Playful Learning Across the Years (PLAY) Measurement Tool Development Process
Outline

- Introduction to the PLAY project
- Conceptual framework of playful learning
- Contextualizing research process
- Toolkit
PLAY Project Overview

Goal: Develop a set of valid and reliable tools to measure how adults set the conditions for learning through play and support it through interactions with children. December 2020 – October 2022

Learning through Play: a child’s experience that is effortlessly engaging and self-sustaining

Definition underpins the LEGO Foundation’s characteristics of Learning through Play (Zosh et al., 2017): engaged, iterative, joyful, meaningful, socially interactive
Why Learning through Play?

• Builds a strong foundation
• Children are motivated to learn
• Engagement and learning is deeper
• Learning is broader, developing holistic skills
  • Collaboration
  • Communication
  • Content
  • Critical Thinking
  • Creativity
  • Confidence

“Rather than pushing children to think like adults, we might do better to remember that they are great learners and to try harder to be more like them.”

Seymour Papert (1928-2016)
LEGO© Professor of Learning Research
MIT Media Lab
Project Outcomes

To develop a suite of tools that is:

1. Focused on social interactions in important settings of development, ages 0-12
2. Theoretically grounded
3. Psychometrically rigorous
4. Adaptable across contexts
5. Practical and easy to use
6. Capable of producing interpretable metrics
7. Visible and accessible

To be used for:
- Research
- Evaluation
- Monitoring

To be used by:
- Governments
- Academics
- Practitioners
Tools

0-2 years
- Parent-child observation
- Parent Survey

3-5 years
- Parent-child observation
- Teacher-child observation
- Parent Survey
- Teacher Survey

6-8 years
- Teacher-child observation
- Teacher Survey
- Child Survey

9-12 years
- Teacher-child observation
- Teacher Survey
- Child Survey

Note: Parent-child may be amended to include other members of the household
Reflection on an experience that was effortlessly engaging and self-sustaining
**Setting-Level Constructs**

Support for:

1. Connection to Experience
2. Problem-solving
3. Exploration
4. Agency
   - Decision-making
   - Participation
5. Social Connectedness
6. Positive Emotional Climate

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**Child-level Characteristics of Learning through Play**

- Meaningful
- Socially interactive
- Joyful
- Iterative
- (Agency)
- (Connectedness)

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**Child Learning Outcomes**

Self-sustaining (effortless) engagement
## Tool Development Process

<table>
<thead>
<tr>
<th>Conceptual framework</th>
<th>Existing measures reviewed (BEQI, CLASS, TIPPS, TEACH ECE, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback from LEGO, advisory boards, and beyond</td>
<td>Qualitative research findings (Build Phase)</td>
</tr>
<tr>
<td>Small-scale pilot testing (Adapt Phase)</td>
<td>Medium-scale pilot (Test Phase)</td>
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<tr>
<td>Phase</td>
<td>Purpose</td>
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<tr>
<td>BUILD</td>
<td>Local perceptions of playful learning</td>
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<tr>
<td>BUILD</td>
<td>Extend core playful learning constructs</td>
</tr>
<tr>
<td>BUILD</td>
<td>Generate/adapt items for context</td>
</tr>
<tr>
<td>ADAPT</td>
<td>Respondent understanding</td>
</tr>
<tr>
<td>ADAPT</td>
<td>Pilot and revise</td>
</tr>
<tr>
<td>TEST</td>
<td>Psychometric assessment</td>
</tr>
</tbody>
</table>
Locations of Contextualization

Colombia
0-2, 3-5, 6-8, 9-12
Build, Adapt, Test

Ghana
6-8, 9-12
Build, Adapt, Test

Jordan
3-5 Build & Adapt, Test

Kenya
6-8, 9-12
Build, Adapt, Test
Classroom Observation Tool (6-8 & 9-12)

<table>
<thead>
<tr>
<th>Support for Connection to Experience</th>
<th>Metric (Effectiveness, Frequency, Participation)</th>
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</table>
| CE1: Teacher connects concepts in the lesson to everyday objects or spaces that are physically present.  
  • Colored objects are brought in for a lesson on adjectives.  
  • A physical object is brought in to represent a word or concept.  
  • Finding an object in the classroom that shares the feature of the language being learned (e.g., finding the letter on the wall, finding an object that begins with the same sound). | Frequency  
High = Observed 2 or more times.  
Low = Observed once. |

- The observers notes the **presence** of the interaction or behavior. Then rates it as **High or Low** using a metric of Effectiveness, Frequency, Participation.  
- Items corresponds to the constructs in the conceptual framework.
Teacher Surveys (6-8 & 9-12)

**Sort:** The teacher independently sorts cards that describe instructional activities (e.g., *I use objects or actions to make connections for learners to their prior knowledge.*) under headers of frequency of use

<table>
<thead>
<tr>
<th>I never do it</th>
<th>I do it once or twice a year</th>
<th>I do it several times a month</th>
<th>I do it several times a week</th>
<th>I do it everyday</th>
</tr>
</thead>
</table>

**Scenarios:** The teacher reads a scenario (e.g., *Imagine a teacher who shows learners some pictures of places they will recognize and which are related to the current lesson. Then, the teacher asks the learners comprehension questions about what they see in the pictures. The teacher likes to connect lessons to things learners already know.*) then reports on:

1. frequency of use  
2. confidence of doing something similar  
3. effectiveness for student learning
Child Survey (6-8 & 9-12)

- **Degree of Agreement**: A sentence is read to the student that describes an activity or other interaction in their classroom (e.g., *Your teacher uses objects to teach new lessons*). Then the student states their degree of agreement/disagreement by pointing at **faces** or **thumbs** (icon is context dependent).

- **Items** corresponds to the constructs in the conceptual framework
Toolkit

- Assessments packages by age range
- Related resources
- Access locations
- Available end of 2022
References


Thank you!

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