DNB311 ID Studio 7: Capstone - Isabelle Burkwood

# RESEARCH REPORT

**Enhancing the Value of Playgrounds for Primary School Students**

Word Count: 3764

PLAY

**Authenticity Statement**

*This is to certify that to the best of my knowledge, the content of this report is my own work. This report has not been submitted for any subject or for other purposes. I certify that the intellectual content of this report is the product of my own work and that all the assistance received in preparing this report and sources have been acknowledged.*

*Your name: Isabelle Burkwood*

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*Date: 13/09/26*

**AI Use Statement**

I have utilised Generative AI in this report (Claude and Otta.ai) to assist in various ways. The way I have used AI includes transcribing the audio recordings and improving the clarity of text.

*Your name: Isabelle Burkwood*

*Student number: n11621231*

*Date: 13/09/26*

# EXECUTIVE SUMMARY

The purpose of this research report was to explore how the value of primary school playgrounds can be enhanced for its students. To explore this topic, primary and secondary research was analysed.

Firstly, secondary research revealed the potential the playground has to support primary students, particularly for their development. Following, primary research included a survey and three interviews. These provided invaluable insights into what stakeholders see as important to playground design and key insights that need to be considered.

As a result of analysis, the design implications were developed. These design implications highlight the need for playgrounds to support open-ended play and allow risky play, while balancing safety.

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# THE TOPIC

01

# Introduction

**How can we enhance the value of school playgrounds for primary students?**

Play is vital to a child's development as it supports building cognitive, social and physical skills (Frost & Sutterby, 2017). Within schools, playground forms the primary context for play during break times, influencing student interactions and activity. Primary school is a critical period for children to develop healthy behaviours, including physical activity (Hyndman, 2017). As a convergence point for social interactions, physical activity and learning, the playground should be carefully designed to enhance value (Nijhof et al., 2018).

A key challenge is balancing opportunities for beneficial risk taking with safety considerations. As standards and requirements have evolved, it is increasingly important to prioritise and support the child's development while reducing hazards (Frost & Sutterby, 2017). Playgrounds must also accommodate for many students at a time, often in a limited space. In some schools, increasing student numbers and new classrooms are further diminishing the available space for play (Hyndman et al., 2022).

This project will address these challenges and explore how the design of school playgrounds can enhance the value provided to Australian primary school students (grades 1-6). Through secondary research, benchmarking, interviews and surveys, the study aims to achieve a greater understanding of primary school playgrounds to inform design implications. This will form the foundation for the development and delivery of a design outcome (see figure 2). By enhancing the value of the school playgrounds, this project will contribute to the UN Sustainable Development Goals (SDGs), particularly "3: Good Health and Wellbeing" and "4: Quality Education" (see figure 1).




Figure 1: United Nations Sustainable Development Goals (United Nations, n.d.)

# PROJECT STRUCTURE

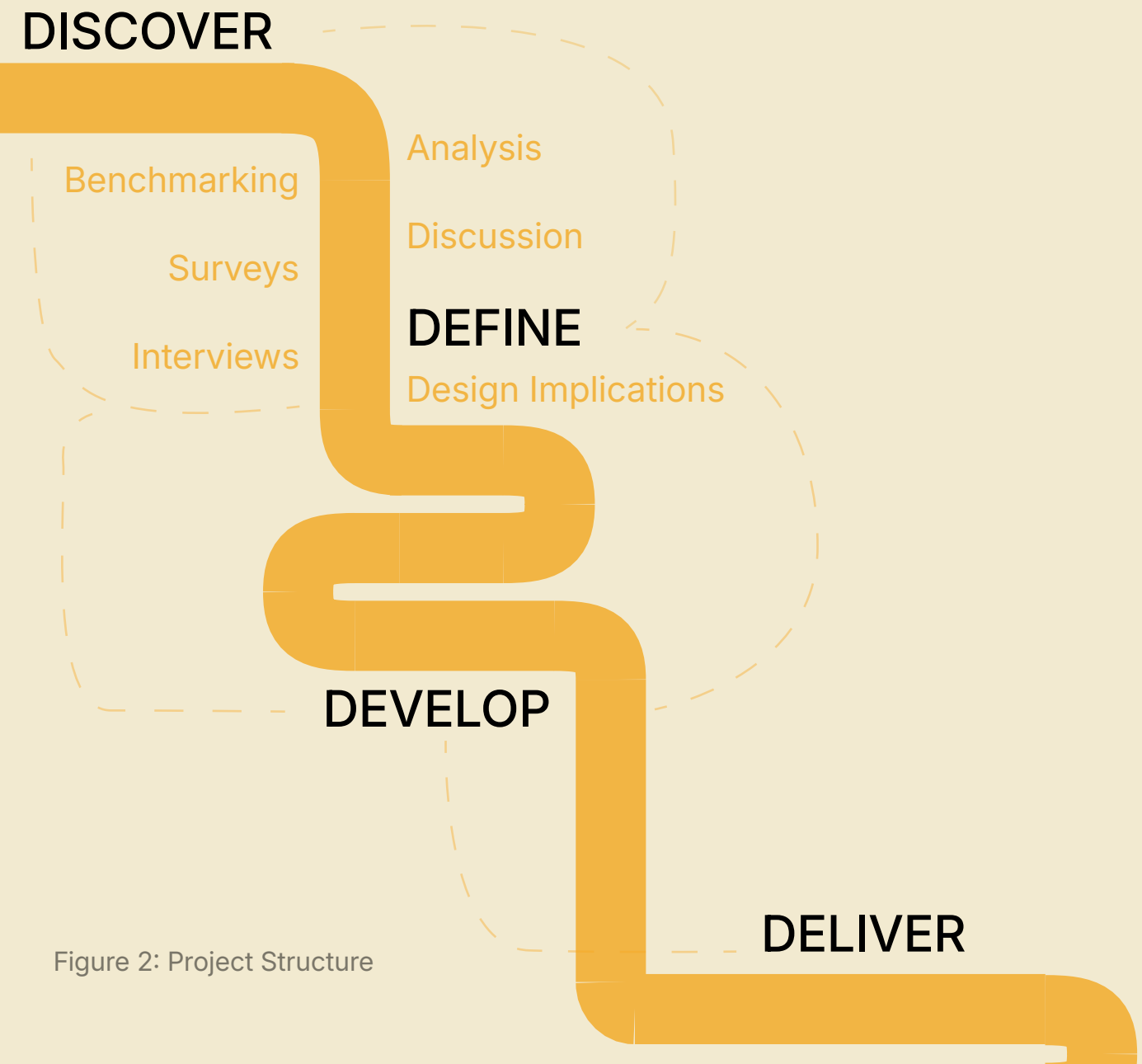



Figure 2: Project Structure

# BACKGROUND

## Overview

In a child's primary years, it is vital that children are able to engage in a variety of play to support their learning and development (Raising Children Network, 2025). Play should include both structured (often guided by an adult) and unstructured play (which allows for imaginative games) (Raising Children Network, 2025). In the Australian school context, playgrounds form the primary context for unstructured play. Over the course of their primary school education, students will have access to school playgrounds up to 4200 times during breaks (Hyndman, 2017). Allowing children to have frequent opportunities for outdoor play in these spaces is critical for a child's healthy development (Frost & Sutterby, 2017).

## Benefits of Playgrounds

Play supports development by providing numerous benefits across three key areas: physical, cognitive and social development (Nijhof et al., 2018). Through playgrounds, primary-aged children can explore and develop skills in a safe context (Nijhof et al., 2018). Additionally, engaging in play supports wellbeing and helps build their confidence (Raising Children Network, 2025).

## Physical Development

School playgrounds can account for up to 50% of a primary school student's recommended daily physical activity (Hyndman, 2017). For some children, access to physical activity is limited outside of school (Hyndman, 2017). The playground provides an opportunity to engage in an easily accessed and supervised space. Reduced physical activity increases the risk of cardiovascular disease, dementia, type 2 diabetes and osteoporosis (AIHW, 2024).

Developing physically active habits in primary aged students can be beneficial as studies indicate that active children are more likely to continue being active into adulthood (Hyndman, 2017). This has a broader impact when considering the global public health priority of increasing physical activity to prevent chronic diseases (Hyndman, 2017).

This is particularly relevant considering a trend of children increasing sedentary behaviour. The 24-Hour Movement Guidelines were developed by the Australian Government and includes guidelines for a child's daily physical activity (Department of Health, 2026). For children aged 5-17, they recommend over 60 minutes a day of moderate to vigorous physical activity (Department of Health, 2026). Additionally, within the 60 minutes there should be muscle-strengthening 3 days a week (such as climbing) and several hours of light physical activity (such as walking) (Department of Health, 2026). It also includes sitting time and quality sleep (Department of Health, 2026). In the 2023 National Nutrition and Physical Activity Survey, 18.3% aged 5-17 years met physical activity recommendations and 7.2% met all 24-Hour Movement Guidelines for Australians (ABS, 2026).

## Fundamental Movement Skills

The skills that should be supported can be categorised as fundamental movement skills (FMS). FMS are the foundational skills needed for movement in complex physical activities, such as sports (see table 1).

| Fundamental Movement Skills | Explanation | Examples |
|---|---|---|
| **Locomotor Skills** | Moving from one point to another | Running, walking, jumping, skipping |
| **Object Control Skills** | Controlling objects by hand or foot | Throwing or kicking a ball, using bats or racquets |
| **Stability Skills** | Balancing while moving or still | Climbing, twisting, swinging and spinning |

Table 1: FMS overview informed by: (Department of Education WA, 2013)

It is important to consider FMS in the design of the playground by providing opportunities to develop balance, climbing, throwing and catching (Pawlowski et al., 2023). The broader play space also plays a role, such as having space between play features to encourage locomotor skills (Pawlowski et al., 2023).

## Cognitive Development

Cognitively, play provides a range of benefits. Research supports that physical fitness can improve working memory executive control, attention span and academic performance in children (Hyndman, 2017). Additionally, playgrounds can facilitate imaginative play and creative thinking (Nijhof et al., 2018). Physical activity is also shown to assist with regulation and managing mental stress (Hyndman, 2017).

## Social Development

From a social development perspective, playgrounds provide opportunities for collaboration and group interactions. Children can explore social and communication skills, developing social competence and resilience (Nijhof et al., 2018). The interactions in the playground are invaluable to social development.

## Risk and Safety

In addition to supporting FMS development, playgrounds form an opportunity for children to learn from risk. In the 1950s, there was a playground safety movement which saw an increase in regulation of play equipment (Frost & Sutterby, 2017). Pressure to increase safety shifted the focus across playground equipment design, manufacturing, installation and funding (Frost & Sutterby, 2017). Often, the extensive regulations conflicted with the child needs and the existing community playground initiatives, meaning that many unique designs were non-compliant (Frost & Sutterby, 2017). Stringent regulations and safety requirements have dictated a reduced-risk play environment (Frost & Sutterby, 2017).

## Loose Parts Play

As a result of the early playground movement, play shifted from the early German kindergarten movement (which focused on educational, outdoor, nature-based play) to rigid play structures that suited an increasingly urbanised environment and stricter regulatory restrictions (Frost & Sutterby, 2017). The fixed structures dictate a specific aspect of how the equipment should be used and limited children's agency (Frost & Sutterby, 2017).

After an extensive focus on safety and regulation, the focus has shifted to the core development needs and whether a playground's value is diminished. Some organisations are reintroducing free play, outdoor activity, and opportunities for risk, responding to criticism that modern playgrounds are "too safe" and rigid (Vox, 2019). A loose play playground is often a collection of mismatched items that resembles a junkyard (Vox, 2019). The items provide opportunities for children to dictate the playground environment, taking risks and using creative problem solving (Vox, 2019).

A distinction is made between risks and hazards. Risks provide opportunities for children to take control and extend their skills, identify potential outcomes and manage their safety (Vox, 2019). Hazards, however, are the unexpected dangers that are difficult to see and should be mitigated (Vox, 2019). Loose parts playgrounds have been acknowledged as useful to promoting risky outdoor play and agency, representing a contrasting approach to the traditional playgrounds (Vox, 2019).

## Summary

Increasing value for playgrounds is heavily related to how well the playground is able to support the children's development. Primary school is a critical opportunity to engage students in active and imaginative play. This provides long term benefits as students are more likely to continue living an active and healthy lifestyle.

# BENCHMARKING

## OVERVIEW

A variety of play spaces were evaluated through benchmarking. These were across the categories of school playgrounds, public playgrounds, nature playgrounds, loose parts play spaces and interactive play equipment. Each of these categories offers distinct benefits and approaches to play. The process of benchmarking allowed for evaluation of competitor products and gaps in the market.

The below table provides an overview of the analysis conducted across these categories:

| Categories: | Playgrounds | | Nature Playgrounds | | Loose-Parts Playgrounds | Interactive Play Equipment |
|---|---|---|---|---|---|---|
| | School Playgrounds | Public Playgrounds | School Playgrounds | Public Playgrounds | | |
| **Number of playgrounds benchmarked:** | 7 | 2 | 2 | 4 | 3 | 6 |

Table 2: Benchmarking overview

## CRITERIA

The criteria used for benchmarking was based on FMS and the key benefits children need to gain from play. The playgrounds were assessed on these criteria using a 1 to 5 scaled rating. This provides an opportunity to explore how the play equipment supports the skill development required by primary aged students and identify where value can be enhanced.

| Criteria | Description |
|---|---|
| 1 | Absent - not clearly supported |
| 2 | Minimal - very limited support |
| 3 | Adequate - moderately supported |
| 4 | Good - meets best practice and is well-designed to support |
| 5 | Excellent - notably well executed and supportive |

Table 3: Benchmarking criteria scale

## Product Matrix

| Playgrounds | Physical Activity | Social Play | Creativity | Risk Taking and Challenge | Locomotion Skills | Object Control Skills | Body Movement /Stability | Total |
|---|---|---|---|---|---|---|---|---|
| Glasshouse Christian College Playground | 5 | 4 | 3 | 4 | 5 | 3 | 5 | 29 |
| Golden Grove Primary School | 4 | 4 | 3 | 5 | 4 | 2 | 4 | 26 |
| St Mary's Primary School | 5 | 4 | 4 | 5 | 5 | 2 | 5 | 30 |
| Plenty Parklands Primary School | 5 | 5 | 4 | 5 | 5 | 2 | 5 | 31 |
| Boronia Heights Primary | 5 | 2 | 2 | 4 | 5 | 2 | 5 | 25 |
| Westgrove Primary School | 4 | 4 | 4 | 3 | 5 | 2 | 5 | 27 |
| Buderim Mountain State School | 5 | 3 | 3 | 5 | 5 | 2 | 5 | 28 |
| Livvi's Place Brisbane | 4 | 5 | 4 | 4 | 5 | 2 | 5 | 31 |
| Riverside Green (South Bank) | 5 | 5 | 4 | 4 | 5 | 3 | 5 | 31 |
| Loose Parts Playground | | | | | | | | |
| Joomunjie Land | 3 | 5 | 5 | 5 | 3 | 5 | 4 | 30 |
| Imagination Playground by Rock-well Group | 3 | 5 | 5 | 3 | 3 | 5 | 4 | 28 |
| Nudel Kart | 3 | 5 | 4 | 4 | 3 | 5 | 4 | 28 |
| **Nature playgrounds:** St Edwards Primary School | 3 | 4 | 4 | 3 | 4 | 3 | 3 | 24 |
| Warril Parkland, Brisbane | 5 | 5 | 4 | 4 | 5 | 3 | 5 | 31 |
| West End State School | 4 | 3 | 3 | 3 | 4 | 1 | 4 | 22 |
| Pod Playground, Canberra | 5 | 5 | 4 | 4 | 5 | 2 | 5 | 30 |
| Adelaide zoo's nature's playground | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 33 |
| Lorikeet Park, Gold Coast | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 32 |
| Interactive Play Equipment | | | | | | | | |
| Memo Activity Zone | 4 | 5 | 3 | 3 | 4 | 2 | 3 | 24 |
| Lü Interactive Playground | 4 | 5 | 2 | 3 | 4 | 5 | 4 | 27 |
| Funky Animals and Spring Riders | 3 | 1 | 2 | 2 | 2 | 1 | 4 | 15 |
| Kid Powered Rhythm Spinner | 2 | 2 | 5 | 3 | 2 | 4 | 2 | 20 |
| Post Mounted Spinner | 2 | 2 | 1 | 1 | 1 | 3 | 2 | 12 |
| Lappset Sona Interactive dance and play arch | 5 | 5 | 3 | 4 | 3 | 1 | 4 | 25 |

Table 4: Benchmarking

In the product benchmarking matrix, it is apparent that most playgrounds provide limited opportunities for object control skills. Playground equipment is usually fixed and does not include objects that can be moved. Additionally, playgrounds were often limited in offering creativity opportunities. Most playgrounds rely on the play surface or sandpits to create opportunities for creativity and open-ended play.

Loose-parts playgrounds performed better in these aspects. The loose parts allowed students to creatively approach challenges and risk. However, the number of loose parts playgrounds are limited. Interactive playground equipment varied and tended to excel in one aspect to target a specific skill.

This presents a product market gap for playgrounds that give children agency, allow for object control skills and engages children in physically active play.

# THE RESEARCH

# 02

# RESEARCH

## Overview

Central to user-centred design is building empathy through understanding user needs (IDEO, 2025). The primary research served the purpose of gathering valuable insights from experts and users (playground supervisors), building on the findings of the secondary research. At this generative stage of the design process, attitudinal research through surveys and interviews was used to understand stakeholder perspectives, how the play spaces are used and identify new opportunities (Rohrer, 2022).

## Methodology

A triangulation approach was used to increase the quality of the methodology. A triangulation approach is where multiple qualitative research methods and data sources are used to converge information (Carter et al., 2014). This increases the rigour of the research by confirming findings and presenting varied perspectives (Carter et al., 2014). Additionally, employing a singular method may limit the opportunities for stakeholders to participate in the research (Carter et al., 2014). In this study, a survey and three separate interviews were conducted (see table 5). This supported the generation of invaluable data from multiple stakeholders by method and data source triangulation (Carter et al., 2014).

| Method | Participants | Project Value |
|---|---|---|
| **Survey** | 106 participants who supervise primary play including:<br>• Classroom teachers<br>• OSHC staff<br>• Teacher aides<br>• Student teachers<br>• Other | A broad range of participants from Australian schools who have supervised play and can provide insights into the play spaces offered to students |
| **Interviews** | Teacher | Expertise in education and supervises students on playgrounds, providing insights into student activities and their observations of the play space |
| | Researcher - Landscape Architecture | Insights into research outcomes and important considerations for playground design |
| | Loose parts play worker | Insights into how a Brisbane-based loose parts play space operates and its impact on primary school students' play |

Table 5: Overview of primary research methods

## Survey

The survey was targeted towards those who supervise primary-aged students on a school playground (including teachers). Beneficially, surveys can provide both qualitative and quantitative data from a larger participant group (Jones et al., 2013). For the quality of the research, it was important that the survey engaged the participants, motivated completion and gathered quality responses (ABS, 2023). To increase participation, care was taken in the design of the survey by ensuring the questions were logically structured around a clear goal (Jones et al., 2013). Additionally, the survey included a selection of questions targeted to gathering valuable insights.

### *Recruitment*

The survey was distributed by email and social media for a broad range of responses from playground supervisors across Australia. To improve the response rate to the online survey, methods included keeping the questionnaire short, using a white background and distributing with an image (Jones et al., 2013). The Qualtrics survey generated 106 participants. The broad range of responses provided useful insight into the play spaces at various schools.

### *Limitations*

While efforts were made to reduce bias, the survey was subject to limitations. The electronic distribution by social media and emails limits the accessibility of the survey to participants (Jones et al., 2013). Care was taken to avoid leading questions, however the survey design may introduce inherent bias in the responses. Another limitation is that the survey is less useful for capturing in-depth information (Jones et al., 2013). Moreover, some data is lost due to misinterpreting responses and a lack of opportunity to ask follow-up questions. Through triangulation, this limitation is reduced by interviews.

## Interviews

Three semi-structured interviews were conducted. Interview participants included a teacher, loose parts play worker and landscape architecture researcher/academic. The semi-structured interview approach allowed for questions to guide the interview while providing opportunities for follow up questions, leading to deeper insights.

The interviews conducted each provided unique insights to specific areas relative to the project. The teacher provided insights into the play space at their school. As a supervisor at a primary school playground, they were able to share what is available to students and how the students interact in these spaces. Additionally, their education expertise provided an additional layer of depth to the research. From the landscape architecture expert, it was an invaluable opportunity to gain insights into playground research. Finally, the loose parts play worker had experience in an innovative play space. As someone who has been actively involved in bringing a loose parts playground to life, they provided insights into opportunities beyond the traditional play structure.

### *Limitations*

Semi-structured interviews can be subjected to inherent bias by the interview structure. Additionally, misunderstandings in communication can reduce the quality of the interview (Kakilla, 2021).

## Summary

The survey and interviews are important sources of data for this project. The research process will support an understanding of user needs. Through triangulation methodology, the rigour of the research is strengthened, which supports the analysis and findings.

# ANALYSIS AND FINDINGS

## Overview

Following data collection, the responses were analysed to find insights that could inform the design implications of this report. The survey resulted in both qualitative and quantitative data, while the interviews were qualitative in nature. For the survey, data included nominal, interval data which was analysed using statistical methods. For the short answer responses in the survey and the interviews, the analysis process included thematic analysis.

## Survey

All survey respondents supervised primary aged students (grade 1-6) on a school playground. The survey was completed primarily by classroom teachers (69%). Included in the "other" category was head of departments, relief teachers, learning support and special education, wellbeing and inclusion roles. When asked what grade levels they supervise, the respondents catered to a broad range of primary school grades, skewed slightly to lower primary years.

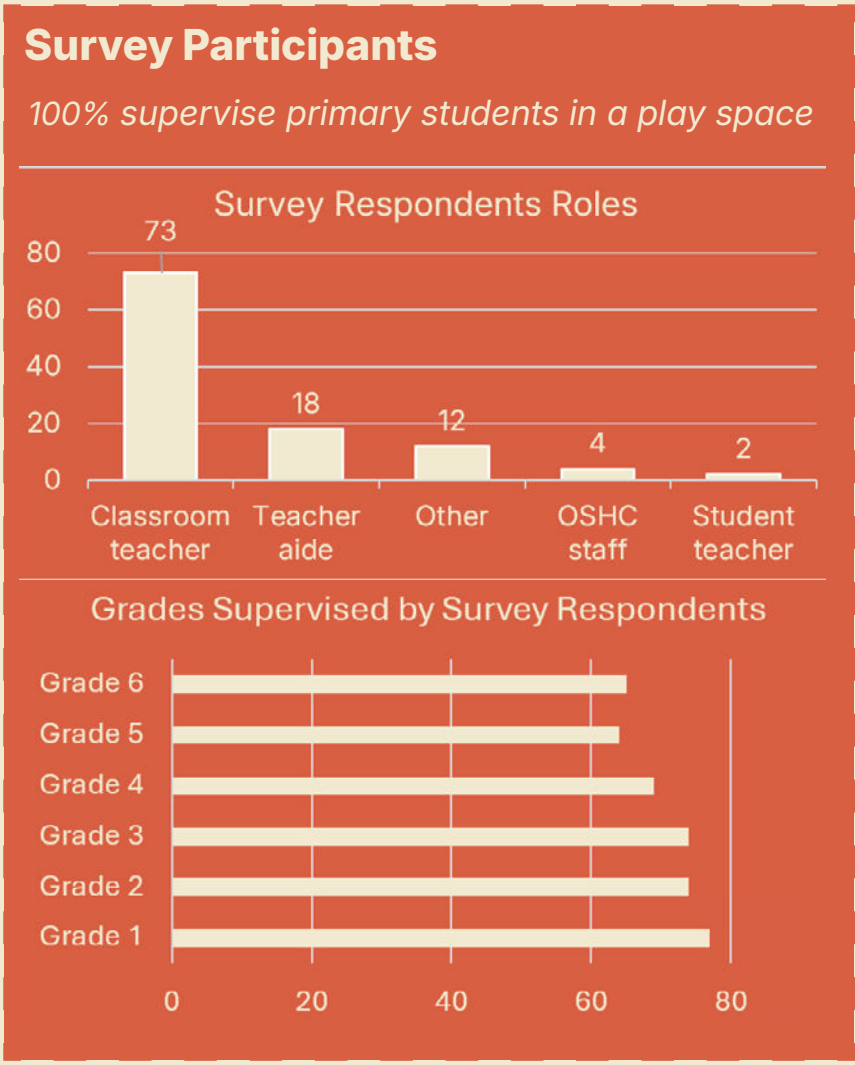



Figure 3: Survey respondents overview

## Playgrounds

When asked about the play spaces at their school, 77.8% of respondents reported that their play spaces were divided by age or grade. Most detailed that multiple grades were allocated to each playground. Additionally, schools with age and grade divided playgrounds often provide additional undivided or activity specific spaces. Sandpits, slides, climbing equipment and monkey bars was the most common equipment in the schools of the respondents. Each of these pieces of equipment offer benefits to the students for development. Sandpits allow for creativity and exploration, while monkey bars and climbing equipment support strength and balance.

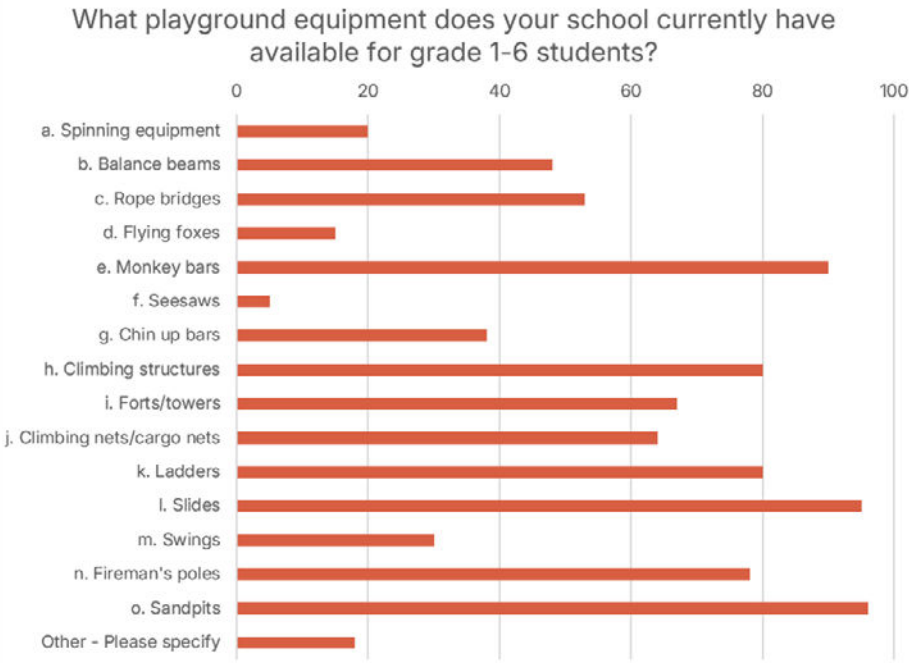



Figure 4: Primary school playground equipment

## Survey Insights

Injuries in the playgrounds were most often connected to monkey bars (included in 44 responses), followed by falling, tripping and collisions. Despite this, monkey bars were still commonly cited by respondents as the activity students enjoy most in the playground. This indicates the appeal of the monkey bars for developing skills and taking risks.

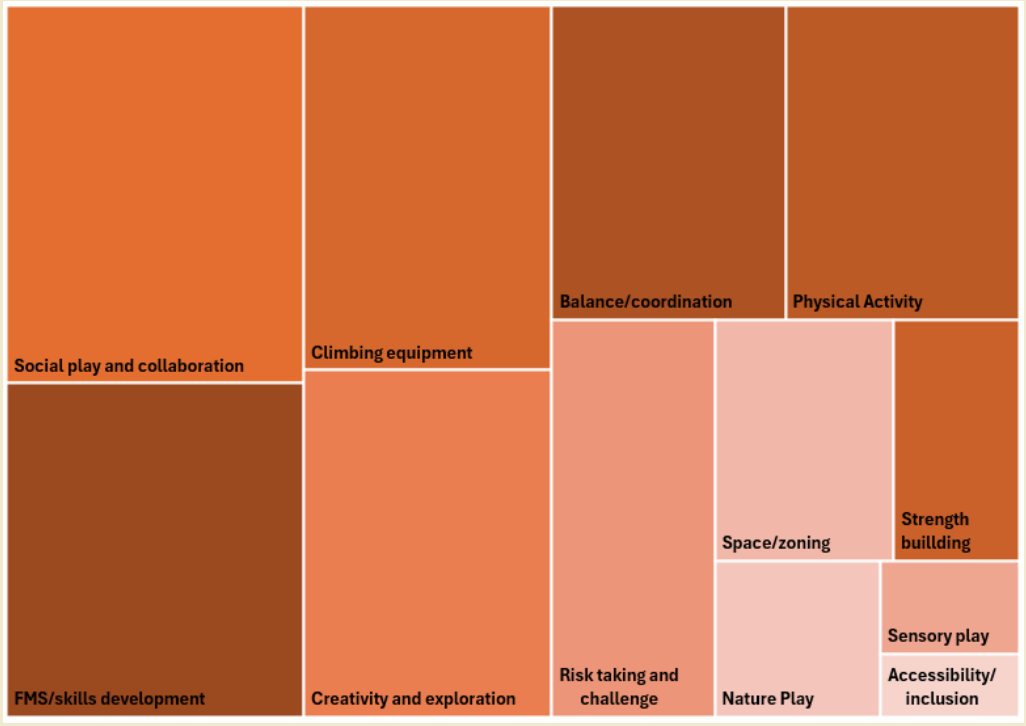



Figure 5: Treemap chart of responses to the most beneficial feature of their playground

When considering benefits of the play spaces, social play and collaboration was a strong theme amongst respondents. Topics also included skill development, climbing equipment, creativity and exploration (see figure 5). 85% of respondents have also connected playgrounds with classroom learning, with 16% reporting doing it often. The supervisors saw benefits in using playgrounds to teach STEM, health and PE. This highlights the importance of the play space design to also consider learning opportunities.

For accessibility and equity, the thematic analysis revealed that a challenge was the height of equipment. There were mixed responses with some quoting the equipment being too low to challenge taller students, while others noted that the equipment was too tall for shorter students to reach. Some also noted that a lack of ground level activities and playground surfaces decreased accessibility for physical disabilities and wheelchair users.

## Interviews

Between the three interviews and survey responses, there were recurring themes. The interviews were audio recorded and transcribed by Otter.ai. Using Atlas.ti for coding in the thematic analysis, distinct themes were identified and analysed across the three interviews:

### *Adult Facilitation of Play*

The adult's facilitation of play was a prevalent topic across the three interviews. In the interview with the loose parts play worker, a recurring theme was the need to give children agency and opportunity to take risks. This made it the adult's role to step back and trust the children. Open-ended play was discussed as important, with all interviews identifying a need to give children opportunities for self-led play and creativity. From the teacher's perspective, supervision is also important. For safety, the teacher needs to be able to have lines of sight to the students.

### *Risk and Safety*

Risk and safety was also an important topic. A distinction was made between hazards and risks, with risks being necessary in play. To include risk, it often involves communicating with stakeholders so that they are comfortable with the risks being taken. Increasing safety was discussed through a variety of topics including injuries that commonly occur, maintenance that is necessary and regulations that need to be followed.

### *Children's Diverse Needs*

As well as being a theme in the surveys meeting the diverse needs of students was also prevalent in the interviews. This includes making sure that play is age appropriate and caters to gender-based needs. The playground needs to cater to different levels of challenge.

### *Value and Benefits of Play*

The benefits of play were extensively discussed across the primary data, echoing the need to support development.

### *Physical Environment and Space*

In the physical space, creating zones for different activities was an important topic in the interview with the landscape architecture research. This helps to create an inclusive environment that caters to the needs of students, supports social play and allows for students to choose how they will engage in play. The teacher cited how allowing multiple children to use the space is important as the students get frustrated when it only allows one person at a time.

## Summary

The interviews were beneficial to gaining insights into different perspectives on play. In combination with the surveys, the triangulation approach allowed for connections to be drawn between responses for a more rigorous data analysis. This is beneficial for informing the design implications.

Example quotes:

*"So it's definitely a playwork approach is to step back and stay out of it. So I'm putting loose parts into this site that are going to spark interest and curiosity from the children that are actually using the space. So, no two spaces are the same because it's dependent on the kids that are playing there."*

*- Loose Parts Play Worker*

*"One thing that is really important in playground is that we can actually see most kids at all times. A little incident that happened a couple of weeks ago is that a teacher was on duty, and some things happen behind in in the playground on the obstacle course."*

*- Teacher*

*"Well, I think it's important to know, and for actually to communicate this, like risk is different than hazard, so we don't want to make things unsafe."*

*- Associate Professor in Landscape Architecture*

# 03

# DISCUSSION AND DESIGN IMPLICATIONS

# DISCUSSION

The surveys captured a broad range of participants who shared how their play spaces are structured and the broad number of students who engage in play. Additionally, the three interviews provided expertise for the project. The research and analysis has highlighted some important insights to consider when designing a playground:

**Physical activity and child development**

Physical activity is vital as playgrounds represent a significant opportunity for children to engage in outdoor play. The skills developed in a playground are foundational and impactful on their abilities. By engaging in active play as a child, they are more likely to continue as they grow older.

**Agency**

The need to give children agency in the playground echoed across the primary and secondary research. The students seek opportunities to pursue their own play. Open ended and unstructured play are essential for this.

**Creativity**

In the product benchmarking, a gap was identified where the playgrounds offered few opportunities for creative and imaginative play. This is a key aspect of play that is often supported by loose-parts play. Interviews revealed that often children are looking for opportunities to create their own games and engage in imaginative play. Unprescribed equipment is best to support this.

**Social**

Socialisation and collaboration remained a key aspect of play throughout. Students enjoy interacting with peers. Supporting socialisation involved creating space for it, such as through zoning or group-based equipment.

# DESIGN IMPLICATIONS

Below are the design implications for how the value of primary school playgrounds can be enhanced. This is resultant of the insights from the primary and secondary research.

1

Embed opportunities for **agency** in the design.

The playground should give the primary students choice in how they use the equipment. Unprescribed and open play ensures that the space is child-led and not dictated by the equipment.

2

Allow the students to be **imaginative and creative.**

Incorporate unfixed and ambiguous play elements so that the child can imagine what it is.

3

Supporting **physical activity and development** is critical.

With playgrounds representing a significant opportunity for physical activity, it is important that it encourages movement. Supporting object control skills is a gap in the playground market.

4

Vary the degree of **challenge and risk**.

Playgrounds support a large number of students with varying needs. It is important that the playground engages students in different levels of challenge so that the play space is inclusive and increases their capabilities.

5

Incorporate collaborative elements to **support social play.**

Social play was a key benefit of the playground. Playground designs should include equipment that allows multiple people to use the playground together.

# CONCLUSION

This report explored how the value of school playgrounds can be enhanced for primary aged students. This was identified as an important design area as play facilitates important developmental skills. Additionally, it is an impactful point for students to access physical activity. While the playground is an important aspect for a child's schooling, opportunities were identified where the playground could better serve its users' needs.

Through primary and secondary research, a gap in the market was identified for playgrounds to give children agency, support creativity and develop object control. These insights support the need for the design outcome to support the child's development, safety and physical activity while also balancing creativity, open-ended play, risk and challenge. This research provides a foundation for designing a playground that best meets primary school students.

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# Appendices

## Appendix A: Benchmarking Criteria

The criteria used for benchmarking was based on FMS and the key benefits children need to gain from play. This provides an opportunity to explore how the play equipment supports the skill development required by primary-aged students and identify where value can be enhanced.

| Criteria | Description |
|---|---|
| 1 | Absent - not clearly supported |
| 2 | Minimal - very limited support |
| 3 | Adequate - moderately supported |
| 4 | Good - meets best practice and is well-designed to support |
| 5 | Excellent - notably well executed and supportive |

| Criteria | Description/Features |
|---|---|
| Physical Activity | Extent playground supports active movement<br>· Supports moderate to vigorous activity (eg. Climbing and running)<br>· Open space to run<br>· Movement between equipment that encourages physical activity |
| Social Play | Extent playground supports collaboration and group play<br>· Includes equipment for 2 or more people (eg. climbing structures)<br>· Has opportunities for group gathering and interactions<br>· Has features that requires collaboration (eg. seesaw) |
| Creativity | Extent playground supports open ended and imaginative play<br>· Ambiguous structures where correct use is loosely defined (including not specifying theme)<br>· Space where fixed equipment is absent so students can create<br>· Loose parts to build and create<br>· Agency is supported for self-directed play<br>· Music making or creative opportunities |
| Risk taking and challenge | Extent playground provides challenging features for risky play<br>· Varying difficulty of the same challenges (so student can increase or decrease challenge)<br>· Features that require the student to evaluate risk and build competency<br>· Elements that provide risk (eg. height and balance) |
| Locomotion skills | Extent playground supports developing skills moving from place to place<br>· Running<br>· Hopping/jumping<br>· Skipping<br>· Sliding |
| Object control skills | Extent the playground develops skills involving handling or manipulating objects<br>· Throwing, catching or kicking objects<br>· Games requiring aim<br>· Moving pieces of equipment |
| Body movement/stability | Extent the playground supports balancing and controlling the body<br>· Spinning equipment<br>· Swinging/rocking equipment (eg. rope bridges)<br>· Suspended equipment (eg. monkey bars)<br>· Uneven surfaces |

# Appendix B: Survey Questionnaire

Consent forms

○ I understand and agree to participate

End of Block: Consent

Start of Block: Introduction

Thank you for participating in this survey. The questions below relate to **school playground equipment** (or similar spaces) used by primary students (in **grades 1-6**).

Q1 What is your role?

- ☐ Classroom teacher
- ☐ OSHC staff
- ☐ Teacher aide
- ☐ Distance education teacher
- ☐ Student teacher
- ☐ Other (please specify) _____

Q4 Do you supervise primary aged students (grade 1-6) on a school playground or similar space?

○ Yes

○ No

*Skip To: Q5 If Q4 = No*

Q2 What grade level(s) do you supervise on the playground(s)?

- [ ] Grade 1
- [ ] Grade 2
- [ ] Grade 3
- [ ] Grade 4
- [ ] Grade 5
- [ ] Grade 6

---

Q5 How are playground spaces divided or zoned at your school (eg. by age, grade or activity type)?

_____

_____

_____

_____

_____

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Q6 What playground equipment does your school currently have available for grade 1-6 students?

- [ ] a. Spinning equipment
- [ ] b. Balance beams
- [ ] c. Rope bridges
- [ ] d. Flying foxes
- [ ] e. Monkey bars
- [ ] f. Seesaws
- [ ] g. Chin up bars
- [ ] h. Climbing structures/frames/rock walls
- [ ] i. Forts/towers
- [ ] j. Climbing nets/cargo nets
- [ ] k. Ladders
- [ ] l. Slides
- [ ] m. Swings
- [ ] n. Fireman's poles
- [ ] o. Sandpits
- [ ] Other - Please specify

_____

**End of Block: Introduction**

Start of Block: Core Questions

Q7 What activities do you think students enjoy most in the play space?

_____

_____

_____

_____

_____

Q8 For each of the below outcomes, how well does your school **playground (or similar space)** currently achieve them? *Use the sliders to select your answers (0=least achieved, 5=best achieved).*

| | Not well at all 0 1 | Slightly well 1 2 | Moderately well 2 3 | Very well 3 4 | Extremely well 4 5 |
|---|---|---|---|---|---|
| Physical Activity | | |  | | |
| Social Play | | |  | | |
| Creativity | | |  | | |
| Risk Taking and Challenge | | |  | | |
| Locomotion Skills | | |  | | |
| Object Control Skills | | |  | | |
| Body Movement/ Stability Skills | | |  | | |

Q9 **Playground safety:** If you have observed or been informed of playground injuries, where have they most commonly occurred?

_____

_____

_____

_____

_____

Q10 **Accessibility and equity:** Have you noticed any accessibility and equity challenges on the playground for students?

_____

_____

_____

_____

_____

End of Block: Core Questions

Start of Block: Challenges/Opportunities

Q12 From your perspective, what are the most beneficial features of the playground(s)?

_____

_____

_____

_____

_____

Q13 Do you currently connect playground time with classroom learning? *Select one option below. Please use the box below your answer if you would like to add a comment.*

- ○ Often _____
- ○ Sometimes _____
- ○ Rarely _____
- ○ Never _____

Q14 Where do you see opportunities to connect playgrounds with classroom learning?

_____

_____

_____

_____

_____

**End of Block: Challenges/Opportunities**

**Start of Block: Conclusion**

Q16 If you could redesign the playground, what would you change and why?

_____

_____

_____

_____

_____

Q17 Is there anything else we should know?

_____