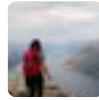


Unrolled thread from @iamconscious2

Powered By [Thread Readers](#)



savhannah schulz

@iamconscious2

44 tweets • 11 min read • 21 Apr 2021 12:13

And it is time for Day 2 - hosted by [@PEDALCam](#) and kicked off by [@paulramchandani](#) giving a quick overview over Pedal. See <https://www.educ.cam.ac.uk/centres/pedal/> for details

<https://twitter.com/iamconscious2/status/1384784316803256320>

The topic of day 2 is "What is Play" and will be kicked off by my [@DrVLeong](#) on early learning through parent-infant neural synchrony and play - explored through the lens of dyadic EEG

Early Learning through Parent-Infant Neural Synchrony and Play

Victoria Leong [@DrVLeong](#)

Asst Prof Psychology, NTU Singapore

Deputy Director, Cambridge-NTU Centre for Lifelong Learning & Individualised Cognition (CLIC)



The talk will be structured around three main points. To reinforce the idea of Day1 that play is a context for social learning, 2. digging into social play cues and brain states in relation, 3.

how play quality may index social development

Overview

1. Play is a context for social learning
2. Social play cues create a “learning-ready” brain state
3. Play quality may index social development



Starting with 1. Play is a context for social learning. At least two mechanisms that can be explored in relation to this are joint attention and social referencing.

Learning through Social Interaction

- Human mastery of **second-personal social relations** has propelled the rise of our species through “**cultural intelligence**” (Tomasello, 2014)
- **Play with a partner** supports learning through:
 - **Joint attention:** Shared interest in an object or event
 - **Social referencing:** Using information from a social partner to form one’s own understanding of a situation (Feinman, 1982)
 - **Instrumental social referencing**
(*observational learning*; Bandura et al 1961, 1963)
 - **Affective social referencing**
(Sorce et al, 1985; Hornik & Gunnar, 1998)



Sorce et al (1985)
12m infants less likely to cross visual cliff if mother showed fearful rather than happy face

In Wass et al (2018), Leong and colleagues studied how joint visual attention affects play

behaviour. One interesting finding was that increased attention to the parent in this task also increased the focus of the joint attention (i.e., the object)

Attentional Benefits of Joint Play

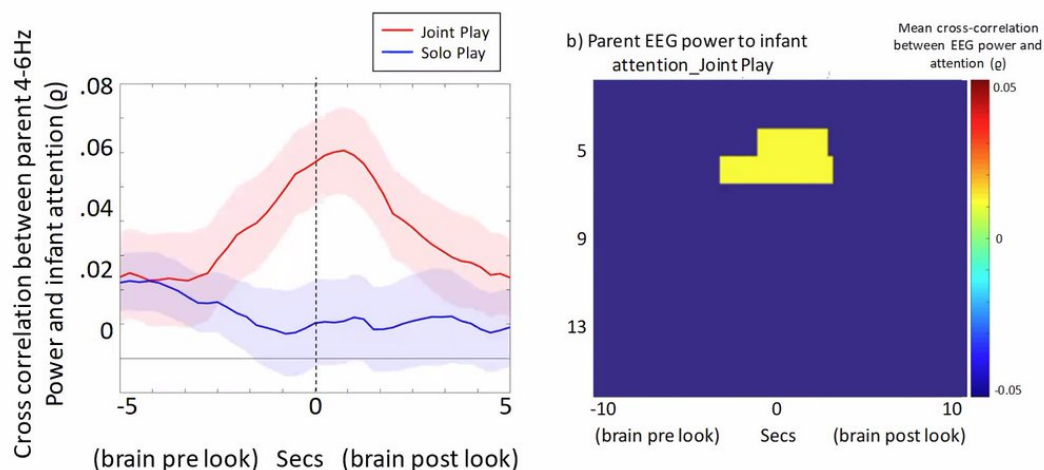
- **N=38** mother-infant dyads (21M/17F)
- Aged 11.4m [0.3m]
- Joint and solo play with toys (*order counterbalanced*)
- Video coding for **visual attention** to object and partner



Wass et al (2018, Dev Sci)

Within this attention framework, they also looked at EEG data.

Maternal Neural Responsivity Prolongs Infant Attention



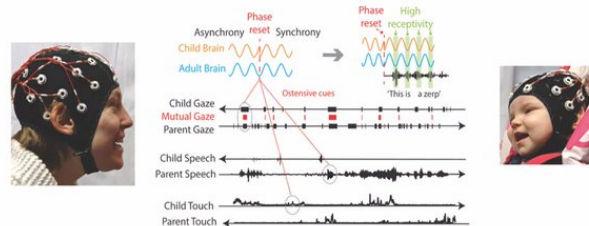
Wass et al (2019, PLoS Biology)

Okay, now moving to 2. the role of extensive cues. This argument is also made in a recent

TICS paper. In their study, Leong and colleagues found that social factors exert transient influences on the brains of both partners during an interaction.

Ostensive Signals Trigger Neural Synchrony

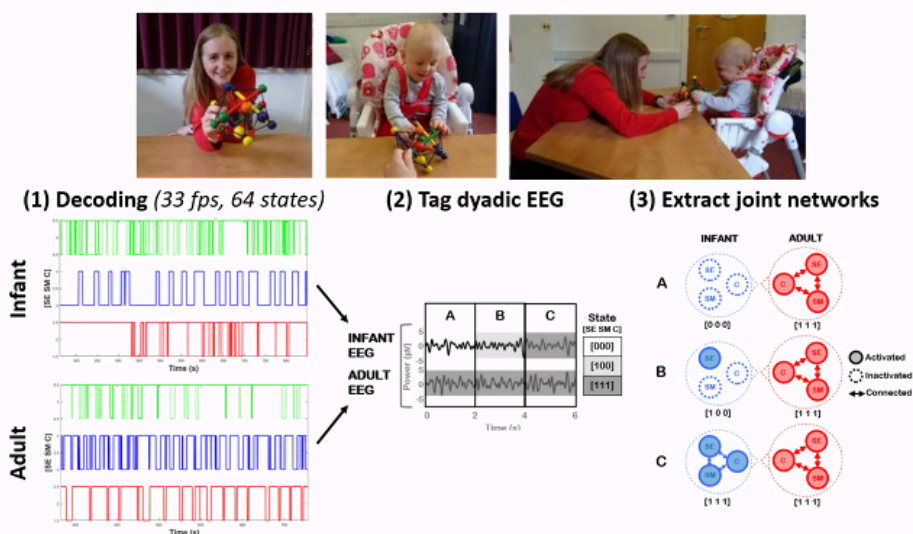
- Gaze (and other ostensive cues) may trigger **phase-resetting** to align infants' oscillation patterns with adults'



Wass, White, Marriott Haresign, Phillips & Leong (2020), TICS

Focus point 3: How can we quantitatively assess neural substrates of playful interaction (work together with [@DaveNealeWriter](#))

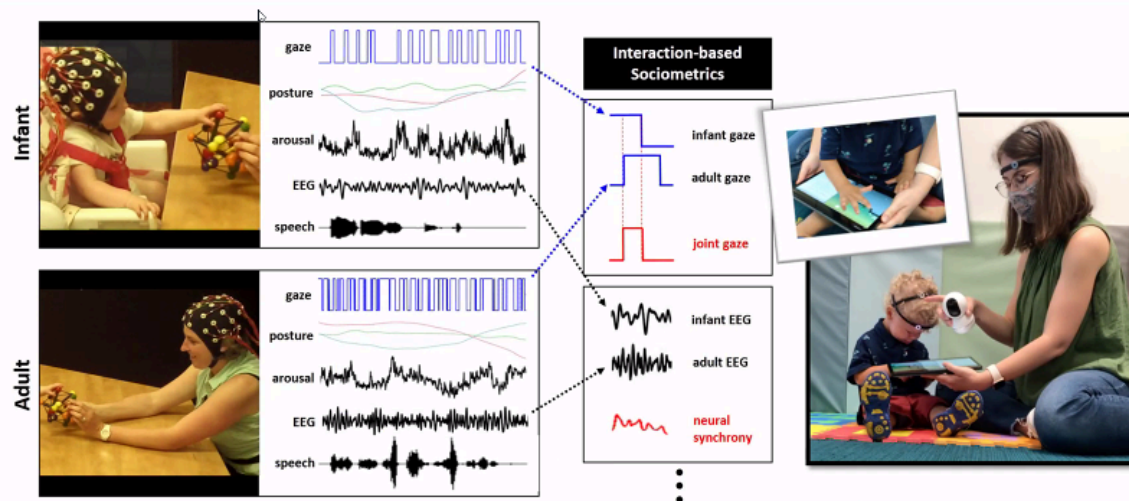
Assessing Neural Substrates of Playful Interaction



Neale et al (2018), Front Psychology

By developing infant wearables for ecological data gathering (FYI [@DCrafa](#)), L hopes moving forward to understand how play quality predicts later social neurodevelopment disorders (building bridges to [@DrJennyG](#)'s puzzles posed on Day 1).

Interaction-Based Sociometrics



Can early **play quality** predict later social neurodevelopmental disorders?

Quick breath break and jumping right into the next talk by [@BethBarker_](#) who will talk about: Using Play as a context for intervention and to facilitate children's self-reported behaviour.

Drawing on the data from the programme of "healthy start, happy start" Beth makes an argument on how parent play programmes can built on playful interactions to offer helpful ways for parents to support child development.

By assessing video-based data and recorded clips of caregivers and children playing together, they found that children whose caregivers had received the programme showed lower levels of behaviour problems.

Extending on this, the findings suggest that play has the potential to offer a tool to support caregivers in the earliest years. A write up of some of this can be found here:

2248 Families as

300 Ran

engaged us all in a little sharing exercise on the groups experience of play in childhood.

<https://twitter.com/GirlKrishna/status/1384863333258563589?s=20>

Moving on with next talk, @elianfink speaking about: How do you empirically examine the construct of play (to evaluate its role in children's social development)? In other words, how do you operationalise social play

In the talk, the focus will be on developed measures. For Gibson et al (2020), a coding scheme was developed that focuses entirely on directly observable behaviours. For example, role assignment: "i'll be a mum"

Second measure is the Child Self-Report Playfulness (CSRP) scale to see how children's self-concept of play can be explored.

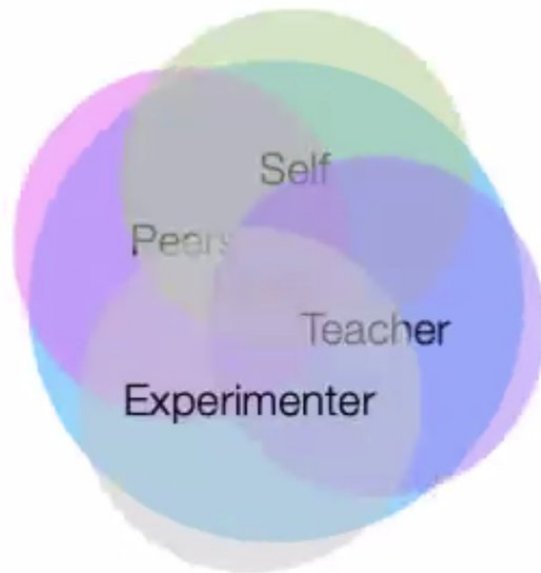
Third Measure: Peer-reported play. Focusing on how peers can report on play related social behaviours.

Fourth measure is the Teacher-reported play Scale (Penn Interactive Play Scale). Building from these measures, some key questions arise (mainly how each measure links to the broader understanding of play).

Key Questions

1. How do different informant ratings of play cohere?
 - Experimenter
 - Self
 - Peer
 - Teacher

A wonderful visualisations arises building from this:



By studying a population in the UK education system, an exploration of the relationship of the measures found that they are not highly overlapping.

1. How do different informant ratings of play cohere?



Some interesting data findings presented below:

2. Concurrent (age 5) associations across Play and Social Competence

		Experimenter		Peer	Child	Teacher
		Pretend Play Negotiation	Pretend Play Enactment	Play Skills	Playfulness	Play Skills
Teacher	Social Maturity	0.05	0.06	0.36**	0.10	0.69**
	Social Skills	0.01	-0.01	0.21**	0.14*	0.73**
	Problem Behaviours	0.13*	0.14*	-0.17**	-0.15*	-0.53**
Peer	Popularity	-0.03	0.1	0.38**	0.05	0.25**

Longitudinally it is interesting to see that peer and teacher judgments are a helpful insight into future social skills

Conclusions

- All four informants on play were psychometrically reliable
- But for the most part informant reports on play were independent
- Are they all assessing play?
- What are observations of children's pretend play telling us?
 - Importance of understanding dyadic nature of play, developmental appropriateness of pretend play, other aspects of dyadic play (amity, connected conversation).
- Self, peer and teacher reported play are meaningfully associated with children's social competence concurrently and longitudinally

Now [@lieberothdk](#) of Playtrack and [@DPUAarhusUni](#), who is asking: Can we create MEANINGFUL SURVEYS for kids to quantify outcomes of play interventions based on children's voices?

SEVEN COMPONENTS OF "GOOD OR "BAD" PLAY?

A PRINCIPAL COMPONENT ANALYSIS OF CHILDREN'S EXPERT STATEMENTS

Andreas Lieberoth
Associate professor, Ph.d.
Aarhus University

Interacting Minds Center
School of Culture and Society

Dept of Educational Psychology
Danish School of Education (DPU)

andreas@edu.au.dk

PlayTrack



The work is a collaboration with [@helleskovbjerg](#) at the Design School Kolding.

Centring the voice of the children, the study first invited children to share their play stories. These were then coded and then reshared with 504 new children who were asked to share if these statements hold true for their own play.

1

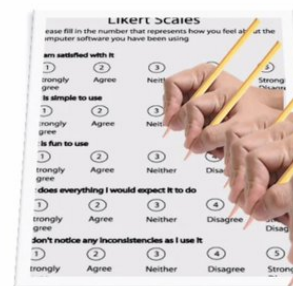
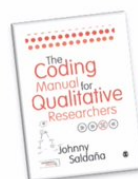
2



104 children's
105 play stories

PlayTrack

82
In vivo and
descriptive
statements



Clustering and selection through 504
children responding to the statements
while thinking about *their own play*
experiences

82 questions were asked and with a little adult help, @lieberothdk and colleagues found that children were actually really interested in sharing their thinking

I'm going to say some things, that other kids have said about *their* play. You tell me: Does this fit *your* play story?

"It was fun" – is this true of your play, or not true?

...OK, is it *very* true or just *a little* true?

Husk på den leg der var (GOD/DÅRLIG).

Nu siger jeg nogle ting, som andre børn har fortalt os om deres lege.

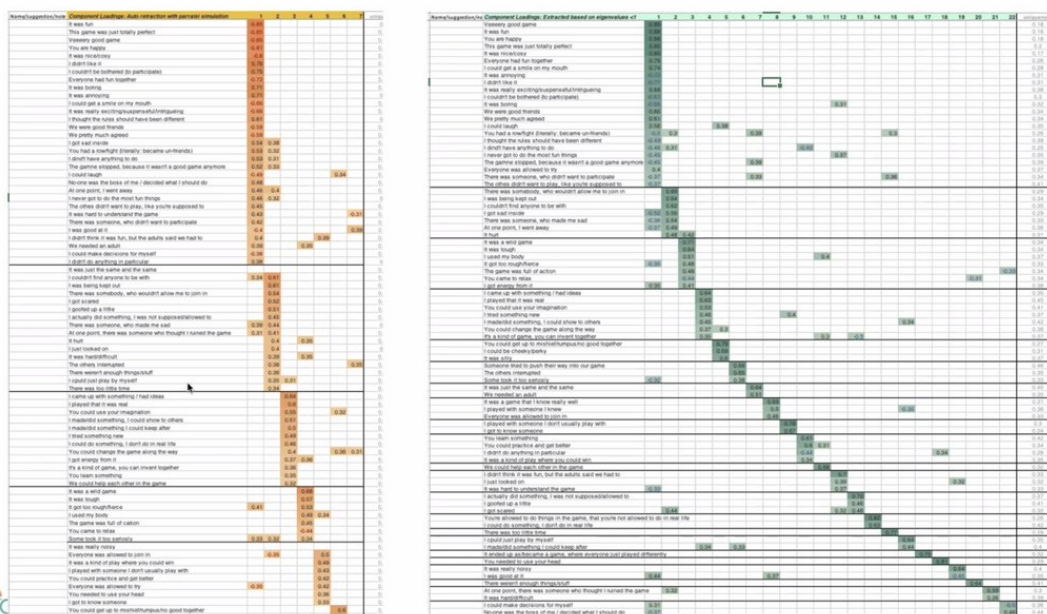
Passer det jeg siger på DIN leg?

	Meget forkert	Lidt forkert	midt imellem / ikke huske	Lidt rigtigt	Meget rigtigt	--Passer ikke på legen--	--Ikke forstået--
Det var sjovt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg gad ikke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PLAYtrack

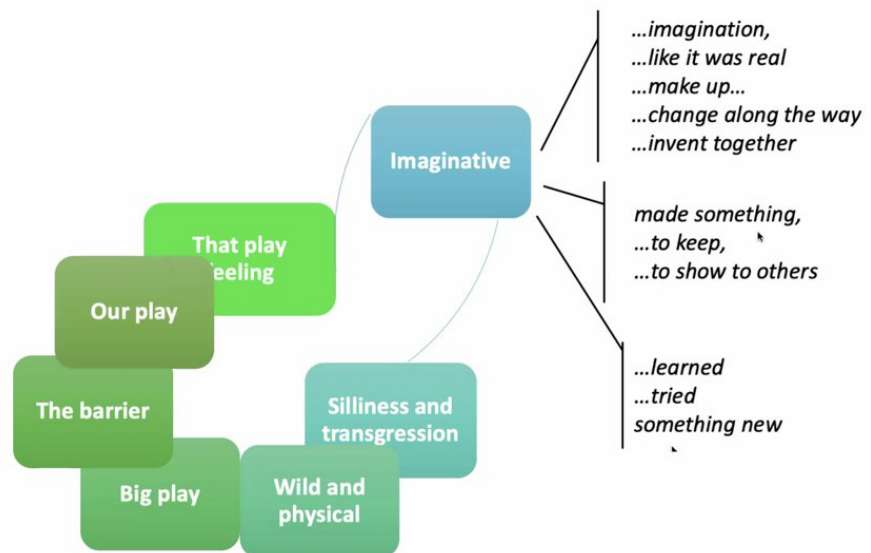
Husk på den leg der var (GOD/DÅRLIG).

Using a Principal Component Analysis, the analysis of the resulting data suggested 22 or 7 main clusters of sentences.



Digging into the 7 clusters - and attempting to find good categories to capture their content -

some categories that arose were "Our play", "That play feeling", "The barrier" (i.e., feeling excluded, lack of playmates,...), "Imaginative", "Silliness and transgression", ...



That play feeling ties into so closely to the [@pedagogyofplay](#) indicators at [@ISBillund](#) and i am looking forward to Megina's talk following

"Big play" or also called "organised" incl. statements like "everyone was allowed to try" and referring from guided play instances.

Side note: Uvenner (unfriends) and hygge are wonderful danish constructs

Some important implications: Centring children's voices and experiences that helps to get a better sense of their experiences. Noting also that these are not tick-boxes but play qualities that vary (in a Danish population).

IMPLICATIONS

- ▶ The 7(+) **components** collect characteristics that are **important to kids**, when they differentiate good (or not-good) play experiences, combining...
 - ...what goes on
 - ...feelings
 - ...abilities + agency
 - ...relationship to others
- ▶ The 7 components are **not tick-boxes** that can or should all be present in every play experience. Instead, they **can vary** in their
 - ...importance for different kids
 - ...prominence in different play situations
 - ...= “play qualities”



h



Finishing off the program of Day 2 the wonderful [@MeginaBaker](#) will share work by [@pedagogyofplay](#) and discuss what we mean by play across cultural contexts

Understanding Learning Through Play Across Cultural Contexts: The Indicators of Playful Learning

Megina Baker
with the Pedagogy of Play team
Project Zero



This is an important perspective, since we know that play is both universal but also culturally determined. For example, who we play with, what we play with ... are all framed by our environment and cultural setting.



Talking: Megina Baker (POP)

Play is both universal and culturally determined

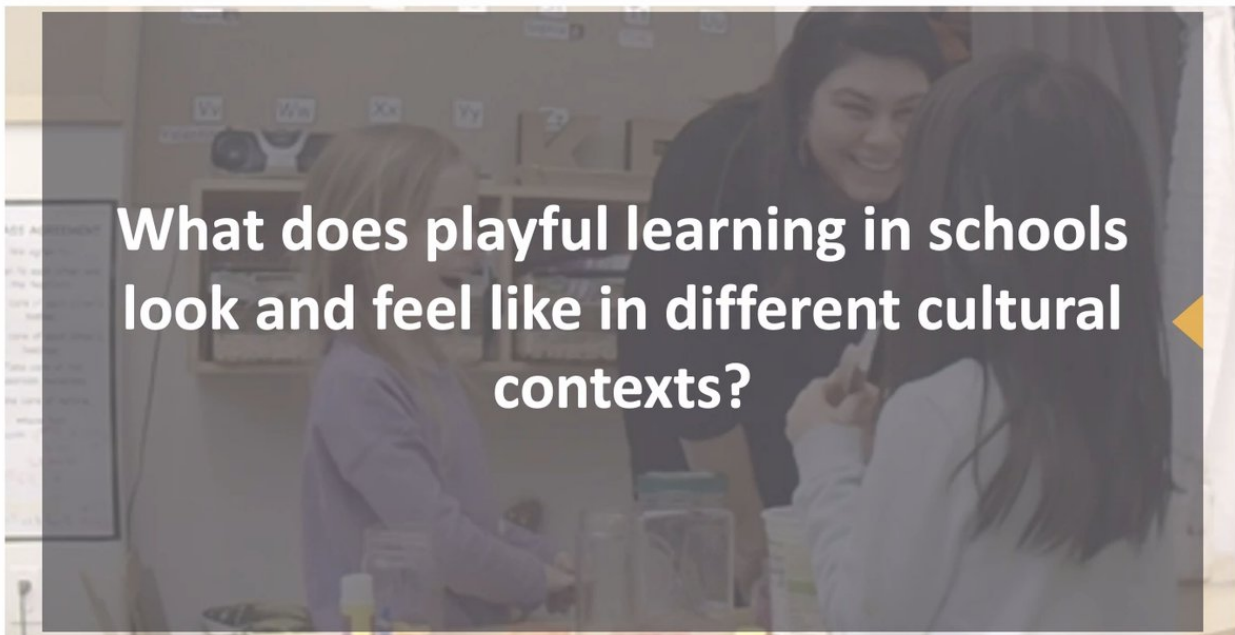
- Who children play with
- How they play
- Where and when they play
- When/if they should stop playing

...all of these ideas are culturally constructed



The focus here is not only to identify behaviour, but also the experiences involved in play -

the "feels like" of play. The work was conducted in a co-created process with schools across the globe (Denmark, US, Columbia, South Africa)



See below a helpful overview over the methodology that was drawn upon when developing the indicators. (For more details, see the PoP website:

<http://pz.harvard.edu/projects/pedagogy-of-play#xlink>)

Methodology: Developing the Indicators

- Site selection – purposive sampling:
 - Variety of SES, school type
 - Interested in incorporating playful learning
- Data sources:
 - Extensive classroom observations
 - In-depth semi-structured interviews with classroom teachers, administrators, and children
 - Focus groups with children
 - Playful activities to surface playful learning experiences
- Analysis:
 - Emic, open coding
 - Thematic analysis
 - Return to the conceptual literature to inform analytic approach
 - Co-construction through iterative analysis and feedback with local educators



An example of the indicators of playful learning @ISBillund and South Africa (@Steph_KaNo and Kgopotso Khumalo) show how playful learning shares similarity but also has cultural nuances (e.g., unique cultural concepts such as hygge in Denmark, ubuntu in South Africa)

Choice

feels like...

autonomy
empowerment
intrinsic motivation
ownership

looks like...

setting goals
negotiating
choosing how long to work/play
choosing collaborators and roles
influencing the direction of learning
making and changing rules
being spontaneous
moving around



Wonder

feels like...

engagement
novelty
fascination
curiosity
surprise

looks like...

risk taking
trying
reflecting on mistakes
asking questions
focusing attention
improvising
pretending
inventing
imagining
exploring
creating

Delight

Talking: Megina Baker (PoP)

feels like...

satisfaction
enjoyment
belonging
pride
excitement
inspiration
flow

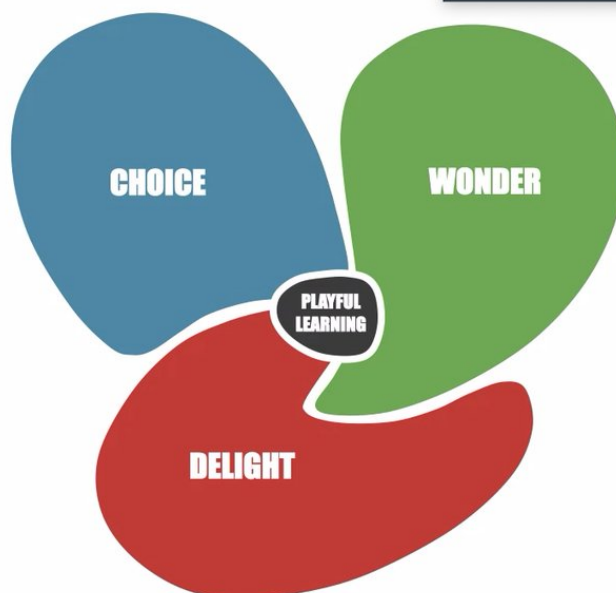
looks like...

celebrating
discovering
being silly
competing
singing/humming
smiling/laughing
anticipating
joking
hygge
being altruistic
expressing excitement
working through a challenge

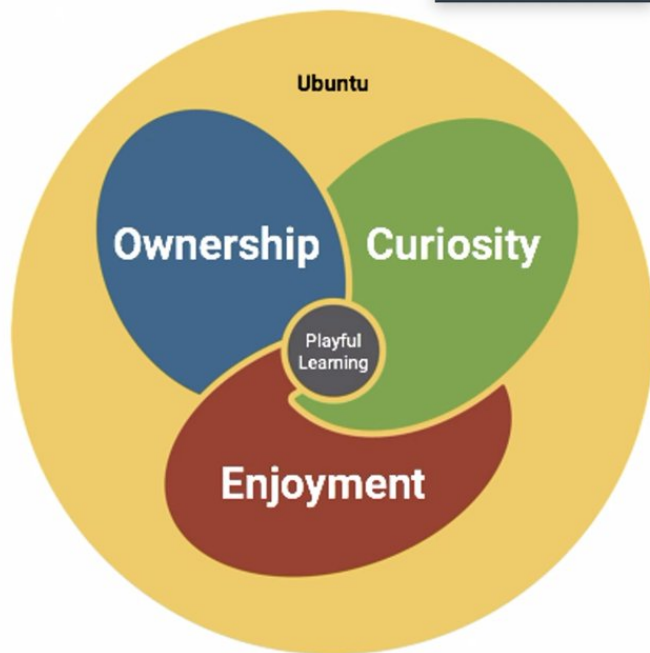
Subjective and Objective

What does playful learning look like? (objective)

What does it feel like? (subjective)



Indicators of Playful Learning in 3 South African Schools



These indicators can allow local communities to engage in a common on language on what they mean by playful learning. It also is a helpful prompt for teachers to plan and reflect on their own practice.

This work is ongoing and current data collection is ongoing in Columbia. Some of the new work will include a guide for how to design your own indicators, a teacher ed course,

Wrapping up with a discussion. How can teachers use these play factors, playful indicators, to inform their practice? What do indicators of play look like across different age ranges?

[Read Thread on Twitter](#)