









Acknowledgements

This paper would not have been possible without the inspiration of Marcus Veerman and Elizabeth Moreno from Playground Ideas, who initiated and guided the research and writing process. I would specifically like to thank Tim Gill and David Whitebread in the United Kingdom and Karen Stagnitti in Australia for their advice and feedback on early drafts and guidance to locate additional sources. I would also like to thank Daniela Pineda Molina and those from LiveStories for their excellent work on design and the illustrations. Additional illustrations have also been provided by Adelaide Daniell. Finally, thanks to the global community of researchers who document the benefits of play, and to the many friends and colleagues who, through discussion and debate, helped to shape the paper. And I should again particularly acknowledge the contribution of Elizabeth Moreno for her considered suggestions and additional material. Thank you all.

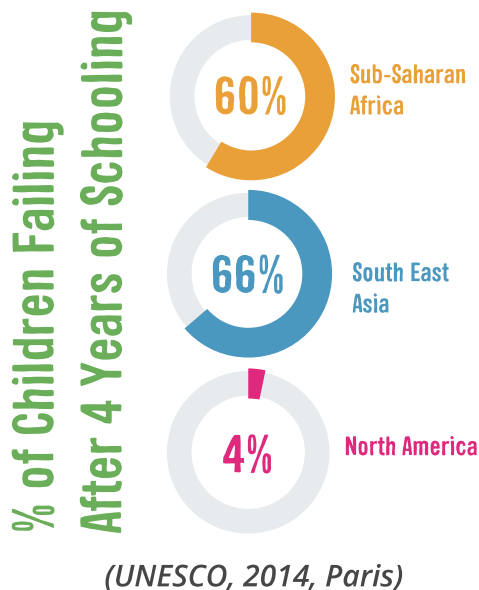
-Peter Kellock

Contents

	Executive summary	3
	Introduction	7
	The issue	8
	Potential of play interventions	10
	+ Long term benefits	10
	+ Play interventions within families	10
	+ Potential to counteract ill effects of early malnutrition	12
	+ Play interventions within schools	13
	+ Economic benefits	16
	+ Improves subsequent academic performance	19
	+ Develops self-regulation and self-control	19
	+ Develops language and literacy	21
	+ Develops mathematical skills	23
	+ Promotes creativity and Initiative	24
	Call to action	25
	References	26

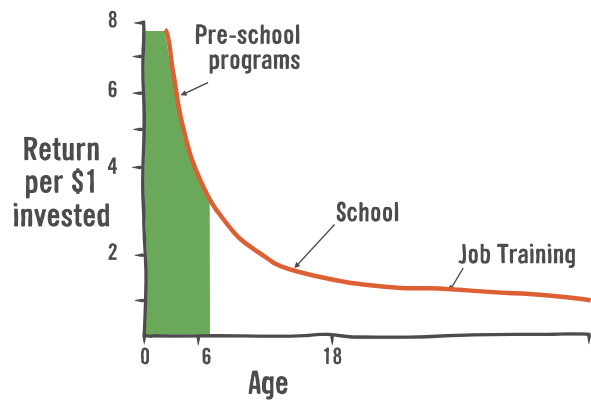
Executive summary

Today over 90% of the world's primary age children attend school. But sadly for many children across the globe, the education they are receiving is failing to equip them with even the most basic skills. In some parts of the world up to two-thirds of children are failing to reach the minimum benchmarks of learning.



For millions of children throughout the developing world, school is largely characterized by overcrowded classrooms, poorly trained teachers, and rote learning. Millions of disadvantaged children in under-resourced education systems enter adolescence ill equipped to gain employment or escape cycles of poverty in adulthood.

Rates of Return to Human Development Investment Across all Ages



(Cameiro & Heckman, 2003)

Multiple 20-40 year longitudinal studies have demonstrated a profound impact of play based interventions in the education and long-term life outcomes of children living in poverty. In addition, these interventions have resulted in significant economic gains both for the individuals and for society as a whole.

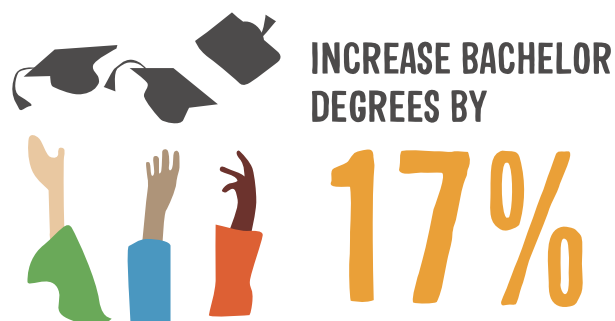
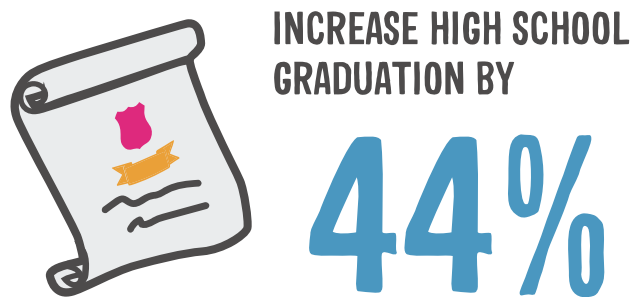
Research on play interventions show that it results in significantly raised IQs, greater levels of education attainment, higher rates of employment, and increased wages.

IMAGINATION
 COOPERATION
 COMMUNICATION SKILLS
 TURN-TAKING
 PERSISTENCE
 STORY TELLING
 MOTOR EXPERIENCES
 SELF-CONFIDENCE
 VOCABULARY
PLAY
 CONFLICT RESOLUTION
 ANXIETY REDUCTION
 CONCENTRATION
 SHARING
 PROBLEM-SOLVING
 ABSTRACT THINKING
 PHYSICAL CHALLENGES
 CREATIVITY
 SELF-HELP SKILLS
 SELF-ESTEEM
 EMERGENT LITERACY
 ATTENTION REGULATION

Disadvantaged children in Jamaica who were provided with additional early play stimulation resulted in their average earnings increasing by 42% 20 years later compared to other children.



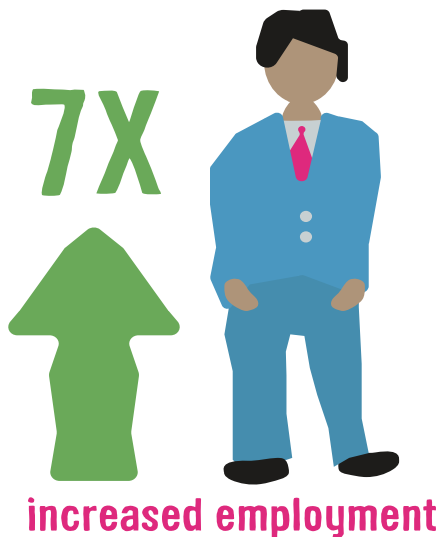
Where play-based approaches in pre-schools were trialled, participants 20 years later completed an average of almost one full year more of schooling, achieved a 44% higher high school graduation rate, while the percentage with bachelor degrees increased by 17%.



The individual and social economic benefits from a play-based preschool program was \$244,812 per participant over 40 years on an investment of \$15,166 per participant.



Participants from pre-schools where play-based approaches were trialled showed increased employment 7 times higher at the age of 40 than one would expect based on their level of educational attainment.



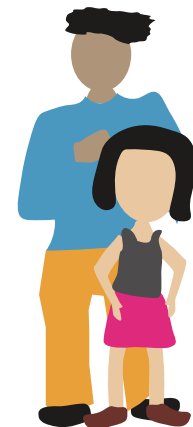
One of the under recognized but crucial biological functions of early play is the development of self-regulation, a skill difficult to teach but naturally developed through play. Early development of self-regulation skills is a reliable predictor of social, cognitive, and interpersonal skills which have positive effects far into adulthood.

In addition, multiple studies illustrate the effects of early play experiences in developing language and literacy, numeracy, and creativity and ingenuity. If we are to equip children with the skills to thrive in the rapidly changing world around them, meaningful early play experiences are essential.

Call to Action

Research has proven play interventions to be a powerful, cost effective poverty reduction tools with sustained impact. We call on both public and private sectors that oversee the welfare of children to:

1. Ensure every child under the age of 12 has substantial daily access to a stimulating, safe space for play.



2. Emphasize the importance of early play opportunities from 0-3.



3. Prioritize play as a basic right for children in crisis.

