A-pops

an urban playful learning experience
and emergent learning system
Proposal Guide

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This project was developed through a collaborative design workshop hosted by Laboratorio para la Cuidad, in collaboration with the MIT Media Lab and IDEO in Mexico City, September 2015.
MEXICO CITY is a diverse and vibrant megalopolis, a true city of the world. Home to more than 21 million people, it is an incredible mix of community, culture, commerce and more.

Yet, like many major urban centers, access to high quality learning environments is not an option for many. And in a city this vast, many sub-communities are isolated with limited access to a variety of experiences, environments, and identities.
Mexico City, like many global urban centers, has millions of children who need better access to quality learning experiences and environments. Tremendous strains, of large-scale growth in enrollment with simultaneous drop-out rates at the secondary level, have placed tremendous pressure on the Mexican education system. Providing rich and meaningful experiences early in life is critical to long-term educational success. Alternative, accessible experiences are needed to engage learners of all ages and encourage them to take agency over their own learning.

Informal learning is already happening all around the city, and highlighting the inquisitive and playful nature of engaging with various events and aspects of the city better demonstrates the value of these experiences.
As a result, the central goals of this program are to make play more visible, and learning more tangible. The proposed design should:

• support learners’ natural curiosity and social nature to play and learning;
• give learners agency and autonomy in the experience, supporting them in taking an active, rather than passive stance in their own learning; and
• engage learners with digital technologies and experiences that support “21st century skills”
empower learners through playful experiences across the city?
A-pops
an urban playful learning experience
A-pops is a networked learning experience across Mexico City that supports young learners in engaging in emergent and playful opportunities in and beyond their local communities.

As part of the Laboratorio para la Ciudad's Playful City program, this project aims to embed playful learning experiences across Mexico City that are creative, collaborative and public, by leveraging existing public spaces throughout neighborhoods and micro communities across the city.

By embedding a variety of playful learning experiences across a variety of locations, a wide range of learners have the ability to easily and socially engage in transformative experiences that support key skills in design, collaboration, creativity, programming and learner agency.

aprender: v. to learn
Our initial design focused on Plaza Tlaxcoaque, a large and well-used open space just across from Laboratorio para la Ciudad. The plaza has a number of key assets, including a LED-illuminated fountain used as a popular place of refreshment and play for children, an open area frequently used for soccer/football, and a church where films are projected in the evenings on the back wall.
installation 1
lightbrights
The back wall of the church in Plaza Tlaxcoaque is a prime space for this installation. Already used to project movies throughout the year, the space behind the church is already heavily used as it is spacious yet protected from nearby road traffic. The wall is composed of small square bricks; likewise, the ground around the church is composed of large cement squares.

PLAY

Individual and collaborative play in the square allows learners to light up the wall in various designs. Jumping on blocks on the ground lights up corresponding LEDs on the wall. Collaborative play illuminates additional features and hidden easter eggs. For example, certain LED features can only be illuminated through multiple-user engagement, and the wall can only be ‘cleared’ by several users creating a complete circuit with multiple users holding hands. The kiosk to the right of the wall allows players to print designs or even upload designs created at home.

LEARN

This installation promotes discovery through play, design, collaboration and communication. Experiences may be entirely playful but also evolve into discovery of how the installation works, discovery of various functionality and features of the space, and into purposeful design and collaboration to further build and create. The additional kiosk adjacent to the church allows users to takeaway their work if they choose, but more critically, supports online development of designs. The web application for A-pops allows users to construct designs online, be given a code that can then be entered at the kiosk to illuminate their design in real time.
installation 2
playgram
The Fountain at the front of the plaza is a delightful feature of the space and very popular amongst young people. With existing embedded colorful LEDs, the fountain activities intermittently throughout the day and plays in a random pattern—a perfect opportunity to give users agency over the function of the fountain. The surface of the fountain is made up of concrete blocks divided up in concentric circles, with the LEDs and fountain jets embedded in each. For this installation, we will embed pressure sensors in blocks of the outer ring, each of which corresponding to basic programming commands.

**PLAY**

The fountain will still function as it has traditionally, activating sporadically throughout the day, but now as young people play throughout the space they can explore and interact with the fountain, exploring how and why it responds in certain ways, and ultimately take on their own agency in the space and ownership of the activity. Individuals can play with the command blocks to program the fountain to playback simple patterns, or groups of players can explore how to work together to create patterns collaboratively.

**LEARN**

This installation promotes discovery through play, collaboration, design, logic skills, and communication. Their natural play in the space can be transformed into active agency over the experience. Our intent is to help young learners identify how they can not just be ‘receivers’ of experiences but be drivers and owners of those experiences—and ultimately their own learning journey. Individual play allows a learner to begin to understand the basic programming commands, while collaboratively play requires communication and collaboration.
PROTOTYPING

STORYBOARDING

CO-DESIGNING
What is the larger A-pops experience?
The aim of the project is leveraging public spaces across the city as a networked, emergent learning system—supporting young people across the city in powerful learning experiences outside of and around the existing educational system, while embedded in the local communities. As these installations grow throughout the city, they provide a wide array of contexts and activities, and consequently key mindsets and skills. They will be supported by an online platform networking them together, which also provides an additional on-ramp to engage in and participate in each installation, and overall incentives and supports for completing the entire experience.
A young learner's guide to A-pops activities around the city.
Space Archetypes

There are a variety of spaces around the city to be leveraged for the project, including:

gardened places
abandoned walkways
open squares
pedestrian streets
pop-up parks
cornered spaces
Space Archetypes
Each city space has a topology of features to be used in the installation design.
Each installation should be developed based on five key design parameters:

- simple
- social
- agency
- public
- playful
Developing the project at scale will require iterative design and development, but also engaging the larger community in co-design as well co-building. Co-design allows for a participatory culture to the project, helping to also surface other features and resources that may not otherwise be known.

The maker community is strong and growing in Mexico City, and is a key asset for this project. The technical ability, expertise and motivation of the community can play a key role in development. At the same time, the installations are place-based opportunities to develop and apply skills in a variety of technical areas.
1. general topic/domain identification
2. identify team members
3. email introductions with bios
4. online hangout and collaborative deep-dive of space
5. identification of goals and materials needed/provided
6. on-boarding of HCD process (if needed)
7. in-person design camp
8. research and data collection
9. identify initial prototype
10. implement / refine / review / redesign
11. identify additional sites and grow partnerships
Jen Groff

Jennifer Groff is an educational engineer and PhD candidate at the MIT Media Lab, in the Education Arcade. She has more than 10 years experience in designing and research leading edge learning technologies, environments and systems. Her current research focuses on tools for supporting and capturing deeper learning, skills and competencies. She is co-founder of the Center for Curriculum Redesign—an international NGO partnered with the OECD to rethink what kids learn in today’s world. Previously, Jen was a Fulbright Scholar to the UK, and for her innovative teaching in the K-12 classroom, she was named a Microsoft Innovative Teacher Leader in 2005 and a Google Certified Teacher. She has an Ed.M. from Harvard University and an M.Ed. from the University of Delaware.

Leticia Lozano

Leticia Lozano is a spatial designer and a people’s person, her creative drive comes from how the dialogue between people and places metamorphose within different cultures, her curiosity and creativity has taken her to explore the boundaries between architecture, public space, design and art. She has a degree in Architecture from Universidad de las Americas Puebla, Mexico and a MA in Narrative Environments from Central Saint Martins College of Art & Design, UK. Her work focuses on research, development, management, design and production of creative projects like urban installations, exhibitions, urban activations. She is passionate about designing immersive and innovative experiences, and her strongest skills are creativity, leadership, teamwork, organization and a way with words.

Nayeli Ramírez

Carla Nayeli Ramírez is a student of Sustainable Development engineering at ITESM. In 2012, she led social projects in Texcoco, where she facilitated learning experiences in global warming and environmental issues. She performed in October 2013 an internship at FAO on Climate Change in the Context of REDD+. In 2015, she becomes labber in Aalto Lab Mexico, working in water problems near the reserve of Calakmul. Today she is working in a NGO called Design You A, with the objective of turning global risks and problems into opportunities.

Daniel Fernández de Córdova Shore

Daniel Fernández de Córdova Shore is an electronic engineer. He has founded several companies, the latest one being MACHINA, one of the first wearable technology company's in the world, appeared along with the rest of the team as one of Forbes' Mexico 30 under 30. He then went on to found ISLA, where he gives project based workshops ranging from homebrewing to building satellites. ISLA is currently being incubated in Startup Mexico and is working to create modern self-sufficient communities.
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