

Measuring learning through play



What's so special about play

JANUARY 2022



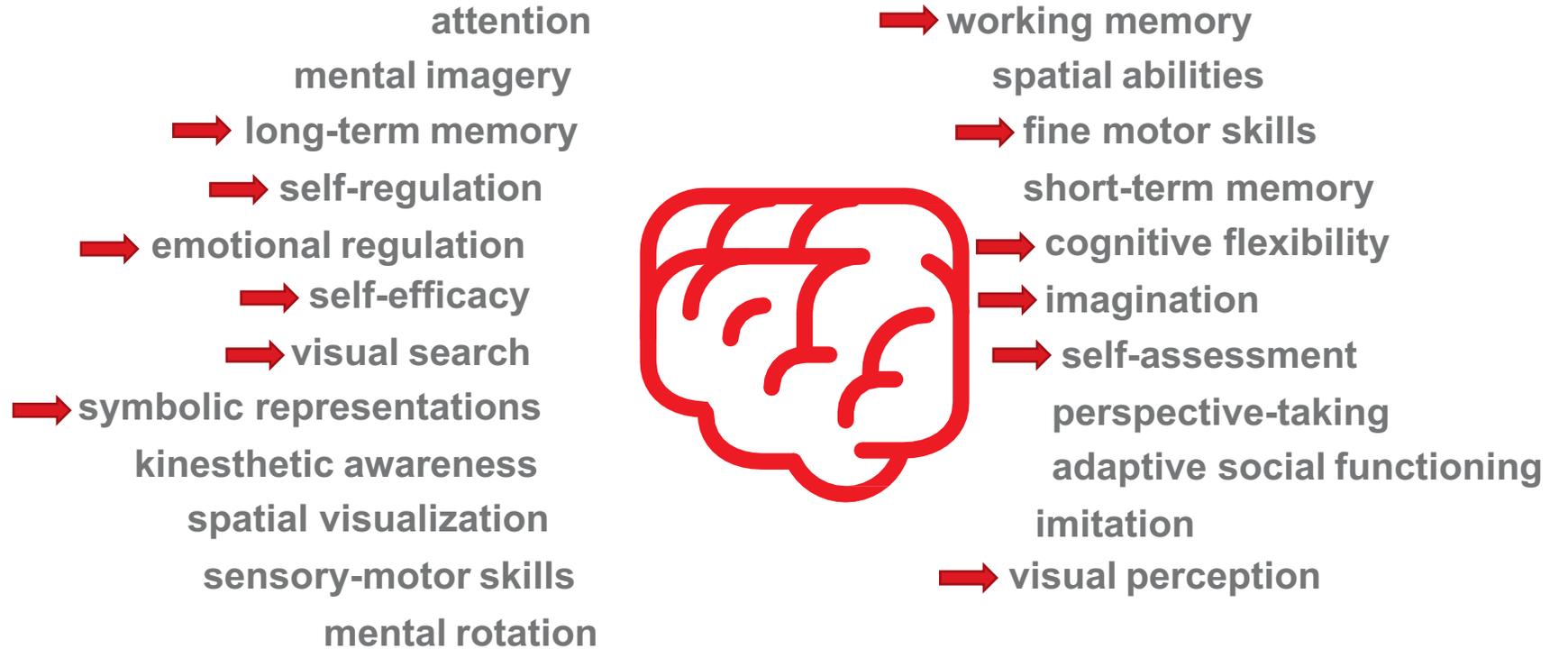
Building Challenge

Build a paper
plane in 3
minutes



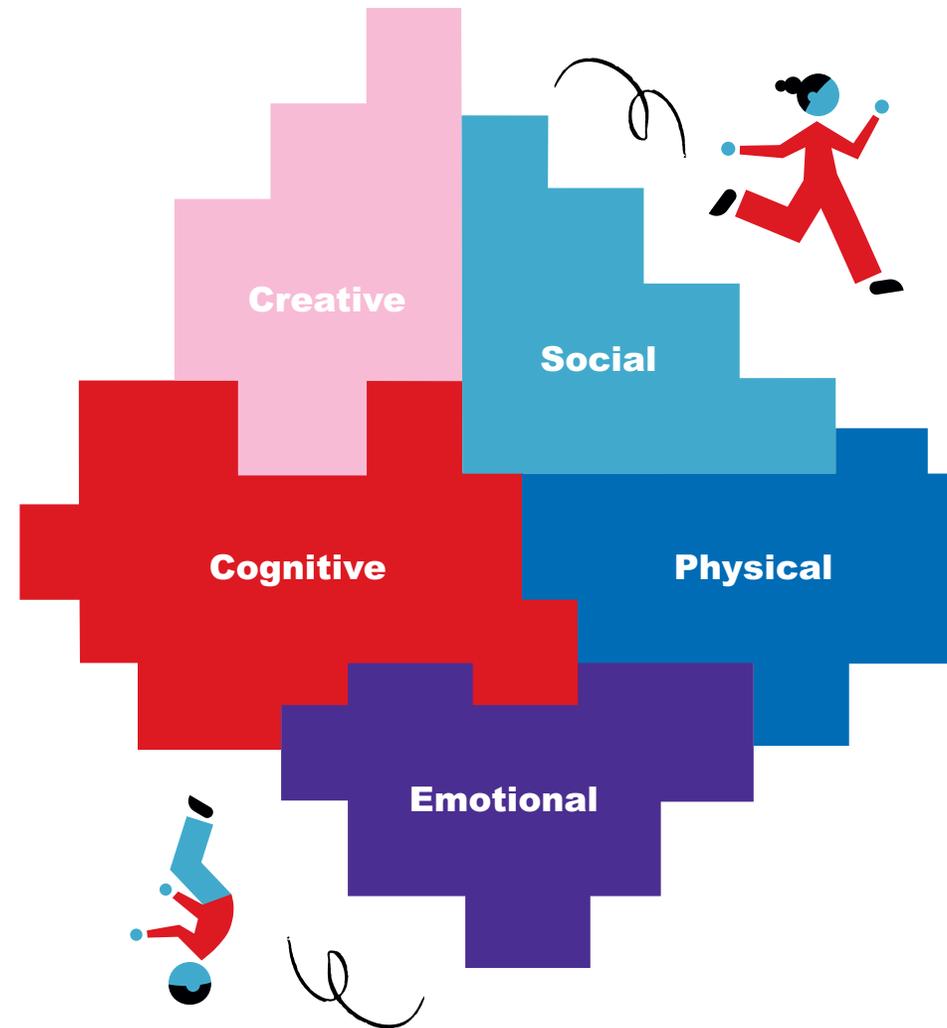
What happened?

A Sheet of paper
20+ Skills used



Holistic skills

Children's development and learning is complex which is why we take a holistic view and high-light the importance of their physical, social, cognitive, creative and emotional skills and how these complement and interact with one another.



21st century skills

- **Critical thinking**
- **Problem solving**
- **Collaboration**
- **Communication**
- **Creativity**
- **Innovation**





Thank you

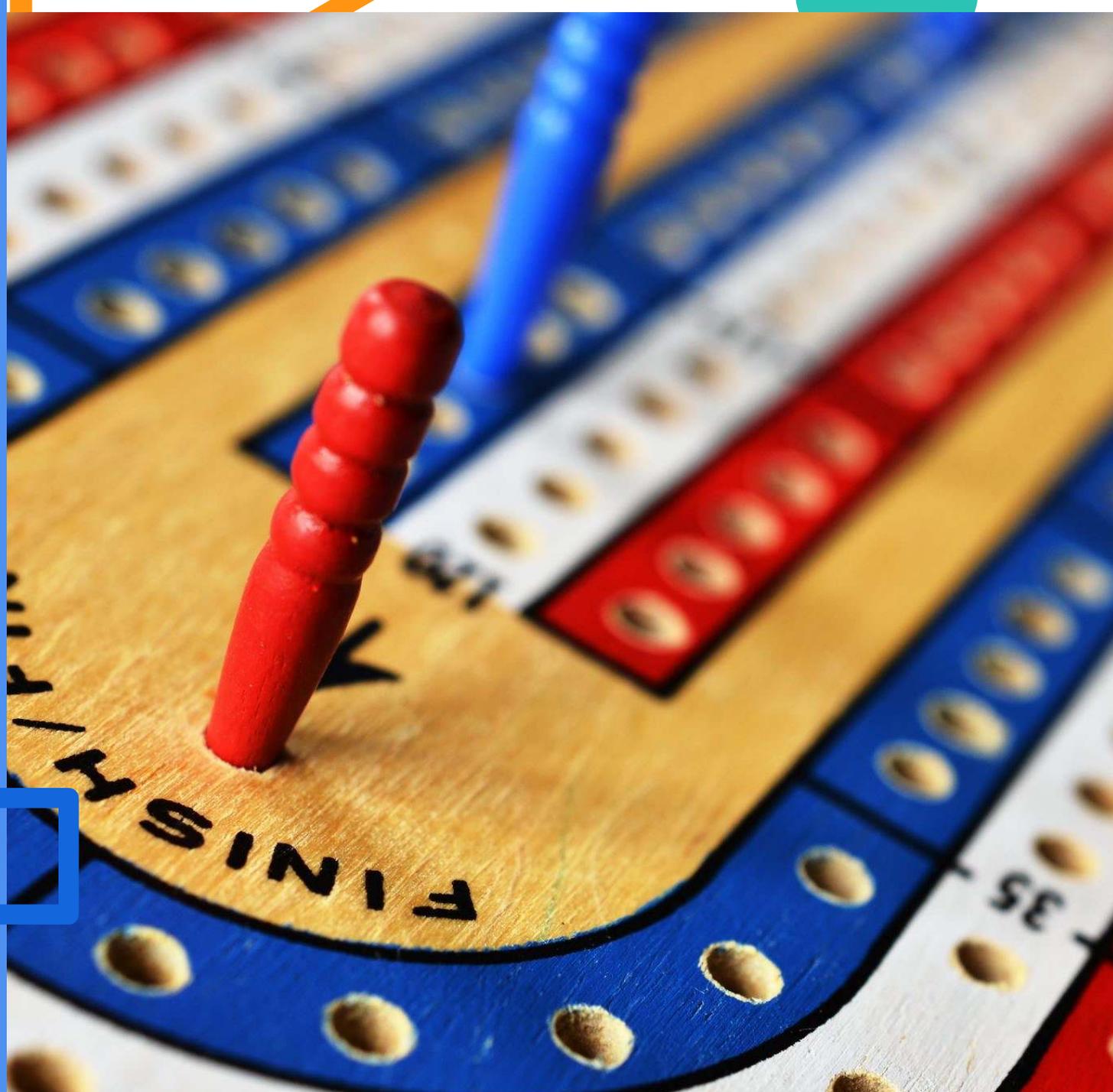
Playful
Learning
Across the
Years

PLAY Measurement Tools
(Primary level)

Schools2030
GLOBAL FORUM
21-23 June, Dar es Salaam

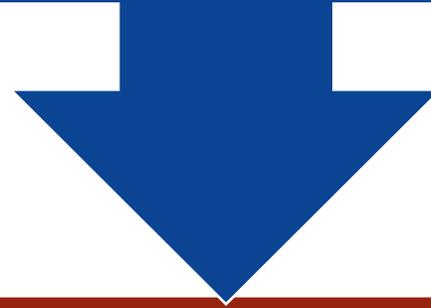
Tabitha Nduku
RTI International

With: Dr. Matthew Jukes, Dr. Jonathan Stern,
Dr. Margaret Dubeck, Kellie Betts



Aim of the Tools

To measure how teachers set the conditions for learning through play (LtP) in the classroom and support it through interactions with students.



Leading to a broad range of academic and non-academic outcomes

Learning through Play = a learner's experience that is effortlessly engaging and self-sustaining.

Focus on teacher-student interactions and use of space/materials to promote engagement

Constructs

- Support for Connection to Experience
- Support for Problem-solving
- Support for Exploration
- Support for Agency
- Support for Participation
- Support for Social Connectedness
- Support for Positive Emotional Climate

- The **first five constructs** are focused on learning/lesson objectives.
- The **final two constructs** are about the classroom environment, not specific to learning activities. We are looking at environment-- social interactions in the classroom and the emotions of students.

Remember! These are things teachers do to promote student engagement

Focus: Teacher's Role

Our task -- to measure what teachers do to ensure students are effortlessly engaged.

(i) Observe teachers to understand what they do to engage learners (**Classroom observation tool**)

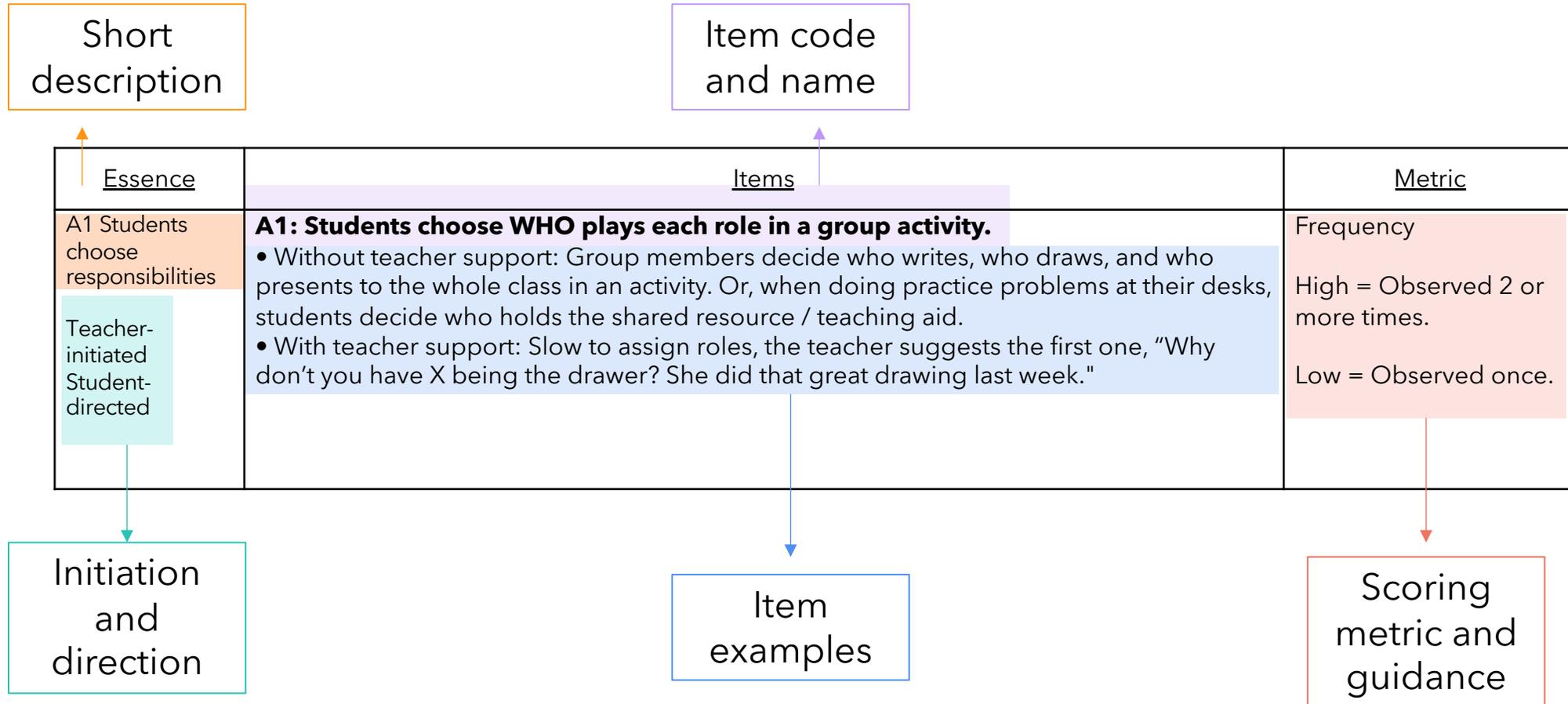
(ii) Ask the teachers' opinion about what they do to engage learners (**Teacher interview tool**)

(iii) Ask the students' opinion about what teachers do to engage them (**Student interview tool**)

(iv) Record the materials in the classroom which may promote engagement

Goal for the student/teacher surveys: To be engaging, valid, and avoid social desirability bias

Format of the Classroom Observation Tool: Essence, Item, Metric



Relations to other measures of Quality

PLAY has a **domain-general** focus (like CLASS, TEACH, TIPPS), not subject-specific, such as tools for the language and literacy environment (CHELLO) or read alouds (SABR).

PLAY measures **adult-child interactions** (i.e., process quality rather than structural quality). However, unlike existing quality measures, PLAY focuses only on specific adult-child interactions, namely those that support (effortless) **self-sustaining engagement** in learning.

The **relation to learning outcomes has not yet been established** for all constructs measured by PLAY. Thus, PLAY measures some constructs that are hypothesized to relate to learning whereas existing measures assess constructs with a more established relation to learning.

PLAY aims to measure interactions that promote a **broad range of outcomes**, including social and emotional outcomes as well as academic outcomes.

The notion of 'quality' relates only to interactions taking place in classrooms and centres. In homes (ages 0-5), we refer to 'caregiver **support** for self-sustaining engagement' rather than 'quality'.

Feasibility

- First tool to focus specifically on child engagement
- Includes items relevant across cultures (e.g. sensitive to low levels of agency, includes social connectedness as a means of engagement which is more important in many LMIC contexts)
- Designed for use across contexts (PLAY 2.0 will explore further)
- Items are easy to understand with practical examples
- Data can inform instruction (by promoting teachers' professional development and programming)
- Current focus on 'long version' but a 'short version' will also be developed

Challenges

Instruction often remains quite traditional; nuanced definitions of 'learning through play'

Training requires a lot of practice using videos of "real classes" in LMICs (availability is limited)

Items can be subjective-can be interpreted in different ways in various contexts

Limited evidence for many items in classroom settings (due to traditional teaching approaches) e.g., items under problem solving, agency

Double coding is complicated (i.e. items that fall under multiple constructs)

The observation tool is more qualitative and requires assessors with qualitative skills

IRR needs to be assessed during data collection, to ensure results are consistent across assessors

Next Steps

- TEST phase data collection almost done
- Analyses are forthcoming to determine psychometric properties of tools (and test constructs)
- Work on short version
- Finalization of toolkit
- All leading toward PLAY 2.0

References

- Neuman, S. B., Koh, S., & Dwyer, J. (2008). CHELLO: The child/home environmental language and literacy observation. *Early Childhood Research Quarterly, 23*(2), 159-172.
- Pentimonti, J. M., Bowles, R. P., Zucker, T. A., Tambyraja, S. R., & Justice, L. M. (2021). Development and validation of the Systematic Assessment of Book Reading (SABR-2.2). *Early Childhood Research Quarterly, 55*, 201-213.

Learn more about RTI's work:



Thank You!

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Why measure Learning through Play?

Rachel Outhred,
Managing Director
Oxford MeasurEd



Why measure Learning through Play?



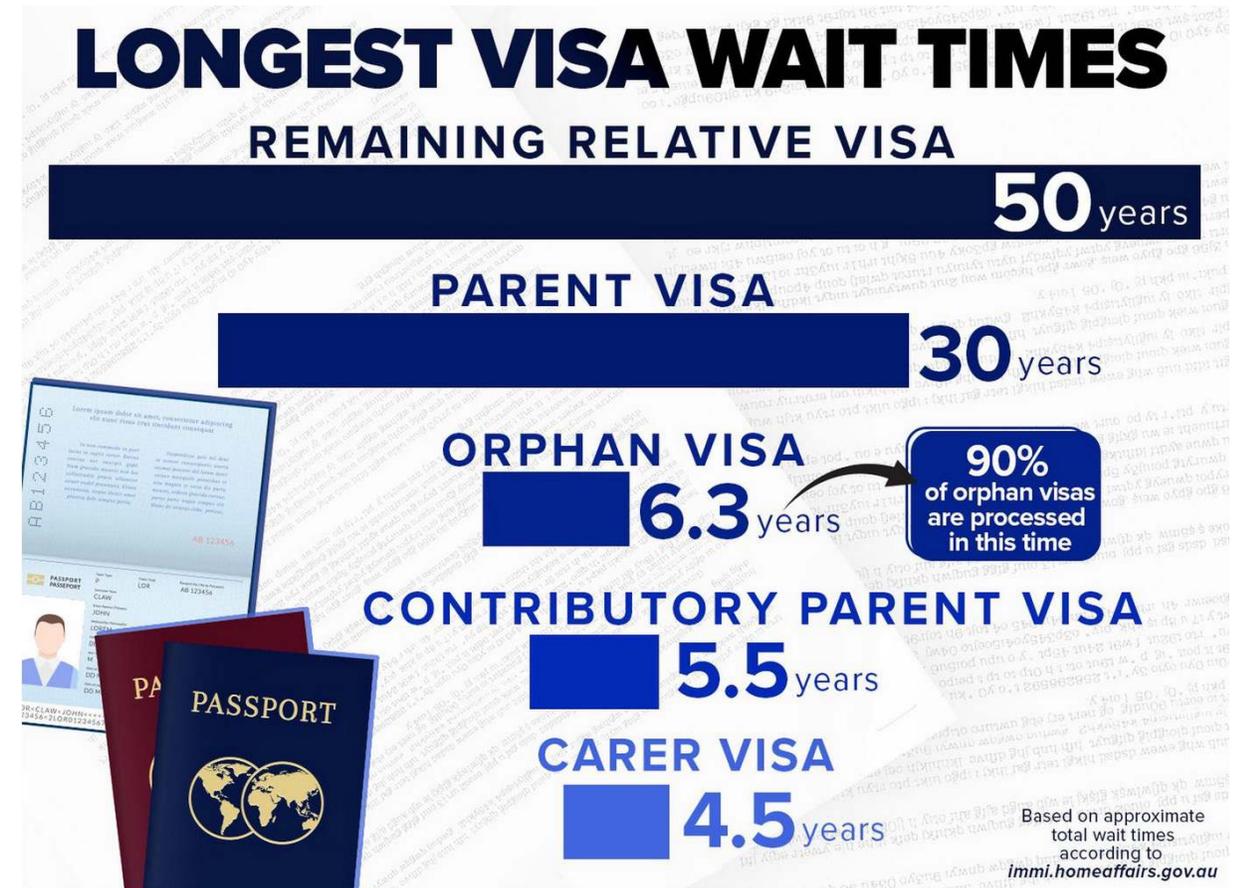
“What gets measured, gets done”.



Why measure Learning through Play?



Processing times for the Remaining Relative visa (subclass 115) in Australia



Source: 9 News, based on immi.homeaffairs.gov.au data

Why measure Learning through Play?



How much sleep a new baby usually deprives each of its parents in the first year of life.

350-400 hours



Why measure Learning through Play?

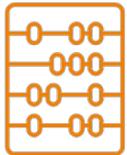


The number of forcibly displaced people worldwide



Figure: UNHCR

Why measure Learning through Play?



“Weighing the sheep,
doesn’t make them fat”



Why measure Learning through Play?



Note: 1 ml = 1 cc	Valbazen (albendazole)	SafeGuard (fenbendazole)	Ivomec (ivermectin)	Cydectin (moxidectin)
Meat Withdrawal Time	7 Days	6 Days	11 Days	14 Days
Standard Dosage	0.75 ml / 25 lb	0.6 ml / 25 lb	2.9 ml / 25 lb	2.3 ml / 25 lb
25 Pound Sheep	0.75 ml	0.6 ml	2.9 ml	2.3 ml
50 Pound Sheep	1.5 ml	1.1 ml	5.7 ml	4.5 ml
75 Pound Sheep	2.3 ml	1.7 ml	8.5 ml	6.8 ml
100 Pound Sheep	3.0 ml	2.2 ml	11.4 ml	9.1 ml
125 Pound Sheep	3.8 ml	2.8 ml	14.2 ml	11.4 ml
150 Pound Sheep	4.5 ml	3.1 ml	16.0 ml	13.6 ml

Source: American Consortium for Small Ruminant Parasite Control

Why measure Learning through Play?



We measure because it focuses our attention to what matters



Why measure Learning through Play?



When we focus on aspects that sit closer to how children learn the quality of the learning process is likely to increase.



Why measure Learning through Play?



More recent literature has identified the dichotomous way in which “learning” and “play” have been framed in ECD practice and research

(See Johansson and Pramling Samuelsson, 2006)



Why measure Learning through Play?



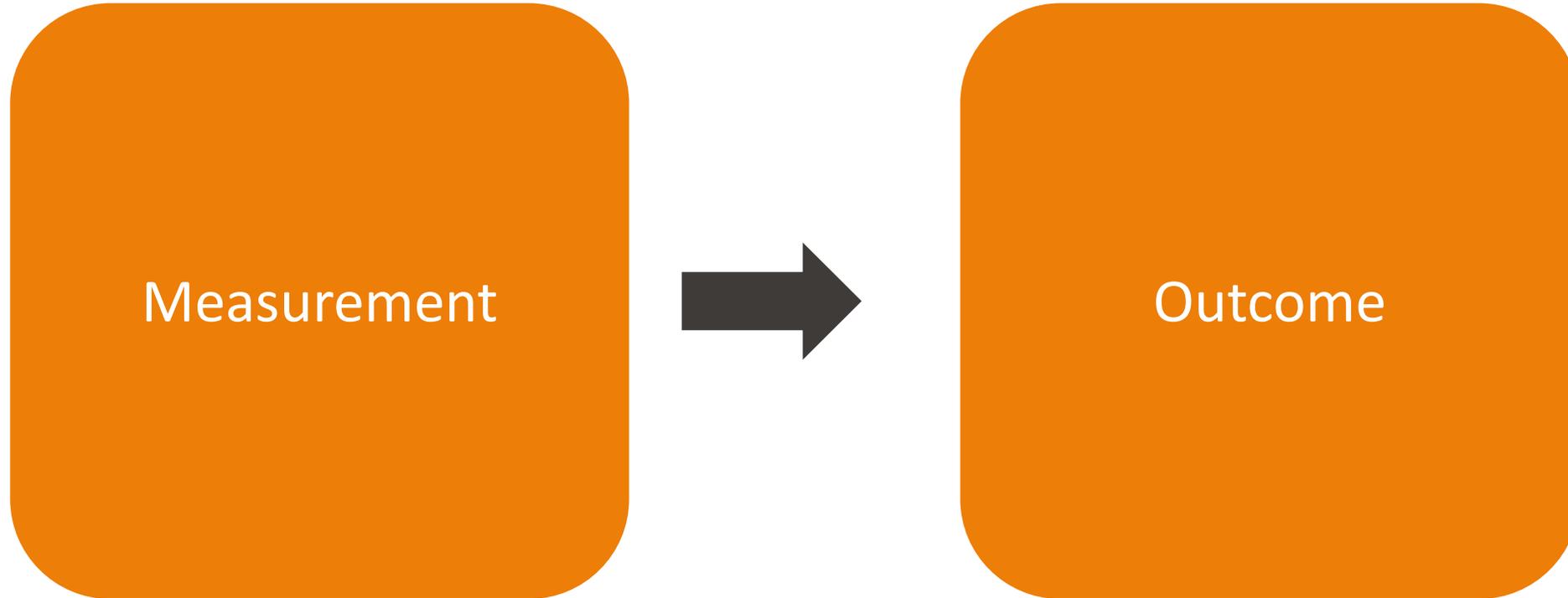
Knowing and understanding what is actually happening in learning environments is complex



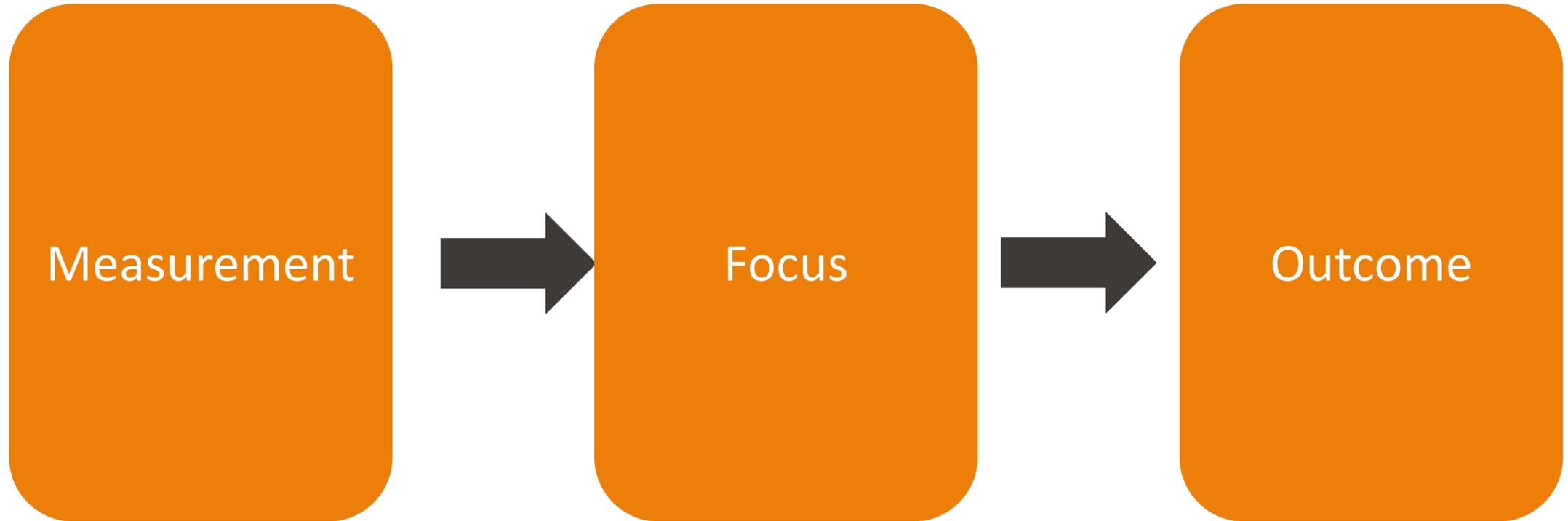
The PLAY constructs can act as focus point to improve the quality of the learning process



Why measure Learning through Play?



Why measure Learning through Play?



Measurements are credible
Actors are willing and able
to focus on child-centred
pedagogy

Measurements are accurate
Actions based on focus are sound

Why measure Learning through Play?



Connection to experience

Problem solving

Exploration

Agency

Participation

Social connectedness

Positive emotional climate



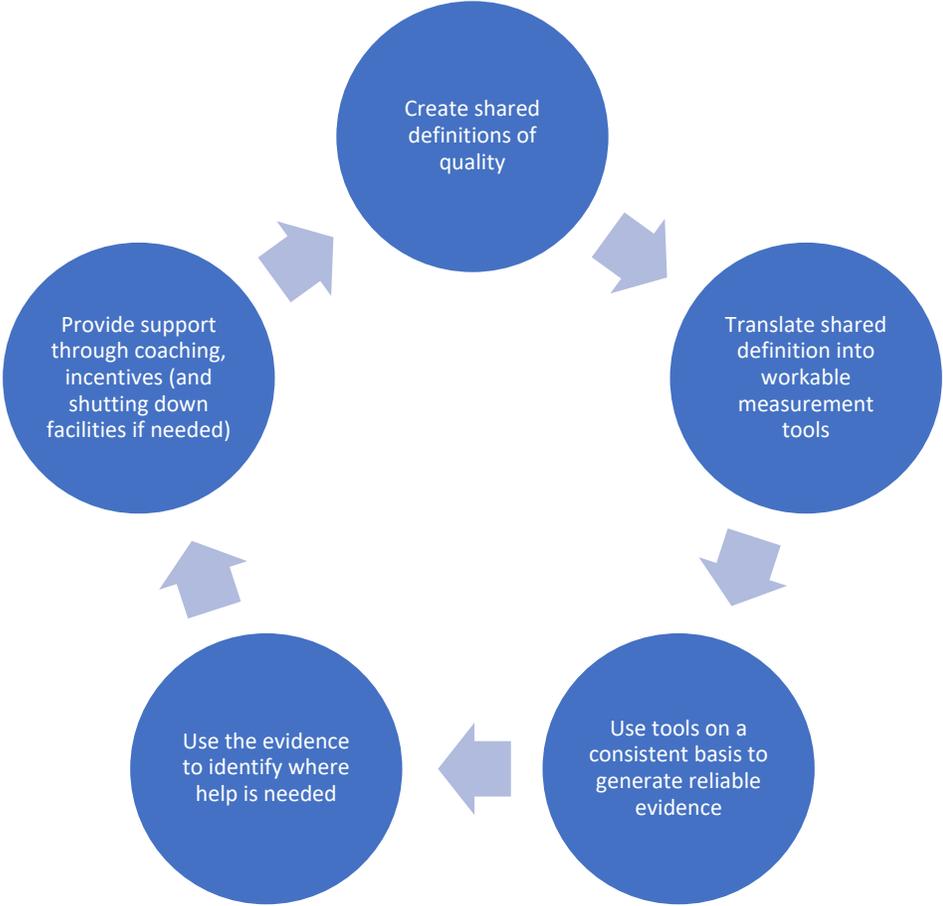


ECCE Quality Assurance Systems

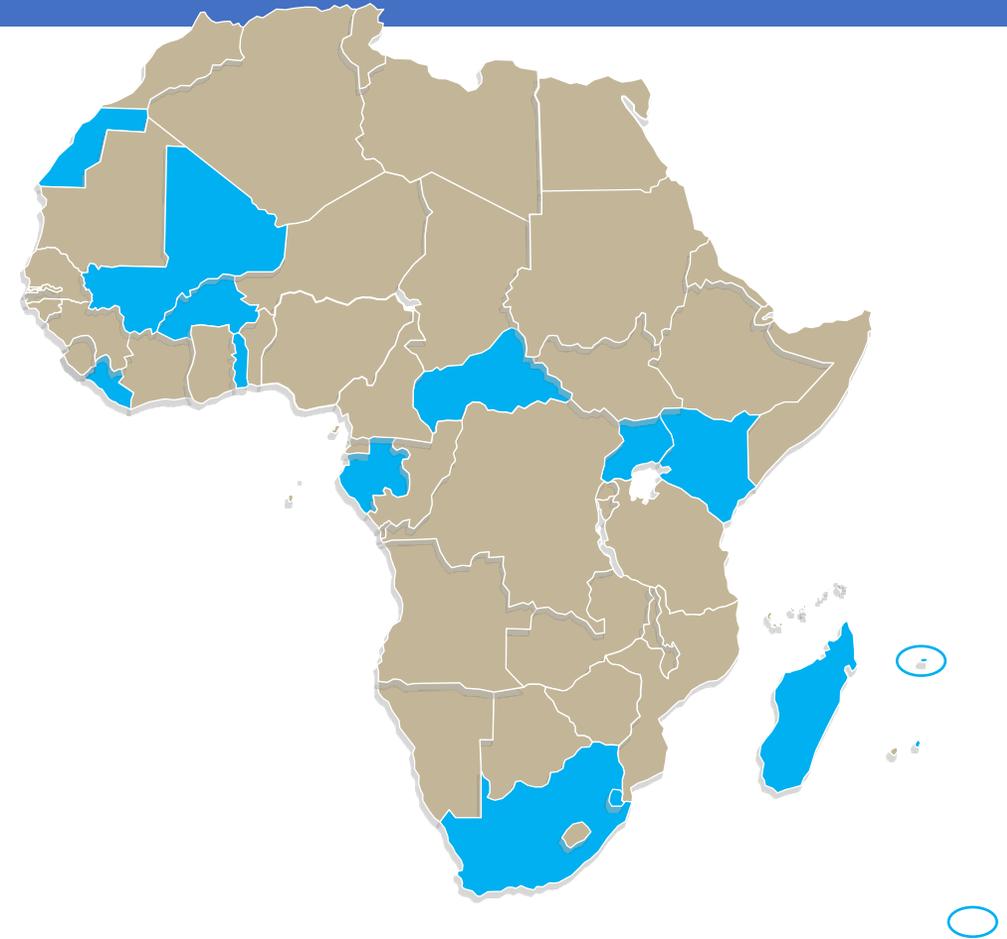
What is a Quality Assurance System?

- Government system designed to ensure quality at scale – across all schools/programs
- Refers to the process of defining and setting standards, monitoring to ensure standards are met, and offering support for improvement
- Critical for quality

Quality Assurance Cycle



ECCE QAS in Africa Report



- 28 respondents from 14 countries responded

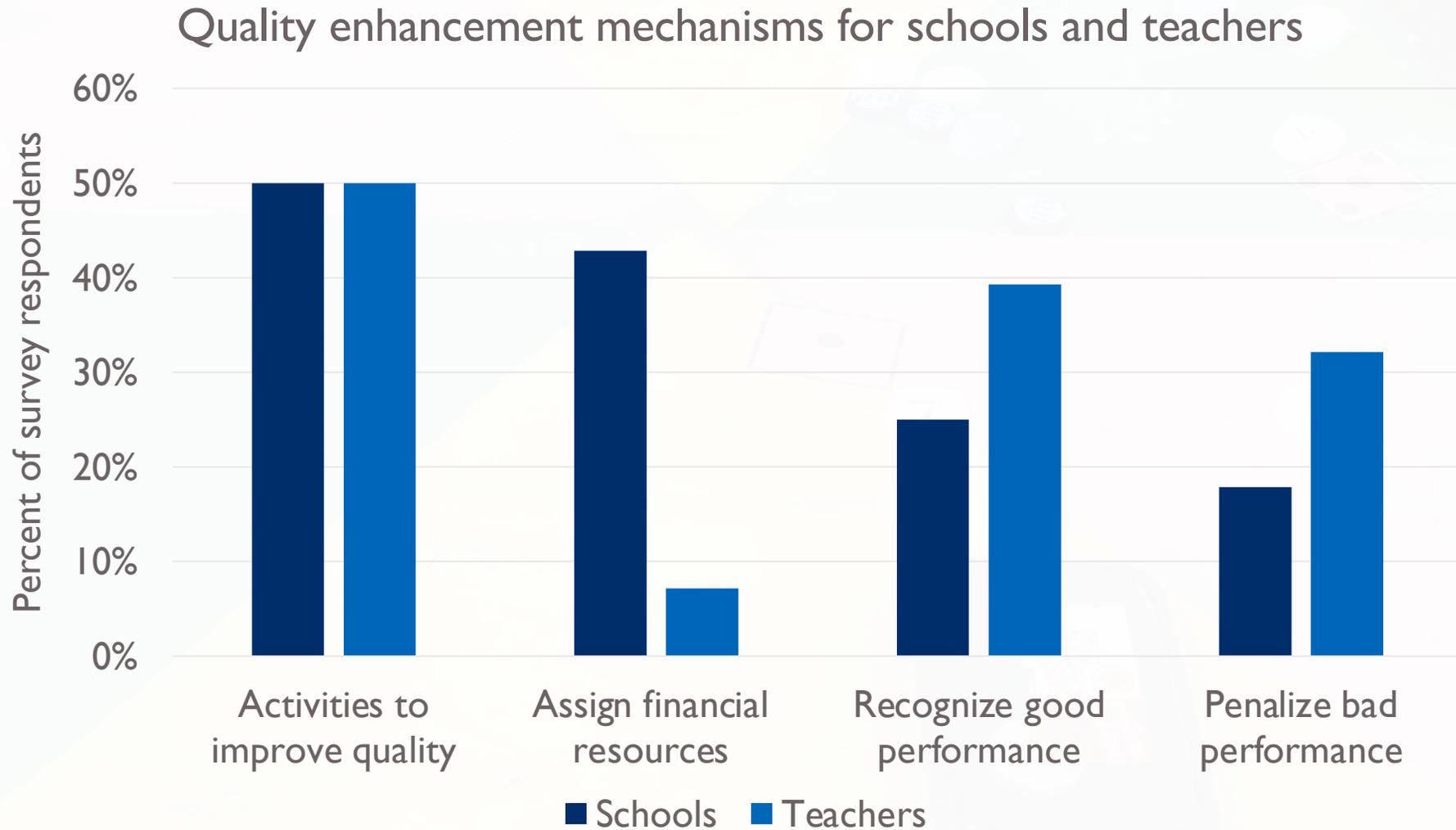
Most countries have some ECCE quality standards

- 92% have established ECCE quality standards
- 71% have same standards for public and private ECCE facilities
- 25% report that all teachers have been trained on standards

Countries have some elements of monitoring systems in place

- **Who is included in monitoring system?**
 - 50% have complete registry of public preschools; 18% have complete registry of private preschools
- **What is monitored?**
 - Health and safety are most prevalent; many are monitoring for other quality aspects
- **How is monitoring data used?**
 - Feedback to schools (not necessarily to teachers)
 - Follow-up visits
 - Inclusion of data in national database/reports
 - Registering schools

Mechanisms to improve quality vary



Conclusions

- Establishing registries of all providers (public + private) is essential part of building effective ECCE system
- Think about how monitoring data are used by all stakeholders (national, local, school-level stakeholders)
- Easy-to-use monitoring tools can capture the most important elements of quality
- More knowledge needed on how to build effective systems

The LEGO Foundation

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