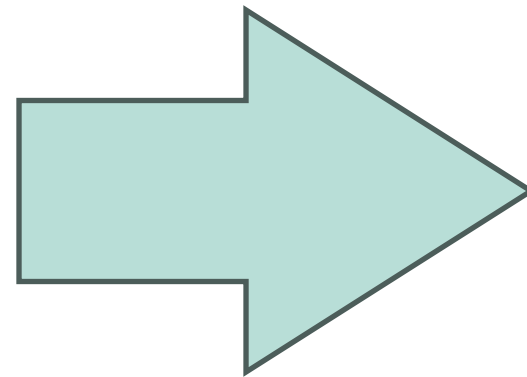# Data feedback loops to improve teacher practice:
Integrating Learning Environment Evidence into HCD

Rebecca Sayre Mojgani
ECD Measure
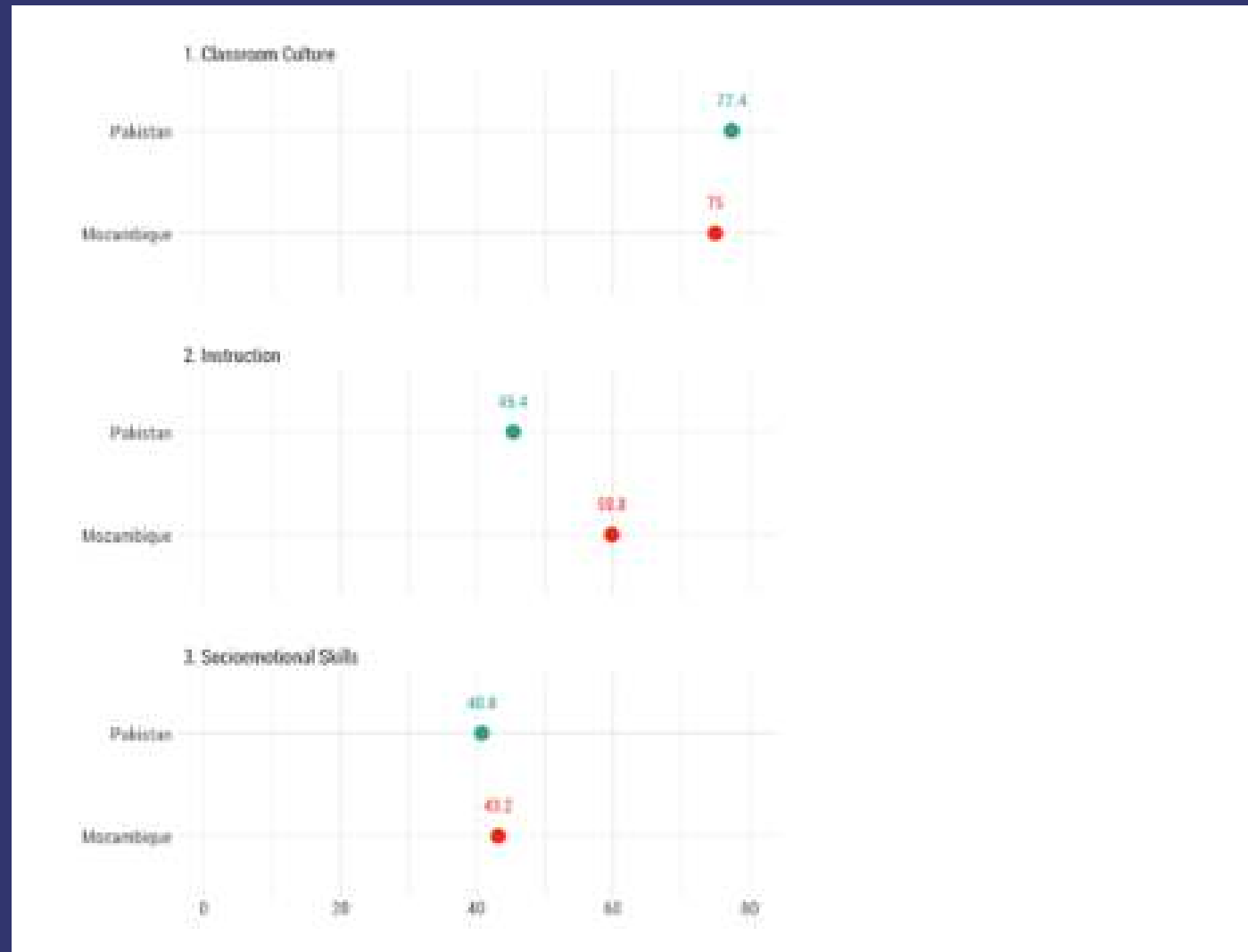*Schools 2030 Global Evidence Symposium*

High quality ECCE leads to better child outcomes

What gets measured gets done❓

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Evidence from traditional classroom observation measures is not always digestible for teachers

	1	2	3	4	5
Classroom Culture					
1. Supportive Learning Environment	2.7	9.4	25.1	49.3	13.5
2. Positive Behavioral Expectations	4.8	19.2	34.7	31.5	9.9
3. Opportunities to Learn	2.2	4.0	13.7	19.9	60.3
Instruction					
4. Lesson Facilitation	6.5	20.9	30.3	34.2	8.1
5. Check for Understanding	7.6	19.8	33.1	28.1	11.4
6. Feedback	14.7	11.5	37.7	16.5	19.6
7. Critical Thinking	32.6	22.3	23.3	13.8	8.1
Socioemotional Skills					
8. Autonomy	25.9	22.6	26.6	15.3	9.5
9. Perseverance	37.0	29.1	18.7	11.7	3.5
10. Social and Collaborative Skills	67.5	13.0	11.4	5.2	2.9

Table 2. *Descriptive Statistics for Observational Indicators*

	N	M	SD
Global observations	227		
CLASS Emotional Climate		5.22	0.76
CLASS Instructional Climate		2.47	1.10
ECERS–R Teaching and Interactions		4.43	1.29
ECERS–R Provisions for Learning		3.79	0.96
Snapshot setting (proportion of time)	231		
Free choice/center activity		.35	.15
Routine activity		.20	.08
Whole group activity		.24	.12

Note: CLASS = Classroom Assessment Scoring System; ECERS–R = Early Childhood Environmental Rating Scale–Revised.

150
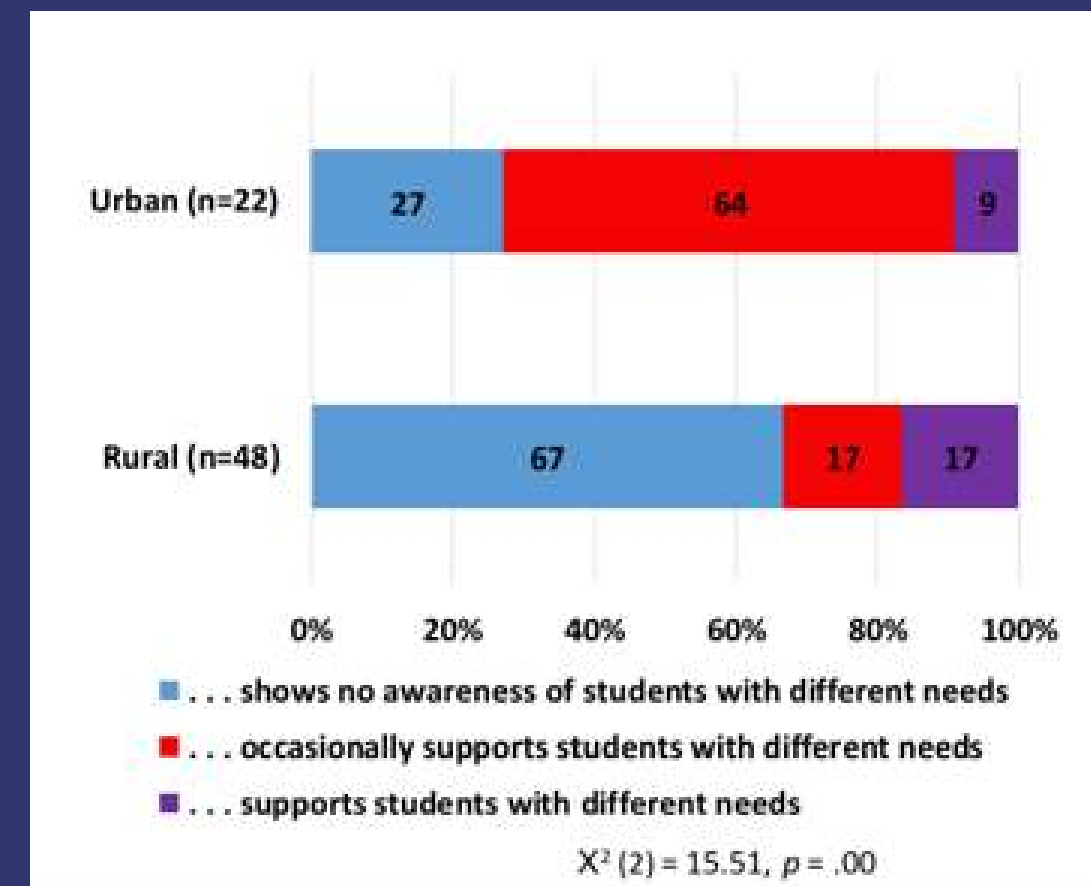
Quality may get measured.. But how is feedback shared with teachers?

How can we make data on ECE quality more accessible and useful to teachers?

How can we improve data feedback loops on early childhood quality for teachers?

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Brief Early Childhood Quality Inventory

BEQI looks at **evidence-based practices** and classroom characteristics in key areas

PLAY-BASED LEARNING

LEARNING THROUGH CONVERSATIONS

PROMOTING STRONG RELATIONSHIPS

SAFE & STIMULATING ENVIRONMENTS

BEQI Data Feedback Loops in Schools 2030

BEQI observation to gather objective data on interactions and practices

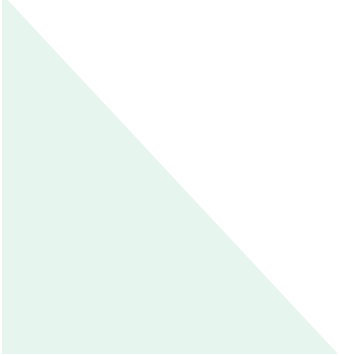Teacher gets **timely and strengths-based feedback**

Within HCD process, teachers work on **innovations to improve quality and learning**

Resources from BEQI toolkit **help teachers reflect, understand their strengths and areas to improve**

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Examples from Schools 2030 BEQI Toolkit:

Individual feedback to teachers

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Examples from Schools 2030 BEQI Toolkit:

Easy-to-understand data summaries and
classroom practice video library

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PRETEND PLAY

IN 5 OUT OF 10 CLASSROOMS, CHILDREN ENGAGE IN PRETEND PLAY

Pretend play supports: language, speech, and literacy development; social skills, friendships, and emotional well-being; and creativity. The use of props and other pretend play materials help achieve a higher level of pretend play to support the intended positive effects on child development.

WHAT CAN **READING A STORYBOOK** LOOK LIKE IN PRACTICE?

Storytelling

It was early in the morning and Splat the Cat was wide awake.

Examples from Schools 2030 BEQI Toolkit:

Teacher Self-Assessment and Reflection Activities Incorporated in HCD

List of Practices Self-Assessment

(similar to card sort; but all practices are listed on 1 page)

Ask teachers to review practices and mark:

(10 <u>most common practices</u> in your classroom

+ 10 practices that <u>do not</u> happen in your classroom, but you would like to happen

★ 10 practices you would like to see in a <u>high-quality classroom</u>

PLAY-BASED LEARNING	
Children have **some choice** in how to carry out activity	Children **engage with writing materials**
Children have free choice/**open play time**	Children **engage with art materials**
Children read or look at **books** on their own	Children **engage with pretend play materials**
Children engage in **pretend play**	Children engage with **blocks**
Children engage in **gross motor** activities	Children engage with **educational toys or math materials**
Children engage in **music activities**	At least 15 age-appropriate books are available
Children go **outside**	**Books are accessible** to children
Children **work alone/individually**	Teacher leads a **math activity**
Children **work in pairs/small groups**	Teacher leads a **literacy or language activity**
Do children **work one-on-one with teacher**	Teacher leads a **science activity**
Teacher **includes all children in activities**	

LEARNING THROUGH CONVERSATION
Children **enjoy answering questions** without fear of "getting it wrong"
Children **describe what they are doing** or thinking about
Children **seek clarification and support** when they are struggling to grasp activity
When children are playing, the **teacher adds information or build on what children are doing** (*"teachable moments"*)
Children have the opportunity to **ask questions** during activities and lessons
Teacher reads a **storybook**
Teacher **talk about feelings or emotions**
Teacher **asks open-ended questions**
Teacher engages in a **back-and-forth discussion**
Teacher connects a lesson to **real-life or every-day experiences**

PROMOTING STRONG RELATIONSHIPS
Peer interactions are mostly positive
Teacher **comforts children** when they are sad, injured, scared
Teacher **comforts children** when they are sad, injured, scared or distressed
Teacher **gets on children's level**
Teacher provides **individualized feedback**
Teacher **calls children by name**
Teacher is positive with children (*verbal praise, smiling, encouraging*)
Teacher does not **punish any child physically**
Teacher **redirects when children misbehave**, rather than punishing them
Teacher encourages children to resolve peer conflicts
Teacher does not have **negative verbal interactions with a child**
Teacher **treats** and attends to all children **equally**
Teacher integrates a respect for diversity
Teacher helps children make **ethical/socially acceptable choices**

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Learning environment tools and data play role in Schools 2030 HCD process

STEP 1:
ASSESS

STEP 2:
INNOVATE
Human-Centered Design

STEP 3:
SHOWCASE

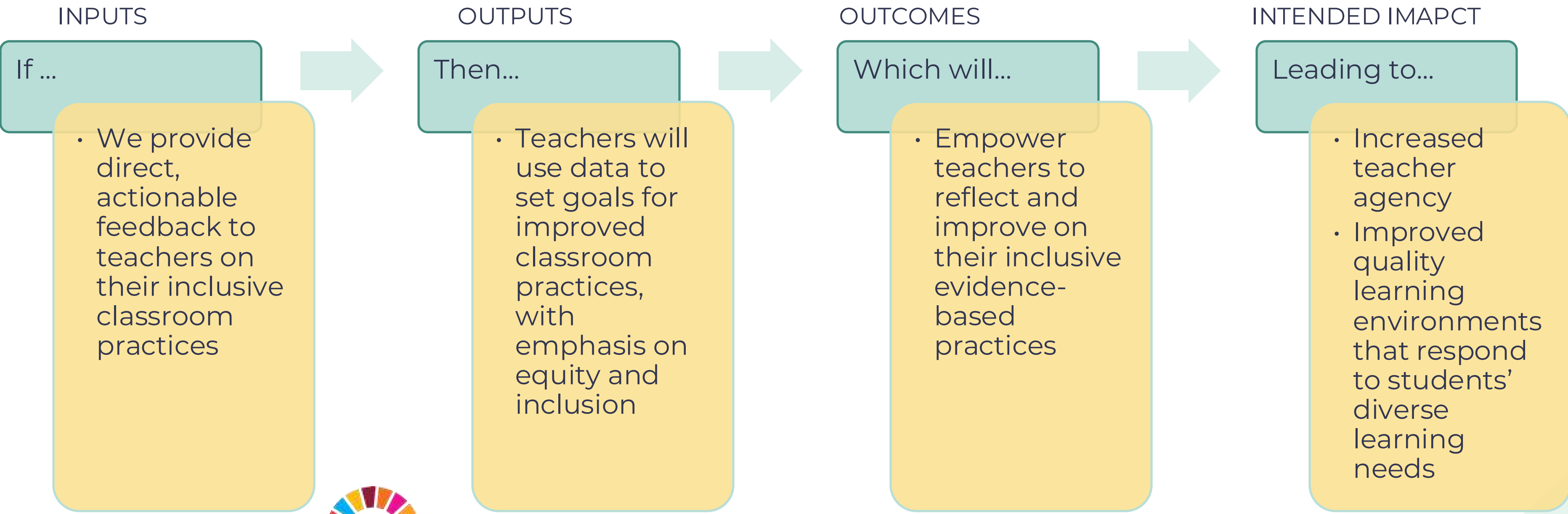*BEQI + VITAL Classroom Environment Tools Help Teachers Identify:*

What do classroom practices look like?

*Where do I want to improve?
How will I know my innovation is working?*

How did my innovation improve teaching practices?

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Our upcoming study in Kenya will generate evidence on how Schools 2030 HCD processes may improve ECE quality and teacher agency

Theory of Change:

INPUTS

If ...

- We provide direct, actionable feedback to teachers on their inclusive classroom practices

OUTPUTS

Then...

- Teachers will use data to set goals for improved classroom practices, with emphasis on equity and inclusion

OUTCOMES

Which will...

- Empower teachers to reflect and improve on their inclusive evidence-based practices

INTENDED IMAPCT

Leading to...

- Increased teacher agency
- Improved quality learning environments that respond to students' diverse learning needs

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Our Research Questions

1. To what extent are teachers adopting their practice based on BEQI data to inform their human-centered design process?

2. How might we aggregate classroom level data on the learning environment so it can be used by teachers to inform their HCD process?

3. Does participation in Schools 2030 activate more positive teacher self perception? If so, does this lead to improved practice?

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Reflection:
How might we strengthen data feedback loops to improve teacher practice?

Evidence on Classroom Practices

Teachers improve practices

Evidence shared with teachers
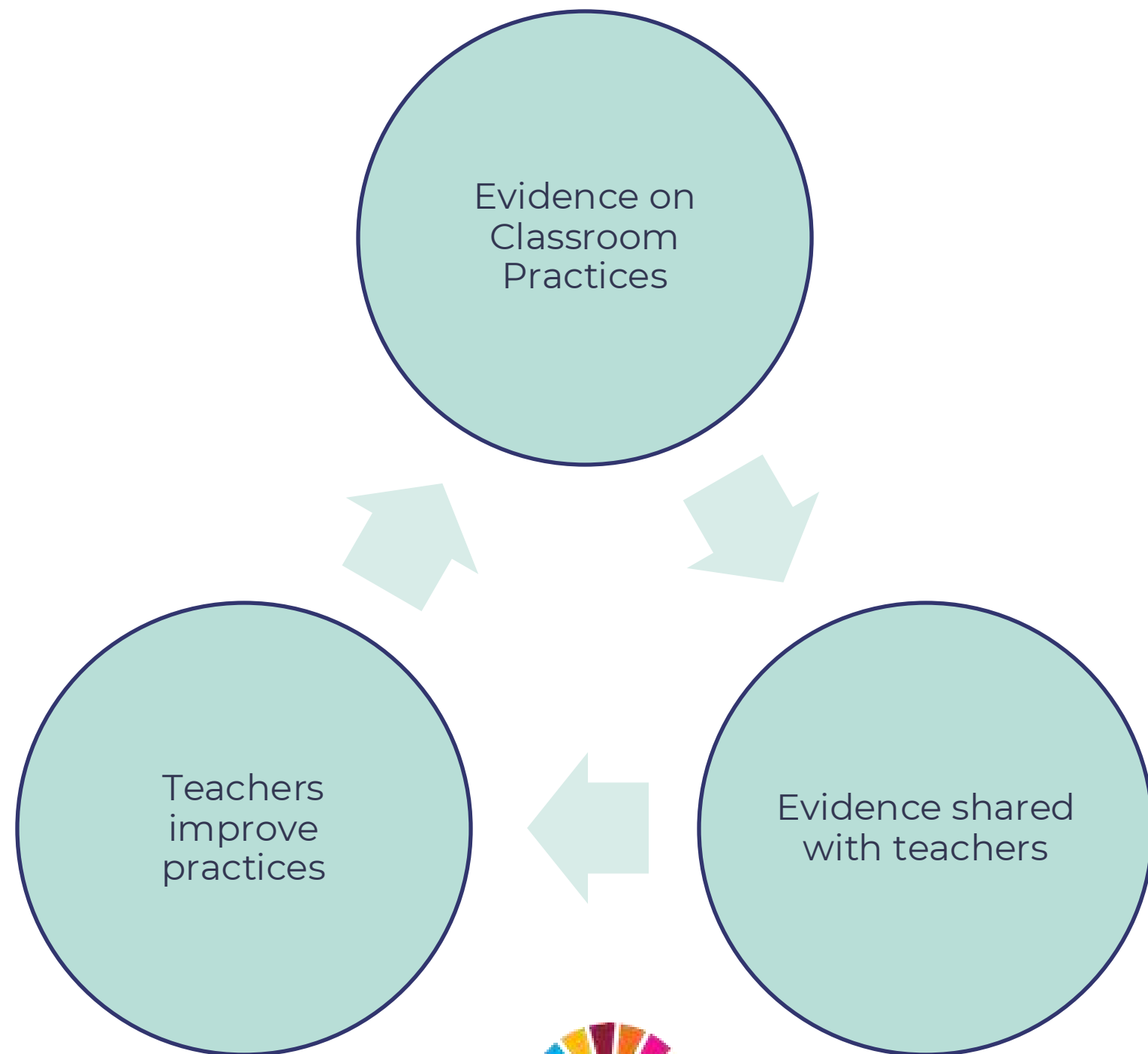
- What are key characteristics of data feedback to teachers that can lead to behavior change?

- What are the key characteristics of data feedback to teachers that lead to improved teacher agency?

- What are challenges to data feedback/evidence uptake with teachers?

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Thank you