

A quick browse through the websites of pre-schools in high socio-economic areas provides insight into the priorities of New Zealand's middle-class parents.

"Children who settle into school easily are the ones who have attended a quality early learning centre with a professional school readiness programme," claims one.

"Our routine is structured similarly to a school routine so that children transition easily to a school day structure. Children will gain skills in early reading and writing in our literacy-rich teaching practice," says another.

Some school preparation programmes go further, one pitching a comprehensive worksheet system to parents of pre-schoolers. "These worksheets are carefully designed to take students from counting up to advanced maths."

Anyone reading such claims and learning of the waiting lists attached to enrolment in these programmes can be forgiven for feeling anxious about "doing enough" to prepare their child for school. Often, the feelings of anxiety continue long past the new entrant stage into the junior school years with some parents seeking private tutors to promote "proper learning" outside of school.

It may come as a surprise, therefore, to learn that probably the best thing you can do for your child's education is to ensure they get plenty of play time.

Play IS learning

Play isn't some sort of soft approach before the 'real' learning begins, says early childhood education expert Viv Shearsby. Play *is* learning, children are the experts – and all teachers should provide play time every day.

"We know young children are expert learners. They are hardwired to do this, and recent advances in brain development research now showcases the importance of this. It is particularly vigorous in the first three to five years. Creative or divergent thinking sits at 98 per cent for those under five, but evidence clearly shows the decline of this consistently throughout childhood with a massive reduction in creative thinking processes by exit of the school context."

Bearing this in mind, it is unsurprising to learn that in Finland, whose state school system has sat at the top of Europe's rankings for the past 16 years, the groundwork for good school performance begins with play-based learning in early childhood centres.

In Finnish daycare centres, designed for children up to age seven, the main purpose is the promotion of health and wellbeing of the child. Children are taught how to develop good social habits such as making friends and maintaining personal hygiene, and at least 90 minutes a day is devoted to physical activity outside.

Nevertheless, play is taken very seriously because it provides children with vital skills in how to learn. By engaging in "free play" and teacher-directed play, children develop skills in paying attention, persevering, concentrating and solving problems, qualities which are considered stronger predictors of academic success than the age at which a child learns to read.

"When children have opportunities to play at length and be involved with others in investigating possibilities and developing hypotheses, they try things out. They have little fear of failure, and through ongoing and recurring experiences they secure brain synapses that form the framework of their learned knowledge. Over time their competence increases, and with this they develop confidence in their capability. Play allows children to be relaxed and work creatively, revisit experiences, solve problems, engage with others and discover an endlessly new world," says Shearsby.

Early years care in Finland is highly subsidised to ensure accessibility to all children. At age five, 75 per cent of Finnish children are in daycare and by six, the uptake is 98 per cent. There is no academic focus, and no formal instruction of maths, reading or writing. Instead the goal is ensuring that the children are happy and responsible.

Many New Zealand-based child advocates believe it should be a similar system here. While the early childhood curriculum, Te Whāriki, is highly regarded internationally, transition to school programmes are less successful and the difference between preschool and primary environments much more pronounced.

As it is, many children's experience of starting school in New Zealand is punctuated by the shock of bells, rules and spending long periods of time sitting down.

One school's experience with play-based learning

However, some schools in New Zealand are adopting Play-Based Learning (PBL) – with very positive results. Kaimai School, a small rural primary school near Tauranga, introduced PBL at the beginning of 2018.

Dane Robertson, the school's former principal who initiated its transition to PBL says the first noticeable change was improvement of social interactions between children.

"The children began to solve their own problems, and fewer would come to me with small issues, they began to self-police their own behaviour."

In the classroom, teachers reported that children were better engaged in reading, writing, and maths groups, and were more confident to give things a go.

Indeed, risk-taking is central to healthy child development and to this end Kaimai raised \$130,000 to finance a skate park, an investment that Robertson says quickly paid dividends.

Within a term, children were observed to develop confidence, patience, perseverance, calculated risk taking, and resilience.

"ALL THESE PERSONALITY TRAITS ARE HUGELY IMPORTANT IN ADULTHOOD, AND THE ONLY WAY THIS CAN BE ACHIEVED IS TO OFFER THESE EXPERIENCES FOR CHILDREN IN A CONTROLLED ENVIRONMENT."

Students are also allowed to play Bullrush, climb trees and make huts, and plans are afoot to build a wooden barn for storage of tyres, scaffolding planks and wooden climbing boxes. There is also a wish list of items such as a mud kitchen and a fire pit.

Kaimai's change in approach came about after Robertson read of schools in Colorado where schooling had been reduced to four days a week because of a funding crisis. Astonishingly the impact on the children's achievement had been positive, it was thought because children were able to be involved in play of their choice on the fifth day. Less school led to better results.

Reading this prompted Robertson to revisit the work of Swiss psychologist and child development expert, Jean Piaget. Piaget's theory of cognitive development and epistemological view are together called "genetic epistemology", and some of his research led to the belief that every interaction establishes cognitive structure in children. This is said to be especially important in the classroom environment.

In 2017, Kaimai staff had professional development with the Brainwave Trust and Nathan Mikaere-Wallis which focused on neuroscience and how the brain works. They learned that at about age seven, the longitudinal fissure (the area where the left and right hemispheres join) strengthens and each hemisphere starts to take on a more dominant role. This is when the brain becomes far more receptive to higher order tasks such as reading, writing, and maths.

Following that, there was professional development with teacher and author Pennie Brownlee, and Longworth Education.

At Kaimai, junior classes still have the focus of reading, writing, and maths, but follow up activities have often been replaced with free play. The teacher will put out invitations or "provocations", are open-ended starting points for play.

Ideally, the items set up for play are natural materials, allowing students to link with nature and use their imaginations. An example being that a plastic apple in a play kitchen will only be played with as an apple; whilst a pinecone could be an apple, an egg or bottle of tomato sauce.

"My findings are that Play-Based Learning is not something that a teacher just does, rather, it is a pedagogical approach to teaching, it is a philosophy that can be backed up through neuroscience, educational theorists and research," says Robertson.

The school's approach is to look at the whole student.

"We fell down the rabbit hole of focusing on students who were struggling in reading, writing, and maths. Late last year we realised we had not looked carefully at the whole

student, as we had students who in the areas of reading, writing, and maths were at, or mostly beyond, their expected levels but had huge social gaps."

Student's academic progress is still a focus, but teachers also consider where they are at with regards to cognitive stages.

"PLAY IS AN EASY WAY FOR TEACHERS TO OBSERVE THE KEY COMPETENCIES IN REAL SITUATIONS, WHICH ARE STUDENT-LED AND STUDENT-FOCUSED."

Kaimai is now investigating what PBL looks like in middle and senior classes with students participating in inquiry projects known as DIY. Teaching is focused on the process rather than the product, and inquiry time is treated more like play. They are mindful of the definition of play as defined by eminent Boston psychologist, Peter Gray:

"Play by definition, is, first and foremost, an activity that is self-chosen and self-directed. It is an activity that you are always free to quit. Activities that are chosen by teachers and directed or evaluated by teachers, is not play."

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