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# PLANNING LEARNING SPACES

FOR ARCHITECTS DESIGNERS AND SCHOOL LEADERS

## PLAYING INTO LEARNING SPACE DESIGN

RESEARCH BY
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# RESEARCH: ALL ABOUT SPACES FOR PLAYFUL LEARNING

The link between space for play and learning was an important finding from Dr Fiona Young's doctorate. It plays a significant part in her work as Principal at Hayball, an Australian architectural practice with a strong focus on research in school design. Dr Young explains.

Play is a critical part of children's learning and space is recognised as an enabler for these playful learning experiences. However, as students progress in their development, the perceived relationship between play and learning and the spaces that support these complementary activities can become tenuous.

However, two separate studies point to an alignment in the types of spatial qualities that support both playful and deep learning practices at school level. They also reveal how perception can be a barrier to enabling the affordances of school learning environments designed to support a wider range of pedagogies beyond direct instruction.

### Spaces for playful learning

In the first study[1], situated at two girls' secondary schools in Sydney, Australia, a series of spatial qualities identified to enable playful learning were ranked by 253 students and 35 teachers. Of the characteristics identified, the most important criteria included:

- The ability to change spaces and use them in different ways;
- Variety of spaces;
- Variety of furniture types;
- Varying spatial volumes e.g. larger and smaller spaces;
- Areas to relax;
- Variation in colour, tones and lightness;
- Connection to the outdoors.

Two key findings emerged from this study. Firstly, while outdoor spaces were viewed favourably as places to engage with playful learning activities, they were rarely used. It appeared that teachers may be reluctant to teach outside of their classrooms.

Secondly, many respondents believed that playful learning approaches were only appropriate for more junior students. At senior level, learning was perceived as a "serious" endeavour and play considered "trivial". Hence, the juxtaposition of "play" with "learning" was considered a challenging concept for some respondents.

### Spatial qualities for deep learning

The results of the second study[2] may bring greater acceptance to the confluence of play and learning in schools. This study identified spatial qualities which supported deep learning activities at school and museum learning spaces. Deep learning is defined by the American Institute for Research (AIR) as having three key components: 1) a deeper understanding of core academic content; 2) the ability to apply this understanding to new situations; and 3) the development of a range of competencies including people skills[3].

Deep learners are those that are empowered to take autonomy over their own learning[4] and able to engage strongly with the 4Cs associated with twenty-first century learning skills – creativity, critical thinking, collaboration and communication[5].

In this study, 20 teachers identified spatial qualities that supported collaborative, interdisciplinary and deep teaching and learning practices. These included:

- A range of diverse settings to enable different ways to work, including wet areas for hands-on and explorative learning.
- Spaces that can be changed or used in different ways to support interdisciplinary pedagogies.
- A range of mobile furniture and different surface heights to enable both seated and standing work.
- A range of larger- and smaller-sized spaces.
- Soft seating and use of the floor as working and collaboration spaces.
- Outdoor spaces to enable the ability to extend learning activities outside.

A comparison between the two studies shows striking similarities between the characteristics and qualities of learning environments that support both playful and deep learning activities (see Table 1). Also common to the two studies was the role perception played in the enabling of these qualities.



TABLE 1.
CORRELATION OF SPATIAL QUALITIES ALIGNED WITH PLAYFUL LEARNING AND DEEP LEARNING PEDAGOGIES

| Characteristics of playful learning environments (adapted from Young & Murray, 2017) | Spatial qualities related to deep learning approaches (adapted from Young, Cleveland & Imms, 2019). |
|---|---|
| The ability to change spaces and use them in different ways | Spaces that can be changed or used in different ways to support interdisciplinary teaching and learning practices. |
| Variety of spaces | A range of diverse settings to enable different ways to work, including wet areas for hands-on and explorative learning. |
| Variety of furniture types | A range of mobile furniture and different surface heights to enable both seated and standing work. |
| Varying spatial volumes | A range of larger- and smaller-sized spaces. |
| Areas to relax | Soft seating and use of the floor as working and collaboration spaces. |
| Connection to the outdoors | Outdoor spaces to enable the ability to extend learning activities outside. |

### Affordances and the critical role of perception

To understand the important role that perception plays in using space, affordance theory[6] is a useful framework often used by researchers. Learning environment affordances are qualities of the environment (space, objects and people) which enable perceived teaching and learning activities and behaviours[7] (see Figure 1). These qualities may exist in the environment offering the potential for users to engage with them; however, unless they are perceived they may not be used at all. The ability to perceive and utilise affordances is dependent on an individual's intentions, influenced by their background, social setting and culture.

For example, whether a teacher perceives and uses a spatial quality (or not), such as an outdoor learning space, depends on their ability to plan and facilitate lessons for an outdoor context. School cultural and organisational contexts (such as values, structures and protocols) also influence how teachers think about their work. So, unless teachers have a sense that engaging with playful learning activities in outdoor spaces is supported, or encouraged by school leadership, they may not recognise that this practice is even possible.

MORE RECENTLY, INNOVATIVE LEARNING ENVIRONMENTS HAVE EMERGED WITH SPATIAL QUALITIES INTENDED TO SUPPORT MORE VARIED PEDAGOGICAL PRACTICES.

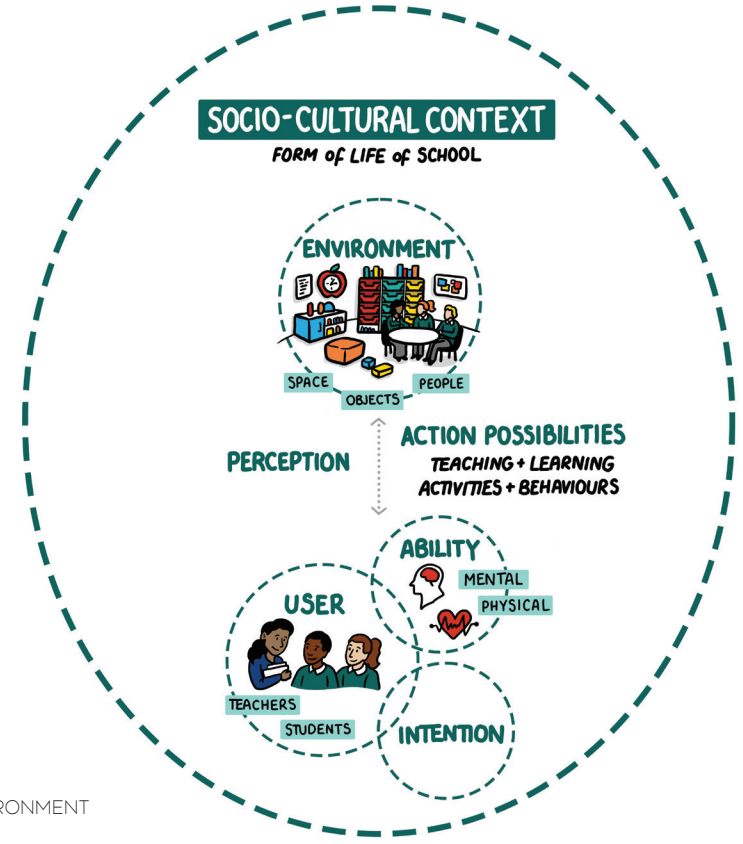


FIGURE 1.
LEARNING ENVIRONMENT AFFORDANCES

**Shifting teacher practice to enable use of new learning spaces**

Traditional schools, largely consisting of cellular classrooms and teacher-directed instruction, have dominated educational contexts since the industrial age. More recently, Innovative Learning Environments (ILEs)[8] have emerged with spatial qualities intended to support more varied pedagogical practices that enable explorative, interactive, playful and deeper learning experiences. However, in order to optimise the affordances of these new spaces, teachers need to be supported to transition from traditional teaching spaces and practices.

Up until more recently, the focus of the development of ILEs has tended to be on the spaces themselves rather than the practices that take place within them. Hence, little is known about how to prepare teachers to practise in these new spaces[9]. This has raised consciousness of the need to find strategies to encourage teachers to think more critically and creatively about the relationship between pedagogy and space.

**Enabling playful learning through playful learning**

A recent interdisciplinary PhD study[10] explored strategies to support teachers in shifting their perceptions and practice around the use of ILE spaces to enable deeper and more collaborative approaches to teaching and learning. Twenty-five teachers from two separate schools with new ILEs in development participated in this combined Participatory Action Research (PAR)/co-design study.



The PAR methodology directed the framework for the research in which teachers as researchers reflected on their current contexts, identified key issues relating to the transition to new ILEs and designed initiatives to address these. A series of co-designed workshops took place at each phase of the study giving teachers dedicated time, space and tools to reflect on the process and share their thoughts with each other.

Playful and hands-on methods were used in each workshop to help teachers reflect and communicate their insights. These ranged from using materials to build metaphors of their practice, creating “field guides” to facilitate the observation of practices around them, and creating drawings to reflect on both previous and projected practices.

A range of strategies relating to school organisation, teacher practice and infrastructure were identified to support teachers in the use of new ILEs. However, critical to the process of shifting perceptions and empowering teachers with the agency to use the affordances of new spaces were the playful co-design workshop techniques which helped participants “better surface unknowns”, “think through nuances”, “link thinking and feeling”, “go deeper” and ‘get to the truth’[11,12]. Reflecting on the value of play as a vehicle to evolve perceptions of space as a resource for learning, one participant noted, “we sometimes jump to the product and we just want a framework or guidelines to tick a box. But this process really has been about experimentation and play and discovery for teachers which is really valuable”.

Although play and learning have often been considered mutually exclusive, this paper highlights the intrinsic connection between play, learning and space, not just for early learners, but also at school level and beyond. Importantly, it recognises the role perception plays in the activation of space for playful learning and the need to enhance teacher’s abilities to optimise the use of ILE spaces for more playful and deep learning approaches. ■

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Full footnotes to Dr Young’s research can be found at *www.planninglearningspaces.com.*