricular or academic commitments but from a firm grounding in parental love, role modelling, and guidance.
- ... educate themselves about appropriate resources in their own community that foster play and healthy child development and have this information available to share with parents.
- ... encourage parents to allow children to explore a variety of interests in a balanced way without feeling pressured to excel in each area ... encourage parents to avoid conveying the unrealistic expectation that each young person needs to excel in multiple areas to be considered successful or prepared to compete in the world. In parallel, they should promote

balance in those youth who are strongly encouraged to become expert in only 1 area (e.g., a particular sport or musical instrument) to the detriment of having the opportunity to explore other areas of interest.

• As parents choose childcare and early education programs for their children . . . reinforce the importance of choosing settings that offer more than "academic preparedness." They should be guided to also pay attention to whether the settings attend to the social and emotional developmental needs of the children.

The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds: Focus on Children in Poverty¹³

Milteer and Ginsburg provide a second clinical report on play aimed at paediatricians but with added focus on children in poverty. Again, it has significant value for teachers and parents:

- Because play contributes substantially to the healthy development and well-being of children, it is important that the inclusion of play in homes, schools, and communities [is promoted]
- . . . educate parents about the importance of free, unstructured play in the normal development of children.
- Parents should be encouraged to participate in physical activities with their children that will not have a financial impact on the family.
- ... educate parents about the negative impact of media exposure on children and encourage them to limit screen time and substitute other activities, including playtime and outdoor activities, for screen time.
- ... advocate for safe play spaces for children who live in communities and attend schools with
 a high proportion of low-income and poor children by emphasizing that the lifelong success
 of children is based on their ability to be creative and to apply the lessons learned from
 playing.
- . . . educate parents about the importance of children's play outdoors in nature. **Spending** unstructured time in nature, surrounded by dirt, trees, grass, rocks, flowers, and insects inspires children's play and offers physical and emotional benefits.
- ... consider offering presentations to help educators, community leaders, faith-based groups, and politicians understand the developmental benefits of play to children.

The Power of Play, A Pediatric Role in Enhancing Development in Young Children¹⁴

Key findings from Yogman et al (2018, pg 11):

- Play is intrinsically motivated and leads to active engagement and joyful discovery. Although
 free play and recess need to remain integral aspects of a child's day, the essential
 components of play can also be learned and adopted by parents, teachers, and other
 caregivers to promote healthy child development and enhance learning.
- Early brain development research shows that *learning is better fuelled by facilitating the* child's intrinsic motivation through play rather than extrinsic motivations, such as test scores.
- The emphasis in this preventive and developmental model is to promote resilience in the
 presence of adversity by enhancing executive functioning skills with free play and guided
 play.
- Play provides ample opportunities for adults to scaffold the foundational motor, social emotional, language, executive functioning, math, and self-regulation skills needed to be successful in an increasingly complex and collaborative world. Play helps to build the skills required for our changing world.
- Play provides a singular opportunity to build the executive functioning that underlies adaptive behaviours at home; improve language and math skills in school; build the safe, stable, and nurturing relationships that buffer against toxic stress; and build social emotional resilience.

What works in schools and colleges to increase physical activity¹⁵

Public Health England prepared this resource "for head teachers, college principals, staff working in education settings" (pg 1) amongst other professionals. The report highlights the following benefits of physical activity:

- Enhanced cardio metabolic health; musculoskeletal health/muscular strength, bone health and cardiorespiratory fitness.
- Enhanced mental wellbeing including positive self-esteem and lower levels of anxiety and stress.
- Emerging association with academic achievement, improved concentration and attention.
- Improved confidence and peer acceptance. (pg 11)

Public Health England have developed the following principals to "support schools and colleges in implementing fun, effective and sustainable physical activity" (pg 24):

 Develop and deliver multi-component interventions – adopting a 'whole of community (school/college) approach' appears to be most effective for increasing physical activity: incorporating curricular learning with the culture, ethos and environment and engagement of the wider school community.

- Ensure skilled workforce ensuring staff have the confidence and competence to offer high quality experiences of both physical education and physical activity across the school/college day.
- Engage student voice giving students a voice and enhancing their ownership of physical activity delivery to ensure that activities are appropriately tailored to their needs can support participation. (pg 6)
- Create active environments good access to, and integration in the school/college day of, open space, forests, parks and playgrounds are positively associated with physical activity levels. Access to a range of equipment, along with non-traditional play materials also support physical activity among children and young people.
- Offer choice and variety offering a variety of physical activity opportunities for young
 people to take part in, including free play can increase participation in physical activity. In
 addition, a focus on games and fun, as well as the more traditional sports or competitive
 activities, can help to encourage participation, particularly among inactive pupils.
- Embed in curriculum, teaching and learning increasing the amount of time spent being physically active during PE and other lessons can improve both physical development, educational outcomes and emotional development.
- Promote active travel active travel can play a key role in contributing to children and young people's physical activity levels. Travel plans which include a range of active travel options, have been found to increase physical activity levels among children and young people. (pg
 7)

In championing a physically active culture and ethos, schools and college leaders will want to consider:

- the capacity and capability of staff to lead and promote activities
- the suitability of outdoor and indoor space
- the availability of financial and other resources
- ideas on how to integrate physical activity into the wider school or college day
- the differing needs and preferences of children and young people
- the evidence of how physical activity enables learning and achievement across the curriculum, particularly amongst more disadvantaged children and young people
- what is appropriate for age and stage of physical development
- taking a whole school or college approach to increasing levels of physical activity (pg 23)

What the research says - Summary

Domestic and international research has identified that physical activity (especially through play when it involves risk taking), physical education, recess (i.e. break times), and active transport are highly important for student wellbeing. Of added relevance for Te Pae Here are the benefits that improve young people's resilience, anxiety, and mental/emotional wellbeing as well as their academic success. This summary includes general benefits, further benefits specific to 'academic' learning, and

recommendations. All recommendations are direct or paraphrased citations from sources outside Taakaro Ora as indicated.

General Benefits

- Increase in physical activity and fitness^{1,3,9,10,12,13,14,15}, cardio metabolic health; musculoskeletal health/muscular strength, and bone health¹⁵, positive self-esteem^{1,15}social skills¹, resilience^{1,2,8,13}, creativity, risk management skills^{1,3,8},independence and leadership by allowing children to determine their own outcomes^{2,6}, persistence⁶, executive functioning in children^{1,14}— an advanced cognitive system essential for planning, problem solving, inhibitory control, and managing novel or potentially dangerous situations.¹
- Improves fundamental movement skills², social and emotional development and connection^{2,9,10,12,13,14}, young people's understanding of their relationship with the physical environment², adaptive behaviours at home, builds the safe, stable, and nurturing relationships that buffer against toxic stress¹⁴, peer acceptance¹⁵, confidence^{8,15}, and memory.^{9,10}
- Helps with the development of flexible, adaptive strategies to the problems that life offers children⁵, including cognitive, social, physical and psychological competencies⁸, and aids better decision-making based around elements of challenge and risk.²
- Play reduces anxiety and stress^{1,15} and does not increase the prevalence of injuries.^{1,3}
- Encourages children to be self-directed, independent, autonomous, creative, innovative, spontaneous, original, and open.^{2,5,6}
- Play is a vital and fundamental part of the human experience; it is important to the lives of children in that it gives them pleasure in being alive and is essential to their healthy physical and mental growth, able to function in the culture and society in which they are born.⁵
- Play provision is uniquely placed to offer children the chance to learn about risk in an environment designed for that purpose, and thus to help children equip themselves to deal with similar hazards in the wider world.¹⁵

Further Benefits Specific to 'Academic' Learning

- Maintaining or increasing time dedicated for physical activity during the school day (e.g. physical education, physical activity breaks, or recess) will not have a negative impact on academic performance.^{9,10}
- Participating in physical activity was positively related to outcomes including academic
 achievement^{9,10,15}, academic behaviours, and indicators of cognitive skills and attitudes, such
 as concentration, memory, self-esteem, and verbal skills.^{9,10}
- School-based physical education either leads to a positive result or is associated with no change in academic performance even when less time is devoted to subjects other than physical education.¹⁰

- Offering physical activity breaks during standard classroom instruction may have favourable associations with some indicators of cognitive functioning (e.g., attention/concentration)^{6,9,10,15}; academic behaviours (e.g., classroom conduct); and/or academic achievement (including grades and standardized test scores) in some situations.^{9,10}
- Classroom physical activity breaks do not appear to have a negative relationship with academic performance. Indeed, classroom teachers can include physical activity breaks as one strategy to promote academic-related benefits for students.¹⁰
- Physical activity in general can impact cognitive skills and attitudes, important components of improved academic performance. This includes enhanced concentration and attention as well as improved classroom behaviour.^{9, 10}
- Recess is associated with improvements in attention, concentration, and/or on-task classroom behaviour.^{9,10}
- Play captures many of the features that we know from research lead to deeper learning, and thus provides an optimal environment to develop the skills and knowledge that children need for education achievements and to thrive and succeed as adults.^{5,6}
- Improves language and math skills in school.¹⁰
- Reduces disruptive behaviour in the classroom.^{9,10}
- Is the way humans develop efficient brains; playing enhances cortical connections and neural organisation; when humans play, the nerve signals the body generates create neural pathways that help with brain development and brain plasticity (flexibility). By so doing playing contributes to developing 'effective systems for learning' rather than particular learning outcomes.⁵
- Learning is better fuelled by facilitating the child's intrinsic motivation through play rather than extrinsic motivations, such as test scores. 12

Recommendations

Domestic and international research has made the following recommendations for schools, teachers, parents, and the community regarding play, physical activity, recess (i.e. break times), and risk taking. Ultimately, the recommendation is to act now. "As the current generation of NZ parents [and educators] is likely to be the last to have experienced a 'free-range' independently mobile childhood, and so may be the last to be amenable to initiatives that promote independence and managed risk in their own children. We need to find ways to reengage children with their communities, promote healthy living, and unlock their full potential" (State of Play, pg. 26).

Play

- Promote free play as a healthy, essential part of childhood. 12
- All children should be afforded ample, unscheduled, independent, non-screen time to be creative, to reflect, and to decompress.¹²

- Parents can certainly monitor play for safety, but a large proportion of play should be child driven rather than adult directed. Indeed, it requires little adult input.^{2,12}
- Emphasize the advantages of active play and discourage parents from the overuse of passive entertainment (e.g. television and computer games).^{2,12}
- Emphasize the benefits of "true toys" such as blocks and dolls, with which children use their imagination fully, over passive toys that require limited imagination.¹²
- Educate families regarding the protective assets and increased resiliency developed through free play and some unscheduled time.¹²
- Reinforce that parents who share unscheduled spontaneous time with their children and who
 play with their children are being wonderfully supportive, nurturing, and productive.¹²
- Although very well intentioned, arranging the finest opportunities for their children may not be parents' best opportunity for influence and that shuttling their children between numerous activities may not be the best quality time.¹²
- Remind parents that the most valuable and useful character traits that will prepare their children for success arise not from extracurricular or academic commitments but from a firm grounding in parental love, role modelling, and guidance.¹²
- Educate oneself about appropriate resources in their own community that foster play and healthy child development and have this information available to share with parents.¹²
- Encourage parents to allow children to explore a variety of interests in a balanced way without feeling pressured to excel in each area. Encourage parents to avoid conveying the unrealistic expectation that each young person needs to excel in multiple areas to be considered successful or prepared to compete in the world. In parallel, promote balance in those youth who are strongly encouraged to become expert in only 1 area (e.g. a particular sport or musical instrument) to the detriment of having the opportunity to explore other areas of interest.¹²
- Reinforce the importance of choosing settings that offer more than "academic preparedness."
 They should be guided to also pay attention to whether the settings attend to the social and emotional developmental needs of the children.¹²
- Promote the inclusion of play in homes, schools, and communities. 2,12,13
- Educate parents about the importance of free, unstructured play in the normal development of children.¹³
- Parents should be encouraged to participate in physical activities with their children that will
 not have a financial impact on the family.¹³
- Educate parents about the negative impact of media exposure on children and encourage them to limit screen time and substitute other activities, including playtime and outdoor activities, for screen time. This is an opportunity to educate parents about the AAP recommendations regarding no media time for children younger than 2 years and fewer than 2 hours per day for older children.¹³
- Advocate for safe play spaces for children who live in communities and attend schools with a
 high proportion of low-income and poor children by emphasizing that the lifelong success of
 children is based on their ability to be creative and to apply the lessons learned from playing.¹³

- Educate parents about the importance of children's play outdoors in nature. Spending unstructured time in nature, surrounded by dirt, trees, grass, rocks, flowers, and insects inspires children's play and offers physical and emotional benefits.¹³
- Presentations to help educators, community leaders, faith-based groups, and politicians understand the developmental benefits of play to children.¹³
- Providers should strike a balance between the risks and the benefits. This should be done based on a risk assessment. Crucially, this risk assessment should involve a risk-benefit trade-off between safety and other goals, which should be spelt out in the provider's policy. Given children's appetite for risk-taking, one of the factors that should be considered is the likelihood that children will seek out risks elsewhere, in environments that are not controlled or designed for them, if play provision is not challenging enough.¹⁵
- Play is the shared responsibility of everyone, and thus it needs clear and strong leadership
 from those who can enable play and must also include the views and opinions of young people
 themselves; they must have agency.^{2,6}
- Schools should re-think their understanding of play and widen the range of activities in which children could take part during break time.³
- Young people must have access to enriched and varied playful experiences within their local environments, including a variety of play types, as an individual and with others, space and place – man-made and natural, sensory rich, a sense of an escape from realism, and physical movement.²

Physical Activity

- The National Association for Sport and Physical Education (USA) recommends that schools
 implement a comprehensive school physical activity program, which includes quality physical
 education; physical activity before, during, and after school, including recess and other
 physical activity breaks; extracurricular, non-competitive physical activity clubs;
 interscholastic sports; and walk- and bike-to-school initiatives.⁴
- Because the vast majority of youth are in school for many hours, because schools have important infrastructure and are critical to the education and health of children and adolescents, and because physical activity promotes health and learning, it follows that physical activity should be a priority for all schools, particularly if there is an opportunity to improve academic achievement.⁴
- Develop and deliver multi-component interventions adopting a 'whole of community (school/college) approach' appears to be most effective for increasing physical activity: incorporating curricular learning with the culture, ethos and environment and engagement of the wider school community^{4,15}, encompasses all segments of the school day, including travel to and from school, school sponsored before- and after-school activities, recess and lunchtime breaks, physical education, and classroom instructional time.⁴
- Adopting joint or shared use agreements allowing school facilities to be used for physical activity programs during non-school hours.⁴

- Working with parent groups and parent—teacher associations to create a demand for physical activity and mobilize this effort.⁴
- Ensure skilled workforce ensuring staff have the confidence and competence to offer high
 quality experiences of both physical education and physical activity across the school/college
 day.¹⁵
- Engage student voice giving students a voice and enhancing their ownership of physical activity delivery to ensure that activities are appropriately tailored to their needs can support participation.¹⁵
- Create active environments good access to, and integration in the school/college day of, open space, forests, parks and playgrounds are positively associated with physical activity levels. Access to a range of equipment, along with non-traditional play materials also support physical activity among children and young people.¹⁵
- Offer choice and variety offering a variety of physical activity opportunities for young people to take part in, including free play can increase participation in physical activity. In addition, a focus on games and fun, as well as the more traditional sports or competitive activities, can help to encourage participation, particularly among inactive pupils.¹⁵
- Embed in curriculum, teaching and learning increasing the amount of time spent being
 physically active during PE and other lessons can improve both physical development,
 educational outcomes and emotional development.¹⁵
- Promote active travel active travel can play a key role in contributing to children and young people's physical activity levels. Travel plans which include a range of active travel options, have been found to increase physical activity levels among children and young people.¹⁵

Recess (i.e. break times)

- Recess is a necessary break in the day for optimizing a child's social, emotional, physical, and cognitive development.¹¹
- Recess should be considered a child's personal time, and it should not be withheld for academic or punitive reasons.^{9,11}
- Cognitive processing and academic performance depend on regular breaks from concentrated classroom work. This applies equally to adolescents and to younger children. To be effective, the frequency and duration of breaks should be enough to allow the student to mentally decompress. ¹¹
- Recess is a complement to, but not a replacement for, physical education. Physical education
 is an academic discipline. Whereas both have the potential to promote activity and a healthy
 lifestyle, only recess (particularly unstructured recess) provides the creative, social, and
 emotional benefits of play. 11
- Peer interactions during recess are a unique complement to the classroom. The lifelong skills
 acquired for communication, negotiation, cooperation, sharing, problem solving, and coping
 are not only foundations for healthy development but also fundamental measures of the
 school experience. ¹¹

- Prohibiting the replacement of physical education with recess or using recess to meet time requirements for physical education policies.⁹
- Providing schools and students with adequate spaces, facilities, equipment, and supplies for recess.⁹
- Ensuring that spaces and facilities for recess meet or exceed recommended safety standards.
- Prohibiting the exclusion of students from recess for disciplinary reasons or academic performance in the classroom.⁹
- Providing recess before lunch.⁹
- Providing staff members who lead or supervise recess with ongoing professional development.⁹

Risk Taking

- Educators are responsible for providing children and young people with opportunities to develop life competencies such as common sense, problem solving and confidence.⁸
- Parents and adult family members, school boards, administrators, legislators, legal authorities, and insurers should all devise policies and processes that permit schools to provide activities with beneficial levels of risk.⁸
- Those who plan, design, manage, supervise and maintain school environments should be encouraged to take benefits of risk into account.⁸
- School grounds should not be as safe as possible but as safe as necessary.⁸
- Since the world is full of risks, children need to learn to recognise and respond to them in order to protect themselves and to develop their own risk assessment capabilities. Hurt can provide a positive experience. Children and young people learn by mistakes and therefore need opportunities to fail. Risk-taking allows children and young people to learn vital lessons about⁸
- Reduce the number of rules children are exposed to during play, emphasising opportunities for increasing exposure to risky and challenging play.³
- Young people need the opportunity to experience risk and challenge through play.⁷
 - The provision of opportunities for all children to encounter or create uncertainty, unpredictability and potential risks (including physical, cognitive, social/emotional and spiritual) as part of their play.⁷
 - We do not mean putting children in danger of serious harm. 7

Additional Research4

Risk is Essential for Health and Wellbeing

- Baluja T., McGinn, D. (2012). Parental fear contributing to sedentary lifestyle of Canadian children: Report. Accessed online from https://www.theglobeandmail.com/news/national/parental-fear-contributing-to-sedentary-lifestyle-of-canadian-children-report/article4217180/
- Brussoni, M., & Olsen, L. L. (2013). The perils of overprotective parenting: fathers' perspectives explored. *Child: care, health and development, 39*(2), 237-245.
- Brussoni, M., Gibbons, R., Gray, C., Ishikawa, T., Sandseter, E., Bienenstock, A., ... & Pickett, W. (2015). What is the relationship between risky outdoor play and health in children? A systematic review. *International journal of environmental research and public health*, 12(6), 6423-6454.
- Brussoni, M., Olsen, L. L., Pike, I., & Sleet, D. A. (2012). Risky play and children's safety: Balancing priorities for optimal child development. *International journal of environmental research and public health*, *9*(9), 3134-3148.
- Bundy, A. C., Naughton, G., Tranter, P., Wyver, S., Baur, L., Schiller, W., ... & Niehues, A. (2011). The Sydney playground project: popping the bubblewrap-unleashing the power of play: a cluster randomized controlled trial of a primary school playground-based intervention aiming to increase children's physical activity and social skills. *BMC public health*, 11(1), 680.
- Bingley, A., & Milligan, C. (2004). *Climbing Trees and Building Dens: Mental health and well-being in young adults and the long-term effects of childhood play experience*. Institute for Health Research, Lancaster University.
- Fuselli, P., Yanchar, N. L., Canadian Paediatric Society, & Injury Prevention Committee. (2012). Preventing playground injuries. *Paediatrics & child health*, *17*(6), 328-328.
- Gill, T. (2007). No fear: Growing up in a risk averse society. Calouste Gulbenkian Foundation.
- Gerlach, A. J., Jenkins, E., & Hodgson, K. (2019). Disrupting assumptions of risky play in the context of structural marginalization: A community engagement project in a Canadian inner-city neighbourhood. *Health & place*, *55*, 80-86.
- Gray, P. (2011). The decline of play and the rise of psychopathology in children and adolescents. *American Journal of Play*, *3*(4), 443-463.
- Gray, C., Gibbons, R., Larouche, R., Sandseter, E., Bienenstock, A., Brussoni, M., ... & Power, M. (2015). What is the relationship between outdoor time and physical activity, sedentary behaviour, and physical fitness in children? A systematic review. *International journal of environmental research and public health*, 12(6), 6455-6474.
- Lavrysen, A., Bertrands, E., Leyssen, L., Smets, L., Vanderspikken, A., & De Graef, P. (2017). Risky-play at school. Facilitating risk perception and competence in young children. *European Early Childhood Education Research Journal*, 25(1), 89-105.

⁴ Many of these references are provided by the International School Grounds Alliance Declaration on Risk in Play & Learning (2017).

- Sandseter, E. B. H., & Kennair, L. E. O. (2011). Children's risky play from an evolutionary perspective:

 The anti-phobic effects of thrilling experiences. *Evolutionary psychology*, *9*(2), 147470491100900212.
- Smith, S. J. (1998). *Risk and our pedagogical relation to children: On the playground and beyond*. SUNY Press.
- Taylor, A. F., Kuo, F. E., (2006). Is contact with nature important for healthy child development? State of the evidence. In Spencer, C., & Blades, M. (Editors), *Children and their environments: Learning, using and designing spaces, 124*.
- Wright, F. (2016). Caution Children Playing: Exploring the Attitudes and Perceptions of Head-Teachers relating to Physical Risky-Play in Four to Eight Year-olds in Three State Primary Schools in Northern England (Doctoral dissertation, University of Huddersfield).

Learning through Experience (a.k.a Play)

- Becker, D. R., McClelland, M. M., Loprinzi, P., & Trost, S. G. (2014). Physical activity, self-regulation, and early academic achievement in preschool children. *Early Education & Development*, *25*(1), 56-70.
- Bertrandsb, A. L. E., Leyssenb, L., Smetsb, L., Vanderspikkenc, A., & De Graefd, P. Risky-Play at School. Facilitating Risk Perception and Competence in Young Children.
- Bundy, A. C., Luckett, T., Tranter, P. J., Naughton, G. A., Wyver, S. R., Ragen, J., & Spies, G. (2009). The risk is that there is 'no risk': a simple, innovative intervention to increase children's activity levels. *International Journal of Early Years Education*, 17(1), 33-45.
- Christensen, P., & Mikkelsen, M. R. (2008). Jumping off and being careful: children's strategies of risk management in everyday life. *Sociology of health & illness*, *30*(1), 112-130.
- Eager, D., & Little, H. (2011, August). Risk deficit disorder. In *Proceeding of IPWEA International Public Works Conference*.
- Fjørtoft, I. (2001). The natural environment as a playground for children: The impact of outdoor play activities in pre-primary school children. *Early childhood education journal*, 29(2), 111-117.
- Guldberg, H. (2009). Reclaiming childhood: Freedom and play in an age of fear. Routledge.
- Ito, K., Sudo, T., & Fjørtoft, I. (2016). Ecological Design: Collaborative Landscape Design with School Children. *Children, Nature, Cities*, 195.
- Han, M., Moore, N., Vukelich, C., & Buell, M. (2010). Does play make a difference? How play intervention affects the vocabulary learning of at-risk preschoolers. *American Journal of Play*, *3*(1), 82-105.
- Herrington, S., & Brussoni, M. (2015). Beyond physical activity: the importance of play and nature-based play spaces for children's health and development. *Current obesity reports*, *4*(4), 477-483.
- Jost, D., Yost, B. L., Mikus, S. M., & Ghiasi Ghorveh, M. (2016). Making room for risk in play environments and play standards. *Landscape Research Record*, *5*, 245-260.

- Kellert, S. R. (2002). Experiencing nature: Affective, cognitive, and evaluative development in children. *Children and nature: Psychological, sociocultural, and evolutionary investigations*, 117151.
- Kellert, S. R. (2012). Birthright: People and nature in the modern world. Yale University Press.
- Kochanowski, L., & Carr, V. (2014). Nature playscapes as contexts for fostering self-determination. *Children Youth and Environments*, 24(2), 146-167.
- Korpela, K., Kyttä, M., & Hartig, T. (2002). Restorative experience, self-regulation, and children's place preferences. *Journal of environmental psychology*, *22*(4), 387-398.
- Lavrysen, A., Bertrands, E., Leyssen, L., Smets, L., Vanderspikken, A., & De Graef, P. (2017). Risky-play at school. Facilitating risk perception and competence in young children. *European Early Childhood Education Research Journal*, 25(1), 89-105.
- Lindon, J. (2011). Too safe for their own good: Helping children learn about risk and lifeskills. JKP.
- McArdle, K., Harrison, T., & Harrison, D. (2013). Does a nurturing approach that uses an outdoor play environment build resilience in children from a challenging background?. *Journal of Adventure Education & Outdoor Learning*, 13(3), 238-254.
- Morrongiello, B. A. (2004). Do children's intentions to risk take relate to actual risk taking?. *Injury Prevention*, 10(1), 62-64.
- New, R. S., Mardell, B., & Robinson, D. (2005). Early Childhood Education as Risky Business: Going beyond What's" Safe" to Discovering What's Possible. *Early Childhood Research & Practice*, 7(2), n2.
- Pellegrini, A. D. (2009). The role of play in human development. Oxford University Press, USA.
- Smith, P. K. (2005). Play: Types and Functions in Human Development.

Beneficial Risk

- Ball, D. J. (2002). Playgrounds-risks, benefits and choices. HSE Books.
- Ball, D. J., Gill, T., & Spiegal, B. (2008). *Managing risk in play provision: implementation guide*. The Department for Children, Schools and Families (DCSF) and the Department for Culture, Media and Sport (DCMS).
- Broadhead, P., Howard, J., & Wood, E. (Eds.). (2010). *Play and learning in the early years: From research to practice*. Sage.
- Children's Play Council. National Playing Fields Association, PLAYLINK. (2000). *Best play: what play provision should do for children*. NPFA.
- Little, H., & Wyver, S. (2008). Outdoor play: Does avoiding the risks reduce the benefits?. *Australasian Journal of Early Childhood*, *33*(2), 33-40.
- Little, H., Wyver, S., & Gibson, F. (2011). The influence of play context and adult attitudes on young children's physical risk-taking during outdoor play. *European Early Childhood Education Research Journal*, 19(1), 113-131.
- Moore, R. (2014). Nature play and learning places. Creating and managing places where children engage with nature.

- New, R. S., Mardell, B., & Robinson, D. (2005). Early Childhood Education as Risky Business: Going beyond What's" Safe" to Discovering What's Possible. *Early Childhood Research & Practice*, 7(2), n2.
- Sandseter, E. B. H. (2007). Categorising risky play—how can we identify risk-taking in children's play?. *European Early Childhood Education Research Journal*, *15*(2), 237-252.
- Sandseter, E. B. H. (2009). Affordances for risky play in preschool: The importance of features in the play environment. *Early childhood education journal*, *36*(5), 439-446.
- Sandseter, E. B. H. (2009). Risky play and risk management in Norwegian preschools—A qualitative observational study. *Safety Science Monitor*, *13*(1), 2.
- Sandseter, E. B. H. (2010). Scaryfunny: A qualitative study of risky play among preschool children.
- Solomon, S. G. (2014). *The science of play: How to build playgrounds that enhance children's development*. University Press of New England.
- Tovey, H. (2011). Achieving the balance. *Outdoor provision in the early years. London: Sage Publications*, 12-22.
- Tovey, H. (2010). Playing on the edge: perceptions of risk and danger in outdoor play. *Play and learning* in the early years, 79-94.
- Susa, A. M., & Benedict, J. O. (1994). The effects of playground design on pretend play and divergent thinking. *Environment and Behavior*, *26*(4), 560-579.
- Valentine, G. (1997). "Oh Yes I Can." "Oh no you can't": Children and parents' understandings of kids' competence to negotiate public space safely. *Antipode*, *29*(1), 65-89.
- Wyver, S., Tranter, P., Naughton, G., Little, H., Sandseter, E. B. H., & Bundy, A. (2010). Ten ways to restrict children's freedom to play: The problem of surplus safety. *Contemporary Issues in Early Childhood*, 11(3), 263-277.

Additional Domestic Research

- Couper, L., & McLachlan, B. (2019). The role of adults in school playgrounds. *Learning and Connecting in School Playgrounds: Using the Playground as a Curriculum Resource*, 46.
- Jensen, A. (n.d). Conversations on risky play. In A. Jensen, N. Lia, R. Muriel & S. Hayes (Eds.), Outside voices: Conversations with early childhood educators about playing outdoors In Aotearoa New Zealand (pp. 59-87). Manuscript in preparation.
- Smith, M., Ikeda, E., Hinckson, E., Duncan, S., Maddison, R., Meredith-Jones, K., ... & Mandic, S. (2018).

 New Zealand's 2018 Report Card on Physical Activity for Children and Youth. *Auckland, New Zealand: The University of Auckland doi*, 10, k6.
- Walters, S. R., Duncan, S., McPhee, J., Atkins, D., & Millar, S. K. (2018). 'Real Play Families': A New Zealand case study. *International Journal of Play*, 7(1), 97-114.

Books of Interest

- Creative Schools: The Grassroots Revolution that's Transforming Education Sir Ken Robinson and Lou Aronica (2016)
- Balance and Barefoot: How Unrestricted Outdoor Play Makes for Strong, Confident, and Capable Children Angela Hanscom (2016)
- Free to Learn: Why Unleashing the Instinct to Play Will Make Our Children Happier, More Self-Reliant, and Better Students for Life Peter Gray (2013)
- Let the Children Play: How more play will save our schools and help children thrive Pasi Sahlberg and William Doyle (2019)
- Most Likely to Succeed: Preparing our Kids for the Innovation Era Tony Wagner and Ted Dintersmith (2016)
- Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul Stuart Brown and Christopher Vaughan (2010)
- Play = Learning: How Play Motivates and Enhances Children's Cognitive and Social-Emotional Growth
 Dorothy Singer, Roberta Michnick Golinkoff, Kathy Hirsh-Pasek (2006)
- Purposeful Play: A Teachers Guide to Igniting Deep and Joyful Learning Across the Day Kristine Mraz, Alison Porcelli, Cheryl Tyler (2016)
- The Child's Right to Play: A Global Approach Rhonda Clements, Leah Fiorentino (2004)
- The Good News About Bad Behaviour Katherine Reynolds Lewis (2019)
- The Self-Driven Child William Stixrud and Ned Johnson (2018)
- The Power of Play: Learning What Comes Naturally, David Elkind (2007)
- Why Play? Learning Through Play: A guide for parents and educators to gain a new perspective on play and how it impacts childhood and beyond Chris Pancoast (2019)
- You, Your Child, and School: Navigate your Way to the Best Education Sir Ken Robinson and Lou Aronica (2018)

References

1

- ³ Farmer, V. L., Fitzgerald, R. P., Williams, S. M., Mann, J. I., Schofield, G., McPhee, J. C., & Taylor, R. W. (2017). What did schools experience from participating in a randomised controlled study (PLAY) that prioritised risk and challenge in active play for children while at school? *Journal of Adventure Education and Outdoor Learning*, 17(3), 239-257.
- ⁴ Kohl III, H. W., & Cook, H. D. (Eds.). (2013). *Educating the student body: Taking physical activity and physical education to school*. National Academies Press.
- ⁵ Else, P., Hughes, B., Greenway, M., & Walter, M. (2014). Declaration on the Importance of Play. *International Play Association*. Retrieved from http://ipaworld.org/wp-content/uploads/2015/05/IPA Declaration-FINAL.pdf
- ⁶ Zosh, J. N., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Hirsh-Pasek, K., ... & Whitebread, D. (2017). *Learning through play: A review of the evidence*. LEGO Foundation.
- ⁷ Ball, D., Gill, T., & Spiegal, B. (2012). Managing Risk in Play Provision. Play England for the Play Safety Forum.
- ⁸ International School Grounds Alliance (2017). *Declaration on Risk in Play & Learning*. Retrieved from http://www.internationalschoolgrounds.org/risk
- ⁹ Centers for Disease Control and Prevention & SHAPE America—Society of Health and Physical Educators. (2017). Strategies for recess in schools.
- ¹⁰ Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: a systematic review of the literature. *Preventive medicine*, 52, S10-S20.
- ¹¹ Ramstetter, C. L., Murray, R., & Garner, A. S. (2010). The crucial role of recess in schools. *Journal of School Health*, 80(11), 517-526.
- ¹² Ginsburg, K. R. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, *119*(1), 182-191.
- ¹³ Milteer, R. M., Ginsburg, K. R., & Mulligan, D. A. (2012). The importance of play in promoting healthy child development and maintaining strong parent-child bond: Focus on children in poverty. *Pediatrics*, *129*(1), e204-e213.
- Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., Golinkoff, R. M., & Committee on Psychosocial Aspects of Child and Family Health. (2018). The power of play: A pediatric role in enhancing development in young children. *Pediatrics*, 142(3), e20182058.
- ¹⁵ Public Health England, Youth Sport Trust and Association of Colleges Sport. (2015). What Works in Schools and Colleges to Increase Physical Activity.

¹ Duncan, S. & McPhee, J. (2015). The New Zealand State of Play Survey. Human Potential Centre, AUT University

² Sport NZ (November 2017). Sport New Zealand Play Principles. Retrieved from https://sportnz.org.nz/assets/Uploads/attachments/Sport-New-Zealand-Play-Principles-Nov-2017.pdf