



# The PlayBook

Offering Development 2010





# Discovery

- . Opportunity
- . Research
  - . Primary
  - . Secondary
  - . Findings
  - . Challenges
- . Process

# Opportunity

Common interest pointed team members to childhood education as the sphere in which to develop the offering. Commonalities between children across cultures were studied in detail, and the key insight was revealed that children play in one of five basic forms.

## Key Insight

**Draw** – It could be with a brush on a canvas or with a stick in the dirt. In essence it is changing the aesthetic of a surface.

**Build** – Constructing and deconstructing objects – LEGOs are utilized in much the same way as rocks and sticks placed one on another. Arranging and placing objects in a way that has context (subjective or otherwise.)

**Story** – Creation of or interpretation of narratives. This might be through acting or dance. Lots of pretending and role playing.

**Travel** – Rolling, pushing, riding. This play gets you from one place to another and deals with motion, in groups or as an individual.

**Team** – Collaborative effort for a goal against another team. From soccer to cricket to capture the flag.



# Research

## Primary

DesignPlay interviewed several people who, as individuals or representatives of organizations, were involved in similar Design Thinking and/or educational pursuits. These included:

- Laura Richardson, Frog Austin
- Peter Han, Inventors Without Borders
- Rob Stokes, Frog Austin
- Katie L Koch, Design Educator, New York
- Peggy Yu, 4th grade instructor
- Sandra Pyles, 2nd grade instructor
- Katerina Elkins, Preschool & PreK instructor

Prior to the discussions, emails were sent that helped frame the conversation by posing several simple questions:

- What are the **basic elements** of design or creativity?
- Is there a particular **environment** that encourages collaboration?
- What is your **secret recipe**?
- What **roadblocks** do you encounter (authority, parents, children) and how do you get through them? [Externalities]
- What **barriers to creativity** do children/people have? [Internal/Cultural]

## Secondary

Secondary research included extensive inquiry into organizations involved in education, curriculum, and child development.

- Reggio Emilia
- Montessori Schools
- Presidio Child Development Center, San Francisco
- Making Learning Visible at Project Zero, Harvard
- MIT Media Lab

## Findings

Analysis and Synthesis of research led to the following conclusions:

**Children play across all cultures.** They are IN-NATE designers as they play; exploring environments, imagination & pretending, and making things. Children are the best IMPROVISERS ever, and have a seemingly limitless JOY as they play.

**Adult designers, when children, had three things in common.** Play, a nurturing environment, and a source of inspiration (person, place or thing.) Somehow, their inspiration and creativity has continued to adulthood.

**Engaging different parts of the brain leads to new thinking; creativity and innovation.** The lack of opportunity for creative activities (such as in the arts, visual or performing) affects a child's ability to solve problems of all kinds (limits the practice they get at engaging these other parts of their brains).

**The current state of education in the United States is lacking.** It is mostly formulaic; standards-based versus critical thinking. Right-brain skills are undervalued, with the budgets for arts, physical education, music and drama dwindling yearly.

**There will be an increasing need for innovators in the future, and the current trend in education is not preparing them.** This is a common problem across nearly all cultures and environments.

## Challenges

How might one harness the natural, playful activities of children and keep them current and present into adulthood?

How might one direct these playful activities to intersect with society, and make new learning opportunities?

Can an offering be developed that empowers children with design thinking tools – one that is engaging and able to be adapted across age and cultural barriers?

DISCOVERY

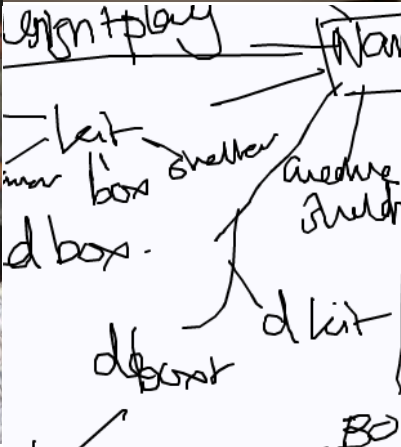
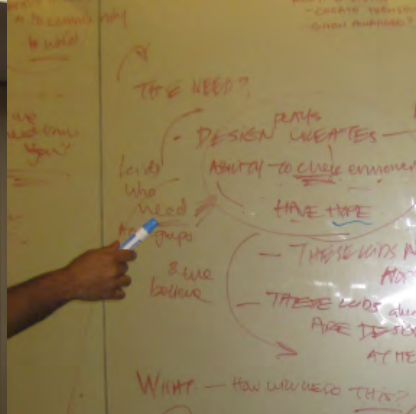
# Process

Development of the DesignPlay framework and its initial iteration, the GoBook, were developed by the interdisciplinary dMBA team during productive face-to-face brainstorming sessions, supplemented by numerous video-conferences, emails and individual contribution.



LEGOs, legos, legos were my all time favorite toy. Between legos in my sandbox I built worlds.  
- Michael McDaniel

Taking every toy apart had and not being put them back together.  
- Andrew Nain





# DesignPlay

- . Overview
  - . Attributes
  - . Benefits
  - . Champion
  - . Implementation
  - . Partners
- . System
  - . Find It
  - . Sketch It
  - . Build It
  - . Share It

# DesignPlay

DesignPlay is Design-Thinking for children. It is an open-ended, foundational creative framework that builds on what children already do as they play. As they imagine, create and collaborate with others, DesignPlay helps kids understand that they can influence their environment. Their empowerment leads to change in their immediate environment and beyond.

## Attributes

DesignPlay features the following attributes in its implementation:

- **Play** as the central tenet; fun to learn
- Facilitates **future learning**; self-directed framework teaches thinking & problem-solving versus information & memorization
- Encourages exploration of **environment**
- Encourages **collaborative communication** with peers and teachers
- **Universal applicability**; capable of cross-cultural iterations
- **Recognizes accomplishment** by peers and/or Champions, where milestones of progress help inform and educate children on their DesignPlay journey

## Benefits

**Creation** – Using innate imagination skills to craft original drawings, structures, and stories unbound by environmental constraints

**Freedom** – Play and create without overt, tight constraints. Loose direction allows opportunity to explore their imagination applied to their environment

**Validation** – Essential for healthy development. Opportunity to prove they are individuals worthy of the respect of peers and caregivers

**Accomplishment** – Enjoy satisfaction from opportunities to employ their innate skills of imagination in play and tasks set before them

## Champion

A parent, teacher or other facilitator is essential for maximum effectiveness:

The Champion helps to nurture **essential emotional needs** of children including Esteem, Affirmation and Validation

The Champion **engages with the child**; active participation in helping and sharing

The Champion will be **well-versed in Design-thinking**, in order to better guide the process.

## Implementation

DesignPlay might take any number of incarnations, including:

**GoBook** – Activity book and personal journal

**DesignPlayground** – After school development center

**Games** – For insertion at schools or retail

**Curriculum** – Books, guides, resources available for educators/parents

**DesignPlayers** – Traveling team that facilitate DesignPlay workshops

## Partners

Partners are necessary for financial support, on-the-ground support, and additional development. Partners might include:

**Aid organizations** (UNICEF, UN)

**Design organizations** (AIGA, IXDA, Frog Mind, IDSA) and similarly minded nonprofits

**Design Education organizations/individuals** (Innovation without Borders, Nueva School, My Dil Development, Laura Richardson, Emily Piloton, Greg Morteson)

# System

DesignPlay empowers children through the activities they already do as they play. DesignPlay isolates these activities that have parallels in Design Thinking, and frames them in engaging ways that are appropriate for the child's developmental level and specific learning environment.

## Find It

Equivalent to Research. Find It activities seek to nurture:

- Systems thinking and connectivity of concepts
- Exploration and observation of the environment in order to discover opportunities in observed challenges
- Conversation in relationships, effective inquiry, and observation skills that help uncover needs



## Sketch It

The Ideation portion of DesignPlay.

- Brainstorming using mindmapping and other tools
- Rendering developed concepts as visual and/or descriptive narratives



## Build It

Analogous to Prototyping, Build It activities feature:

- Craft skills that involve the physical making of an idea
- Improvisation in finding source material to generate tangible artifacts
- Iteration, rebuilding existing concepts, using them as springboards to develop new concepts



## Share It

The collaboration and critique aspect of DesignPlay, Share It activities help foster settings where children are:

- Encouraged to share their work with peers and accept feedback. This might be extemporaneous discussion or in organized "gallery" settings
- Guided in means of delivering constructive feedback
- Placed in environments where collaboration is required to effectively complete an activity
- Encouraged to release personal ownership of their project, making group completion a desired outcome



Just as in Design Thinking, DesignPlay activities often overlap and interweave; linear progression may or may not be present, dependant on the circumstance and need.





# Prototype Testing

- . Prototype description
  - . GoBook attributes
  - . 9 year old developmental characteristics
- . Demographics: Blacow Elementary
- . Photo audit: 4th Grade Class
- . Focus group: 10 children
- . DesignPlay Exercise
- . Participant: Alexander

PROTOTYPE

# DesignPlay GoBook

The DesignPlay GoBook is a collection of DesignPlay exercises gathered in a journal/book format. It is designed to enable the participant to have a self-guided experience, ideally in a group setting with loose facilitation. Specific visual and written communication were implemented to allow for the cognitive and social development of 9 year old children.



## Attributes

**Foundational** – Inspires and directs, does not constrain

**Systems-oriented** – Ability to craft their own story, integrate their story with the stories of others

**Iterative** – Contextual change prompts reimagining and recreation, spinner (or dice) gives random direction

**Engaging** – Delivery in a fun, kid-appropriate manner

**Simple** – Encourages them to find or create their own tools and materials

**Portable** – Tangible ownership of creations and design process

**Collaborative** – Prompts sharing with peers and facilitators/teachers

## Relevant Developmental Characteristics

### Social

- Self-aware – Learning to take responsibility for own actions
- Observes that authority figures are fallible; note adult inconsistencies and imperfections
- Fairness and justice a priority
- Enjoy being a member of a club
- Increased interest in competitive sports
- Becoming much less egocentric – able to understand the perspectives of others
- Better understanding the concept of “audience” when writing

### Intellectual

- Can reason logically and organize thoughts coherently
- Abstract thinking is difficult without relating to direct experience
- Learn best through active, concrete experiences
- Showing signs of being more responsible, inner directed, an independent worker
- Variety in reading: fiction, how-to project books, and non-fiction informational books
- May develop special interest in collections or hobbies
- May be less imaginative than at earlier grades; more involved in real world

### Emotional

- Desire for self-expression, and a modicum of control over choices
- Age of negatives: “I can’t,” and “This is boring”
- Appreciate being trusted
- Peer conformity and acceptance is increasingly important
- Desire affirmation of adults

# Blacow Elementary School

Blacow Elementary School was the ideal testing platform. It features a diverse population of kids, based on family income, education, languages spoken at home and ethnicity.

Grade range and calendar

**K-6**

TRADITIONAL Academic

Performance Index

**775**

County Average: 800  
State Average: 792

Student enrollment

**547**

County Average: 461  
State Average: 518

Teachers

**30**

County Average: 24  
State Average: 26

Students per teacher

**18**

County Average: 19  
State Average: 20



English Language Skills

**41%**

English Learners

County average 31%  
State average 32%

## FAMILY FACTORS

Low-income indicator  
Parents with some college  
Parents with college degree

	BLACOW ELEMENTARY	COUNTY AVERAGE	STATE AVERAGE
Low-income indicator	<b>39%</b>	44%	56%
Parents with some college	<b>57%</b>	69%	55%
Parents with college degree	<b>35%</b>	48%	31%

## LANGUAGE

Spanish  
Vietnamese  
Canonese  
Hmong  
Filipino/Tagalog  
Korean  
Khmer/Cambodian  
All other

	BLACOW ELEMENTARY	COUNTY AVERAGE	STATE AVERAGE
Spanish	<b>80%</b>	63%	84%
Vietnamese	<b>3%</b>	4%	3%
Canonese	<b>3%</b>	6%	1%
Hmong	<b>0%</b>	0%	1%
Filipino/Tagalog	<b>3%</b>	4%	2%
Korean	<b>1%</b>	1%	1%
Khmer/Cambodian	<b>0%</b>	1%	0%
All other	<b>10%</b>	21%	8%

## ETHNICITY

African American  
Asian American/Pacific Islander  
Hispanic/Latino  
White/Euro/Other

	BLACOW ELEMENTARY	COUNTY AVERAGE	STATE AVERAGE
African American	<b>4%</b>	14%	7%
Asian American/Pacific Islander	<b>21%</b>	27%	11%
Hispanic/Latino	<b>51%</b>	31%	50%
White/Euro/Other	<b>24%</b>	28%	32%

Based on School Accountability Report Card (SARC) provides information that can be used to evaluate and compare schools. State and federal laws require all schools to publish a SARC each year.

PHOTO AUDIT

# 4th Grade Class | 25 Students

Miss Peggy Yu's 4th grade students is typical of those in the Fremont Unified School District; there is a varied cross-section of the ethnicities previously presented, with slightly more girls than boys.



# 10 Children | 2 groups of 5

The DesignPlay facilitators were able to be selective in their choice of test subjects; subjects were chosen based on varied ethnicity and gender. Facilitators interacted with five children each; working on the ground, in a circle, at eye level with the children.



THUY



ALEXANDER



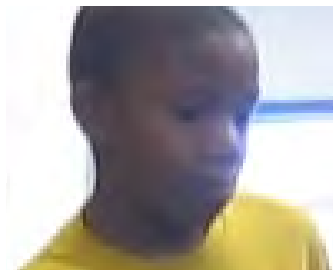
DAN



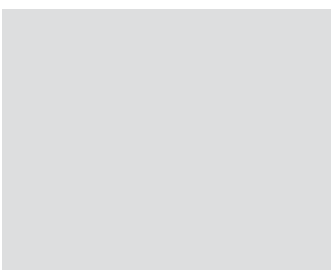
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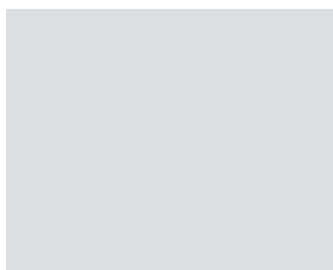
ANNA



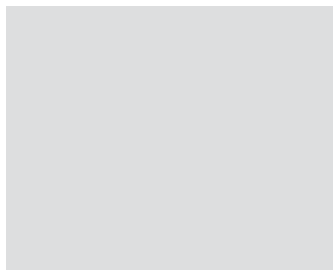
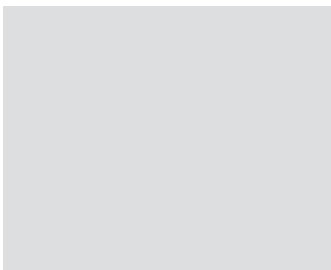
ROB



THUY



JACOB



## Group observations

**Inquisitive** – All hands shot up to participate, after only a cursory introduction of the forthcoming exercise.

**Excited** – Children literally ran to the facilitators to be chosen for the activity. Those chosen for participation arrived on time and energized to be part of the group activity, giving up their lunchtime play to participate.

**Attentive** – Gave full attention to and were eager to listen to instructions

**Participatory** – Excited to go get their own drawing/writing utensils (pencils, markers, crayons, colored pencils

**Focused** – Children were involved with their activities, rarely looking up

**Independent** – Only rarely asked for assistance from facilitators

**Collaborative** – Enjoyed being in a group, helping and sharing with others

**Self-motivated** – Continued to build stories with each activity beyond instruction

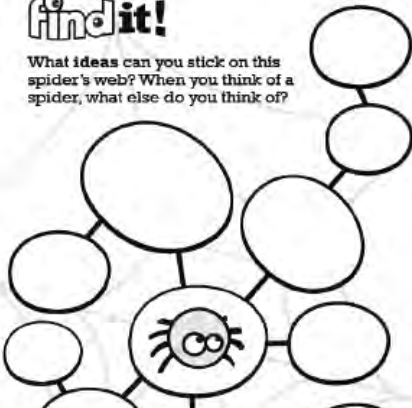
Occasional **self-doubt** – There were a few “I can’t” and “i don’t knows”

Concerned with **correctness** – Wanted to fulfill the project parameters, to do things “the right way”

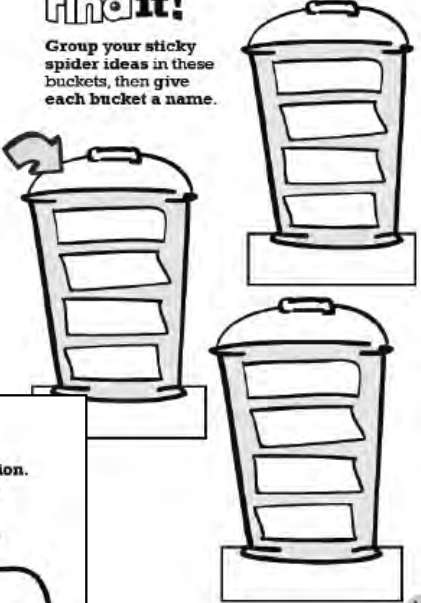
# GoBook | Open Framework

Select DesignPlay GoBook exercises were distributed to each child, with very general instructions given. Facilitators made themselves available for questions as they circulated within the group. The time frame for the exercise was roughly 30 minutes.

**findit!**  
What ideas can you stick on this spider's web? When you think of a spider, what else do you think of?




**findit!**  
Group your sticky spider ideas in these buckets, then give each bucket a name.



19


**Sketchit!**  
Your creation is going on a vacation!  
Use the spinner to send it on a new adventure!  
Now sketch it!



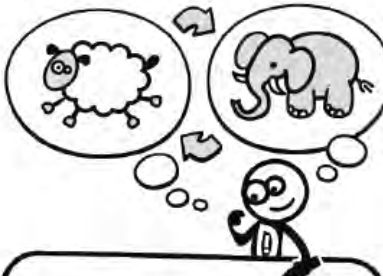
1  
2  
3  
4  
5  
You choose!

6  
Bring your creation from Page 3 on this adventure!

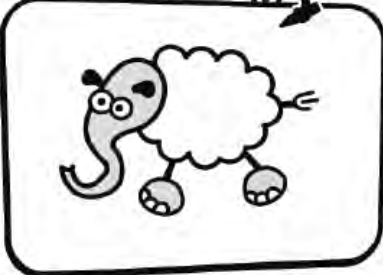
**THINK!**  
Sketch your animal on vacation.  
What will it need to Get there?  
What will it need to Survive?  
What will it bring to Play with?



**Sketchit!**  
I took TWO animals and sketched a NEW one!



2



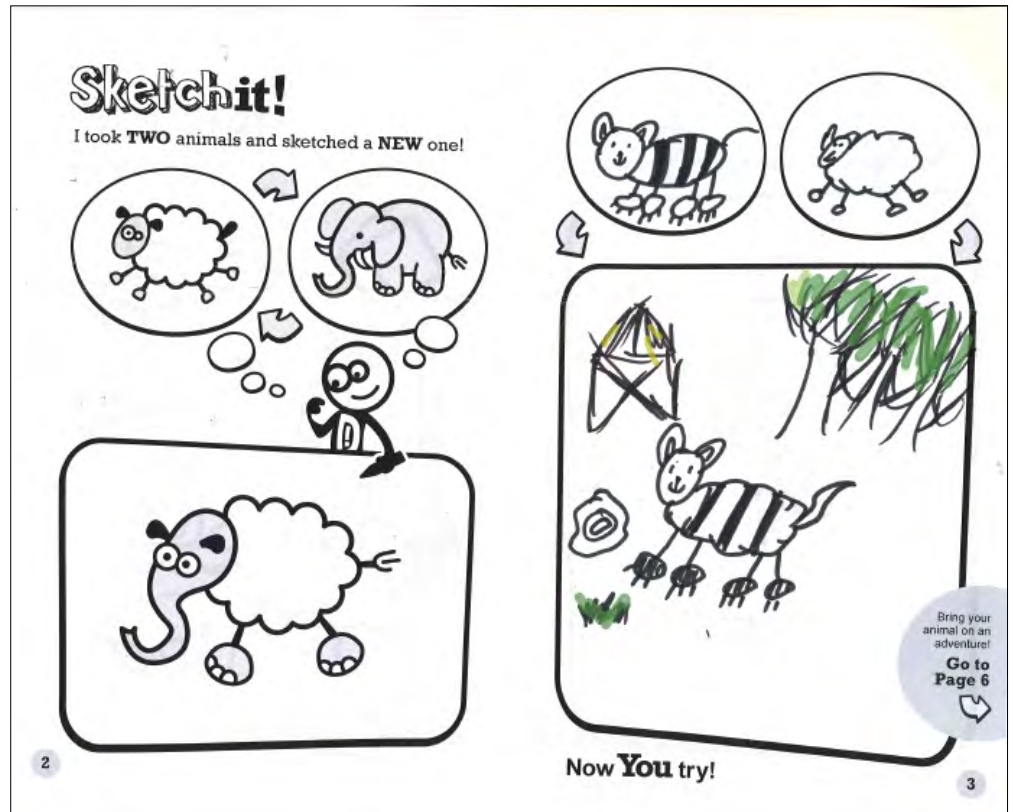
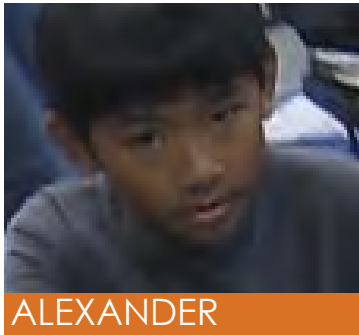
3

Now **You** try!

Bring your animal on an adventure!  
Go to Page 6

# Alexander

Alexander is an articulate, soft spoken 9-year-old of Cambodian descent. Alexander jumped right into the exercise. He asked a minimum of questions and was eager to share his work with the facilitators. Alexander also added elements to the story that were unprompted.



## Findings

Representative of the participants, interaction with Alexander offered several key insights:

- Facilitator engagement, carriage and positive voice is essential for full effectiveness
- The more direction given, the less the child used their own imagination and storytelling capabilities
- Each iteration of the prototype **MUST** be specifically geared toward the specific target age group
- Developmental ability in abstract thought varies between children; simple written/visual directions is ideally accompanied by a facilitator for guidance
- Pride in ownership and creation was important – each child wanted to take their drawings for display to peers or adults
- Pages with characters appealed more to the participants than those without. Pictures drew their attention to word descriptions