How architectural design can support play in preschool

by Jack Graham
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From our homes and offices to urban spaces, architecture plays a role in shaping human behaviours and interactions. How buildings are designed can be especially important during a child’s preschool years, when children are absorbing the world around them and constructing their own brain architecture.

Architects around the world, therefore, are looking for ways to improve children’s experiences during preschool and kindergarten; events which shape their physical, social and cognitive development, and help to determine their success at school and beyond.

So how can buildings affect early education, and what impact could they have on children’s development?

Shift in thinking

In the last decade or two, there’s been a shift in thinking about preschool design in the Western world, said Tigran Shmis, a Senior Education Specialist at the World Bank. From traditional box-like kindergartens of the twentieth century, architects are looking towards “more open, collaborative places with different types of activities within a common space.”

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The award-winning Fuji Kindergarten, built near Tokyo in 2007 – which caters for children from two to six – helped to trigger this movement and has been replicated around the world. Shaped like a doughnut, the kindergarten has a huge roof which forms an endless playground for children to run around and play, and there are no boundaries between classrooms.

Fuji demonstrated how “a building can make kids socially and physically active,” explained Jure Kotnik, a preschool architect who advises national governments on educational design. The open plan increases the frequency of children’s social interactions, he said. Meanwhile, each day children can cover up to five kilometres: physical activity helps to develop motor skills and is even linked to improved cognitive development.

Experiencing through play

Most importantly, however, this new wave of open plan kindergartens is designed to put play at their core. In recent years, the evidence has grown about how developmentally-appropriate play is fundamental in early education – in everything from early literacy and maths to socioemotional
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“A kindergarten should be like a small city,” said Kotnik, aiming “to give children as much experience as possible”. Instead of all play rooms having the same equipment, a broad selection of activities helps to boost children’s intelligence and skills, he said. And instead of playground equipment being predefined, it should be more adaptable to children’s imagination, he explained, to promote creativity.

One of the best ways of doing that is by incorporating nature, and all of its changing conditions, into children’s play and experience. Takaharu Tezuka, Fuji’s world-renowned architect, always tries to create an intermediate space between the outside and inside using eaves, providing easy access to things like trees, timber, water and soil.

Evidence has also shown that play involving elements of risk lead to a whole host of developmental benefits for children aged two to five, such as problem-solving and focus. This risk can be built into preschool structures, like having big steps or trees to climb at Fuji. “Everything we do has been tested” though, Tezuka points out, “such as the height they can jump off and the softness of the floor”.

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Although further research is needed to directly prove the impact of this new type of buildings in comparison to traditional preschools, the pedagogy on which these designs are based is informed by various studies – on aspects like play and outdoor space – and initial anecdotal findings at kindergartens like Fuji are very promising. Thinking outside the box, these buildings reflect a new vision for twenty-first century early education.

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