

Risk-taking and resilience: lessons from Japanese kindergartens

4. FIXED EQUIPMENT



About the project

This case study is one of a series, following research into the role outdoor environments in Japanese kindergartens can play in developing risk-taking behaviours and emotional, intellectual and physical resilience.

Funded and supported by the Great Britain Sasakawa Foundation, Play Learning Life, Learning through Landscapes and Tsurumi Junior College, the research team visited 15 settings in and around Tokyo and Yokohama. Information and evidence was gathered through desk research, outdoor observations, discussions with children and adults and targeted online surveys for teachers, practitioners and designers. *Click on the logos to visit our websites.*

In addition to these case studies, our project conclusions can be accessed via online and face to face CPD seminars, aimed at designers, policy makers and those working in schools and kindergartens so that they too can learn from what is being achieved in Japan.



Case study: Fixed equipment

This case study looks at fixed play equipment: permanent features in the grounds, which have been specifically designed for play; and examines how it is used to support risk-taking and resilience in Japanese schools and kindergartens.

Fixed equipment comes in many forms, sizes and materials. It can provide children with challenging and exciting experiences and places to sit and observe once they have climbed up high. Well designed and situated fixed equipment makes the most of its location and form to provide a wide range of play experiences, and can be adapted to meet children's changing needs and interests.

Jasmine Pasch's work on vestibular movement play has influenced how we chose to share our observations from Japan. Her 'Boing-Whoosh-RolyPoly' approach helps understand why children's bodies drive them to move in the way they do, and how equipment can build their physical and emotional strength, balance and resilience. To find out more, click [here](#) to visit the Early Education webpage.

Risk-taking + Resilience: Lessons from Japanese kindergartens was made possible by generous funding and support from the Great Britain Sasakawa Foundation, Play Learning Life CIC, Learning through Landscapes and Tsurumi Junior College.

Julie Mountain and Mary Jackson would like to express their sincere thanks to the children and adults who welcomed us so warmly to their schools and settings, and to Dr. Ko Senda and Ryuta Otsubo, researchers, interpreters, curators and outdoor play pedagogues. We simply wouldn't have had this incredible opportunity without you.

Fixed play equipment - swinging

WHOOSH... to and fro movements such as being rocked side to side, rocking forwards and backwards on hands and knees, running, starting and stopping, swinging, going on a zip wire, using bikes, scooters and slides, sliding down stairs on your bottom. **JP**

Opportunities for swinging are important in all settings and can be as simple as tying a rope to a thick tree branch, or providing bars at different heights to swing around. Traditional swings are common, and zip wires create more exciting ways for children to feel themselves fly through the air. In all cases, settings offer graduated challenge, with swinging opportunities increasing in height, length (aerial runways) or effort required.

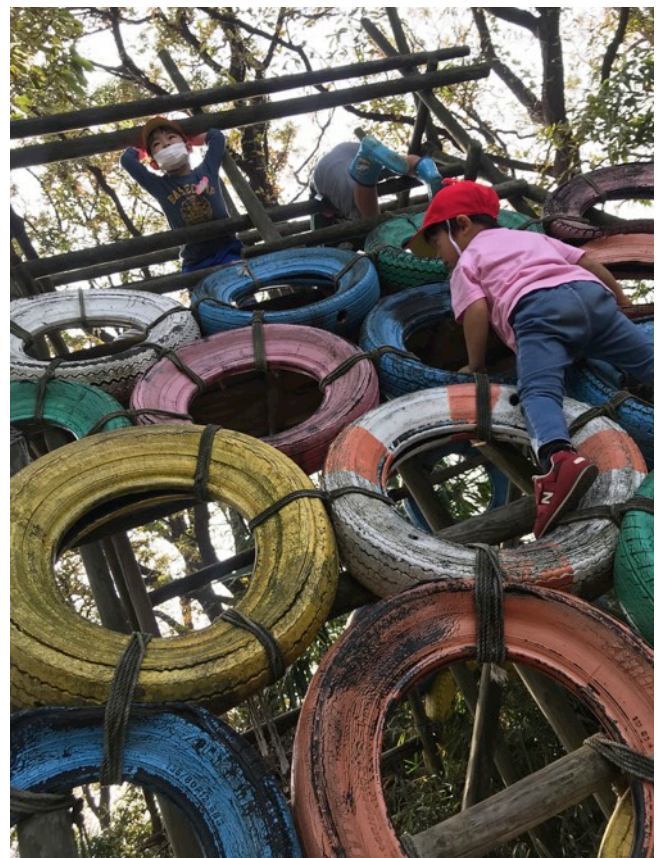


Fixed play equipment - climbing

*Children relish using their strength, so vigorous **PUSH AND PULL** activities like climbing are essential provision. Climbing and rough and tumble play engage children's proprioceptive system which helps them to get to know their bodies from the inside. JP*

Ranging from something as simple as a timber steps in an embankment or a wall of tyres to large structures with multiple opportunities for climbing, each setting provides children with different ways to ascend and descend, and build their skill levels and confidence. Sometimes children watch one another, memorising the movements needed to conquer tricky structures until they are ready to try them out for themselves. In all situations, they are supported by practitioners who are skilled in knowing when and how (and indeed, whether) to collaborate.

We noticed that children are particularly proficient at climbing vertical poles and posts.



Fixed play equipment - climbing

BOING... up and down movement on the vertical axis such as being lifted up and down or tossed high in the air, bouncing on a trampoline, hanging upside down, climbing and jumping off, hopping, skipping and jumping, or playing on a see saw. **JP**

'Open ended' play structures are common in kindergartens and often make use of the landscape around them. Children access and use these features in many different ways; play 'rules' are broken as children increase their tolerance of risk and challenge. Children might balance outside the barriers surrounding high-level platforms, clamber up a slide or suspend their bodies from a bridge.

Structures have multiple levels, entry and launch points allowing lots of children to use the equipment simultaneously, and include elements of retreat and prospect.



Fixed play equipment - sliding

Most settings have at least one slide; often there are several. The earthquake risk in Japan means that rapid exit from upper floors is crucial and slides from first and second floors of buildings are not uncommon – sometimes accompanied by clamber nets.

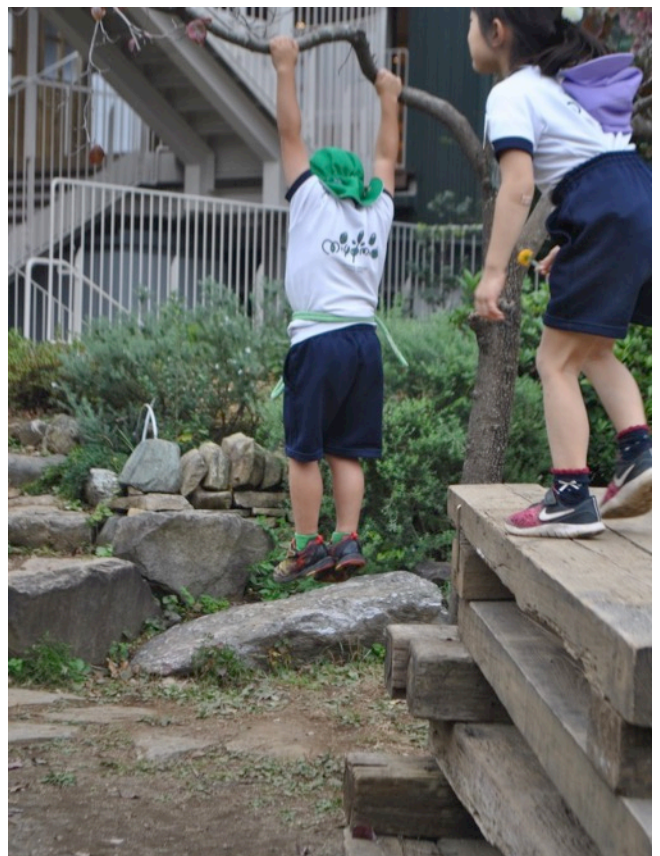
Undulating landscapes provide opportunities for slide installations that offer graduated risk. Embankment slides of differing lengths and gradients mean that children can decide where they are on the spectrum of risk-taking, and choose an experience that will keep thrills on just the right side of fearsome. Practitioners are always nearby to help children assess their confidence levels and provide assurance where needed – however, they won't interfere – verbally or physically – in the flow of play unless they judge it's necessary.

Tall play structures are frequently launch points for slides made from steel, timber, plastic or resin. Vertical poles and artificial grass are also used for sliding.



Fixed play equipment - climbing

Other features: Children have opportunities to hide, to jump, to climb, to handle tricky equipment (such as a two-person water pump) and to find spaces to meet with friends.



Risk-taking + Resilience: fixed equipment

Putting it into practice

Key lessons from our study of risk-taking and resilience in Japanese kindergartens:

Skilled practitioners

- Japanese practitioners engage fully with the children, sometimes climbing up structures with them or coming down a slide with the younger children. They are actively involved in the children's play and encourage and support them as they try out new activities. However, just as importantly, they understand when to participate and when to leave children to play without adult input.

Materials

- A variety of materials is used for fixed play structures. Most settings have at least one item of 'traditional' steel climbing equipment, but features built into landscapes tend to be constructed from timber or bamboo. Tyres and rope are commonly used in climbing structures.

Safer surfacing

- The majority of fixed play equipment is built onto the natural 'dirt' substrate with no additional surfacing provided. This surface has a large-grained structure which drains well and provides a small degree of impact absorption as children land on it. Infrequently, rubber matting is provided.

Large and small

- Settings provide fixed equipment of varying sizes, from huge timber towers through to small steel frames. Rope is used to create simple swings, and horizontal bars and vertical poles make the most of small spaces. Using every scrap of land available extend the challenge and delight for children.

Benefit Risk Assessment

- Cuts, bumps and grazes are an expected, and acceptable, outcome of outdoor play and learning. Broken bones are very rare - seen only once by two different teachers each with more than twenty years of experience - yet children are consistently able to experience the thrill of trying something new or extending what they have done previously. Risks are taken in an environment which is *as safe as necessary* and children learn by observing and experimenting. Equipment is designed to stretch children and be exciting each time it's used, and parents understand what this might mean!
- Large steps, high platforms, wobbly bridges and uneven surfaces allow children to manage their own changing bodies, with the support of friends and practitioners.



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