PROJECT PARKOPOLIS
TRANSFORMING CITIES INTO LEARNING LANDSCAPES

EVIDENCE-BASED ACTIVITIES
FOSTERING 21ST CENTURY SKILLS
THROUGH PLAYFUL LEARNING

PILOT SWITZERLAND

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“We are currently preparing students for jobs that don’t yet exist, using technologies that haven’t been invented, in order to solve problems we don’t know are problems yet” - Karl Fisch

What is Project Parkopolis?

Part of the global Learning Landscapes initiative, Project Parkopolis is among the big ideas reimagining cities as extraordinary learning opportunities for the breadth of skills children need in the 21st century. Building on years of research from the science of learning, Parkopolis reimagines ordinary public places as accessible and affordable opportunities for learning in the 21st century through evidence-based activities that facilitate interactions and engagement between children and their parents, educators and communities.

Imagine a life-size board game that supports children practice difficult mathematical topics such as fractions with a reinvented dice that prompts them to move from space 5 to space 8¼. Or a game that challenges them, their families and friends to solve a problem in scientific reasoning or to play hopscotch on a specially engineered area that fuels the executive function skills of attention, memory and flexibility. These are just a few of the activities embedded in the familiar set-up of a classical board game that researchers from the science of learning have designed to be fun and engaging, while also being deeply purposeful.

The science of learning behind Parkopolis

Activities in Parkopolis target children 3-6 and 7-12 and were born from rigorous research focusing on patterns, numeracy and spatial skills, geometry, measurement and fractions, fostering at the same time collaboration, creativity and collaboration. Research shows that playing linear numerical board games promotes children’s math development and that children learn more effectively when they engage with their whole body. In addition, there is an explicit focus on social and emotional skills and executive functioning skills.
(working memory, cognitive flexibility, inhibition and approaches to learning (strategic planning, persistence, open-mindedness, sustained focus, communication, and cooperation). Game cards in Parkopolis also target fluid reasoning which is the capacity to think logically and solve novel problems, a critical aspect for scientific and computational thinking. Parkopolis also promotes physical activity and gross motor skills which have proven benefits for children’s cognitive and health development.

Why do 21st century skills matter?

With business as usual, by 2030 half of the world’s youth - over 800 million young people - will not have the skills they need to succeed in work and life (Education Commission projections 2016). According to WEF’s Future of Jobs Report 2016, 65% of children entering primary school today will ultimately end up working in job types that don’t yet exist, most of which will be supported by technology. In Switzerland only, the number of missing IT professionals is forecasted to 25’000 by 2024 (Swiss ICT Professional Association). In our rapidly evolving society, the ability to anticipate and prepare for future skills requirements is increasingly critical for schools, businesses, governments and individuals in order to fully seize the opportunities presented by these trends. However, high levels of immigration and wider social and gender disparities make it difficult to ensure fair educational opportunities for all children, in and out of school.

Why does playful learning matter?

The science of learning tells us that humans learn best when they are active, engaged, when the information they learn links to their lives and when they are socially interactive. Many of the efforts to redress the current skills gap our world in facing are aimed at reforming the school curriculum. Yet, children spend only 20% of their waking time in the classroom. The 80% time children spend out-of-the-classroom has the potential to leapfrog their learning. Parents, educators and communities have extraordinary powers to influence a child’s development. By acknowledging the importance of playful, lifelong learning, they can best support children fulfil their potential.

Pilot project launch

The first prototype of Project Parkopolis was launched by We Are Play Lab in August 2017 in Switzerland during 10 summer camps for robotics, coding and entrepreneurship at EPFL Lausanne, at the Innovation Park Dübendorf and the Loreto School in Zug. Further installations are planned in Swiss and international cities.
PROJECT PARKOPOLIS RESEARCH TEAM

Kathy Hirsh-Pasek, Ph.D., is a senior fellow in global economy and development with the Center for Universal Education at the Brookings Institution, the leading policy center focused on universal quality education. She is also the Stanley and Debra Lefkowitz Faculty Fellow in psychology department at Temple University, where she serves as director of the Infant Language Laboratory. Her research in the areas of early language development and infant cognition resulted in 14 books and over 200 publications. Her newest book, "Becoming Brilliant: What Science tells us about raising successful children", is on The New York Times best sellers list.

Andres Bustamante, Ph.D., is a Postdoctoral Research Fellow at Temple University, under the Institute of Education Sciences « Network for Integrating Cognitive and Educational Sciences ». Having earned a Ph.D in developmental psychology, he has a dual appointment in the department of Psychology and the College of Education. Andres is leading the collection of observation, survey, and interview data for Project Parkopolis.

ABOUT WE ARE PLAY LAB

Fully embracing UN’s Sustainable Development Goal 4, we envision a world where every child has access to inclusive and equitable quality education and lifelong learning opportunities. We are a nonprofit organization on a mission to empower children with the skills, attitudes and knowledge they need to thrive in a fast-paced, increasingly complex world. To achieve our mission, we elevate the public discourse around the skills needed in the 21st century. Informed by research and together with the key stakeholders in the life of a child, we aim to create effective, convenient and affordable new ways to deliver 21st century education.

The We Are Play Lab Foundation is a startup officially registered as a nonprofit organization under the umbrella of Fondation des Fondateurs in Zurich, Switzerland. Guided by a strong social mission, we are a global interdisciplinary network of parents, educators, social entrepreneurs, scientists, designers, engineers and policy-makers exploring new models in education. We Are Play Lab is proud member of Impact Hub Zurich and the Swiss EdTech Collider at EPFL Lausanne.
We Are Play Lab Founder and CEO

**Cristina Riesen** is a social entrepreneur, startup mentor and lecturer. Former General Manager of Evernote in Europe, Middle East and Africa, she has over a decade experience in tech, strategic international communications and high impact entrepreneurship. Startup mentor at Kickstart Accelerator and lecturer at STRIDE, she recently managed the setup and launch of the Swiss EdTech Collider at EPFL Lausanne.

We Are Play Lab Foundation Advisory Board

**Serena Cangiano** is an interaction design researcher at SUPSI Lugano, specialized in technology and communication. Having gained extensive experience in the field of information architecture and user experience design, she is currently carrying out projects of applied research at the Interaction Design Lab at SUPSI.

**Pascale Vonmont** is the CEO of the Gebert Rüf Foundation and a Swiss digital leader very much involved in supporting the Swiss startup ecosystem. As coordinator of the Kick Foundation, established to accelerate innovation in Switzerland, she is a key driver behind the establishment of digitalswitzerland and is also heading the Venture Kick strategy board.

**Francesco Mondada** is Professor at EPFL Lausanne where he has led the design of many miniature mobile robots such as Thymio, commercialized and used worldwide in thousands of schools and universities. He is currently leading the educational activities of the Swiss National Center for Competence in Research on Robotics.

**Manu Kapur** is Professor at ETH Zurich at the Department of Humanities, Social and Political Sciences and Chair of Learning Sciences and Higher Education. For over a decade, he was the Head of the Learning Sciences Lab at the National Institute of Education of Singapore where he conceptualized the notion of productive failure.