Westmead Catholic Community – CEDP Design Approach

Executive Summary

Catholic Education Diocese of Parramatta (CEDP) currently operates 80 schools, 6 Early Learning Centres, 2 High Support Centres for Learning and 25 Out of School Hours Care locations. The current number of students enrolled in our schools across the Dioceses is approximately 44,000. CEDP has been engaged in designing, delivering and teaching in contemporary learning environments for over a decade. Our experienced senior people, many with decades of education delivery experience are continually engaged in helping others from across Australia and the world understand best practice teaching and learning environments. Our newest schools are continually visited by other education experts to understand what best practice learning design is.

One of CEDPs key design principles is – **Learning Drives Design**. The process of designing a new school or a school refurbishment starts with articulation of our Pre-School to Post School Learning Framework.

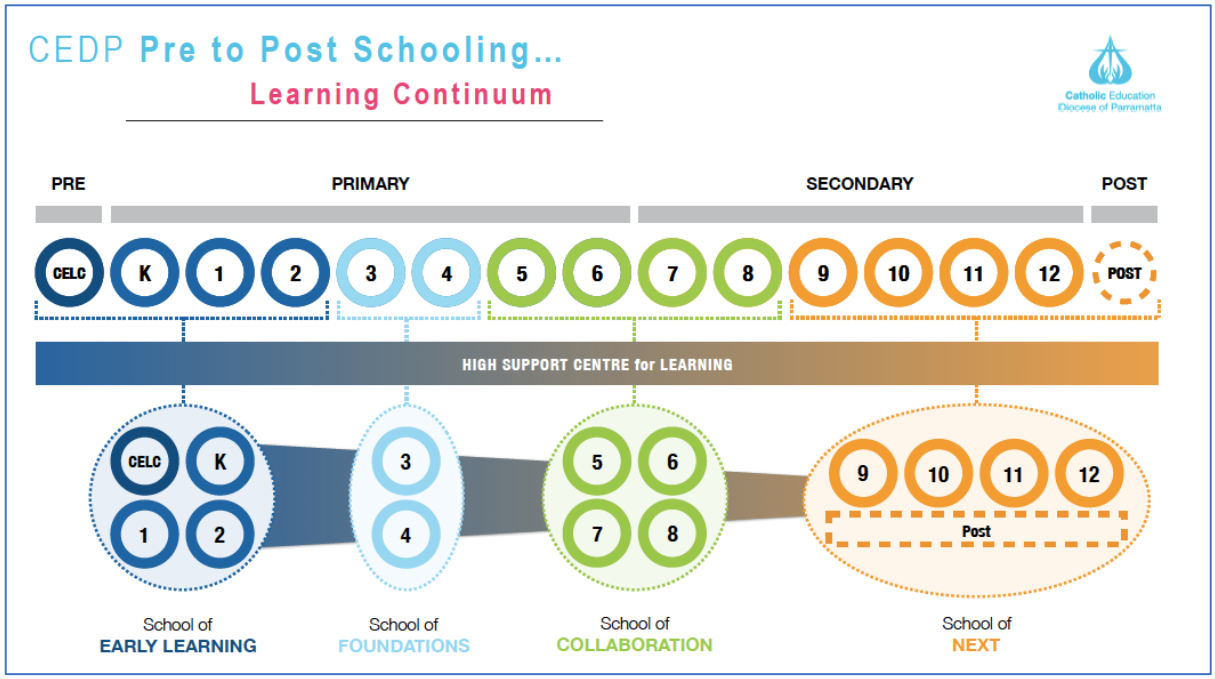


Figure 1: CEDP delivers the outcomes of the Improvement to Transformation Learning Model through a Pre-School to Post School learning framework

This framework demonstrates that the 19th century model of education, where primary, secondary and tertiary learning were separated, is no longer fit for purpose. Our experience and extensive global research and practice reveal that children learn best when their learning spaces and learning practices are grouped according to stages of learning. This approach acknowledges that as children grow, the way they learn changes, and what they need to learn changes, and that these cognitive development stages do not reflect the historical practice of splitting school between primary and secondary. In fact the cognitive processes and development, and hence the methods of learning to be applied, are consistent across the traditional year groups of 5, 6, 7 and 8. The same as they are across early learning into years K, 1 & 2.

Beyond the extensive experience of CEDP's well credentialed learning leaders, the most recent research underpinning our school design approach is the:

> **Towards Effective Learning Environments in Catholic Schools (TELE): An Evidence-based Approach project undertaken by the Learning Environments Applied Research Network (LEaRN) and The University of Melbourne. (Attachment 1).**

This research project represents one of the largest known studies to have evaluated the relationships between the built environment (learning environments/spaces) and the practices, activities and behaviours of school students and teachers (pedagogies). As such, it both informs and supports CEDP's school design approach, and the design of the Westmead Catholic Community (WCC) Schools.

Key in the outcomes of the TELE research is that the relationships between dedicated learning spaces and outdoor areas are crucial as they directly impact:

- Supervision and safety,
- The variety of activity settings available,
- Opportunities for agile and flexible use, including connections to outdoor learning environments,
- The movement of teachers and students and,
- Students geographical engagement and affinity for their learning environments.

The body of this document clearly demonstrates how the design of the WCC Schools, especially including the design and adjacency of outdoor spaces is very well aligned to and supported by this extensive contemporary research.

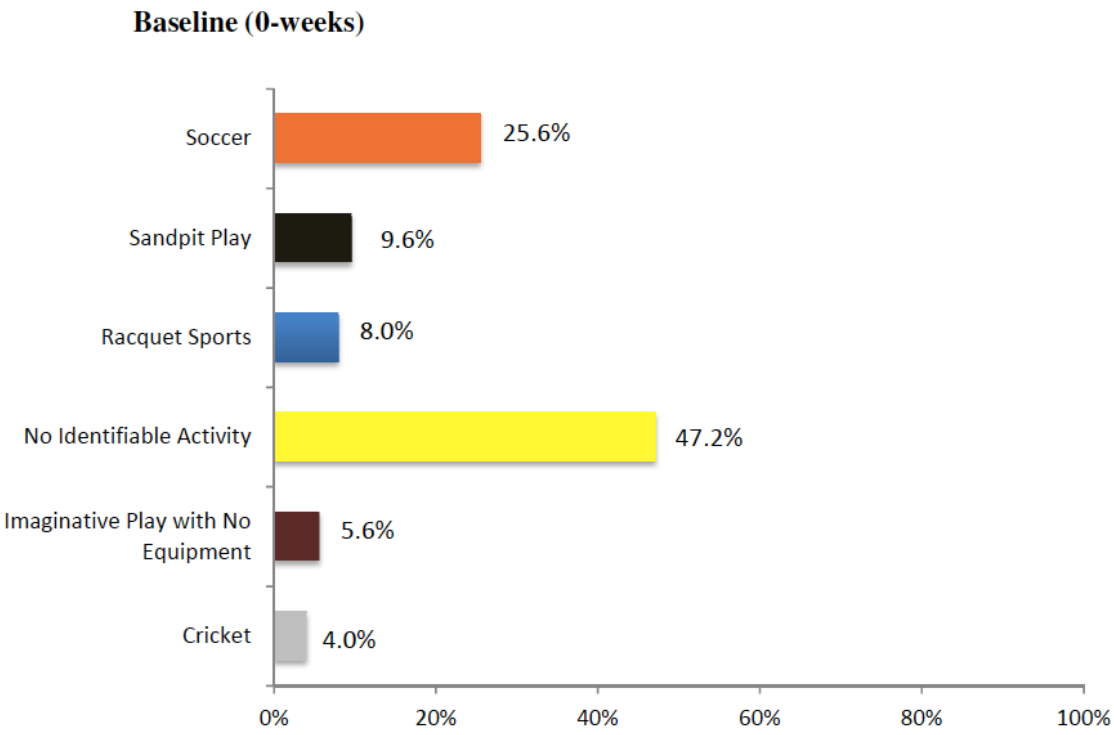
With specific regard to play space it is demonstrated in the body of this document that even when using a traditional measurement of area available per student, the WCC Schools will have sufficient space available as compared to both other CEDP schools and the DET Education Facilities Standards and Guidelines (EFSG).

Further research included below also demonstrates that movement towards more contemporary play spaces, away from just offering traditional 'one-size-fits-all" ovals and the like, is proven to substantially INCREASE the amount of active behaviour of students.

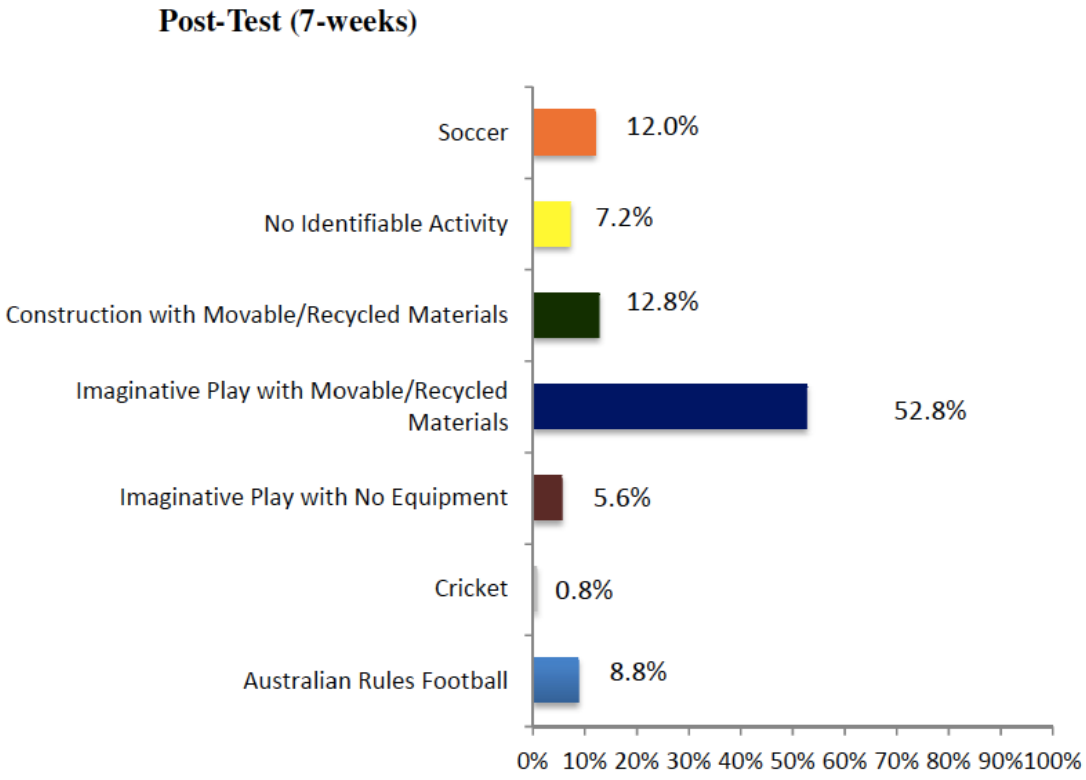
> **A Guide for Educators to Move Beyond Conventional School Playgrounds: The RE-AIM Evaluation of the Lunchtime Enjoyment Activity and Play (LEAP) Intervention (Hyndman, B. P., Benson, A. C., & Telford, A. (2014).)**

In fact the results of this research demonstrate that when given the opportunity of more contemporary approaches to school play, children actually move AWAY from the traditional open oval sports. Note the significant reduction in children choosing soccer and cricket below.

> **"Physical activity participation that is enjoyable and non-competitive is emerging as an important alternative for students who prefer less structured and vigorous intensity physical activities" (Dyment, Bell, & Lucas, 2009).**



The proportion of predominant activity types measured by SOPLAY within each specified target area at baseline. (Hyndman, B. P., Benson, A. C., & Telford, A. (2014))



The proportion of predominant activity types measured by SOPLAY within each specified target area at post-test (7 weeks). (Hyndman, B. P., Benson, A. C., & Telford, A. (2014))

With proven extensive experience in operating schools, deep knowledge of the appropriate research and Learning Drives Design approach, CEDP are very confident of our ability to comply with delivery of the NSW PDHPE curriculum requirements at the WCC Schools.

Introduction

Catholic Education Diocese of Parramatta (CEDP) currently operates 80 schools, 6 Early Learning Centres, 2 High Support Centres for Learning and 25 Out of School Hours Care locations. The current number of students enrolled in our schools across the Dioceses is approximately 44,000. CEDP has been engaged in designing, delivering and teaching in contemporary learning environments for over a decade. Our experienced senior people, many with decades of education delivery experience are continually engaged in helping others from across Australia and the world understand best practice teaching and learning environments. Our newest schools are continually visited by other education experts to understand what best practice learning design is.

CEDP takes a whole of school approach to design. All elements are considered in terms of their contribution to learning, including play space and the relationship of play space to learning areas. The operational modes of schools, including the length and purpose of break times are also considered in terms of their impact on students ability and opportunity to learn.

The Westmead Catholic Community (WCC) Schools will provide the services of Early Learning, Primary School, Secondary School, Before and After School Care and School Holiday Care. 5 key services all in one location with an operating model working from 6am to 6pm. Our schools like St Luke's Catholic College, Marsden Park and, St Mark's Catholic College with St John XXIII Catholic Primary, Stanhope Gardens are proving this model on a daily basis as evidenced by continual high enrolment demand over and above existing capacity. These are successful schools. Our research and confidence in the success of this model is based on our real-world experience.

The Westmead Catholic Community offers CEDP the incredibly rare opportunity of providing education in the heart of a growing world class Health and Education Innovation Precinct. The resultant adjacencies to business, enterprise and industry will offer our future students opportunities to explore career pathways and partnerships for many years to come. In return our schools will provide the community with considerable amenity and convenience.

The level of convenience, and potentially reduced traffic movement for families offered by the WCC Schools is truly aligned with delivering the 30 minute Central River City. A genuine "one stop shop" for children aged 3 an up, adjacent to significant employment areas, growing future residential population and with unsurpassed access to public transport including Sydney Metro West, Parramatta Light Rail, Heavy Rail, Busways and improving pedestrian connectivity and amenity. The whole community will continually benefit from CEDPs community focus and overall design approach.

School Design Starts with Learning Design

At CEDP one of our key design principles is – Learning Drives Design

This starts with articulation of our Pre-School to Post School Learning Framework.

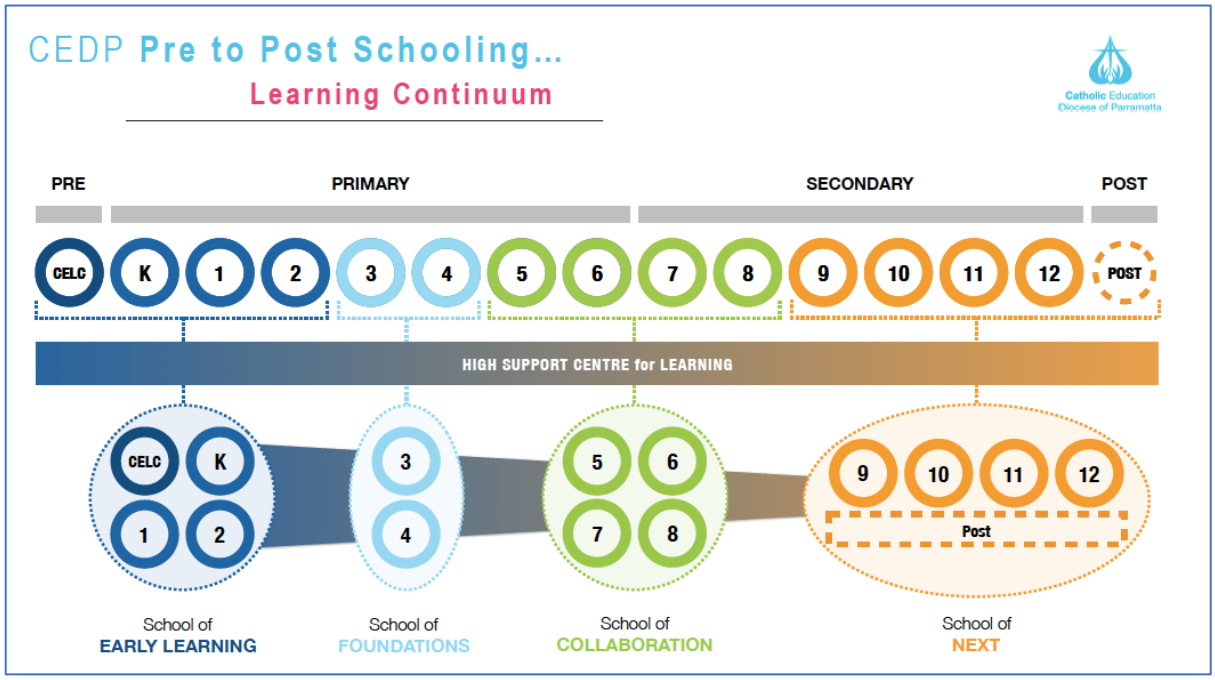


Figure 1: CEDP delivers the outcomes of the Improvement to Transformation Learning Model through a Pre-School to Post School learning framework

The pedagogical approach which responds to this framework adopts the following transformational learning principles.

1. Experiential Learning

Characterised by the ability for a learner to visualise their thinking and share their learning (in any medium) both individually and in collaborative physical and virtual settings.

This is a circular learning journey beginning with surface learning experiences, then deep learning experiences, developing into transferable learning experiences. This process has an emphasis on feeding back through critical review, iteration, presentation, and feeding forward by exploring where to next.

- Experiential learning in the Early Years (Prep-Yr4), characterised by learners sitting/positioned together to develop intra-personal dispositions and capabilities
- Experiential learning in the Middle years (Yrs 5-8)characterised by learners sitting/positioned together and working on collaborative inquiries, to develop inter-personal dispositions and capabilities
- Experiential learning in the Senior years (Yrs 9-12) characterised by:

- Learners who may or may not be sitting/positioned together and may or may not be working on collaborative inquiries, to develop their cognitive dispositions and capabilities.
- The learning environment extending beyond the campus with movement and availability of learning resources extending to external partnerships and locations.

2. Inquiry Based Learning

Inquiry based teaching promotes the ability of a teacher to utilise a repertoire of teaching strategies that promote student inquiry over a substantial and/or sustained period of time that include student learning collaboration as the norm, with the opportunities of direct/explicit instruction and accelerated intervention when required. As such the intent of the learning environment/settings should:

- Promote active engagement in feedback on the learner's thinking and learning.
- Be adaptive with significant opportunities to utilise digital/ technological enablers.eg. data sensors, AR, VR etc.
- Incorporate the opportunity to engage intentional learning partners (external and internal).
- Promote a safe, curious, experiential and playful environment that support age specific development, including gross and fine motor skills, the ability to establish and assess risk, pursue independent investigation, innovation and lines of inquiry.

3. Transformational Leadership

Methods of transformational leading through executive leadership include:

- Developing the professional capacity of themselves and their staff, including inculcating professional dialogue on capacity, professional learning and management of self as professional learners – eg. where to next.
- Leading teaching and learning, utilising observation and direct engagement within the circular inquiry learning strategies of feedback and feedforward on teacher learning.
- Modelling learning inquiry from the senior executive through all staff to all students including school leaders modelling "learning the work by doing the work" in a visible manner and fostering and implementing innovation.
- Leading improvement, innovation and change – looking for the physical and virtual/digital opportunities of what is possible (future thinking) and where to next.
- Leading the management of the school – physical and digital infrastructure management and accountability.

4. Embracing the Richness of the Local and Global Community

- Create an inclusive environment that supports dialogue between the school community, universities and industry partners to create purposeful real world experiences and collaborative learning partnerships.
- Explore opportunities of sharing resources with the wider community and external partnerships.

5. Personalise Learning for All

- Empower individuals by recognising and supporting all students and teachers as learners in charge of their own journeys.
- Create space that welcomes and engages a diverse range of participants.

6. Blur Boundaries

- Blur boundaries within local and global networks to connect people, ideas, and foster playful innovative thinkers.
- Create strong visual connections between formal and informal learning settings, meeting, collaboration, planning and development spaces where inquiry and collaborative methodology is modelled.
- Provide for age appropriate site security while engaging with external leaning partners within and beyond the campus.

7. Make Learning Visible

- Make learning transparent to users through display of work, visibility of spaces and expression of building components to incite the curious minds of learners.
- Provide physical and digital displays to showcase student work that are accessible to the whole learning community, or school, to celebrate student achievement. This could be done through:
    - Acoustic wall panels/materials that double as display space, allowing learning resources to be attached with velcro and/or other easy fixing devices;
    - Storage cupboards that are covered in pinable surfaces.
- Make the building a billboard to showcase the learning within through well-integrated display surfaces that take advantage of vertical (wall) surfaces to offer easy to use display opportunities and/or writable surfaces.

8. Outdoor Learning

- Outdoor learning environments include but are not limited to nature play spaces, outdoor classrooms and fixed play equipment areas intended for use by children, young people and the community.

- Strengthen communities through the design of culturally appropriate environments, which are contextual to the community. Provide a wide range of possibilities for children that promote learning and development, are challenging, engender a feeling of security and wellbeing and build a sense of community and belonging (culturally appropriate)
- Unstructured play in natural environments creates a space that fosters interaction, autonomy, exploration, curiosity, creativity and communication and offered as places for all children and adults to explore together.
- Loose material is available and space for moveable play

9. Building as a Learning Tool

- Enable aspects of the buildings, building design and outdoor spaces to be learning tools in themselves—for example, learning from the ecologically sustainable features of the design and associated energy management systems
- Exposing how the building works through simple strategies such as colour coding exposed pipework can allow students to see how buildings are constructed.
- Data around energy and water usage, or waste can be collected and displayed within the school, increasing student and staff awareness of the schools environmental initiatives and impact. Data can be brought into lessons including maths, science or HSIE.

School Design Research

The most significant research CEDP has been involved in includes the "Towards Effective Learning Environments in Catholic Schools (TELE): An Evidence-based Approach" project undertaken by the Learning Environments Applied Research Network (LEaRN) and The University of Melbourne. (Attachment 1). This project represents one of the largest known studies to have evaluated the relationships between the built environment (learning environments/spaces) and the practices, activities and behaviours of school students and teachers (pedagogies). Drawing from the rigorous evaluation of 43 learning environments in 38 schools, the Final Report collates the distilled findings from a three-year program of evaluation conducted between 2015-2017.

Overall, the findings of the project highlighted nine principles of designing and using learning environments to best pedagogical effect. Fundamentally, learning environments should offer the following:

1. A dynamic social and physical environment;
2. Variety and choice, with respect to both settings and activities;
3. The capacity to differentiate and personalise learning experiences, including across independent, small group, and whole class activities;
4. Ready access to multiple learning settings, commonly differentiated by furniture arrangements and/or glazed separations between spaces of different sizes;
5. Engaging and meaningful teaching and learning experiences, including opportunities for instruction, interaction and reflective retreat;
6. Options to socially organise students in varied ways, within the same class and/or across multiple classes;
7. Good acoustics, especially in more open spaces;
8. Good slight-lines, to enable the consistent observation and monitoring of students' activities;
9. A design that recognises the physical, organisational, temporal and cultural histories of the school/school sector and allows for pedagogical development over time, without alienating teachers from their past practices (hybrid-pedagogies may be considered a path to more engaging teaching and learning experiences – particularly in secondary schools).

In keeping with the above principles, it was concluded that the best alignments of pedagogies and learning environments occurred in type D learning environments. As a spatial typology, this cluster of facilities was overall the most supportive of the desired pedagogical activities of teachers and students.

> The Westmead Catholic Community Schools design most closely resembles the Type D environment recommended by the research.

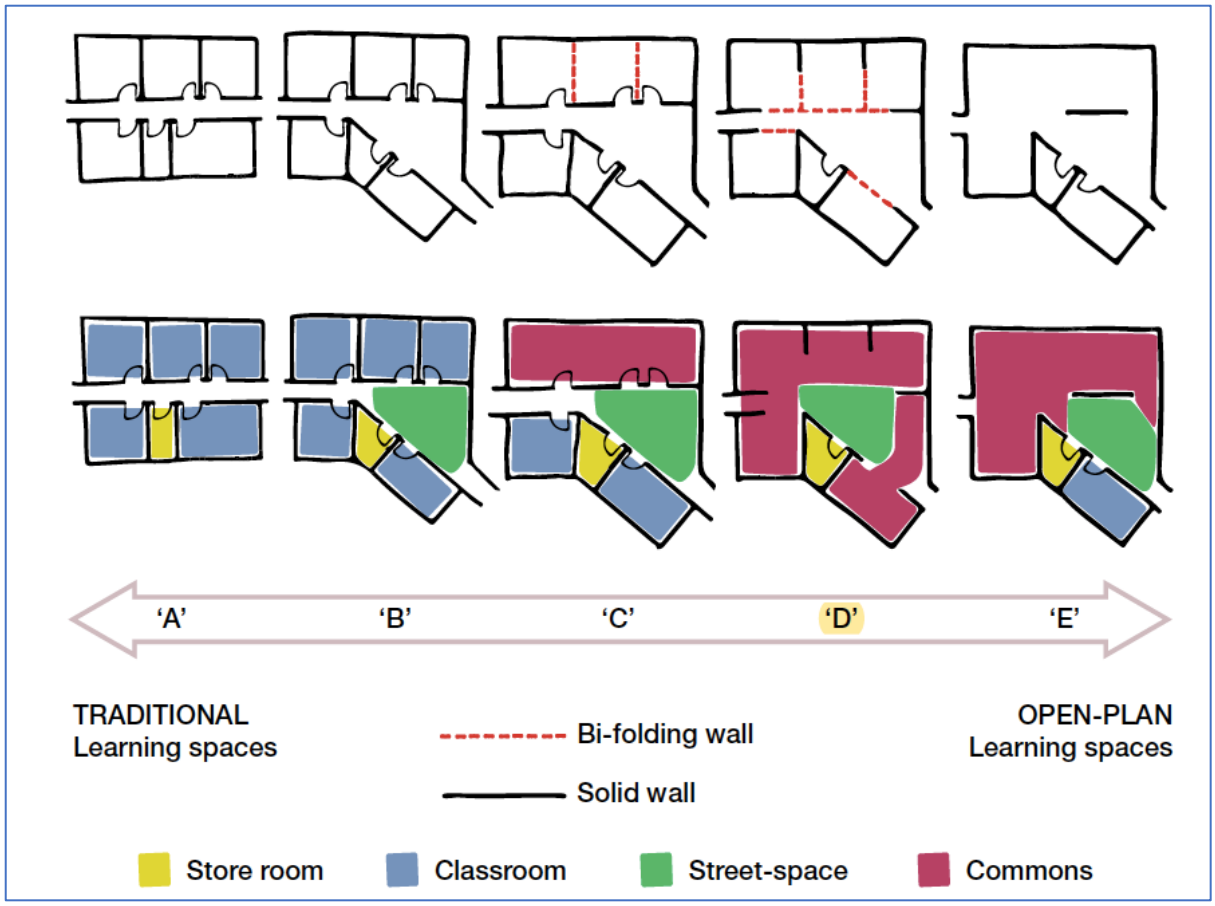


Figure 2: A visual representation of 5 learning environment types defined by Dovey and Fisher (2014)

Key in the outcomes of the TELE research is that the relationships between dedicated learning spaces and outdoor areas are crucial as they directly impact:

- Supervision and safety,
- The variety of activity settings available,
- Opportunities for agile and flexible use, including connections to outdoor learning environments,
- The movement of teachers and students and,
- Students geographical engagement and affinity for their learning environments.

The below extracts from the research provide some further detail for each of these.

Supervision and Safety – Refer Attachment 1, Pg32

- *Factors found to enhance...*
    - Unobstructed sightlines through the learning environment, allowing teachers to oversee students' activities;
      "The glass doors and panelling allow visibility of students who are working in the 'gallery' outside of the classroom" (Teacher, St Monica's Primary School).

- Large aperture doors that open between classrooms and/or onto breakout spaces/common areas to allow movement between spaces/settings.

- *Factors found to detract…*

  - Breakout spaces that are visually separated (no sightlines) from classrooms or general learning areas;
    "Our ability to supervise depends on the task. If the task is individual and we are using the common space, the teacher will stand in the doorway between the two spaces to supervise" (Teacher, St Mary's Primary School).

  - Learning environments where students are too spread out, requiring teachers to roam across extensive areas;

"A teacher sometimes needs to roam too far to monitor students, which is a waste of an expert" (Teacher, St Francis of Assisi Catholic Primary School).

The WCC Schools are being designed to ensure supervision can be maintained at all times as breakout areas and play spaces are adjacent to learning areas. Without these adjacencies of outdoor settings to learning areas, (if they were located on the ground plane) such supervision would not be possible, thus limiting students access to outdoor learning opportunities.

In addition, such adjacencies limit the need for students' vertical movement during the day, delivering a more efficient and effective learning experience.

Variety of Activity Settings – Refer Attachment 1, Pg 38

- *Factors found to enhance...*

  - Differentiated spaces are available to support a variety of activities (e.g. accessible wet areas in primary schools that may be used for art, cooking, science or general learning activities that may generate mess)

  - "Using the breakout space to help students with one-on-one work during a class – particularly with a teacher's aide present – can be quite discreet and immensely beneficial" (Teacher, Star of the Sea College).

The WCC Schools are being designed such that accessible wet areas (maker spaces) are not only adjacent to learning areas but are also accessible during breaktimes. These outdoor spaces are also readily available for one-on-one direct instruction as required. Without the adjacencies of outdoor settings to learning areas (if they were located on the ground plane), such supervision and direct teaching would not be possible, thus limiting students safety and access to outdoor learning opportunities.

In addition, such adjacencies limit the need for students' vertical movement during the day, delivering a more efficient and effective learning experience.

Opportunities for Agile & Flexible Use – Refer Attachment 1, Pg 46

Connections to Outdoor Learning Environments

- *Factors found to enhance....*
    - Direct connections and clear sightlines between indoor and outdoor spaces;
      "Learning groups can move freely into outdoor spaces to continue their work" (Teacher, St Lawrence Catholic Primary School).
    - Appropriate outdoor landscaping or furniture.
      "There is excellent access to a large covered outdoor learning deck" (Teacher, St Luke's Catholic College).
    - Teachers allow students some autonomy regarding where they work;
      "I like the flexibility students have to work out in the garden area. It is something that the students have ownership over and it allows them to be creative and to seek out an area that suits their needs for that session" (Teacher, St Macartan's Catholic Primary School).
    - There is a focus for outdoor activities;
      "Small groups work out in outdoor learning spaces – outdoor stage, balconies and cave. They use these areas to record or film or for quiet reading and playing games" (Teacher, Our Lady of the Angels Primary School).
    - There are multiple teachers who can share responsibility for supervision across indoor and outdoor areas;
- *Factors found to detract... (When not well connected)*
    - Limited connections and access to outdoor learning areas from multi-storey buildings;
      "Using outdoor learning environments would require extra supervision as the students from upstairs cannot easily access the outdoors" (Teacher, St Raphael's Primary School).
      "It has to be all or none, because we are upstairs" (Teacher, Ave Maria College).
    - A lack of ready access to outdoor learning settings;
      "It's not too difficult to get outside, but doesn't feel like there is a direct connection. Outside leads to the sports area, which doesn't readily link with what I teach" (Teacher, Star of the Sea College).
    - Inadequate weather protection from wind, dust, rain and direct sunlight.

- Concerns about disrupting other classes while moving students between indoor and outdoors learning environments;

The WCC Schools are being designed such that outdoor learning settings and play spaces are very well connected to learning areas. Without the adjacencies of outdoor settings to learning areas (if they were located on the ground plane), the learning opportunities available would be severely limited.

In addition, such adjacencies limit the need for students' vertical movement during the day, delivering a more efficient and effective learning experience.

The weather protection afforded by the design of the WCC Schools also ensures that outdoor learning settings and play spaces are accessible by students all year round, regardless of rain, heat and wind. Crucial in Western Sydney.

Movement of Teachers in the Learning Environment – Refer Attachment 1, Pg 74

- *Factors found to enhance....*
  - Access to the learning commons or break-out spaces that enable students to work in a variety of settings beyond the classroom and teachers to join them as required (these may be shared by multiple classes and/or year levels);
  - Collaborative (team)-teaching practices that permit the coordinated supervision of students across multiple settings/spaces;
    "In some instances when I have been team-teaching I look over at my colleague and we realise that we are redundant. The students are engaged and supporting one another. So, in these cases, we then need to move around the room looking for ways to challenge students to move to the next level. Our movement becomes about enabling and promoting even greater levels of engagement" (Teacher, St Monica's College).
  - "The students are very independent and will sometimes articulate to you what their goal is for the day. This will help you to understand what they need from you" (Teacher, Bethany Catholic Primary School).

The WCC Schools will be a multi-storey school environment and as such are being designed to ensure supervision and access can be maintained at all times as breakout areas and play spaces are adjacent to learning areas. Without these adjacencies of outdoor settings to learning areas (if they were located on the ground plane), such supervision and access would not be possible, thus limiting students safety and their access to outdoor learning opportunities.

In addition, such adjacencies limit the need for students' vertical movement during the day, delivering a more efficient and effective learning experience.

Movement of Students in the Learning Environment – Refer Attachment 1, Pg 74

- *Factors found to enhance....*

    - Good sightlines;
      "Excellent lines-of-sight enable movement of students anywhere in the space and they still remain visible" (Teacher, Our Lady of Angels Primary School)

  The WCC Schools will be a multi-storey environment and as such are being designed to ensure supervision and access can be maintained at all times as breakout areas and play spaces are adjacent to learning areas. Without these adjacencies of outdoor settings to learning areas (if they were located on the ground plane), such supervision would not be possible, thus limiting students safety and their access to outdoor learning opportunities.

  In addition, such adjacencies limit the need for students' vertical movement during the day, delivering a more efficient and effective learning experience.

Geographical Engagement – Refer Attachment 1, Pg 81

- Students' responses to the survey questions about geographical engagement clearly indicated that a high proportion enjoyed working in type D and E learning environments and found such environments conducive to their sense of agency.

- The responses of teachers were not as clearly indicative of a preference for any particular learning environment typology; however, the responses were higher for the type D and E learning environments. The most positive results were reported by teachers – and learning environment experts – for enjoyment and a sense of belonging in type D learning environments.

- Type D learning environments in primary schools were seen to be associated with higher levels of student wellbeing and teacher climate, as measured by CEM's school performance surveys. The relative success of type D environments could be explained by the increased opportunities afforded by these spaces for social interaction and collaboration, amongst both teachers and students.

  The WCC Schools design most closely resembles the Type D environment recommended by the research.

Affinity for the Learning Environment – Refer Attachment 1, Pg 82

- *Factors found to enhance....*

    - Spaces that are designed for communities of students and teachers, supporting strong social connections and cohesion;
      "What I really love about this space is my colleagues. I love that I can see them. I feel

surrounded. I feel connected. I feel supported" (Teacher, Bethany Catholic Primary School).

- Natural light;
- Good links to the outdoors – both visually and physically, allowing observation and movement between indoor and outdoor settings;
- Stimulating environments that feature a variety of flexible learning settings that can accommodate a diversity of learning activities;

The WCC Schools will be a multi-storey environment and as such are designed to ensure connections and access to outdoor spaces are readily available, as is natural light, expansive views and a variety of learning settings.

Overall Findings

- ...Neither good practice, nor good spaces in isolation resulted in the production of highly effective learning environments. Rather, 'effectiveness' was observed to arise from the combined effect of good practices and well-designed spaces. A key feature of such alignment was the variety and choice these environments offered students and teachers with respect to their social and physical experiences – and therefore their options for learning and teaching.
- In several focus groups, the frustration of teachers was evident as they discussed the limitations placed on them and their students by learning spaces that offered little choice in how to socially organise students – either within the same class and/or across multiple classes. Comments related to their school leaders promoting 'innovative pedagogies', but their spaces being traditional and difficult to arrange for varied activities. By contrast, teachers in well-designed spaces that offered access to multiple learning settings – commonly differentiated by furniture arrangements and/or glazed separations between spaces of different sizes – talked about the wonderful options they had to offer students a variety of engaging and meaningful teaching and learning experiences, including opportunities for instruction, interaction and reflective retreat.

CEDP not only proposes a transformational learning framework and approach to pedagogy, it ensures that this approach drives design and hence provides environments that will maximise the learning opportunities for students and teachers and ensures their ongoing engagement in and enjoyment of learning itself.

Open Space Requirements

When considering required open space CEDP must consider:

- NSW Curriculum requirements for Personal Development, Health and Physical Education (PDHPE)
- Whether or not the school will offer inter-school sport and;
- Play Space.

1. NSW PDHPE Curriculum

The mandatory curriculum requirements extend from Early Learning to Stage 5 (K-10).

With use of onsite areas including classrooms, Running Tracks and Sports Courts, along with access to adjacent ground plane areas and nearby playing fields the WCC Schools will be well provisioned to deliver on the requirements of the curriculum. CEDPs confidence regarding this outcomes is drawn from its current operation of 80 schools within the Diocese.

2. Play Space

CEDP's considerable experience in the management and operation of 80 schools in the Diocese, with approximately 44,000 students has developed a preference for environments that promote inquiry and curiosity. Environments that challenge students to think and make new cognitive connections. The students are always learning and often in this context, without even realising they are doing so.

Dr Brendon Hyndman from Southern Cross Uni has been doing research in this area for over a decade. One publication based upon his research is:

Contemporary School Playground Strategies for Healthy Students - 2017 (https://link.springer.com/book/10.1007/978-981-10-4738-1)

This book is a research guide for implementing contemporary playground strategies to promote active, healthy students. A number of school playground strategies have succeeded in reducing the decline in students' activity levels by introducing equipment and policies that encourage further engagement. The book outlines these strategies and ideas and offers insights into their multiple levels of influence on engaging students in school playground activities that can promote student health.

School Playgrounds as a Place of Learning – Hyndman 2017

- "School playgrounds are a crucial developmental and learning setting to complement and supplement the formal school curriculum"

- The concept of learning for life suggests that learning continues throughout the lifespan and is not just the realm of childhood. Importantly, learning for life suggests that not all the skills needed for life are learned in the classroom. The skills of negotiation, bargaining, sharing, tolerance and the basic skills of democracy are thought by many to be learned in the playground, when students are playing, away from the restrictions and interference of adults. Playground activities can provide a mechanism for allowing students to move from what they already know and can master to more advanced knowledge and how students can control what happens and use what they know in their own unique ways to further their understandings and development.
- Students can engage in rich and meaningful playground activities, apply judgement, get to know and enjoy the power of choice and can experience autonomy, mastery and competence. If students are unable to experience a range of emotions, students' emotional development could be jeopardised. The cognitive skills that students learn to use as they engage in playground activities are necessary prerequisites for later academic learning.

Social Environmental Influences on Students Within School Playgrounds – Hyndman 2017

- The social playground environment includes factors such as relationships, culture and societal influences in which a student interacts with. The social environment is a major influence on students' playground activities as many students prefer having someone to be active with.

  The notion of play time and what it can offer young people has clearly progressed considerably in recent years. It has moved far beyond simply offering wide open spaces where social interactions and specific cognitive challenges would continue to be minimised.

The State of Playgrounds in Australian Schools – Hyndman 2017

- The most common school playground features reported have included sporting areas such as basketball courts, netball courts, sandpits, grassed play areas and football ovals.
- The playgrounds and policies of many Australian schools have **reduced** students' opportunities for active, creative and diverse play.
- In Australia, there is an absence of regulations governing school playgrounds beyond the national standards for manufacturing playground equipment…

School Playground Strategies to Promote Unstructured Activities – Hyndman 2017

- 'Activities within school playgrounds that don't have an agenda, are randomly engaged with and encourage spontaneity are those that align with being unstructured '.
- Unstructured playground activities are defined as the activities students participate in that are spontaneous and without a set regime or purpose that can include digging, raking, lifting/carrying, exploring, planting, chasing, pushing objects into positions, construction,

imaginative and creative play. The importance of students' unstructured active playground activities is reflected in the definition of school recess "as a regularly scheduled time for children to engage in 'unstructured' play" (Wechsler et al. Prev Med 31(2):123, 2000). School playground opportunities that encourage unstructured, open-ended free play are an important opportunity to promote students' activity levels of all ages and genders.

The landscaping plans for the site easily demonstrates that the design of the play space for the WCC Schools ensures age appropriate outcomes and encourages inquiry, exploration and social interaction.

Consistent with above, CEDP recognises that Play Space cannot be a one size fits all approach. Play space must be designed so that it automatically engages ALL students, and does not by its nature exclude ANY students. It should also encourage activity that has the added benefits of social and cognitive development.

In research published in the Australian Journal of Teacher Education (Volume 39 | Issue 1 Article 6 – 2014) - **A Guide for Educators to Move Beyond Conventional School Playgrounds: The RE-AIM Evaluation of the Lunchtime Enjoyment Activity and Play (LEAP) Intervention** (Hyndman, B. P., Benson, A. C., & Telford, A. (2014).) the following is stated:

- A number of school break interventions have successfully attempted to reduce the decline in students' physical activities by introducing equipment and policies that encourage structured physical activities (Verstraete, Cardon, De Clercq, & De Bourdeaudhuij, 2006; Scruggs, Beveridge, & Watson, 2003; Ridgers, Stratton, Fairclough, & Twisk, 2007) that tend not to engage all students' interests and abilities (Dyment & Bell, 2008). Physical activity participation that is enjoyable and non-competitive is emerging as an important alternative for students who prefer less structured and vigorous intensity physical activities (Dyment, Bell, & Lucas, 2009).
- Natural environmental features (Dyment & Bell, 2007; Dyment et al., 2009) and movable/recycled materials (Engelen, et al., 2013; Bundy et al., 2009; Bundy et al., 2008) are an emerging alternative to enable teachers to provide diversity of school play activities, develop physical activity participation, playability and appeal to a broader range of students. However, natural environmental features (greening projects) can be quite expensive and can restrict the use of play areas while the greening projects are being implemented (Bundy et al., 2008). A cheaper, more convenient alternative is the implementation of movable/recycled materials within the school environment (Bundy et al., 2011), as students often prefer the flexibility of using movable materials (Francis & Lorenzo, 2006).

In observing the results of the above approach Hyndman et al. observed the following:

- Direct observation of students' school lunchtime activities revealed that the intervention had a positive influence on students within the school playground participating in sedentary behaviour post-test significantly decreased by 17.9%... and the quantity of students that were engaged in Vigorous Physical Activity (VPA) significantly increased by 18.6%. The

increases in physical activity intensity were maintained at eight months and again after two and a half years.

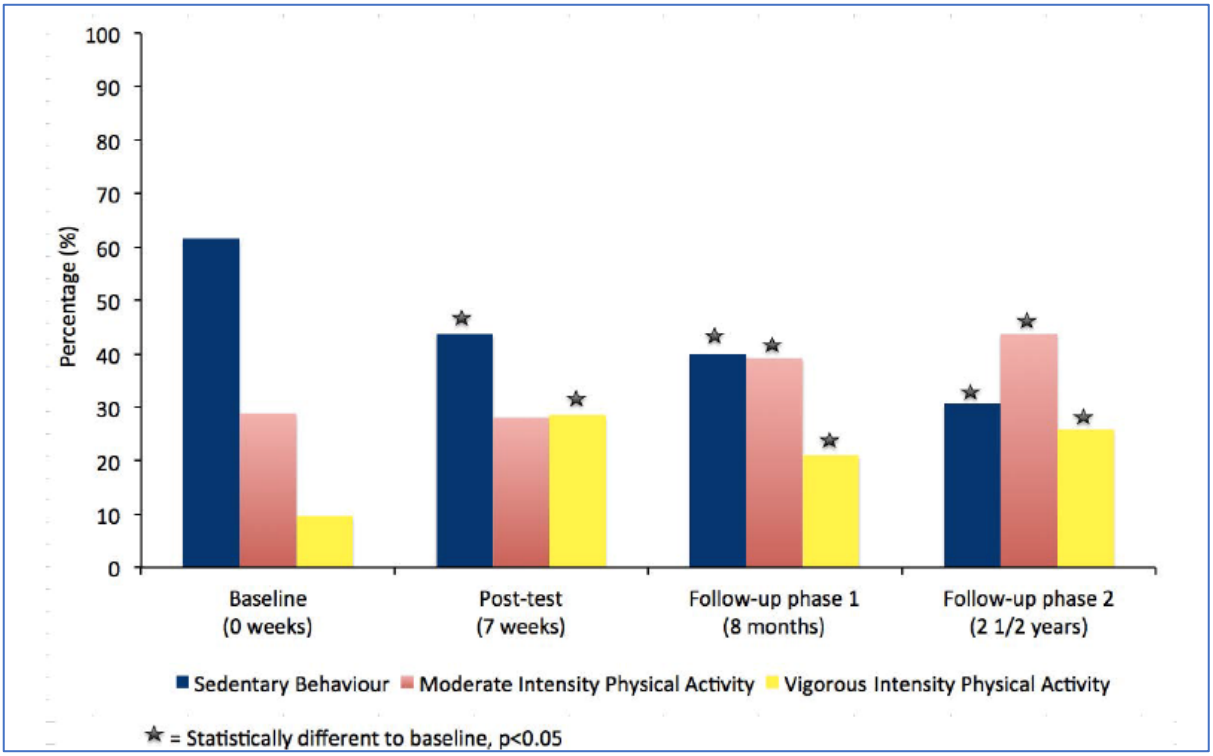


Figure 3: Percentage of Students engaged in each physical activity intensity within the school playground (Hyndman, B. P., Benson, A. C., & Telford, A. (2014))

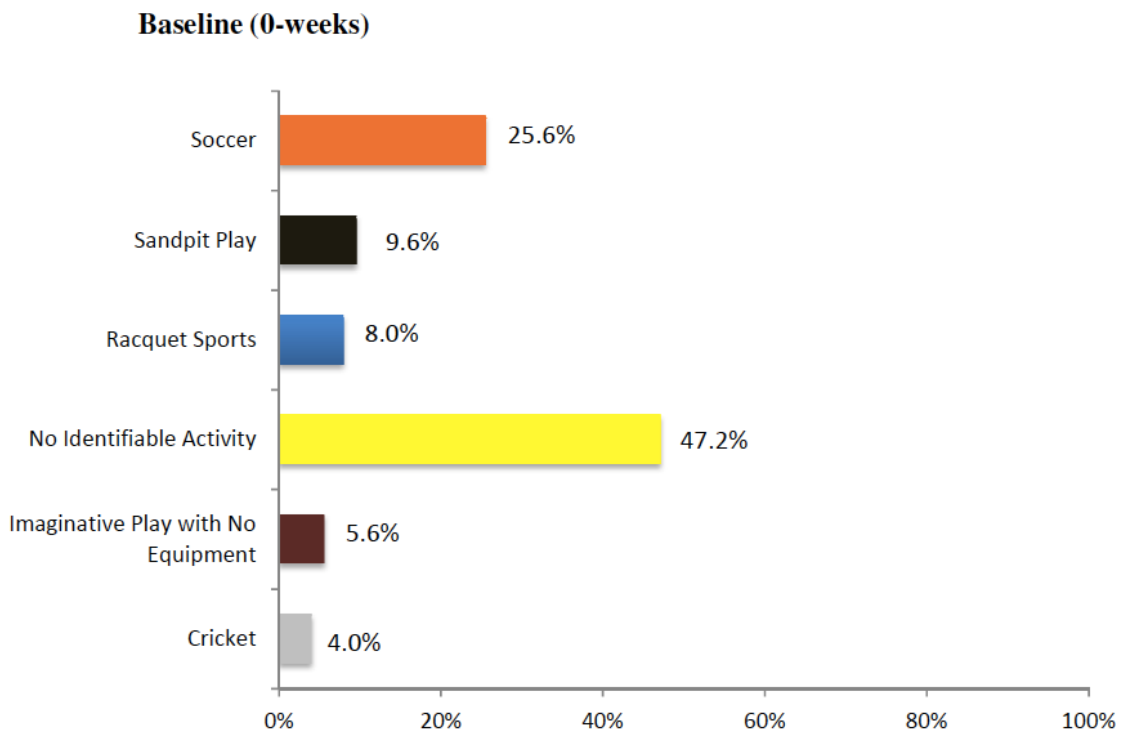


Figure 4: The proportion of predominant activity types measured by SOPLAY within each specified target area at baseline. (Hyndman, B. P., Benson, A. C., & Telford, A. (2014))

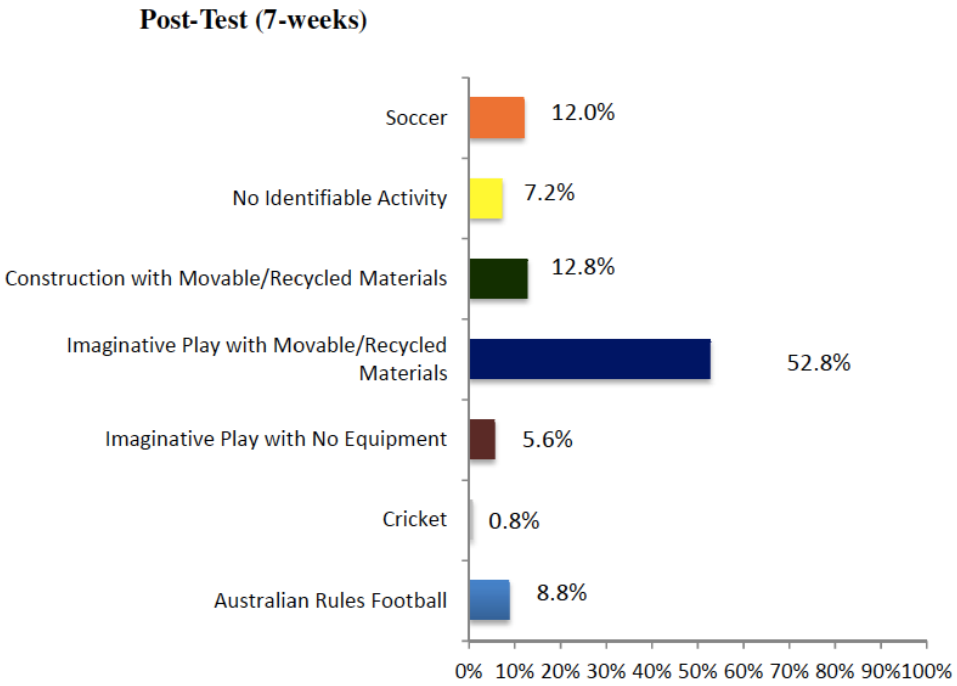


Figure 5: The proportion of predominant activity types measured by SOPLAY within each specified target area at post-test (7 weeks). (Hyndman, B. P., Benson, A. C., & Telford, A. (2014))

Benchmarking

In the absence of a National or Sate regulation regarding play space areas in schools CEDP sees it appropriate to consider a sample of existing schools with similar play areas. CEDP operates a number of schools where the available play space is less than that being provided for the WCC Schools.

School	No. Students	Play Area	Area / Student
St Monica's, Parramatta North	210	2,180	10.4
St Oliver's, Harris Park	210	1,140	5.4
St Patrick's, Parramatta North	420	1,750	4.2
Caroline Chisholm & Bethany Primary Glenmore Park	1,650	17,870	10.8
Cerdon College, Merrylands	1,150	11,530	10.0
Christ the King, North Rocks	630	4,150	6.6
Delaney College, Granville	720	4,650	6.5
Santa Sophia, Box Hill	1,920	14,000	7.1

Table 1: CEDP Schools Play Space Benchmarking