Active Playful Learning:
Where the science of learning meets education in and out of school

Kathy Hirsh-Pasek
Temple University
Brookings Institution

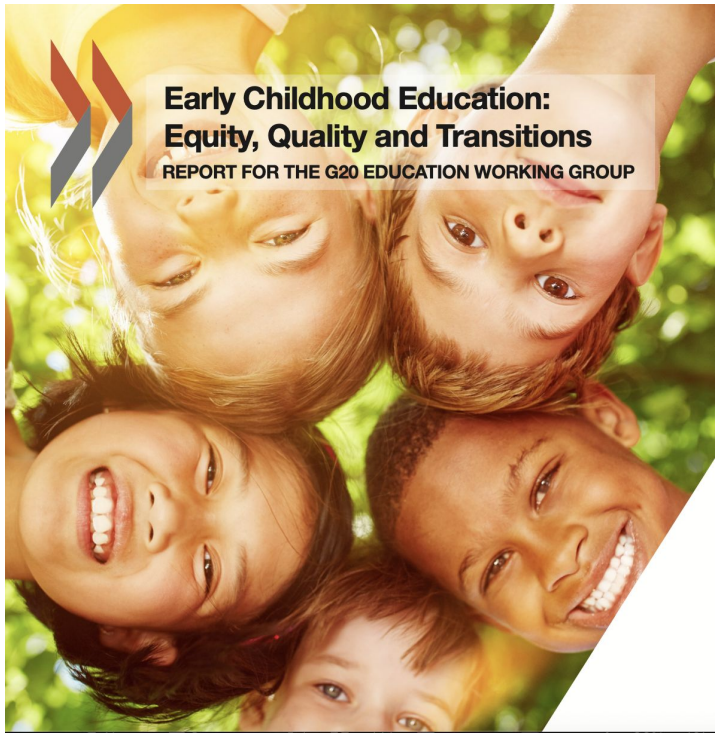
As Yuval Noah Harari wrote in 2021



The Industrial Revolution has bequeathed us the production-line theory of education….It is easy to laugh at this model, and almost everybody agrees that no matter its past achievements, it is now bankrupt.

What the Year 2050 has in Store for Humankind

In the US, in England, in Europe and at UNESCO, policy makers are turning to those who study the ***science of learning*** for ways to think about education transformation



OECD

U.S. Department of Education

U.S. Department of Education Announces Kindergarten Sturdy Bridge Learning Community

SEPTEMBER 7, 2023

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Global Alliance on the Science of Learning for Education Policy Brief (March 2025)

What is the science of learning?



Anita Ponne/Shutterstock.com

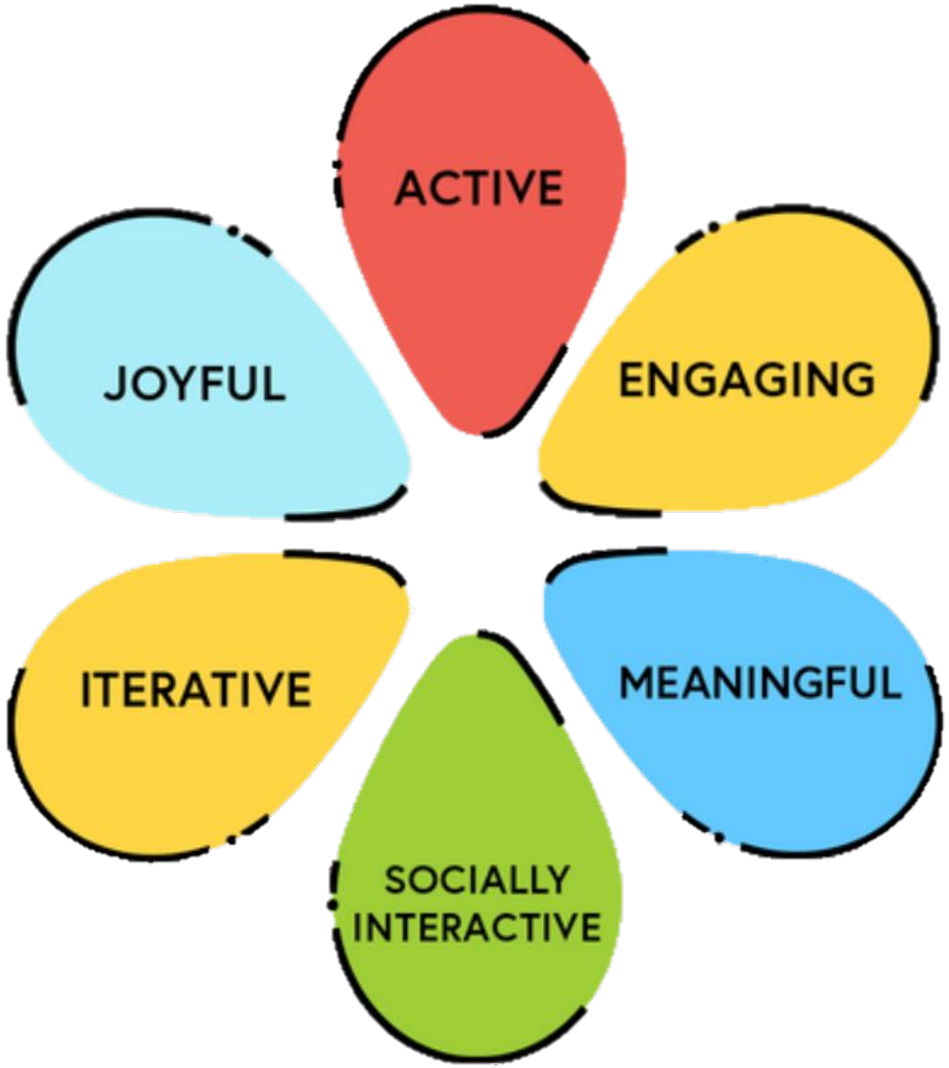


This talk is built on a bold premise!

That we can elevate early education by applying an Active Playful Pedagogy that teaches in the way that human brains learn!

The science that shows us children grow **when experiences are…**

These pillars are embodied in the concept of active playful learning



Hirsh-Pasek et al. (2022). *Making Schools Work*; Zosh et al. (2018)

When we focus on *how* children learn, we support *what* they need in school and life

THE 6 C's

COLLABORATION

COMMUNICATION

CONTENT

CRITICAL THINKING

CREATIVE INNOVATION

CONFIDENCE





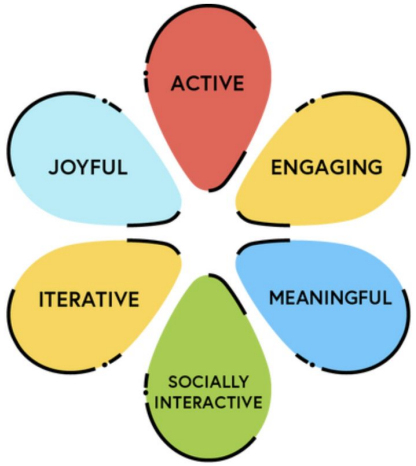
From the home to the school to the neighborhood to the broader community, to be successful we should align our efforts to the contexts in which children live.

Active Playful Learning

An evidence-informed, 3-part equation to bring joy and deeper learning back to children's lives



+



+

THE 6 C's

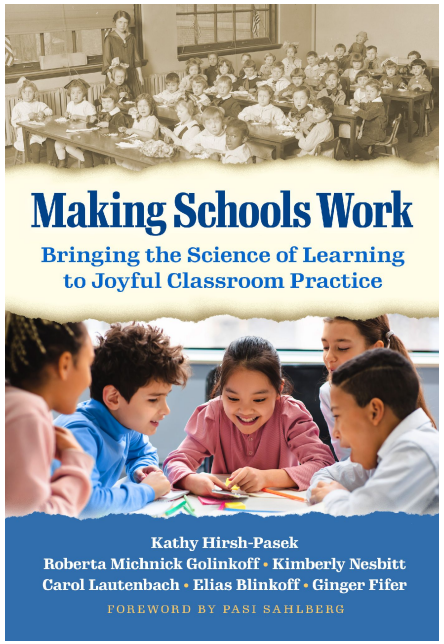
COLLABORATION
COMMUNICATION
CONTENT
CRITICAL THINKING
CREATIVE INNOVATION
CONFIDENCE

The Who: Community + Family Values

The science of *how* children learn

The science of *what* children should learn

And we are applying this model in communities, schools and in media





Defining Active Playful Learning or Guided Play

Maximizing APL in the Classroom

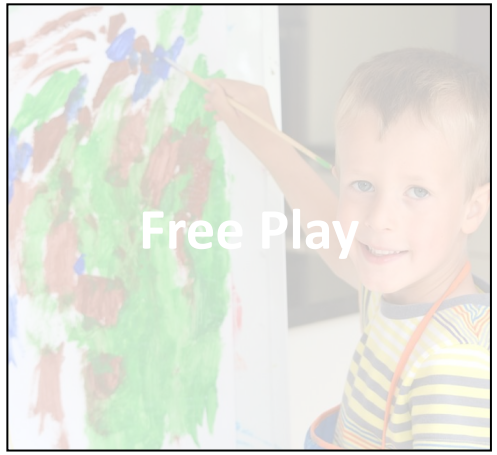
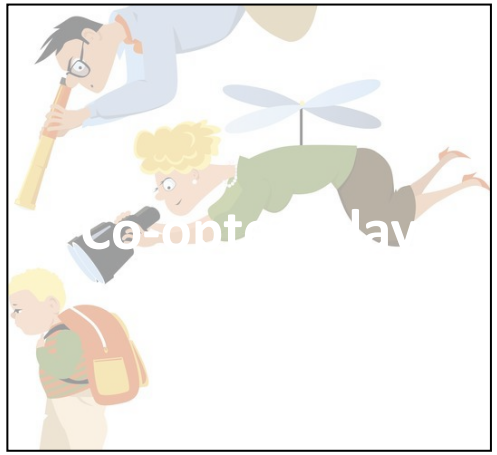
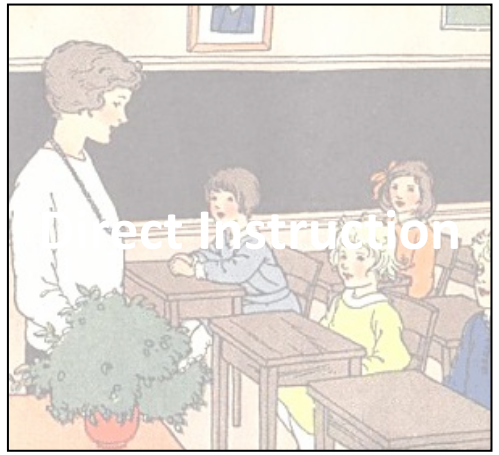
	Free Play	Guided Play	Playful Instruction	Direct Instruction
Explicit Learning Goal	No	Yes	Yes	Yes
Initiated by	Child	Teacher	Teacher	Teacher
Child Active Involvement	Yes	Yes	Yes	No
Child Agency/Choice	Yes	Yes	No	No

Active Playful Learning with a learning goal

Adapted from Hassinger-Das et al., 2017; Zosh et al. 2018, 2022

Playful Learning

Initiated By

Directed By	Child	Adult
Child	 Free Play	 Guided Play
Adult	 Co-cont[illegible]lay	 Direct Instruction

And Guided play also has a clear learning goal



A planned play environment, enriched with objects/toys that provide experiential learning opportunities, infused with curricular content (Berger, 2008), Think Museums or Montessori classrooms.

Adults enhancing children's exploration and learning through:

- co-playing with children
- asking open-ended questions
- suggesting ways to explore materials

Fisher et al., 2011; Hirsh-Pasek et al, 2009; Hirsh-Pasek & Golinkoff, in press; Weisberg, Hirsh & Pasek & Golinkoff, 2015; Weisberg et al., 2016; Zosh et al., 2018, 2021; Pesch et al., in press)

And research suggests that active playful learning enhances **social regulation** (collaboration); **language and literacy** (communication); and **STEM** (content learning), and **hypothesis testing** (critical thinking), and even creativity, among others

A peek at the evidence

The science of playful learning and guided play

Play and social regulation

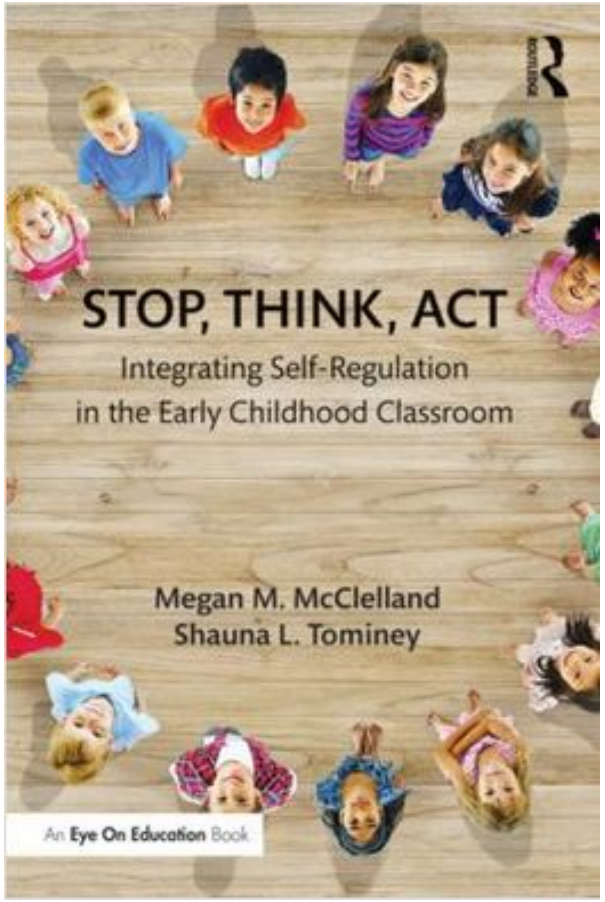
Those all-important executive function skills

- Impulse and emotion control
- Self-guidance of thought and behavior (private speech)
- Planning
- Self-reliance
- Socially responsible behavior
- Attention
- Memory

(Bronson, 2001; Kopp, 1991; Rothbart & Bates, 2006)

For example, Megan McClelland created classroom games for social regulation





- **Conducting an Orchestra**

  Every child use a musical instrument. The circle leader used a drum stick as a conducting baton. When the conductor waved the baton, children played their instruments. When the conductor put the baton down, children stopped.

- **Drum Beats**

  Teachers used drum beats to represent different actions that children can do while sitting (e.g., clapping or stomping) or while moving around the room (e.g., walking or dancing). For example, children walked quickly to fast drumming, slowly to slow drumming, and froze when the drumming stopped

frontiers in Psychology | Educational Psychology

Promoting Executive Function Skills in Preschoolers Using a Play-Based Program

Robbin Gibb[1*], Lara Coelho[1], Nicole Anna Van Rootselaar[1], Celeste Halliwell[1], Michelle MacKinnon[2], Isabelle Plomp[3] and Claudia L. R. Gonzalez[1]

The program consisted of 10 simple, fun, and interactive games selected to enhance various facets of EF. The 10 games included were: dimensional change card sort, lips and ears, block building, musical freeze, opposites, pretend play, red light/green light, shared project, Simon says, and wait for it. The program was implemented with a group of children shown to have challenges with respect to kindergarten readiness.



And another…..

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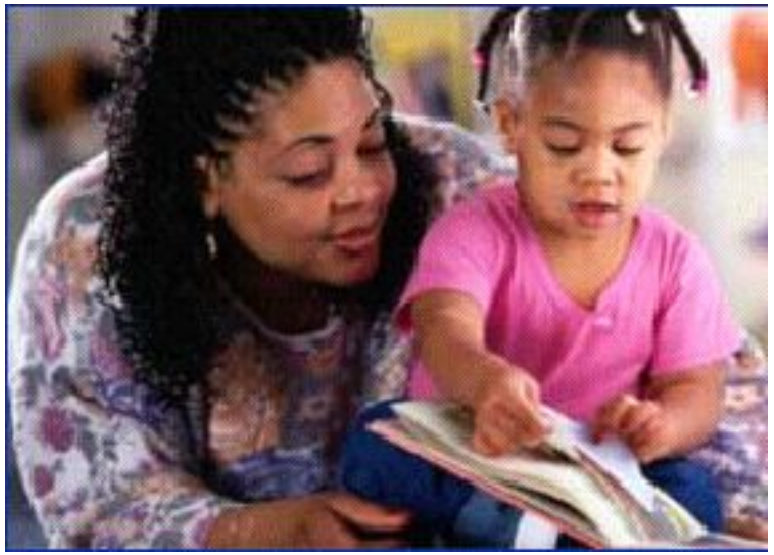
Parent Provision of Choice Is a Key Component of Autonomy Support in Predicting Child Executive Function Skills

Romulus J. Castelo[1], Alyssa S. Meuwissen[1], Rebecca Distefano[1,2], Megan M. McClelland[3], Ellen Galinsky[4], Philip David Zelazo[1] and Stephanie M. Carlson[1*]

We coded parent autonomy-supportive behaviors from a 10-min interaction between parent and child dyads working on challenging jigsaw puzzles together. Children completed a battery of EF. Overall, child EF was most consistently correlated with the offering choice subscale. Additionally, only the offering choice subscale predicted child EF while controlling for the other autonomy support subscales and child age. These results suggest that parent provision of choice is an especially relevant aspect of autonomy-supportive parenting and may be important to the development of EF in early childhood.



Playful learning and cognitive skills: Literacy



Telling stories
Word play
(what rhymes with “hat”?)
Singing songs
Dialogical reading
Reading product labels
Engaging conversations
Dramatic play (Roskos & Christie, 2013)

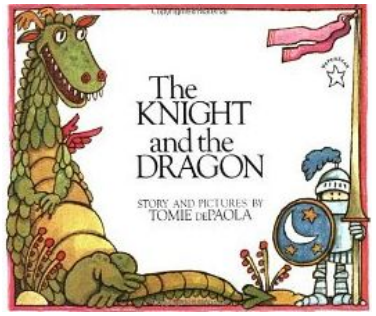
See Lillard et al., 2012; Toub et al.,al., 2018; Scott et al.,2024

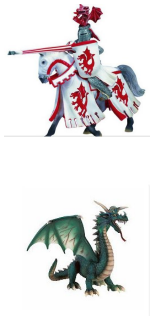
Our current research (with Dickinson and Golinkoff) is asking how playful learning can increase vocabulary for children from under-resourced environments!



Photo from Sheryl Ann Crawford

Adult reads children a book like the Knight and the Dragon while highlighting new words (e.g., galloping, shield)





Free play

Directed play

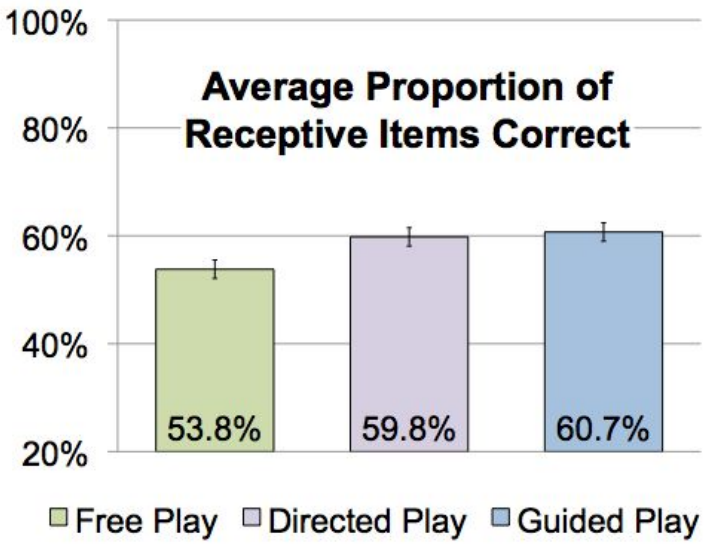
Guided play

No focus, dialogue; meaning-making; child initiated and directed

Targeted focus with more closed questions; adult initiated and directed, meaning-making

Targeted focus with more open ended questions; adult initiated, child directed, meaning-making

Results?



Children did better post that pre in all conditions

Adult supported play was better than free play in all conditions!

Book reading + adult supported play was also better than book reading plus fun flash cards!

Bottom line? When there is a learning goal – adult supported play (guided or directed) helps children learn!

Weisberg et al., 2015; Toub et al., 2018; Hadley et al., 2021

In findings….

- We used different play activities – singing, large and small group games, drama and digital.

- Our kids learned target vocabulary as well in the play condition as they did in the read condition!

Scott et al., 2023; see also,
Nicolopoulou et al., 2015

What about STEM??

- Finding patterns
- Dividing candy and sharing
  - Squire & Bryant, 2002
- Sorting trail mix
- “I spy”
- Noticing more and less
  - (“She got more ice cream”)
- Playing with blocks, trains and puzzles
- Playing board games
  - Ramani & Siegler, 2008; Ramani, Siegler & Hitti 2012



In our research, we studied **Block Play** to ask if it might build better spatial language and math outcomes

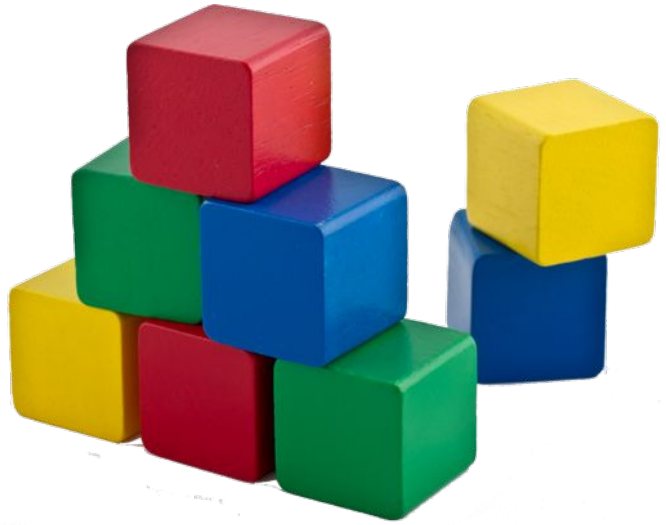
Our questions:

Do we talk more about space when we play with blocks?

Result: **YES** In non-block play contexts, parents use only 3 to 6% of spatial terms

Do we talk more about space in certain play situations over others? (using words like above, on top of, beside…

Result: **YES**, there is more spatial language in guided play than in free play



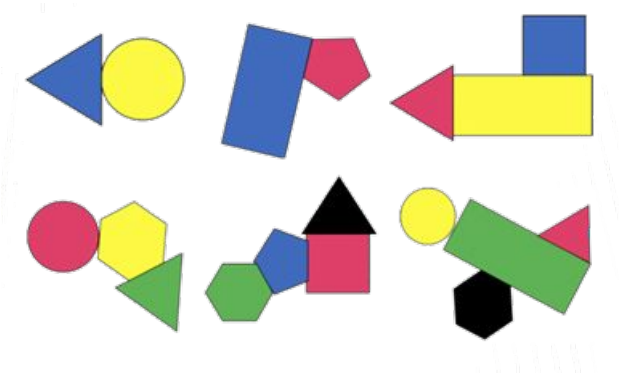
Ferrara, Hirsh-Pasek, Newcombe & Golinkoff, 2011; Bower et al. 2021

Why should we care?

Because spatial language and spatial play relate…

- to later spatial ability!
- and later math ability!

2-D Test of Spatial Ability (TOSA)



3-D Test of Spatial Ability (TOSA)



Verdine, B., Golinkoff, R., Hirsh-Pasek, K, Newcombe, N., Filipowicz, A. & Chang, A. (2014); Verdine, Golinkoff, Hirsh-Pasek & Newcombe, 2017; Bower et al., 2021. See also Strasser et al. (2023) re games and spatial/math learning.

Indeed, a recent study confirms our findings, guided play but not free play, even fosters children's academic self-concept in science!

Journal of Applied Developmental Psychology 80 (2022) 101400

Contents lists available at ScienceDirect

Journal of Applied Developmental Psychology

journal homepage: www.elsevier.com/locate/jappdp



Fostering children's block building self-concepts and stability knowledge through construction play

Anke Maria Weber *, Miriam Leuchter

Institute for Children and Youth Education, University of Koblenz-Landau, Landau, Germany

ARTICLE INFO

Keywords:
Academic self-concept
Guided play
Science learning
Free play
Scaffolding

ABSTRACT

The study investigated preschool children's block building self-concepts in relation to their stability knowledge acquisition as implied by the reciprocal effects model and possible effects of different forms of play. We investigated three types of construction play: (a) guided play with verbal and material scaffolds, (b) guided play with material scaffolds, and (c) free play. We examined the effects of the different play forms on block building self-concept and stability knowledge acquisition as well as the reciprocal effects model's fit to preschool children. We implemented a pre-post-follow-up design, $N = 183$ German 5- to 6-year-olds (88 female). Block building self-concept declined in the free play group, but not in the guided play groups. Both guided play groups outperformed the free play group in stability knowledge acquisition. The reciprocal effects model was not supported. Guided play may be effective in fostering children's block building self-concepts and stability knowledge.

Playful learning also supports Critical thinking and Creativity

Cognition 218 (2022) 104940

Contents lists available at ScienceDirect

Cognition

journal homepage: www.elsevier.com/locate/cognit

Full Length Article

Children are more exploratory and learn more than adults in an approach-avoid task

Emily G. Liquin [a,*], Alison Gopnik [a]

[a] Department of Psychology, 2121 Berkeley Way, University of ...

Preschoolers Outsmart College Students In Figuring Out Gadgets

your health

by MICHELLE TRUDEAU

June 30, 2014 3:26 AM ET

Journal of Experimental Child Psychology

Volume 207, July 2021, 105091

Examining the impact of children's exploration behaviors on creativity

Natalie S. Evans [a], Rachael D. Todaro [a], Molly A. Schlesinger [a], Roberta Michnick Golinkoff [b], Kathy Hirsh-Pasek [a, c]

...10. Epub 2014 Feb 22.

...are better (or at least more open-minded) learners than adults: developmental differences in learning the forms of causal relationships.

Lucas CG[1], Bridgers S[2], Griffiths TL[2], Gopnik A[2].

Author information

Abstract

Children learn causal relationships quickly and make far-reaching causal inferences from what they observe. Acquiring abstract causal principles that allow generalization across different causal relationships could support these abilities. We examine children's ability to acquire abstract knowledge about the forms of causal relationships and show that in some cases they learn better than adults. Adults and 4- and 5-year-old children saw events suggesting that a causal relationship took one of two different forms, and their generalization to a new set of objects was then tested. One form was a more typical disjunctive relationship; the other was a more unusual conjunctive relationship. Participants were asked to both judge the causal efficacy of the objects and to design actions to generate or prevent an effect. Our results show that children can learn the abstract properties of causal relationships using only a handful of events. Moreover, children were more likely than adults to generalize the unusual conjunctive relationship, suggesting that they are less biased by prior assumptions and pay more attention to current evidence. These results are consistent with the predictions of a hierarchical Bayesian model.

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And Gweon,Goodman, Spelke & Schultz (2010)



Find that direct instruction (while effective), "limits spontaneous exploration and discovery" relative to play! See also Bonowitz et al., 2011

How Does Active Learning Pedagogy Shape Learner Curiosity? A Multi-Site Mediator Study of Learner Engagement among 45,972 Children

by Ji Liu *, Dahman Tahri and Faying Qiang

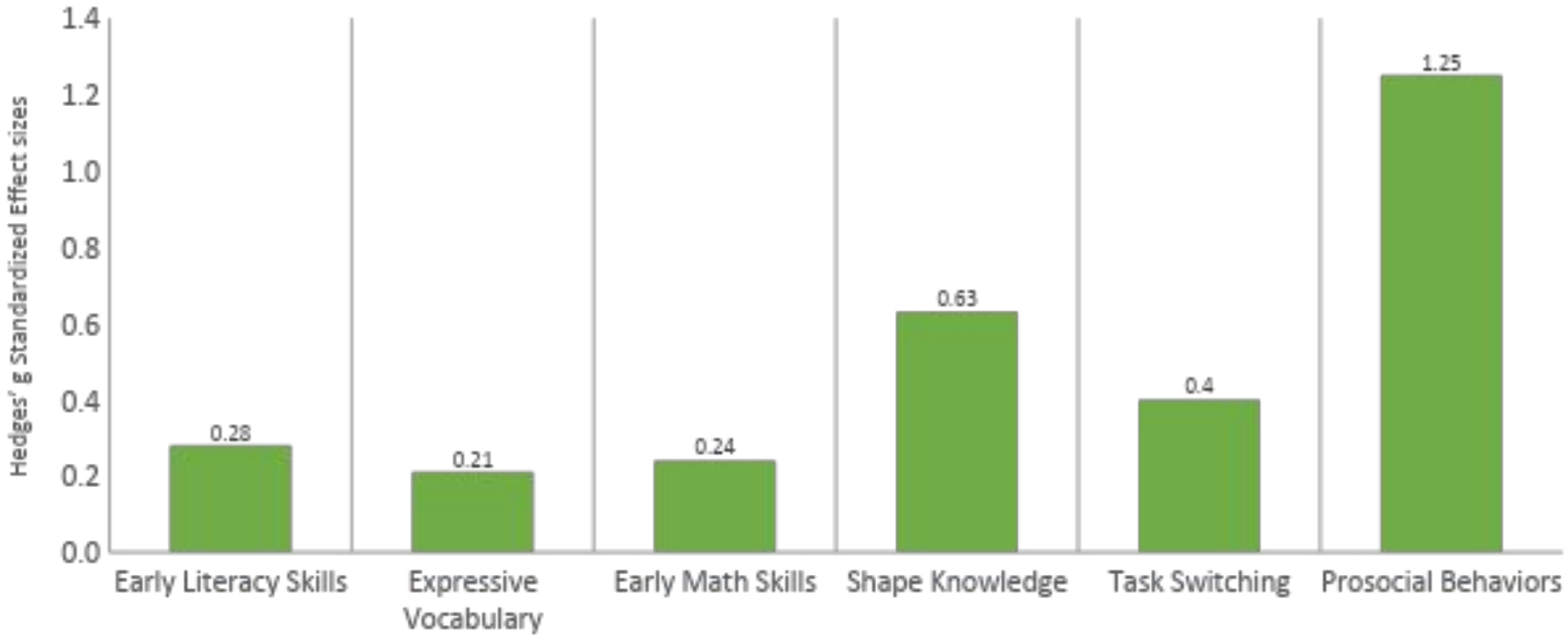
Faculty of Education, Shaanxi Normal University, Xi'an 710062, China

* Author to whom correspondence should be addressed.

J. Intell. **2024**, *12*(6), 59; https://doi.org/10.3390/jintelligence12060059

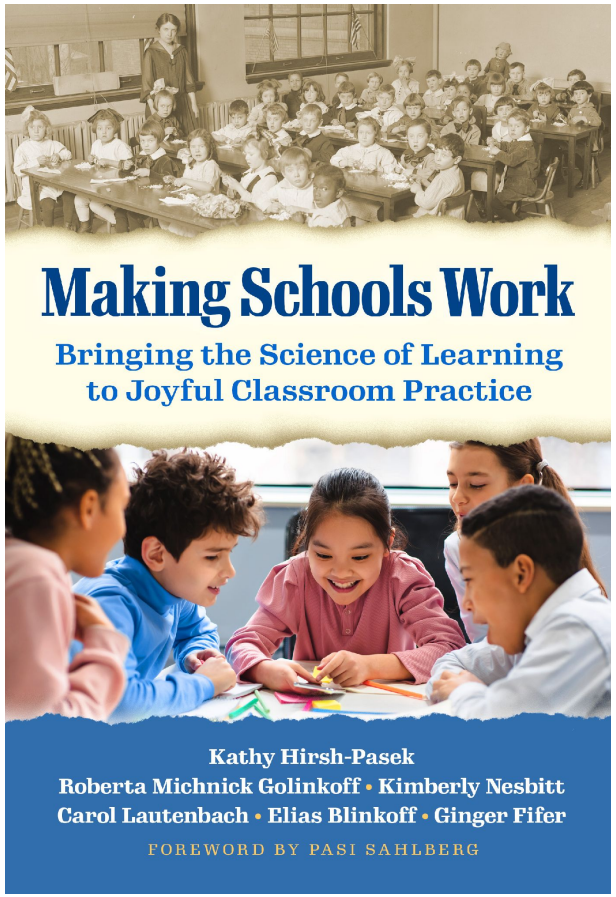
See also Hart, Kosoy, Liquin, Leonard, Mackey and Gopnik, in press; Jirout et al., 2024; Liu et al., 2024

Playful Learning vs. Direct Instruction



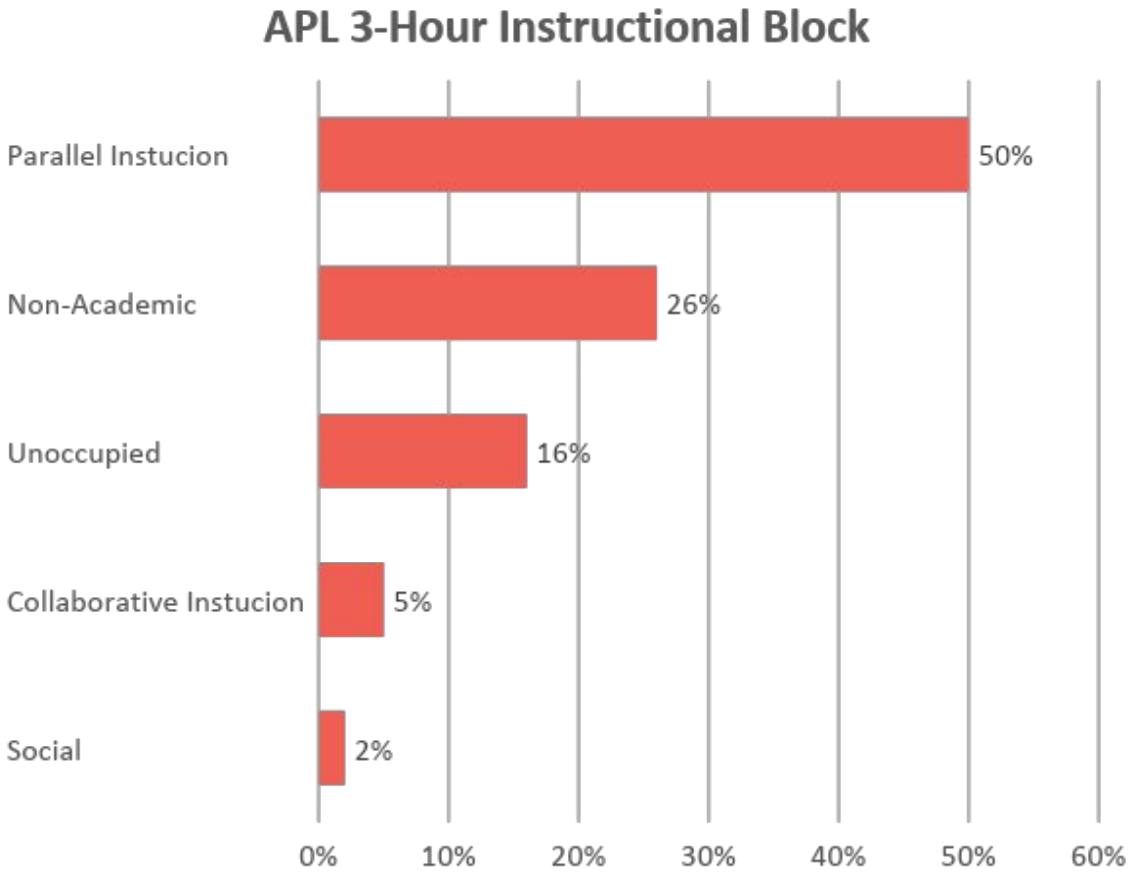
Effect Sizes from Skene et al., (2022) . https://doi.org/10.1111/cdev.13730

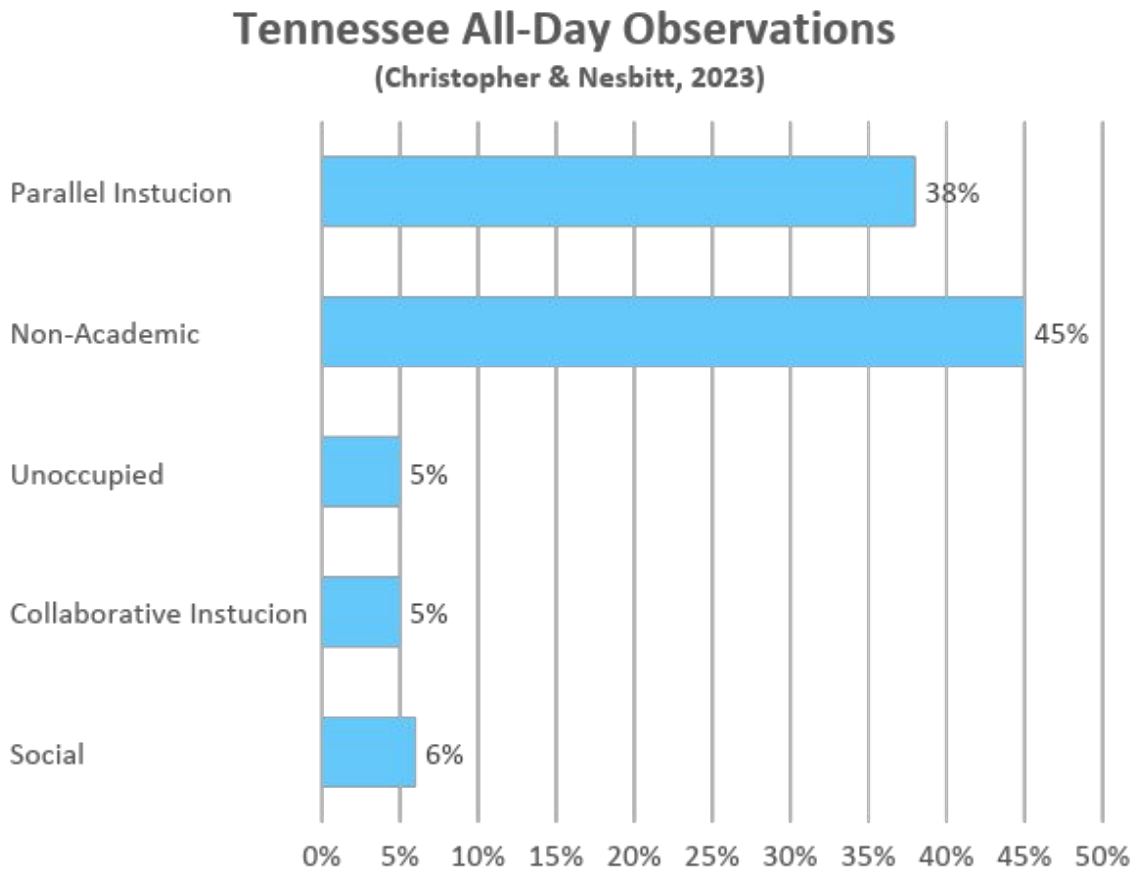
Might active playful learning work in schools?





Let's start with how K and Grade 1 Spends The School Days Today





CAN WE DO BETTER THAN THIS??

THE STUDY: The ASPIRATIONAL GOAL

ACTIVE PLAYFUL LEARNING APL!

Joyful Teaching. Deeper Learning.



- **School Districts** –
  - 80 teachers (40 personalized coaching/40 self paced coaching)/year
  - 2-3 teachers per grade per exp school – k- through 4th
- **3 Coaches** (work with 40 teachers)
- **Data Collector Team** (school assessments, coach feedback, observations)



Same breakdown as above



Same breakdown as above

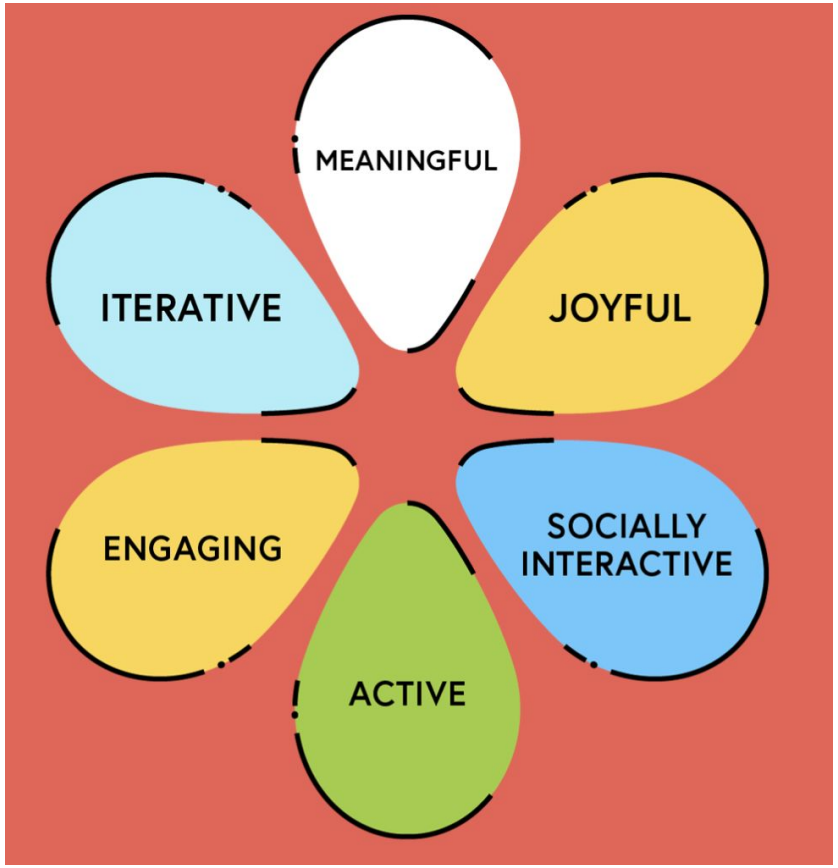


Same breakdown as above

How? By changing these 6 behaviors:

Focusing in on coaching teachers on 6 practices:

1. Use **small and paired groups**
2. Increase **students' contributions** to interactions with peers and teachers
3. Support **hands-on and minds-on** exploration, discovery, and inquiry
4. Give students **choice and voice** in their own learning
5. Help students **connect their learning** to other experiences both in and out of school
6. Infuse **enthusiasm and positivity** into learning experiences



Using a coaching-based model on a pilot group of 42 teachers.

We began to see how schools could change and teachers and students could be more engaged.



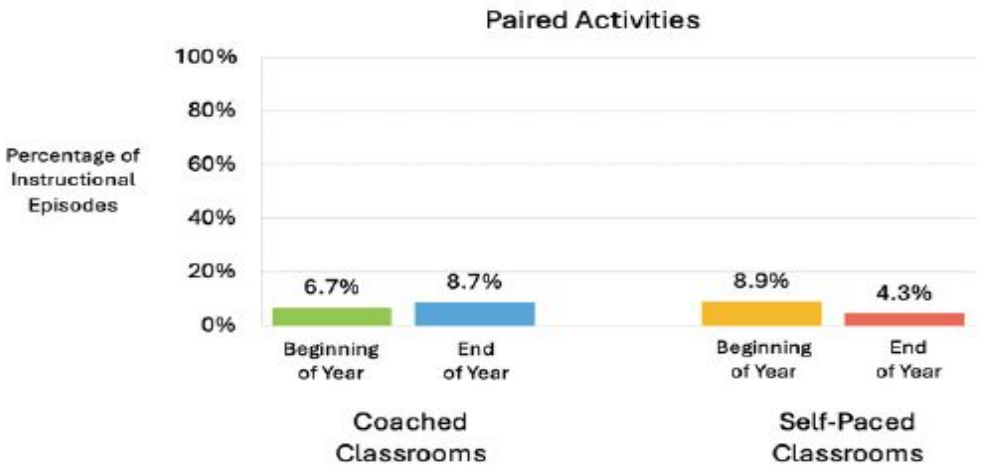
From the pilot year and has stayed consistent in year 1 of the study

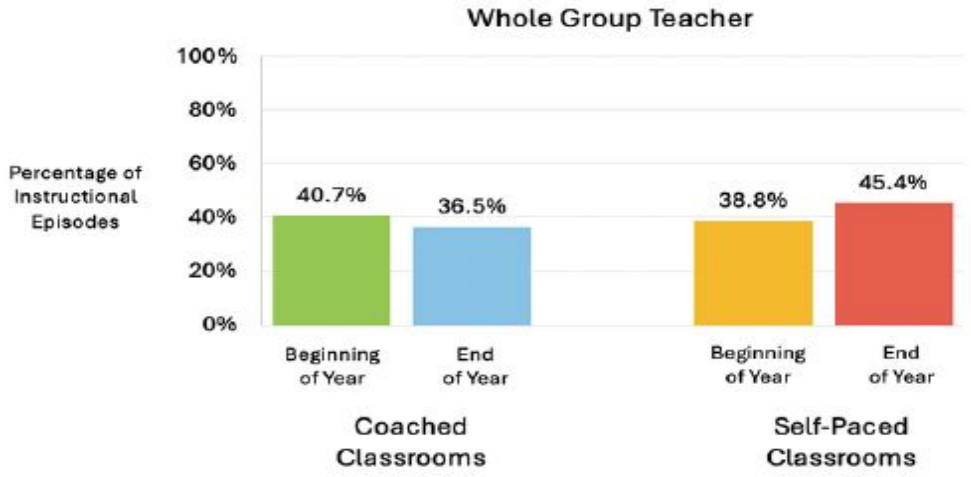
ACTIVE PLAYFUL LEARNING APL!
Joyful Teaching. Deeper Learning.

Observations of classrooms revealed...



Compared to self-paced classrooms, coached classrooms spent more time in paired group activities and less time in whole group teacher-led instruction throughout the school year.





From 237 teachers, 6412 students in 2024-2025

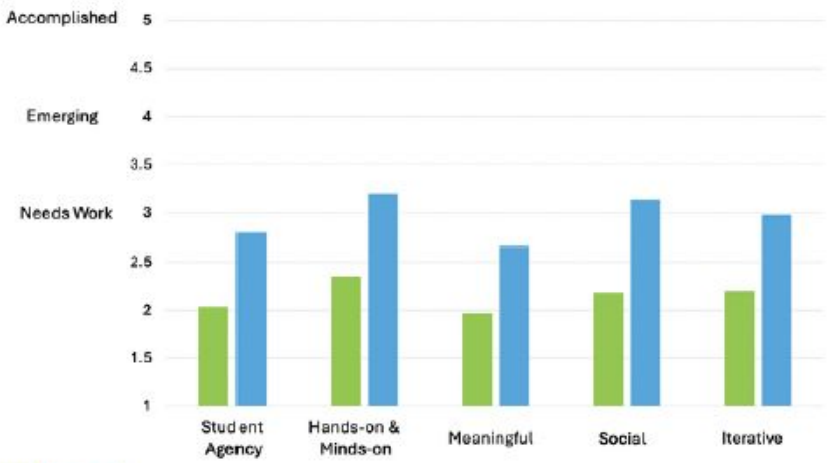
ACTIVE PLAYFUL LEARNING APL!

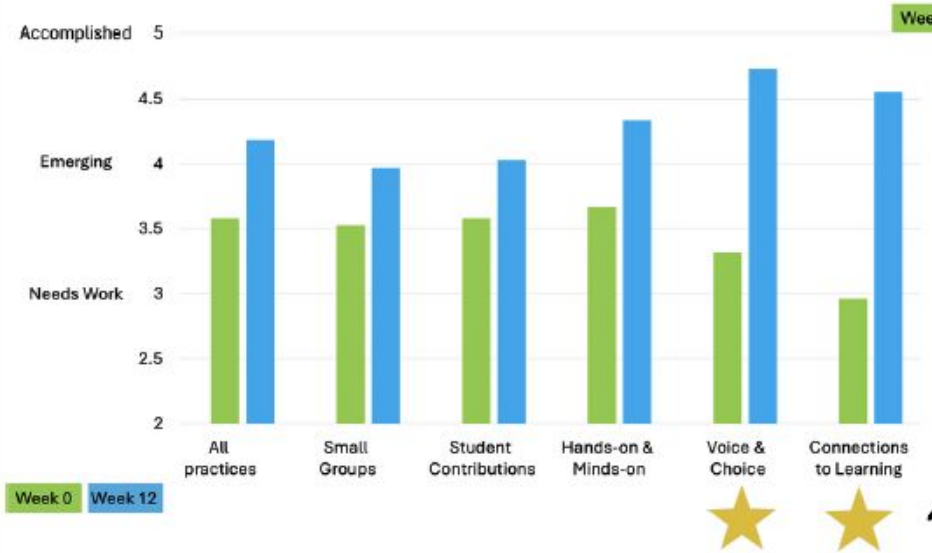
Joyful Teaching. Deeper Learning.



What did we learn?

Coaches reported that teachers made gains on APL practices during coaching cycles



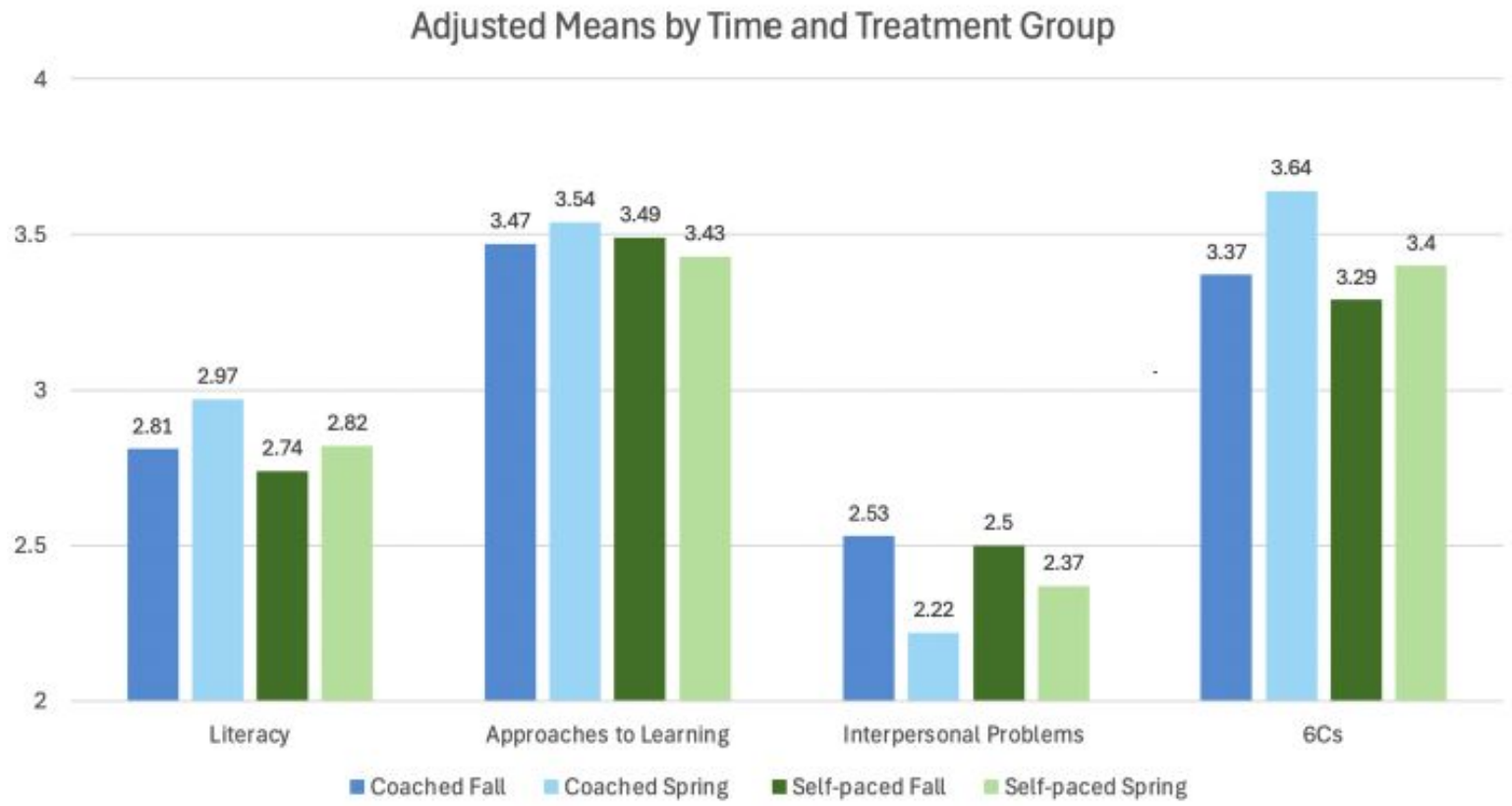


Coaches reported that teachers made gains on APL pillars throughout the school year.

We saw the largest gains on these 2 practices!

From 237 teachers, 6412 students in 2024-2025

And Teachers report that APL coaching (relative to self paced) helped students in literacy, approaches to learning, and the 6Cs as well as reducing problem behaviors!

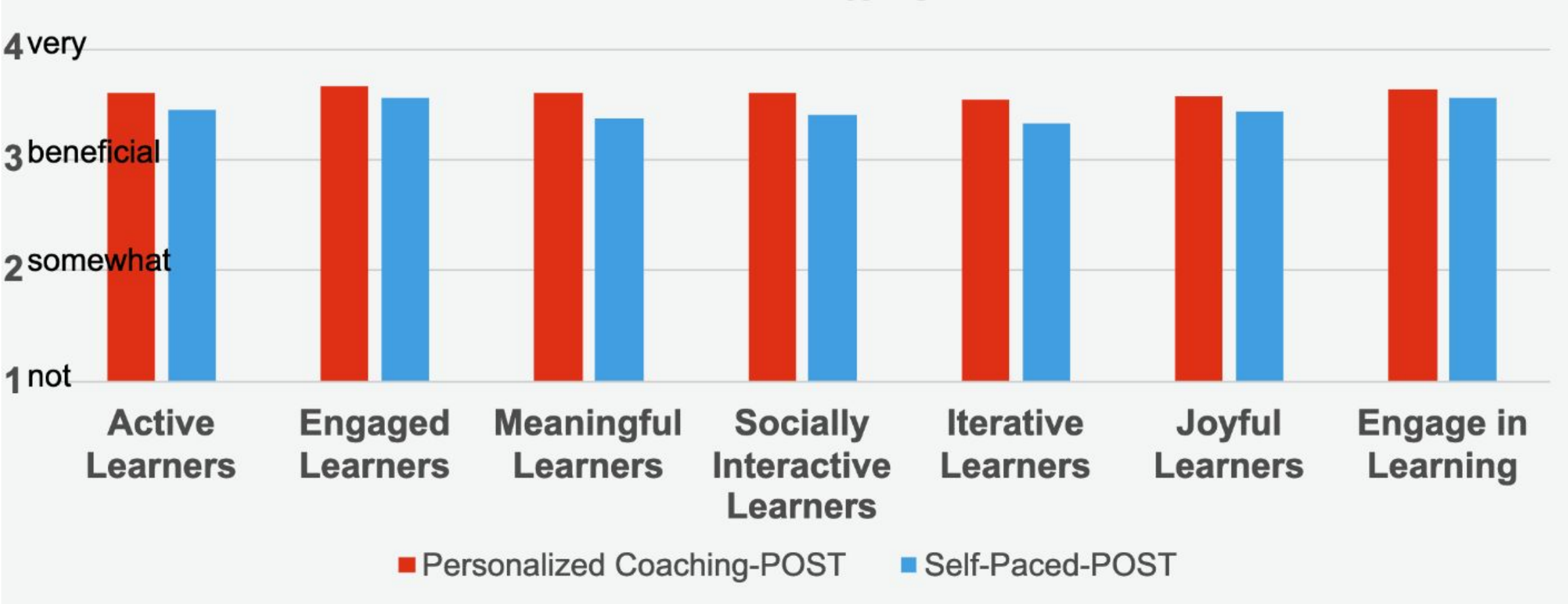


Very new data – from the Virginia data June (2026)

Teachers in the coached condition (43 of 85) with 545 students report that students in coached classrooms have more AGENCY in pre-post scores and more engagement in school.



Teachers also report that APL benefitted their students



What does it look like? Like this



Grade 3, California



Grade 2, Connecticut

TO DATE, We developed……

OUTREACH



Activeplayfullearning.com



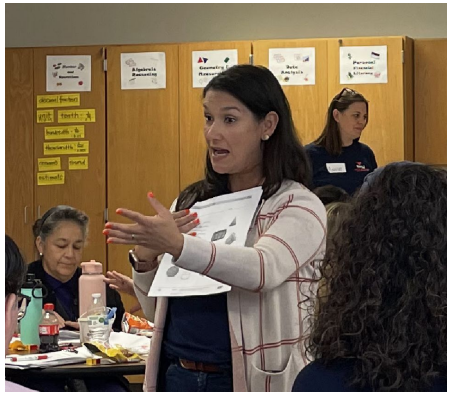




Measurements for all the constructs of interest to look for change in classrooms informed by…



Observers



Coaches



Teachers

The Teacher Name: _____ Teacher ID: _____

School ID: _____ Classroom ID: _____

Coach Name: _____ Coach ID: _____ Date: _____

SMART Goal Reflection Form

Typically, the timeframe to accomplish a S.M.A.R.T. goal should be 1 to 2 months. As such, approximately every two months (4 two-week coaching cycles), the teacher and coach will reflect on their progress toward meeting the planned S.M.A.R.T. goal. It is understood that discussion around these goals is ongoing, and goals should be revisited and revised as necessary.

Teacher: _____ **Coach:** _____ **Date:** _____

1)To what extent was the S.M.A.R.T Goal Met?

- ☐ Goal was unfinished.
- ☐ Goal was partially met.
- ☐ Goal was met.

Initial Classroom Visit Form

The goal of the initial classroom visit(s) is to get to know the classroom, teacher(s), and children.

- Focus on identifying strengths to build on through coaching.
- Focus on the practices targeted by APL and that might be supported through coaching.
- Focus on providing specifics to support noted comments, including the language heard or behaviors seen.

Teacher Name: _____ **Teacher ID:** _____ **Classroom ID:** _____

School ID: _____ **Coach Name & ID:** _____

Date: _____

What's Working

APL Teacher Practices

Small & paired groupings

- Supports children working together.
- Reinforces prosocial behaviors.

Student contribution

- Facilitates multi-turn conversations.
- Responsive to

And Manuals for coaching and for study administration



ACTIVE PLAYFUL LEARNING

Coaching Guidebook

November 2023

Active Playful Learning

Operations Manual



Fall 2024

And, importantly, Active Playful Learning is not just for little kids



Blinkoff et al., (in preparation) show how it can even be used to teach in college classrooms!

Active Playful Learning can also be incorporated outside of school

What are children doing with the 80% of their waking time, not in school?





THE 6 C's

COLLABORATION
COMMUNICATION
CONTENT
CRITICAL THINKING
CREATIVE INNOVATION
CONFIDENCE

Example 1: Urban Thinkscape

- Transforming a bus stop into a playful learning space
- Over 100 community members participated in building the site
- Community members trained as “data ambassadors” to collect observational data on use and learning from the site
- Results (N=280) 28% increase in adult/child language and in targeted spatial or number language use

Hassinger-Das et al. 2019









Hassinger-Das et al., in press

How the bus stop changes in Santa Ana



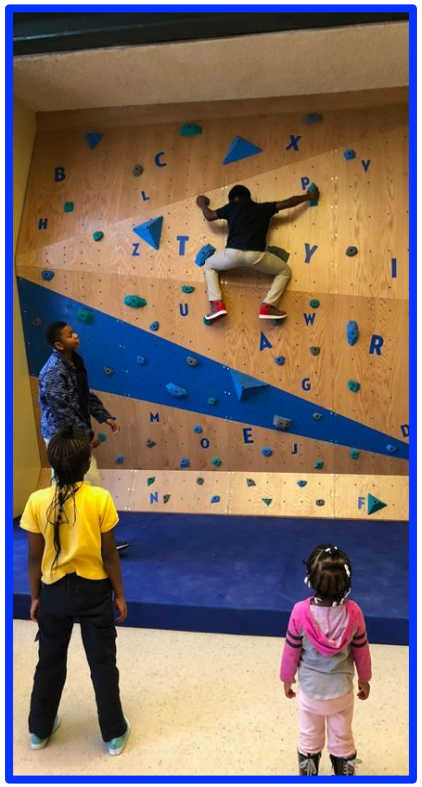
Example 2: Playbrary

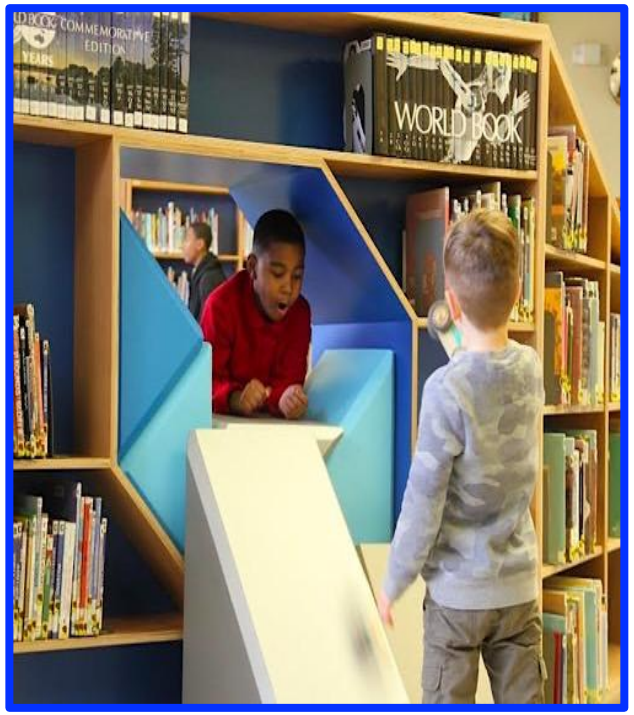
- Can we even change a library to enhance playful learning and conversation? You bet.

RESULTS:

- Number of children using number, spatial, color, or letter language increased by 44% from pre to posttest.

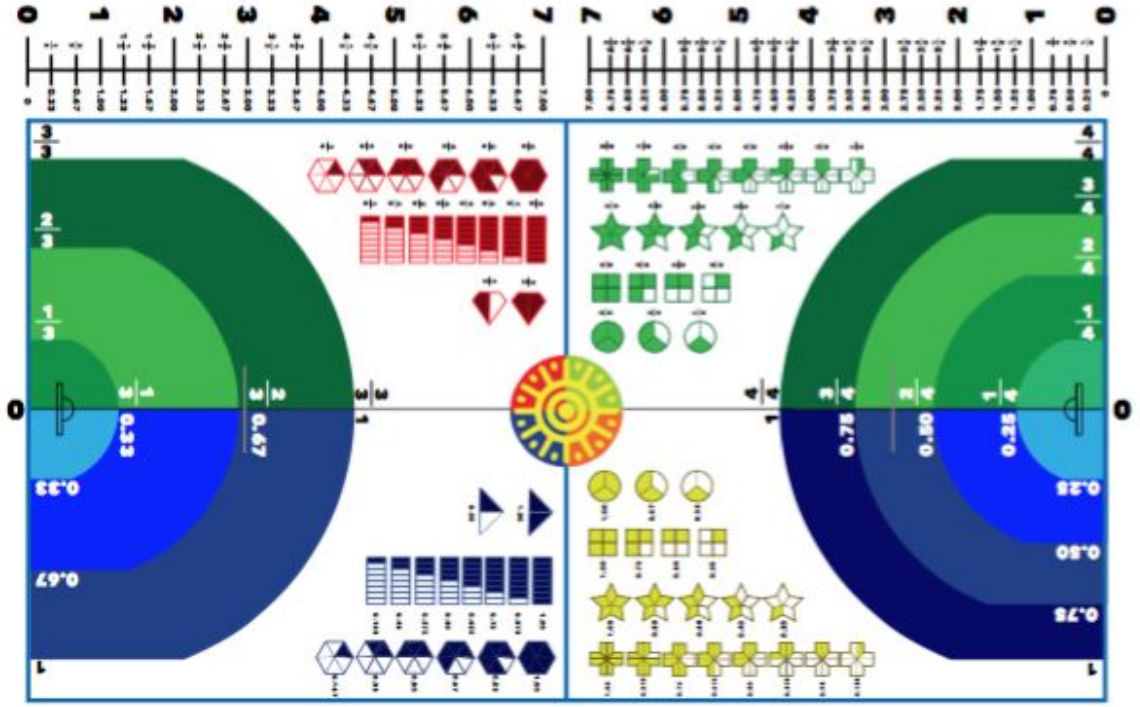
- Adults and children' technology use decreased by 38% from pre to posttest.





Hassinger-Das et al., 2021

Example 3: Fractionball





Results? N=160, 4-6th graders; Increase in decimal to fraction conversions with just 4 PE sessions!

Bustemante et al., 2022

Example 4: Supermarkets

In Tulsa, OK







In South Africa



A 33% increase in parent-child conversations

Example 5: Murals in Santa Ana



Murals in hospital waiting rooms.









Erkaboni et al. in progress

Work in affordable housing



You can even adapt these to fit in with more classic, ancient designs

Jumping Feet

Placing cues for jumping patterns helps the development of executive functions. Executive function is an umbrella term for the control of cognitive processes, including working memory, flexibility, and problem solving, and planning. Children's executive function abilities in the early childhood predict later reading and mathematics achievement better than IQ scores (Blair & Razza 2007).

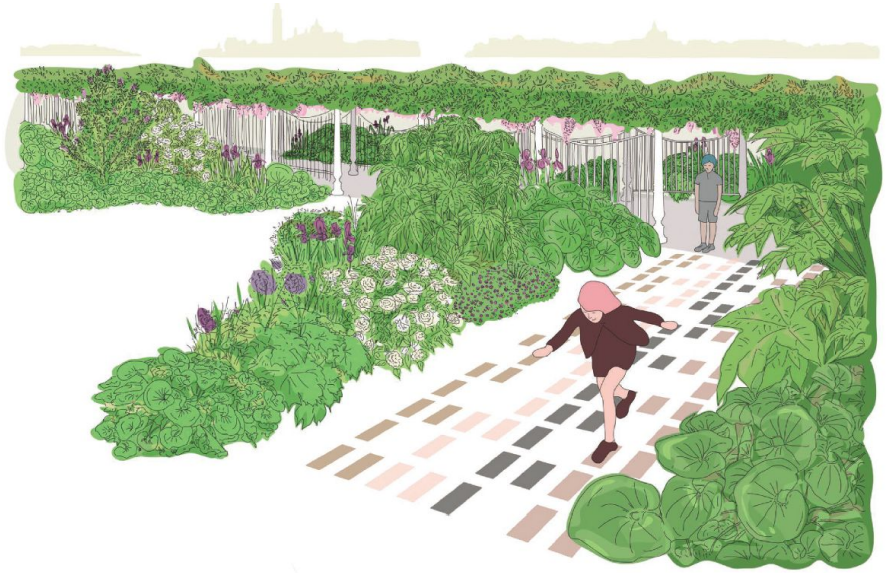
S Socio-emotional skills

E Executive functions

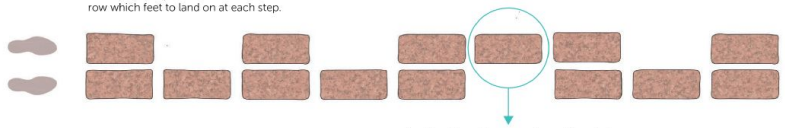
M Math/Spatial

Materiality

To integrate the jumping patterns, stones of slightly different tones set into the ground would indicate the 'routes' to follow. Types of stones already present in the design of the historic garden will be used so as not to introduce new materials, yet still be clear and simple to use.



One set of footprints can indicate for a whole row which feet to land on at each step.



Breaking the pattern exercises self control.

Analogy Paths

Many think that the ability to notice similarities and differences — especially across patterns — lies at the very heart of human intelligence. After all, three shoes, three buckets and three stones all share that they belong to the set of three — even though they do not share one single item. Further, a song is the same song be it played in the key of C or the key of G — all because of the relationship between the patterns of notes. For this reason, developmental psychologists like Dedre Gentner of Northwestern University, believe that focusing on analogy literally helps us learn to look beyond the particular pieces and to allow us to better see the patterns on which higher intellect is built. The ability to use analogy appears to be uniquely human.

S Socio-emotional skills

L Literacy/Language

M Math/Spatial

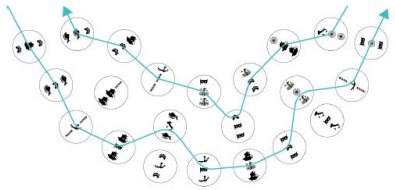
Materiality

Carved paving stones with patterns of Venitian icons set into the ground.



Navigating the paths means finding stones that display identical patterns of icons:



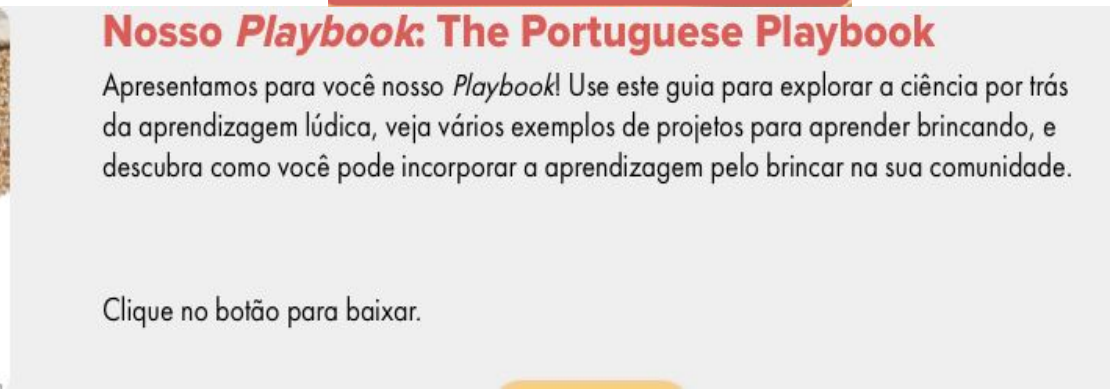


We have developed playbooks in multiple languages



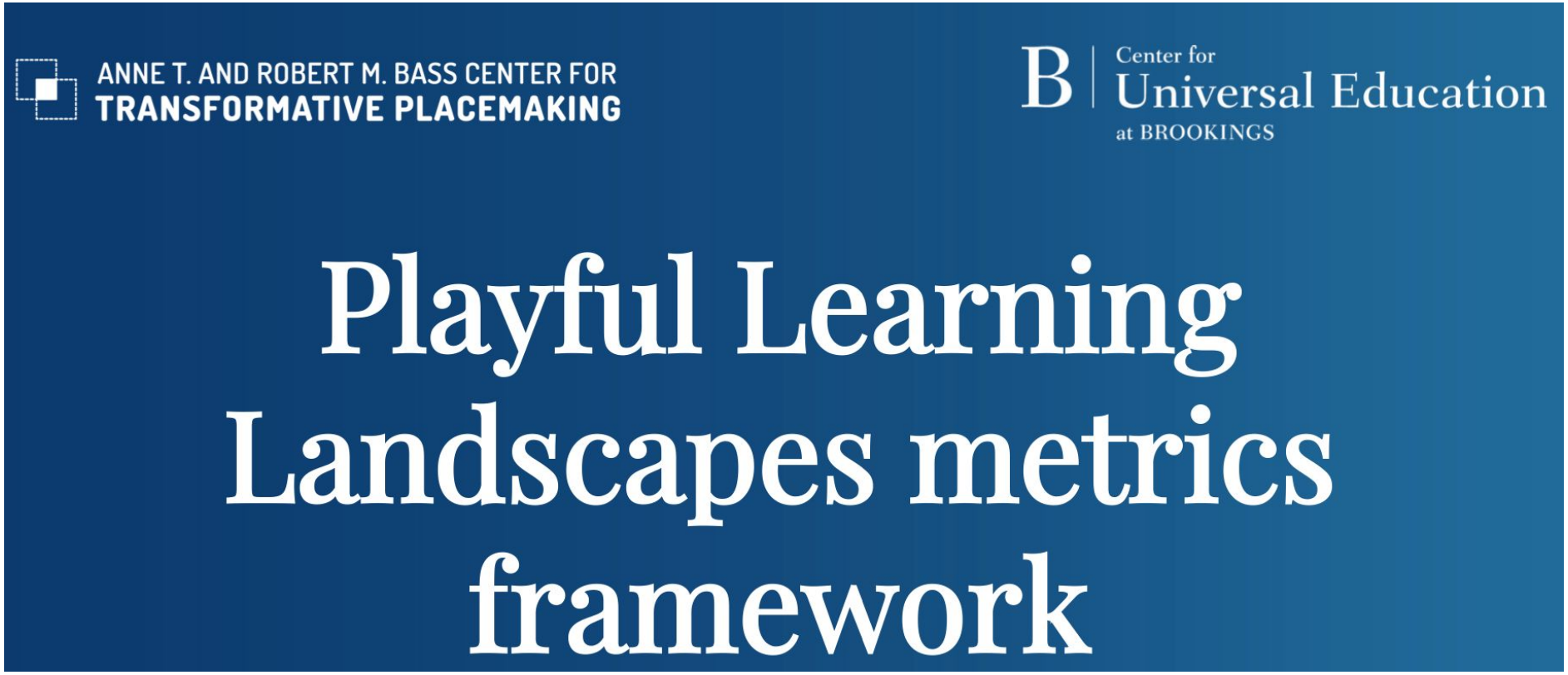






And soon to be in Chinese

Along with clear ways to measure the impact of the installations on interaction outcomes for families and for communities



On June 11, 2026, the City of Philadelphia was declared the first playful learning city



'Great cities invest in their children': Philadelphia designated world's first Playful Learning City

Low-impact prompts to encourage creative play are sprinkled around high-traffic areas of Center City.

By Peter Crimmins · Updated Jun. 12, 2026 12:35 pm

Finally, we are applying the three-part equation to better understand and develop good ed-tech



AI is all over the news – but really **AI is not monolithic**. There are three levels of AI that should concern us and how we proceed in the science and policy depends on the level we want to address



MOXI

- Anthropomorphic AI – Social Companions



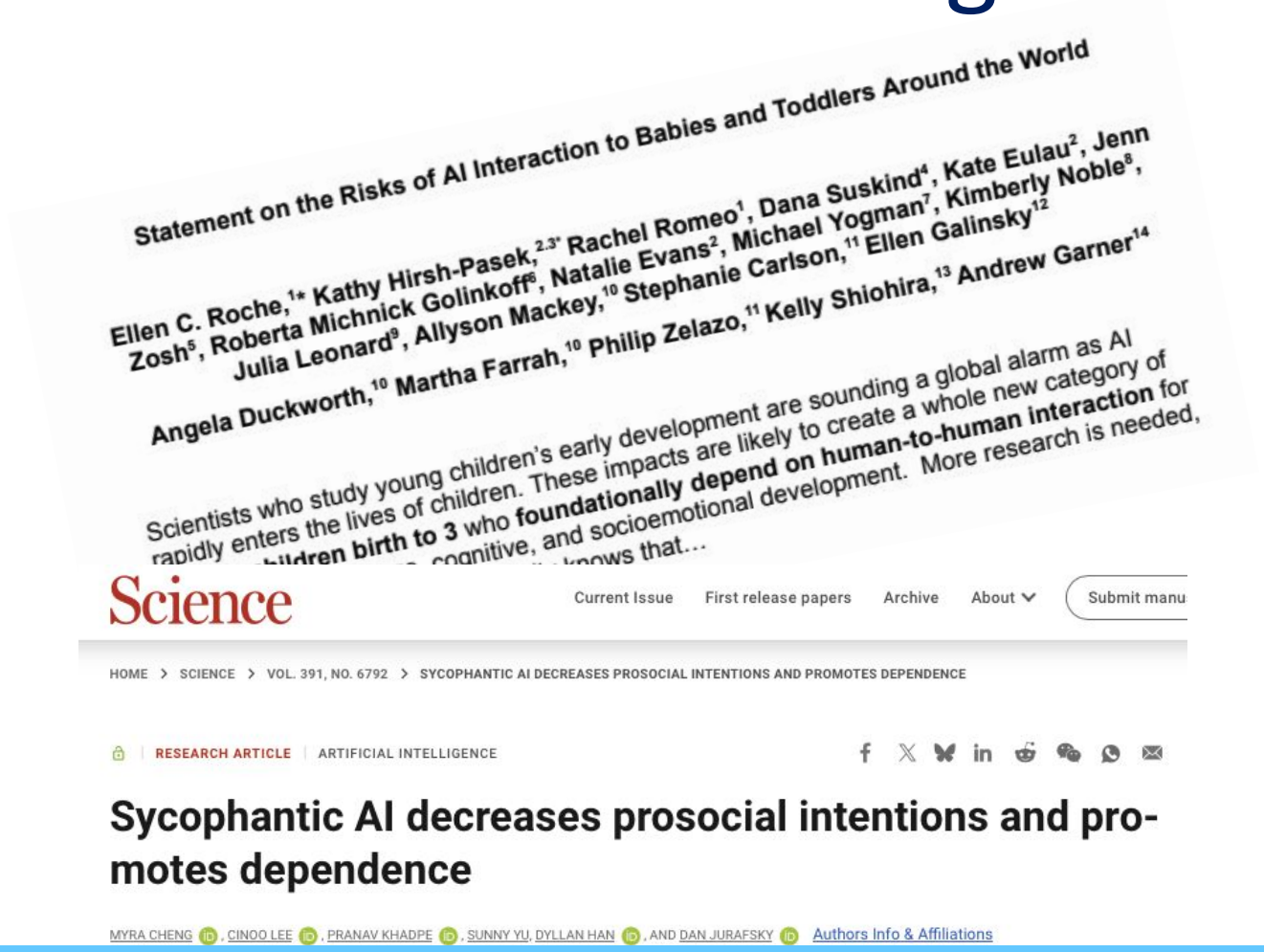
OWLETT

- Learning Tools *for* children



- Learning Tools *about* young children

This is a job that has required even more attention in the age of AI social companions



Statement on the Risks of AI Interaction to Babies and Toddlers Around the World

Ellen C. Roche,[1*] Kathy Hirsh-Pasek,[2,3*] Rachel Romeo[1], Dana Suskind[4], Kate Eulau[2], Jenn Zosh[5], Roberta Michnick Golinkoff[6], Natalie Evans[2], Michael Yogman[7], Kimberly Noble[8], Julia Leonard[9], Allyson Mackey,[10] Stephanie Carlson,[11] Ellen Galinsky[12] Angela Duckworth,[10] Martha Farrah,[10] Philip Zelazo,[11] Kelly Shiohira,[13] Andrew Garner[14]

Scientists who study young children's early development are sounding a global alarm as AI rapidly enters the lives of children. These impacts are likely to create a whole new category of **children birth to 3** who **foundationally depend on human-to-human interaction** for cognitive, and socioemotional development. More research is needed, knows that...

Science

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HOME > SCIENCE > VOL. 391, NO. 6792 > SYCOPHANTIC AI DECREASES PROSOCIAL INTENTIONS AND PROMOTES DEPENDENCE

RESEARCH ARTICLE | ARTIFICIAL INTELLIGENCE

Sycophantic AI decreases prosocial intentions and promotes dependence

MYRA CHENG, CINOO LEE, PRANAV KHADPE, SUNNY YU, DYLLAN HAN, AND DAN JURAFSKY Authors Info & Affiliations

NEW YORK POST

OPINION

AI is coming for our babies — putting their brains at risk

By Kathy Hirsh-Pasek

Published Sep. 17, 2025, 6:19 p.m. ET

The74

ARTIFICIAL INTELLIGENCE

AI 'Slop' Is Flooding Children's Media. Parents Should Be Very Alarmed.

Low-quality, mass-produced video content is a "monster problem" for child development, with few guardrails in place to stop it.

BROOKINGS

Iran | Education | Artificial Intelligence

COMMENTARY

What happens when the toy talks back? Calling for caution and guardrails on AI toys

Karyn Allee, Elias Blinkoff, and Kathy Hirsh-Pasek

December 19, 2025

Here we need to be particularly vigilant – especially with “social companions”



MIKO



FILO

Tech might well be diminishing *relational IQ* and and for young children might be particularly troubling

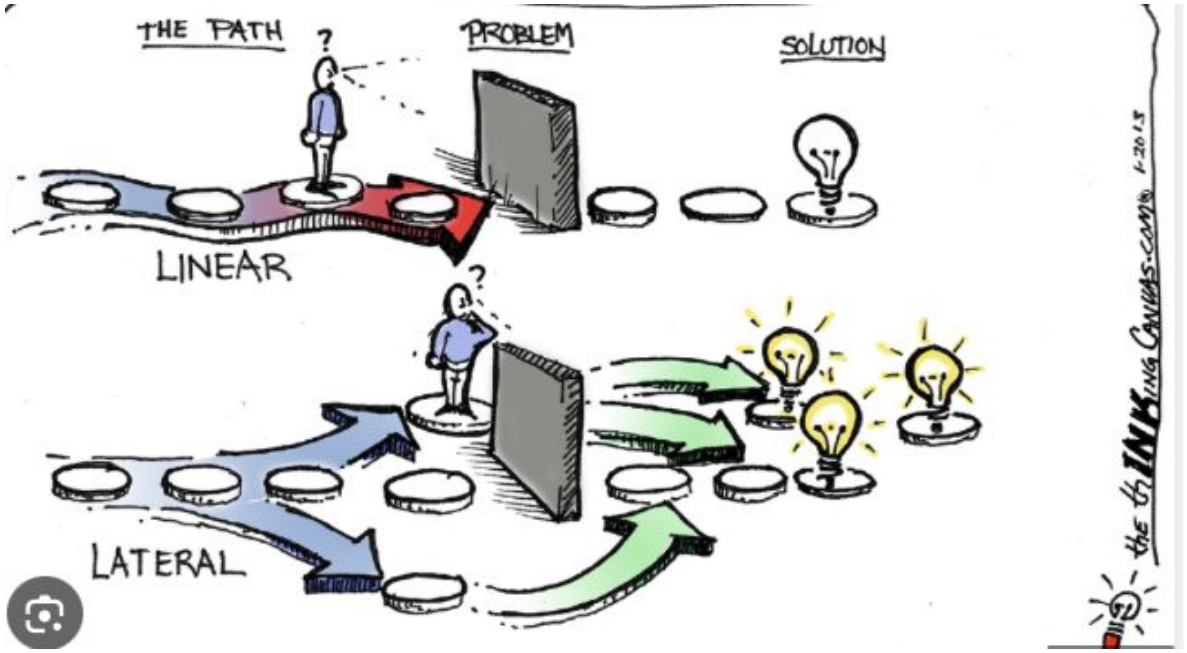
The 3Ds:

- Disruption
- Displacement
- Derailment



Further, I propose that even for older children, AI might be good for creating *consumers* but likely is not good for creating

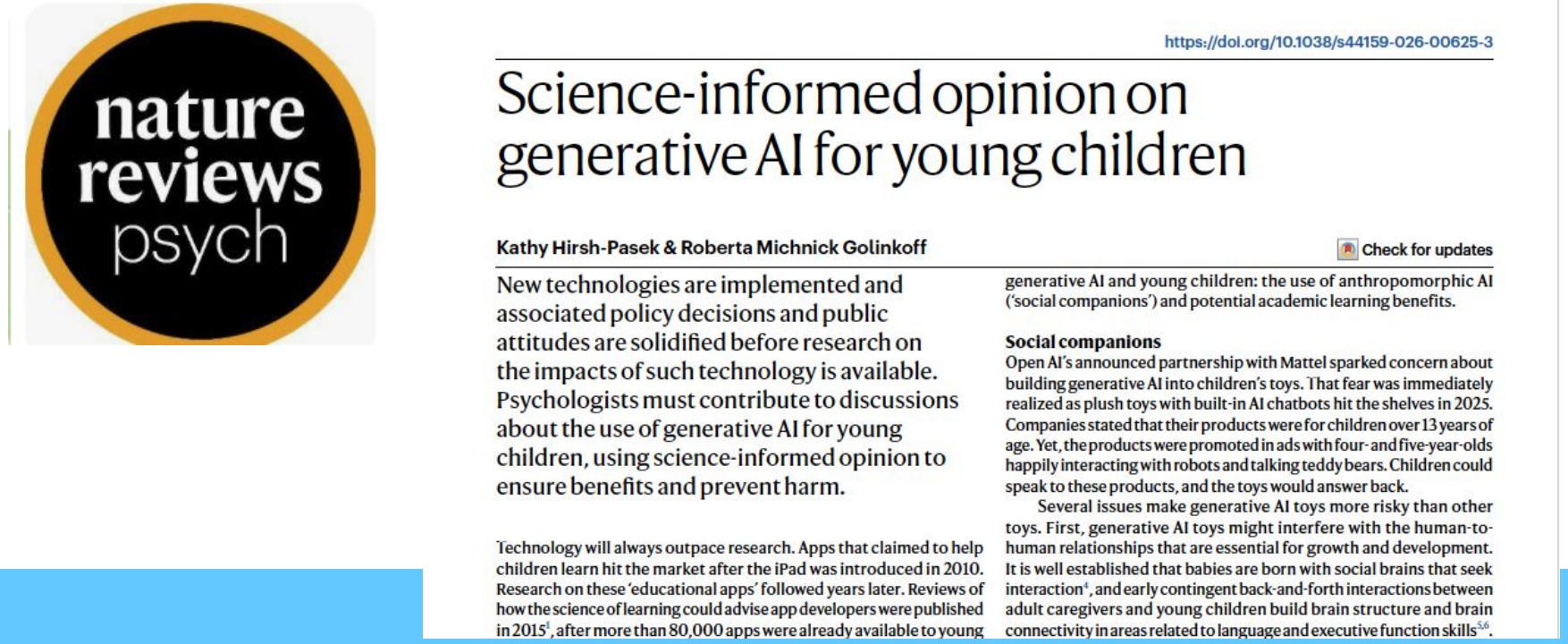
inquisitors– critical thinkers or creative innovators.



By design, it might diminish the ability to “grow” the 6Cs for young children

The case for Science Informed Opinion

- We know enough about learning to apply our model to the development of high-quality AI products for kids. The challenge is making that happen.



Comment

https://doi.org/10.1038/s44159-026-00625-3

Science-informed opinion on generative AI for young children

Kathy Hirsh-Pasek & Roberta Michnick Golinkoff

Check for updates

New technologies are implemented and associated policy decisions and public attitudes are solidified before research on the impacts of such technology is available. Psychologists must contribute to discussions about the use of generative AI for young children, using science-informed opinion to ensure benefits and prevent harm.

Technology will always outpace research. Apps that claimed to help children learn hit the market after the iPad was introduced in 2010. Research on these 'educational apps' followed years later. Reviews of how the science of learning could advise app developers were published in 2015[1], after more than 80,000 apps were already available to young

generative AI and young children: the use of anthropomorphic AI ('social companions') and potential academic learning benefits.

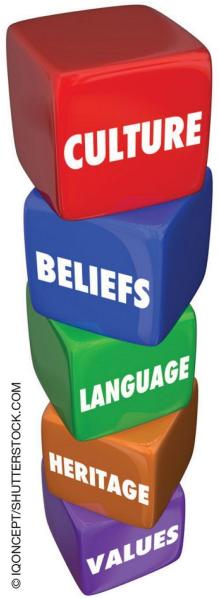
Social companions

Open AI's announced partnership with Mattel sparked concern about building generative AI into children's toys. That fear was immediately realized as plush toys with built-in AI chatbots hit the shelves in 2025. Companies stated that their products were for children over 13 years of age. Yet, the products were promoted in ads with four- and five-year-olds happily interacting with robots and talking teddy bears. Children could speak to these products, and the toys would answer back.

Several issues make generative AI toys more risky than other toys. First, generative AI toys might interfere with the human-to-human relationships that are essential for growth and development. It is well established that babies are born with social brains that seek interaction[4], and early contingent back-and-forth interactions between adult caregivers and young children build brain structure and brain connectivity in areas related to language and executive function skills[5,6].

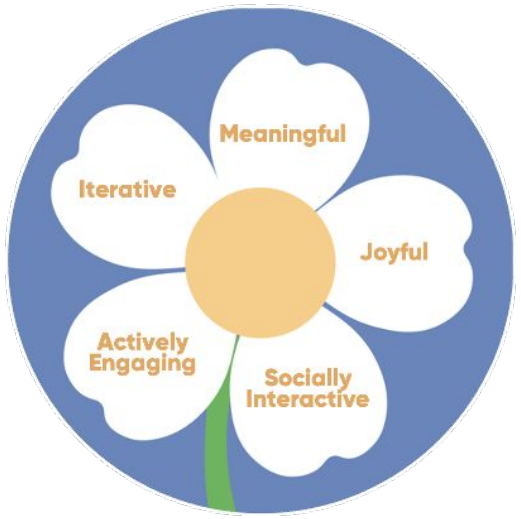
The key to designing successful programs????? Our three-part equation, taking culture and community seriously and prioritizing human interaction

Cultural, Community values



+

The science of *how* children learn



With a learning goal

+

Playful Learning

The science of *what* children should learn

The 6Cs

	Collaboration	Communication	Content	Critical Thinking	Creative Innovation	Confidence
Level 4	Building it together	Tell a joint story	Expertise	Evidence	Vision	Dare to fail
Level 3	Back and forth	Dialogue	Making connections	Opinions	Voice	Calculated risks
Level 2	Side by side	Show and tell	Wide breadth / Shallow understanding	Truths differ	Means-end	Where do I stand?
Level 1	On my own	Raw emotion	Early learning / Situation specific	Seeing is believing	Experimentation	Barrel on

And at the core – social interaction and collaboration as the foundation for all learning

Thanks to

The most wonderful postdocs, graduate students and undergrads.

And to the families who make the research we do possible!

TEMPLE INFANT & CHILD LABORATORY

bezos family foundation

WILLIAM PENN FOUNDATION

The LEGO Foundation

IES Institute of Education Sciences

NSF National Science Foundation WHERE DISCOVERIES BEGIN

NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development

For more, visit us at Playfullearninglandscapes.com
hear our APA podcast: https://www.apa.org/news/podcasts/speaking-of-psychology

Speaking of PSYCHOLOGY