

THE RULE OF THIRDS

**SOUTH AUSTRALIAN EXPERIENCES
OF SPACES FOR LEARNING INSIDE, OUTSIDE AND IN THE HOME**

JOHN HELD

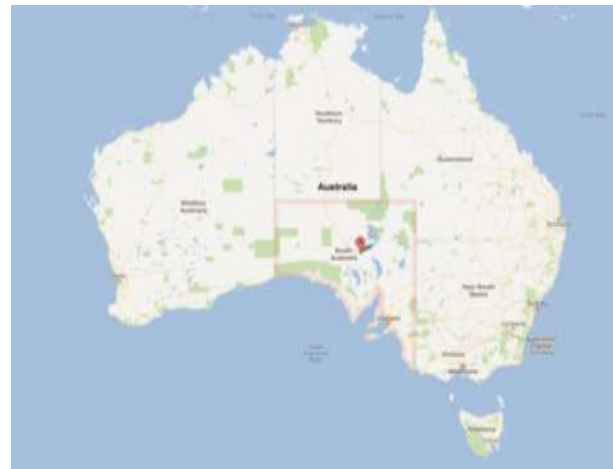
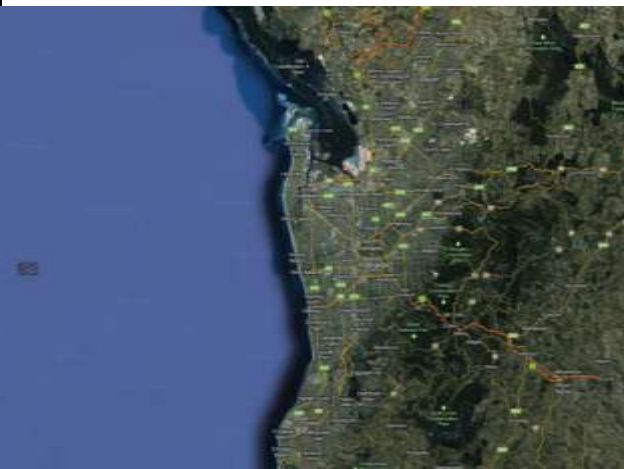
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ADELAIDE, SOUTH AUSTRALIA

- South Australia
40% bigger than
Texas but 6% of
population



Climate data for San Antonio (San Antonio Int'l), 1981-2010 normals

[hide]

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	89 (32)	100 (38)	100 (38)	101 (38)	103 (39)	107 (42)	108 (41)	108 (42)	111 (44)	99 (37)	94 (34)	90 (32)	111 (44)
Average high °F (°C)	63.0 (17.2)	67.0 (19.4)	73.6 (23.1)	80.7 (27.1)	87.1 (30.6)	92.4 (33.8)	94.7 (34.8)	96.1 (35.6)	90.4 (32.4)	82.3 (27.9)	72.3 (22.4)	64.1 (17.8)	80.31 (26.84)
Average low °F (°C)	40.7 (4.8)	44.2 (6.8)	50.9 (10.5)	58.2 (14.6)	66.9 (19.4)	72.6 (22.6)	74.7 (23.7)	74.8 (23.8)	69.1 (20.6)	60.2 (15.7)	50.1 (10.1)	41.7 (5.4)	58.68 (14.82)
Record low °F (°C)	0 (-18)	-4 (-16)	19 (-7)	31 (-1)	43 (6)	48 (9)	60 (16)	67 (14)	46 (8)	27 (-3)	21 (-6)	6 (-14)	0 (-18)
Precipitation inches (mm)	1.76 (44.7)	1.79 (45.5)	2.31 (58.7)	2.10 (53.3)	4.01 (101.9)	4.14 (105.2)	2.74 (69.6)	2.09 (53.1)	3.03 (77)	4.11 (104.4)	2.28 (57.9)	1.91 (48.5)	32.27 (819.7)
Snowfall inches (cm)	.7 (1.8)	.1 (0.3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	.7 (1.8)
Avg. precipitation days (≥ 0.01 in)	7.0	7.2	8.8	6.4	8.5	7.5	5.2	4.7	6.6	6.9	6.7	7.5	83
Avg. snowy days	0.2	0.3	0	0	0	0	0	0	0	0	0	0	0.5
Mean monthly sunshine hours	158.1	172.3	217.0	210.0	223.2	278.0	310.0	294.5	234.0	217.0	171.0	148.8	2,631.9

Source: NOAA ^[22], The Weather Channel (records) ^[23], HKO (sun, 1961-1990) ^[24]

Climate data for Continentaltown (Kent Town, 1981-2010)

[hide]

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	45.7 (114.3)	44.3 (111.7)	41.9 (107.4)	38.9 (98.4)	29.2 (84.6)	25.4 (77.7)	23.1 (73.6)	30.4 (86.7)	34.3 (93.7)	39.0 (102.2)	43.0 (109.4)	42.5 (108.5)	45.7 (114.3)
Average high °C (°F)	29.3 (84.7)	29.5 (85.1)	28.5 (79.7)	22.7 (72.9)	19.0 (66.2)	16.1 (61.0)	15.3 (59.5)	16.6 (61.9)	19.0 (66.2)	21.8 (71.2)	25.2 (77.4)	26.9 (80.4)	22.3 (72.1)
Average low °C (°F)	17.1 (62.8)	17.2 (63.0)	15.3 (59.5)	12.5 (54.5)	10.2 (50.4)	8.1 (46.6)	7.5 (45.5)	8.2 (46.8)	9.7 (49.5)	11.4 (52.5)	14.0 (57.2)	15.5 (59.9)	12.2 (54.0)
Record low °C (°F)	9.2 (48.6)	9.5 (49.1)	7.2 (45.0)	4.3 (39.7)	1.5 (34.7)	-0.4 (31.3)	0.4 (32.7)	1.6 (34.9)	2.6 (36.7)	4.7 (40.5)	5.3 (41.5)	8.0 (46.4)	-0.4 (31.3)
Rainfall mm (inches)	19.7 (0.776)	12.8 (0.504)	26.5 (1.043)	39.3 (1.547)	61.1 (2.406)	79.9 (3.146)	75.7 (2.98)	69.9 (2.752)	59.4 (2.339)	41.5 (1.634)	30.3 (1.193)	30.1 (1.185)	546.3 (21.508)
Avg. rainy days (≥ 1.0 mm)	2.9	2.0	3.5	5.1	8.8	11.3	12.0	12.1	9.0	6.7	4.7	4.4	82.5
Mean monthly sunshine hours	269.7	221.2	226.3	189.0	142.6	123.0	136.4	167.4	183.0	226.3	225.0	260.4	2,370.3

Source: Bureau of Meteorology ^[29]



- Adelaide is same size as San Antonio
- Similar weather



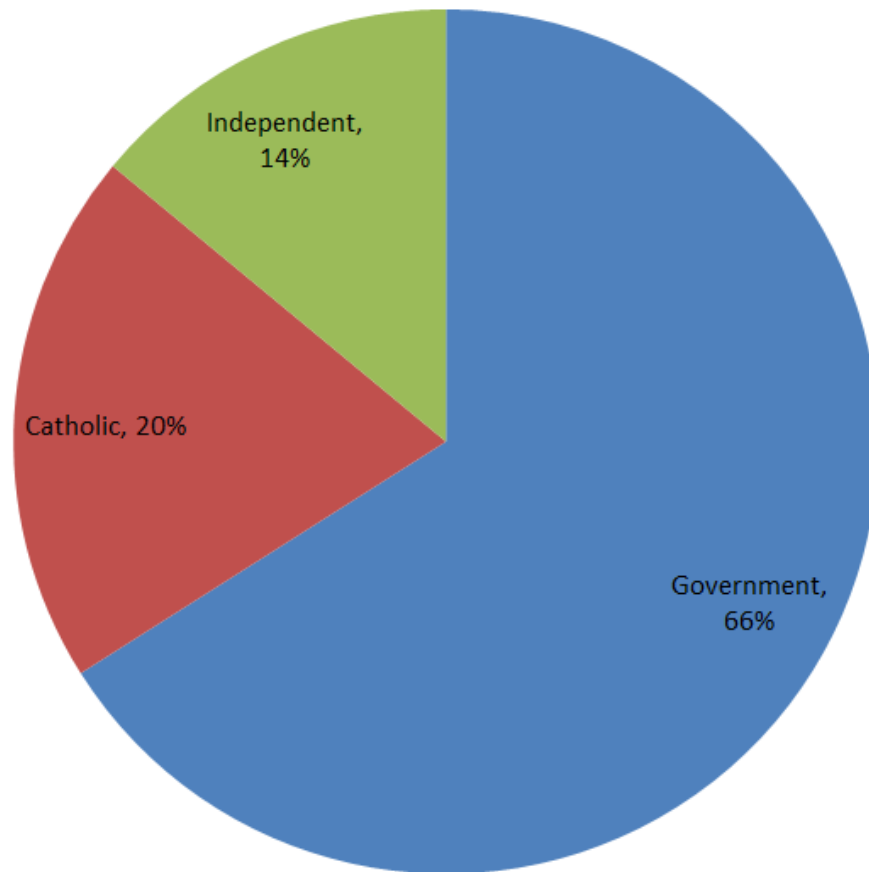
ADELAIDE, SOUTH AUSTRALIA



- free settlement
- nonconformist and German settlers
- early interest in progressive education
- first in Australia to develop a science degree
- first in music education with the establishment of the first Conservatorium of Music
- first university in Australia, and only the second in the world, to grant degrees to women
- Influence of significant educators through state's history



AUSTRALIAN EDUCATION SYSTEM



- Mix of public and private
- Private was traditionally religious-based
- Three sectors: Government, Catholic, Independent

ENERGY CONSUMPTION

ONE THIRD AT
WORK

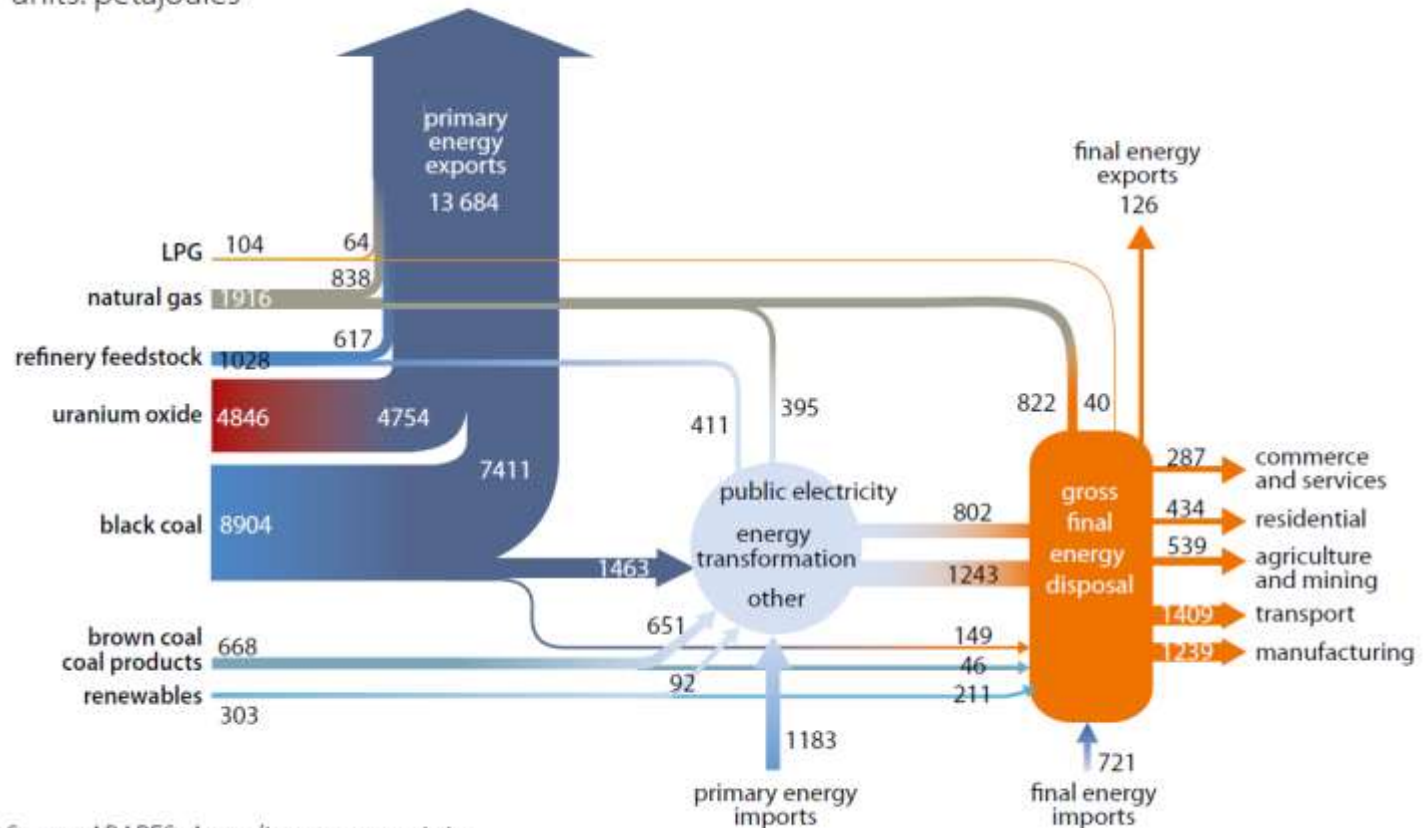
ONE THIRD FOR
TRANSPORT

ONE THIRD AT
HOME



ENERGY CONSUMPTION

Australian energy flows, 2008–09
units: petajoules

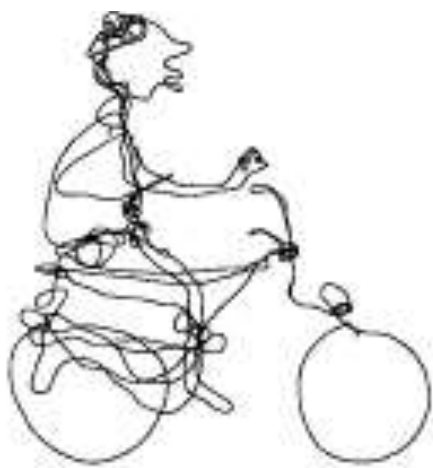


Source: ABARES, Australian energy statistics.



Adelaide Thinkers in Residence

- Susan Greenfield
- Laura Lee
- Fraser Mustard
- Carla Rinaldi



The influence of Reggio Emilia

- Professor Carla Rinaldi
 - The hundred languages of children
 - The child as a citizen
 - The child's right to beauty
 - Environment as the third teacher
 - The links between pedagogy and architecture





The influence of neuroscience on early childhood education

- Dr Fraser Mustard
 - The impact of neglect in early childhood

- Baroness Susan Greenfield
 - How changes in technology use are changing children's brains





The influence of neuroscience on early childhood education

- Dr Martin Westwell
 - “every chance for every child”
 - Health and education indicators of very young children flow through to adulthood
 - Delayed gratification and the marshmallow tests
- Dr Stuart Shanker
 - Self-regulation in children



Risk-taking



- De-risking our schools and early childhood centres can be counterproductive
- Affects the way we design inside and outside spaces

Services Integration: Childrens Centres



Services Integration: Childrens Centres



- Integration of health, education and family services
- Co-located with schools
- Better transition between early childhood and schools
- Family services focus
- Ability for early intervention



OUTDOORS

OUTSIDE SPACES AT SCHOOL

URBAN REALM

BACKYARD/HOME



JOURNEYS BETWEEN



OUTDOORS

- What was your favourite childhood place ?



WHAT WERE THE THREE MOST MEMORABLE QUALITIES OF YOUR MOST CHERISED CHILDHOOD PLACE?

<i>Ownership over space</i>	<i>Nearby, safe and outdoors</i>	<i>Privacy and away from the eyes of adults</i>
<i>Outdoors: Where the woods and bugs provide for games with infinite possibilities</i>	<i>Very little structure – could work of it what we wanted</i>	<i>Backyard, outdoors, fresh air, adventure</i>
<i>Abundance, insect life, nature, shady fun parks</i>	<i>Freedom, adventure</i>	<i>Open spaces with diversity</i>
<i>Space and quiet</i>	<i>Safe and familiar</i>	<i>Loose parts to make our own play and props</i>
<i>Space: primary school playground. Experience climbing trees. Feel safe within the space</i>	<i>Adventure, mystery, ability to run and hide</i>	<i>Accessible by bike</i>
<i>Outdoor rambling: cliffs, birds, the island</i>	<i>Farm land – gum trees, horses</i>	<i>The Garden of Unearthly Delights – Open space, performers, lively</i>
<i>Alone to do what we like</i>	<i>Garden, imagination, gran's stories</i>	<i>Spacious</i>
<i>The outer appearance: Black Diamond Copenhagen, the inner bridges, the underground exhibitions</i>	<i>Safe – you knew everyone and we all cared for and protected each other.</i>	<i>Unpredictable, adventure</i>
<i>Freedom to explore – Independence</i>	<i>Extended family</i>	<i>Violet's Garden – safety refuge, smell of crushed violets, and biscuits baking, cool, and damp</i>
<i>Ireland is fun and exciting. Parents knew we were safe</i>	<i>Make believe, ownership, safe and secure</i>	<i>India: building, deserts, camels</i>
<i>Open + Multipurpose space</i>	<i>Meet friends at a pub</i>	<i>Well defined</i>
<i>Changing but familiar</i>	<i>Population diversity – Ethnic and indigenous mix, different sports, culture, food, language, experiences.</i>	<i>Make believe</i>
<i>No boundaries</i>	<i>Relationship, place and friends</i>	<i>Wild trees in suburbia – adventure and mystery, while feeling safe</i>
<i>Cheap and free activities for everyone</i>	<i>Wild, unsupervised. Wood, fields.</i>	<i>Fantasy land of epic proportions</i>
<i>Sense of adventure, freedom, discovery</i>	<i>Safety, opportunity, creativity</i>	<i>Macro to Micro</i>
	<i>Naturally wild</i>	<i>No Authority</i>



OUTDOORS

- We concentrate on the design of indoor space because we assume that most of the important learning happens there
- Outside is just for play
- Don't treat inside and outside as a continuum with learning taking place anywhere

SAFETY AND RISK



- Outdoor spaces de-risked due to legal concerns
- Move away from standards:
- “Being safe as it needs to be, not as safe as possible”

INFLUENCES ON OUTDOOR DESIGN



- Friedrich Froebel
- Lady Allen of Hurtwood
- Helle Nebelong
- Lillian deLissa



INFLUENCES ON OUTDOOR DESIGN: FRIEDRICH FROEBEL (1840s)



- German educator and philosopher who in 1840 established the Kindergarten. It was a radically new method and philosophy based on structured, activity based learning
- “Play is the highest expression of human development in childhood for it alone is the free expression of what is in the child’s soul”

INFLUENCES ON OUTDOOR DESIGN: LADY ALLEN OF HURTWOOD (1950's)



- 'There is always a certain risk in being alive and the more you are alive the more the risk'

INFLUENCES ON OUTDOOR DESIGN: LILLIAN deLISSA (1900)



In February 1906 de Lissa became the Director of the first Adelaide free Kindergarten in Franklin Street and the program was based on Froebelian methods

40 children were enrolled and de Lissa 'regarded improved child welfare and education as the basis for social reform'

INFLUENCES ON OUTDOOR DESIGN: HELLE NEBELONG (2000s)

- *“I am convinced that ‘risk-free’, standardised playgrounds are dangerous – just in another way from those with obvious risks. When the distance between all the rungs in a climbing net or a ladder is exactly the same, the child has no need to concentrate on where he puts his feet. Standardisation is dangerous because play becomes simplified and the child does not have to worry about his movements. This does not prepare him for all the knobby and asymmetrical forms he is likely to be confronted with outside the playground and throughout life”.*
- “The ability to concentrate on estimating distance, height and risk, for example, requires a lot of practice and is necessary for a person to be able to cope successfully with life.”



IS THERE ANYONE OUT THERE???: [.....CLIMBING TREES]

- Studies from Play England suggest one third of English children have never climbed a tree and 60% would prefer to watch TV or play a video game.
- Westwell points out that risk taking drives cognitive development



WHAT DO THESE SPACES LOOK LIKE?

- Don't look architectural
- Don't always photograph as well as a shiny colorful playground
- The spaces are often quite small
- Scaled for small children
- Infinitely flexible – from stage to pirate ship in minutes



ECO-LITERACY

- Just as critical as literacy and numeracy
- Understanding the basic principles of ecology and live accordingly
- Treats outdoor areas as extensions of the indoor learning areas
- Example: Galilee Catholic Learning Community



GALILEE CATHOLIC LEARNING COMMUNITY

- Established on a bare field south of Adelaide in 2007, next to a new housing estate
- Planned as a community facility, with school, church & social services



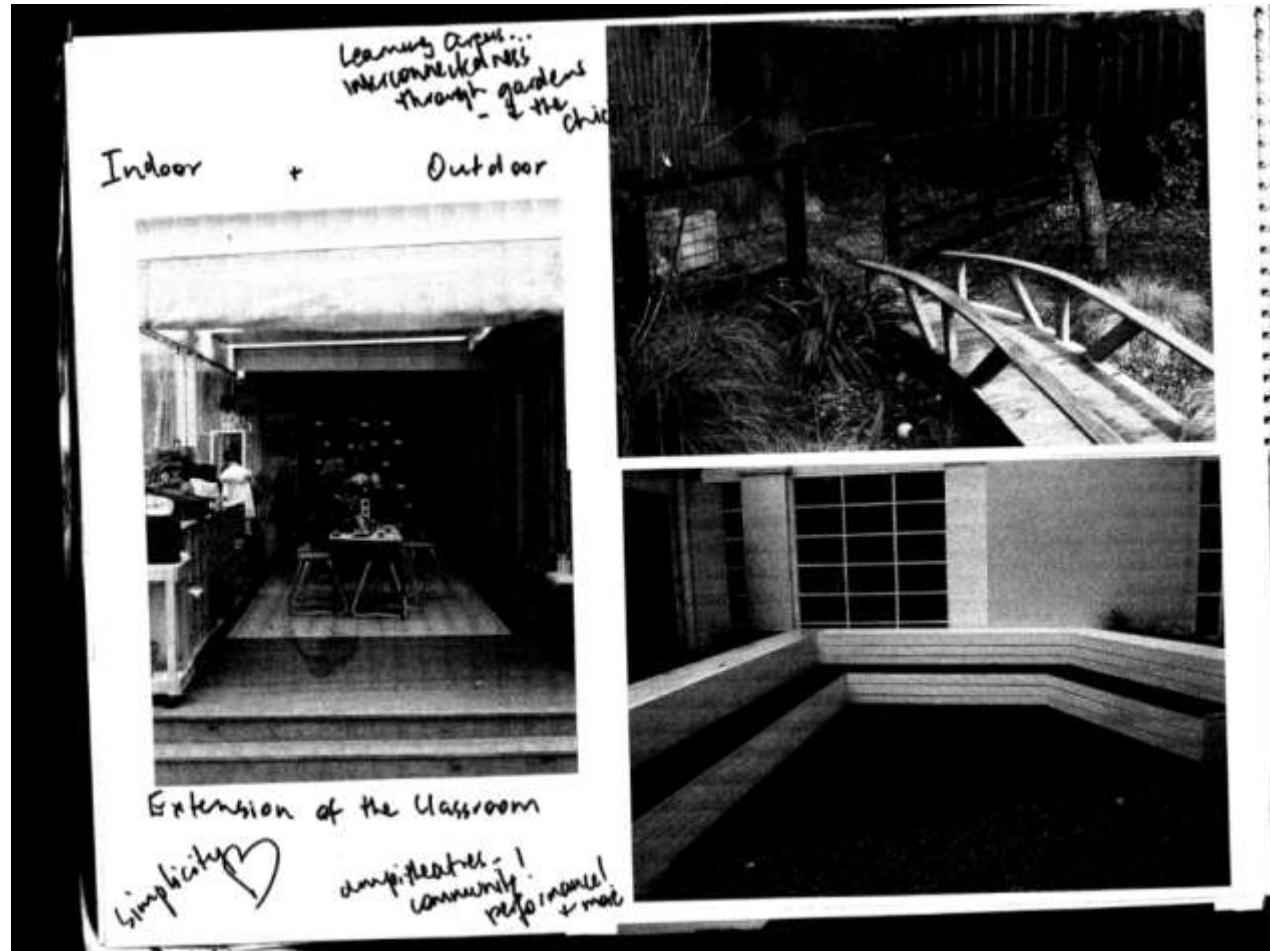
GALILEE CATHOLIC LEARNING COMMUNITY

- Based on Reggio principles, but with local culture and community foremost
- Involvement of children in design
- A different type of brief



GALILEE CATHOLIC LEARNING COMMUNITY

- Brief was about the feelings – the “vibe” rather than a catalogue of areas



GALILEE CATHOLIC LEARNING COMMUNITY

- Site as a series of small pavilions
- Links between inside and outside
- Church on the corner
- View of the hills



GALILEE CATHOLIC LEARNING COMMUNITY

- Church on the corner



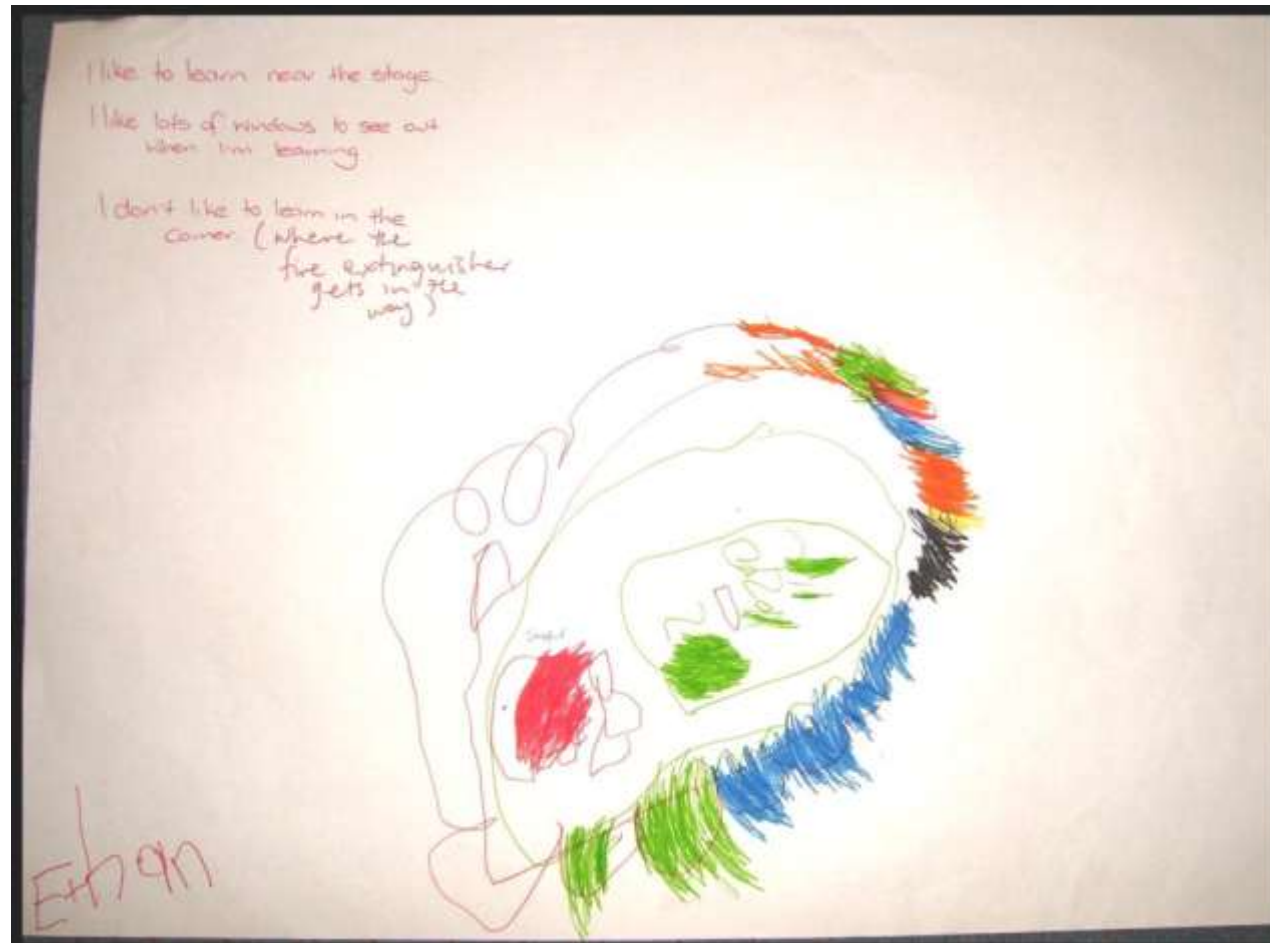
GALILEE CATHOLIC LEARNING COMMUNITY

- Church on the corner



GALILEE CATHOLIC LEARNING COMMUNITY

- Children's drawings guide spatial thinking



GALILEE CATHOLIC LEARNING COMMUNITY

- Site as a series of small pavilions
- Links between inside and outside
- Church on the corner
- View of the hills



CENTRE OF INNOVATION FOR CHILDREN

- Feasibility study
- Early childhood centre
- Based on Reggio philosophies
- No space for ground level outdoor play



CENTRE OF INNOVATION FOR CHILDREN



CENTRE OF INNOVATION FOR CHILDREN



CENTRE OF INNOVATION FOR CHILDREN



CENTRE OF INNOVATION FOR CHILDREN: PRINCIPLES OF CHILDREN'S PARTICIPATION

- children must understand what the project/process is about, what it is for and their role within it .
- power relations and decision making structures must be transparent so that children understand the likely impact and influence they will have
- children should be involved from the earliest possible stage (not merely brought in at the last minute as a token gesture) .
- all children should be treated with equal respect regardless of their age, situation, ethnicity, abilities or other factors
- ground rules should be established with the children at the beginning so that boundaries are clear and explicit so that children's expectations about the possible outcomes can be realistic .

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CENTRE OF INNOVATION FOR CHILDREN: PRINCIPLES OF CHILDREN'S PARTICIPATION

- participation should be voluntary and children should be allowed to withdraw their interest in participating at any stage.
- Shared research between adults and children and listening to the voice of children through engagement and consultation are key understandings and practices of the Reggio Children Educational Project.
- Children have a right to have their views respected, to be given opportunities and resources to express themselves, to understand and to live in encounters with others and their environments, to make connections, build knowledge, contribute to the building of knowledge and experience the feelings and culture of solidarity, responsibility and inclusion (RE 2012).

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CENTRE OF INNOVATION FOR CHILDREN





THE ROLE OF OUTDOORS FOR STUDENTS WITH SPECIAL NEEDS



- Some children need to spend most of the school day outdoors to stay calm
- some need swings and hammocks
- others just need to be by themselves. Children who spend most of their time in wheelchairs need special outdoor challenges
- others need the healing powers of kitchen gardens

THE KITCHEN GARDEN MOVEMENT



- Popularity of kitchen gardens in primary schools
- Stephanie Alexander's kitchen garden movement has over 260 participating schools
- Becomes integral part of the school curriculum

CHILD AND YOUTH FRIENDLY CITIES



- that “outdoors” is not just the space around a school, but goes much wider and should permeate our thinking about neighbourhoods, towns and cities
- SA is moving towards being Australia’s first Child and Youth Friendly accredited region

CHILD AND YOUTH FRIENDLY CITIES

A child friendly city guarantees the right of every young citizen to:

- Influence decisions about their city
- Express their opinion on what city they want
- Participate in family, community and social life
- Receive basic services such as health care, education and shelter
- Drink safe water and have access to proper sanitation
- Be protected from exploitation, violence and abuse
- Walk safely in streets on their own
- Meet friends and play
- Have green spaces for plants and animals
- Live in an unpolluted environment
- Participate in cultural and social events
- Be an equal citizen of their city with access to every service, regardless of ethnic origin, religion, income, gender and disability.

- a welcome development because in Adelaide we had seen much talk about the value of integrated design in the development of vibrant cities, and yet until that point very little discussion about how children and youth fit into that process

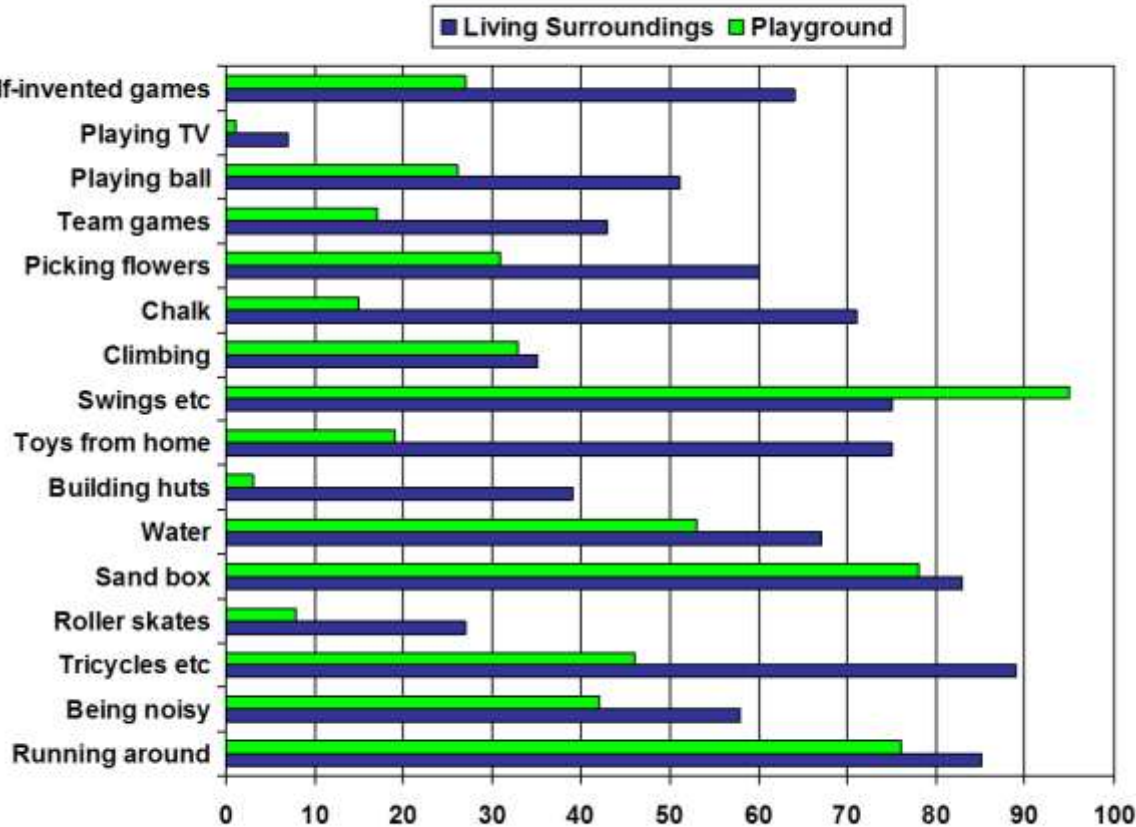
CHILD AND YOUTH FRIENDLY CITIES



- “..the failure of an urban environment can be measured in direct proportion to the number of playgrounds”
- If you remove playgrounds, what requirement would it put on us to design cities for play and activity?
- How do you activate those spaces between buildings as places of play for all ages?

CHILD AND YOUTH FRIENDLY CITIES

Comparison of games played in living surroundings and on public playgrounds



BETTER SPACES FOR LEARNING



- truly “progressive” schools need the latest computers, the latest software, the most teacher training in new technologies?
- “at best, the net benefits of the introduction of computing into schools have been mediocre and at worst, a waste of time and money”
- It might be true that we need to embrace technology, but does it need to rule our educational facilities?

BETTER SPACES FOR LEARNING

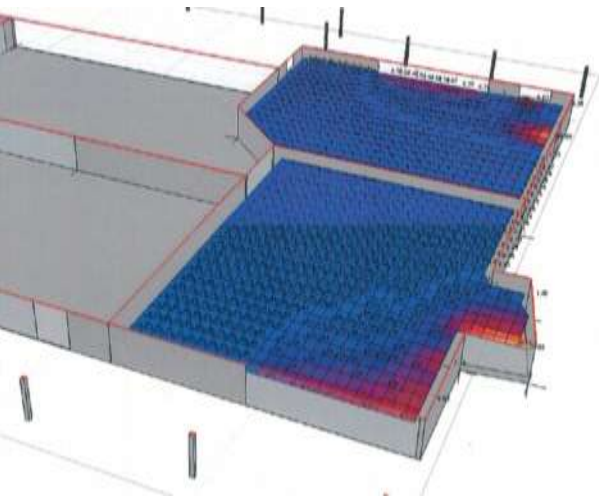


- it's almost impossible to design for the technology – by the time the buildings are built, the technology has changed



NATURAL LIGHT

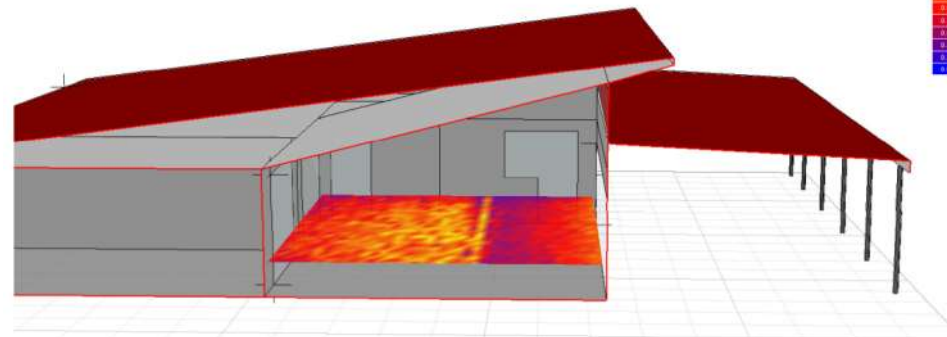
- Neuroscience – changes alertness
- darker spaces for calming
- Lighting variability is important
- Colour effects



Shared Learning space.
Percentage of direct daylight in space for a design sky.
Design sky lighting level is the level exceeded 85% of the time between 9am and 5pm over the year.

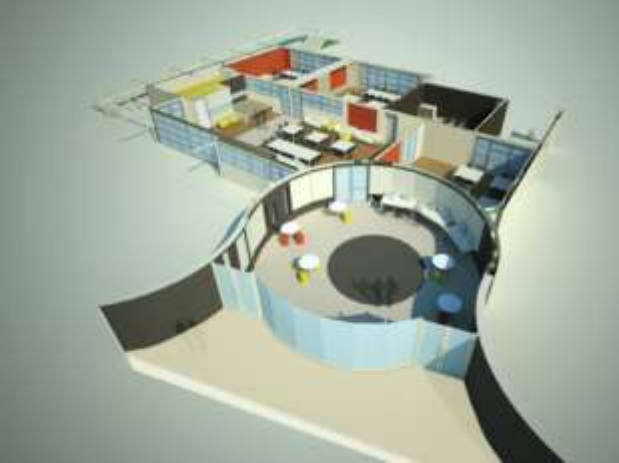


Daylight Analysis
Sky Component
View Range: 3.00 - 1.00 %
© 2010 COLETTA Ltd

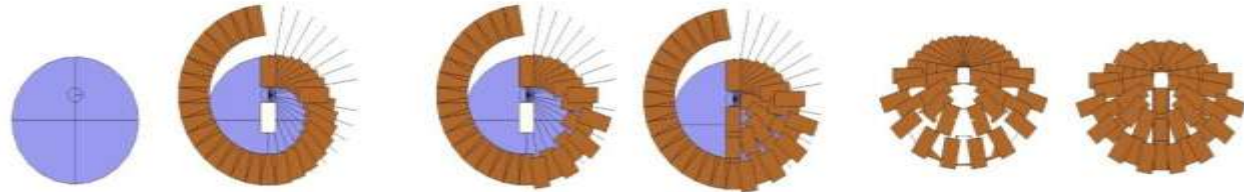


NATURAL LIGHT





ACOUSTICS



- Often ignored
- the dangers of speech reinforcement systems
- Open space and noise
- Language teaching



ACOUSTICS



SHAPING SPACE

- Open vs closed: the wrong debate
- Balance between open and closed, big and small, communal vs intimate





SHAPING SPACE: GALILEE STAGE 1



- Variation in shape, size, height and lighting
- Different ceilings
- No front to the rooms
- Bay windows
- Large shared space



SHAPING SPACE GALILEE STAGE 2



- Older children
- Smaller shared space
- Small withdrawal spaces

SHAPING SPACE GALILEE STAGE 3



- Older children
- Even smaller budget
- different shared space
- One small withdrawal space
- Different toilet configuration



SHAPING SPACE



- Hierarchy of furniture important
- Not all uniform types and sizes
- Encourages different activity types

SHAPING SPACE

UniSA Centre for Science and Mathematics



- Secondary outreach program based on campus
- For children from low socioeconomic areas
- Non-traditional space types
- Encouraging interest in science and mathematics

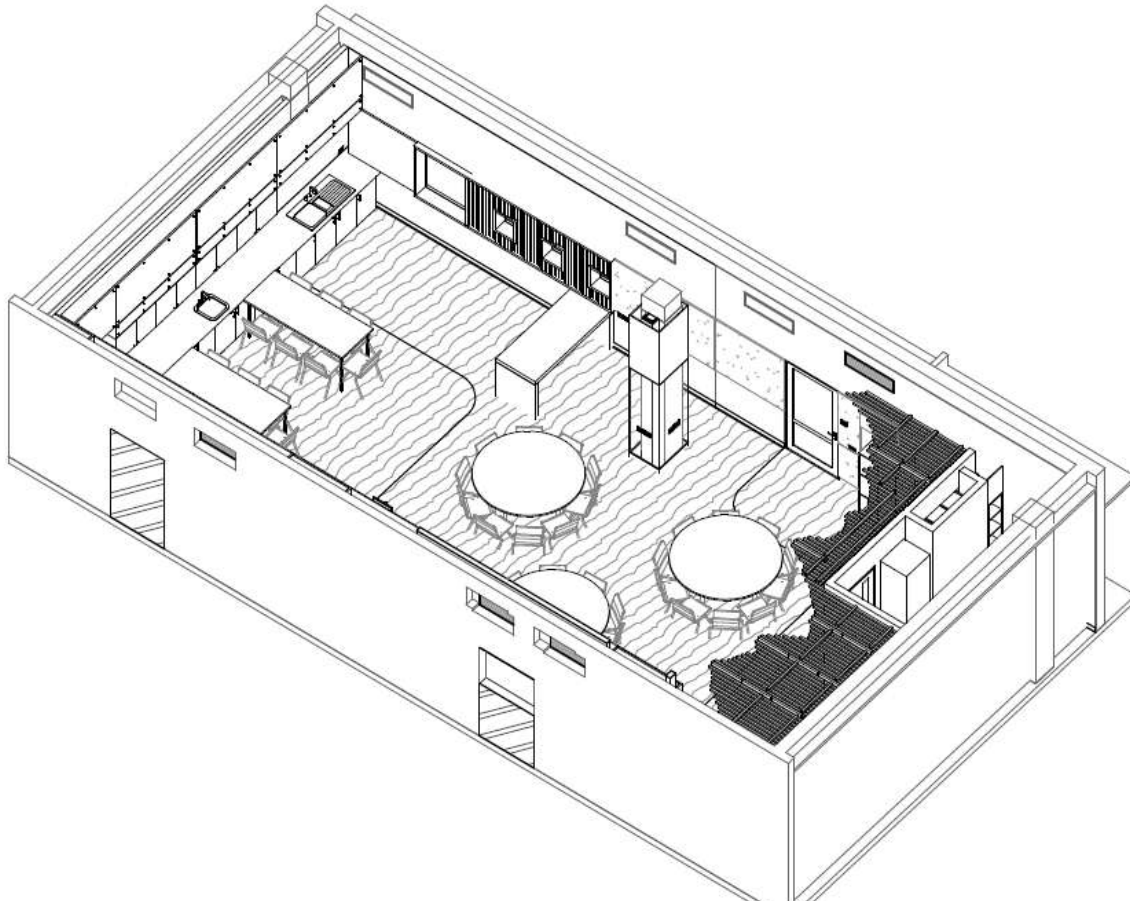
SHAPING SPACE

UniSA Centre for Science and Mathematics



SHAPING SPACE

UniSA Centre for Science and Mathematics





SHAPING SPACE

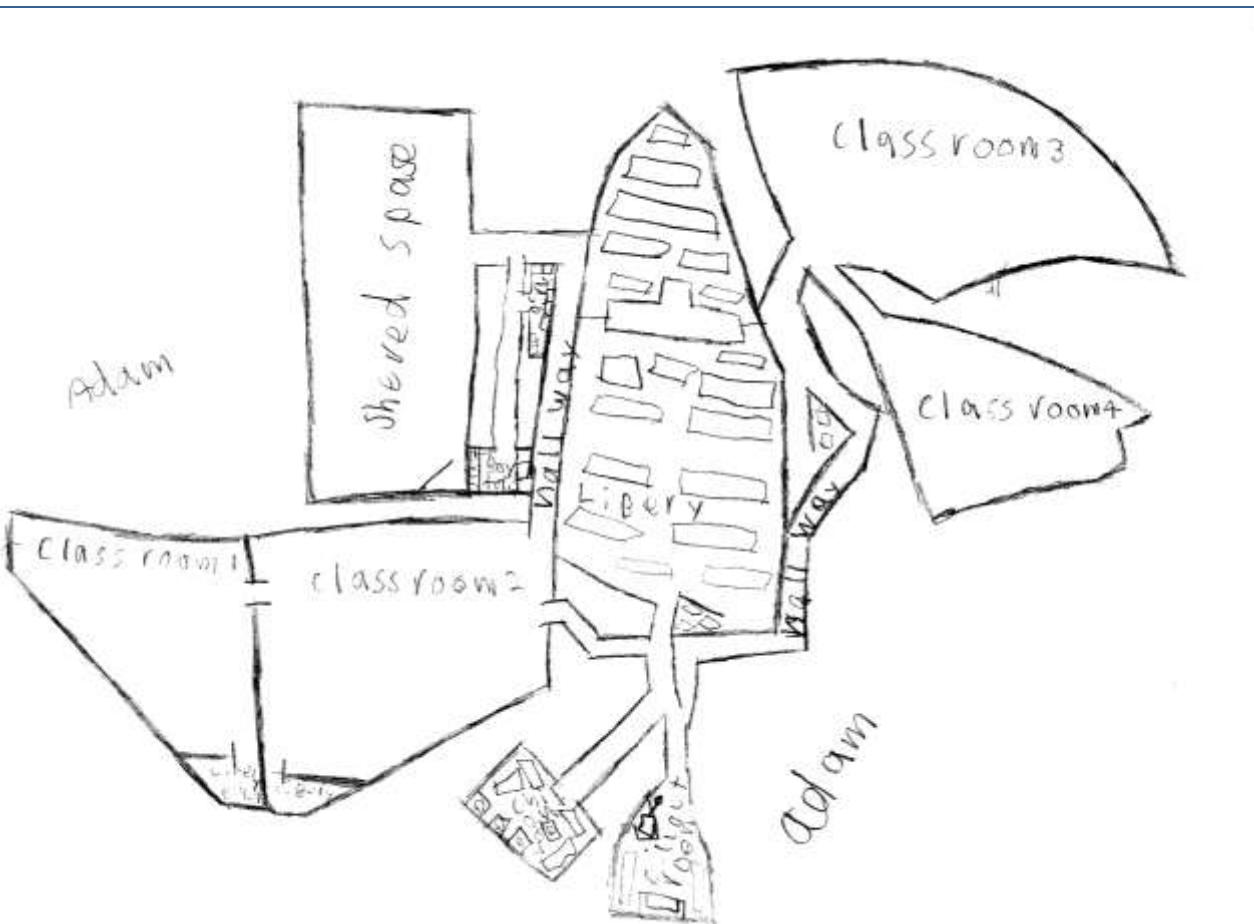
Melbourne University Spatial Laboratory



- Flexible facility to demonstrate links between architecture and pedagogy
- Run postgraduate courses for architects and educators

SHAPING SPACE

Spatial Literacy



- Listening to students
- Educating teachers

A HOME ...FOR LEARNING



- what is the role of the home design in education?



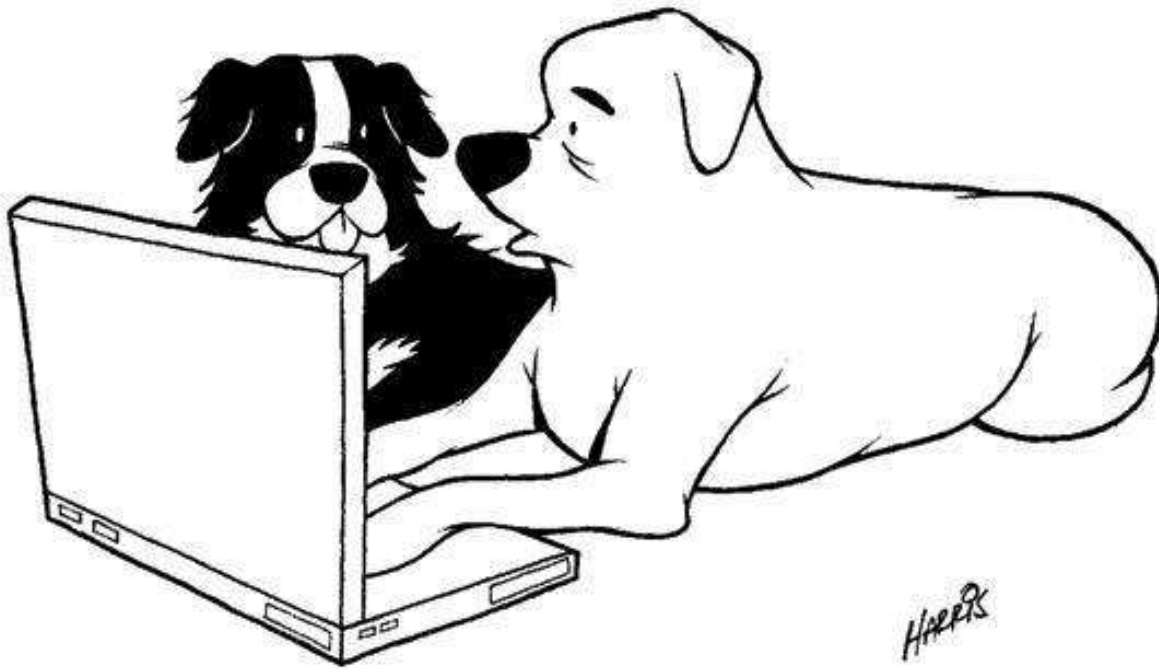
A HOME two scenarios



- Aboriginal housing
 - Housing shortage
 - Nowhere quiet
- New house in a beautiful estate
 - Every feature:
 - Home theatre, separate bedrooms, computer networking etc
 - Children up till 1AM on facebook?

HOME

the place of relationship building in home design



“And then I just hit delete. I haven’t actually eaten any homework for years.”

- Homework is not the key.....
 - Ranked 88 out of 133 in effective learning strategies
- Are we encouraging effective relationships in the design of our homes?

HOME

the place of relationship building in home design



- Role of technology
 - TV
 - Computers
- The role of the family table?

HOME

the place of relationship building in home design

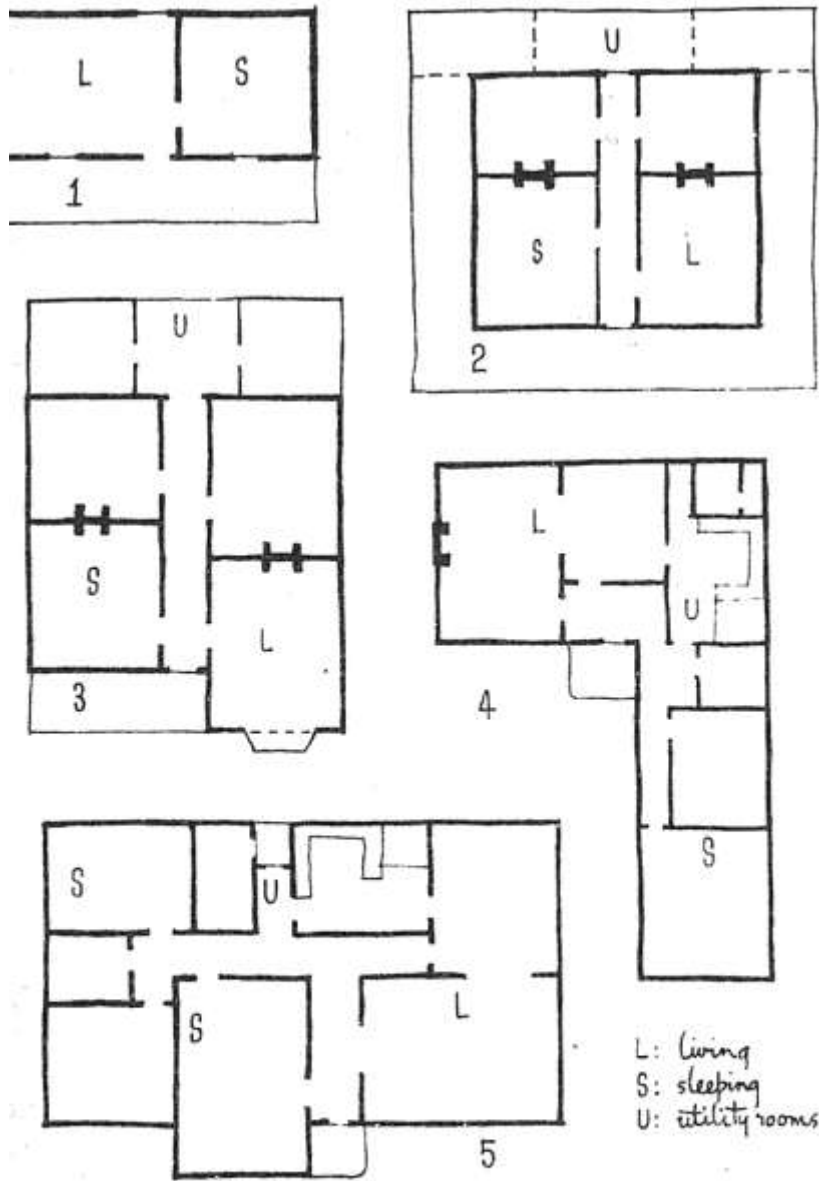


- Does technology have to be moderated?

HOME

the history of
house plans
(..in Australia)

- The evolution of house typologies

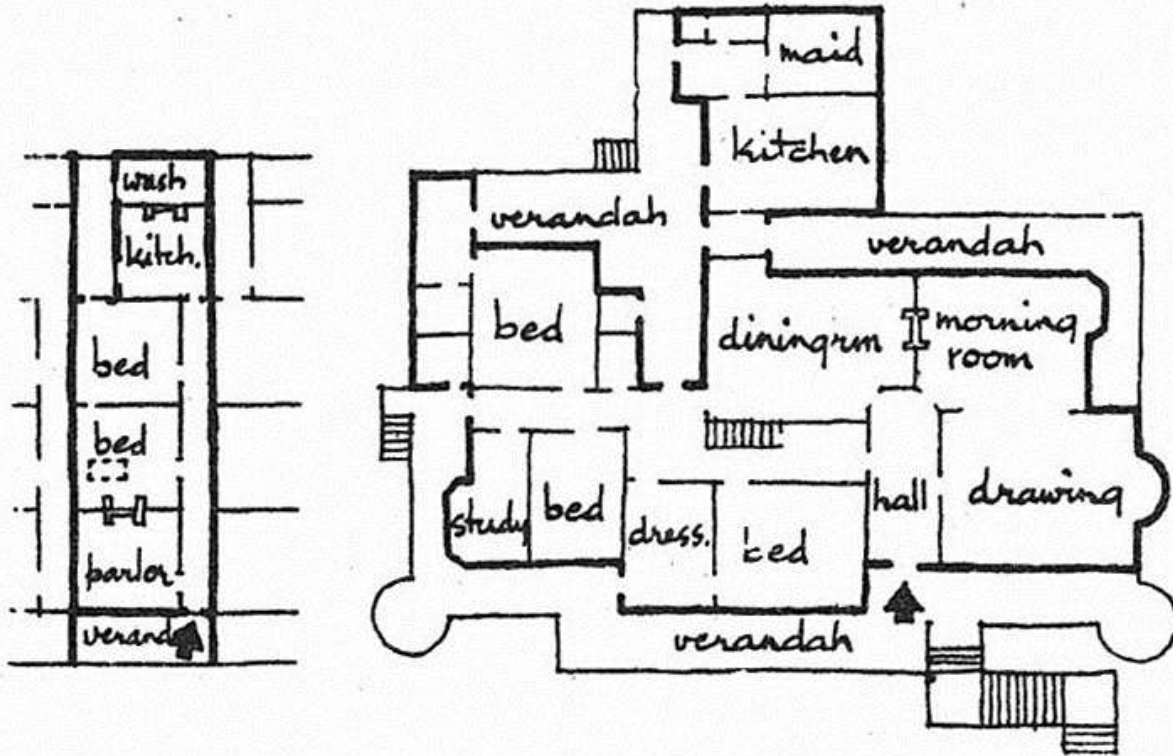


Five Principal Plan Types

(1) Primitive Cottage; (2) Bungalow; (3) Asymmetrical Front; (4) L-shape; (5) Triple-front. An infinite number of minor variations disguised the fact that nearly every small Australian house was based on one of these five plans—more than one million of them being based on No. 3 alone.

HOME

the history of
house plans
(..in Australia)



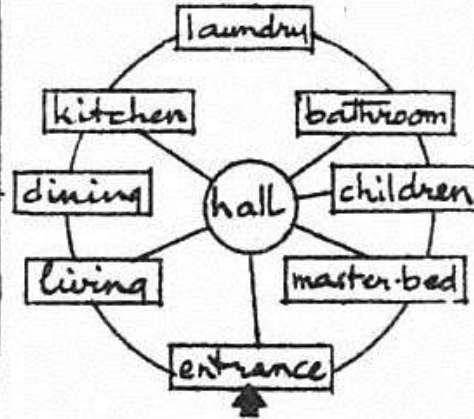
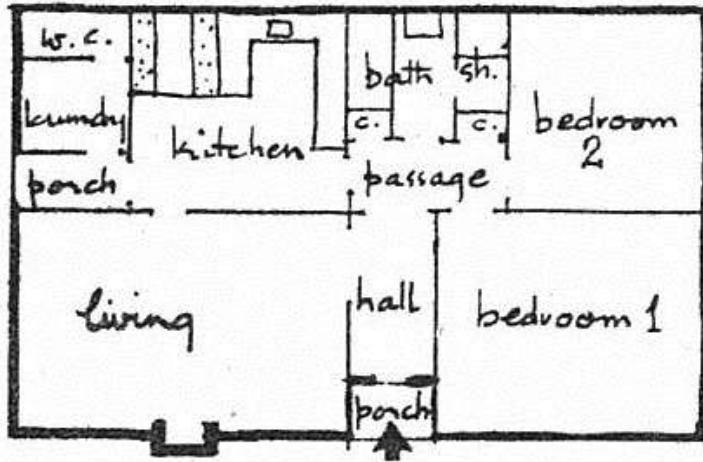
Planning in the later Nineteenth Century

(Left) The tunnel plan of workers' tenements. Average width: 17 feet (three houses to a 50-foot lot). The centre room received only sky-light.

(Right) The vast, rambling incoherency of planning for opulence; the ground-floor plan of a house in Brisbane, 1888 (H. W. K. Martin, architect). The rooms have been juggled to present an almost symmetrical front. Otherwise there has been no attempt to compose the assembly. Rooms have been added one to another like dominoes, according only to related functions (*see also next figure*).

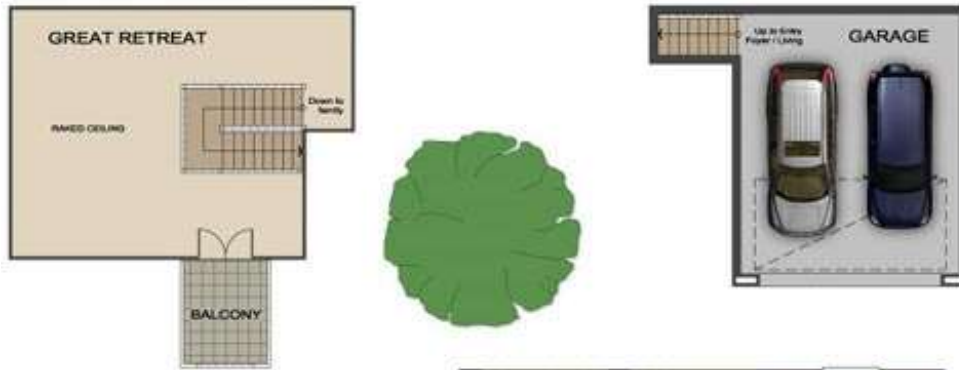
HOME

the history of
house plans
(..in Australia)



Planning in the mid-Twentieth Century

Prefabricators, and planners of minimum cottages for housing estates, almost invariably returned after extensive research and experiment to this basic rectangle. Simplicity of structure, grouping of plumbing, and conventions of room juxtaposition (diagram at right) made this plan inescapable. Variables were the positioning of the w.c. (sometimes off the bathroom) and the living-room chimney. Popular features were the retention of the living-room and the main bedroom at the front (as in the bungalow plan) and the separate shower compartment and the "U-shaped plan of the kitchen working-area, with its adjacent eating "nook". Until conventions of living altered, no more reasonable plan could be found.



HOME

the history of house plans
(..in Australia)

- Rumpus/billiard room
- Home theatre
- Isolation of master bedroom
- Bed 4/study

HOME



- The recession is a retreat to home (if we still have one)
- Entertainment a focus
- The rushed parent vs the slow food movement – are they compatible?

THE
WINTER
OF OUR
DISCONNECT



*How Three Totally Wired Teenagers
(and a Mother Who Slept with Her iPhone)
Pulled the Plug on Their Technology
and Lived to Tell the Tale*

Susan Maushart

HOME

- Decided to disconnect for six months

HOME



- We put our time and money and effort into things we value.
- The design of a home places emphasis on what the occupants believe is valuable.
- In terms of the design of a family home, what should be given pride of place?
- Does the same technology that can empower children make it harder to be a parent?
- is there a polarization between the disconnected parent and the “helicopter parent”, who always hovers over their child, which makes considered education planning harder?

HOME



- Back to the learning metaphors?
 - Campfire
 - Watering hole
 - Cave
 - Life
- Rethinking our homes as relationships for learning

HOME



- Carla Rinaldi notes that community is created by relationships between children, teachers and parents.
- The patterns of home life set the tone for the building of relationships, and the nature of the spaces will affect those relationships.
- the links between architecture and pedagogy come by the spaces changing relationships, and the relationships influencing learning.
- Creating a home with spaces for play, for conversation, for sharing, for isolation, for exploration will create a strong base for a relationship.



Conclusions...

- The first step to better and more diverse learning environments might be to give families the skills required to understand how the design of their homes could change relationships.

- Changing parents' attitudes to the risks and rewards of their child's responses to outdoor environments could restore the importance of the outdoor realm in children's development.

- Then, if those same parents are empowered to influence the design of schools, and the children are inspired to create their own learning environments, a new approach and thinking could be born.

