To Nudge or not to Nudge? Improving implementation and practice to achieve learning for all

68th Annual CIES Conference

March 13, 2024

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Presentations

1. From access to learning to nudging: Why behavioral science might be the next new best thing in education improvement programs
2. More of this and less of that: How a behavioral science lens suggests alternative approaches to education program design & implementation
3. Peer-to-Peer Learning: The Power of Social Networks in Adoption of New Pedagogies
4. Supporting Caregivers of Young Children in South Africa to Engage in Play

Think, Pair, Share

Think of a time when you acted irrationally or against your own best interests.

Pair off with a neighbor.

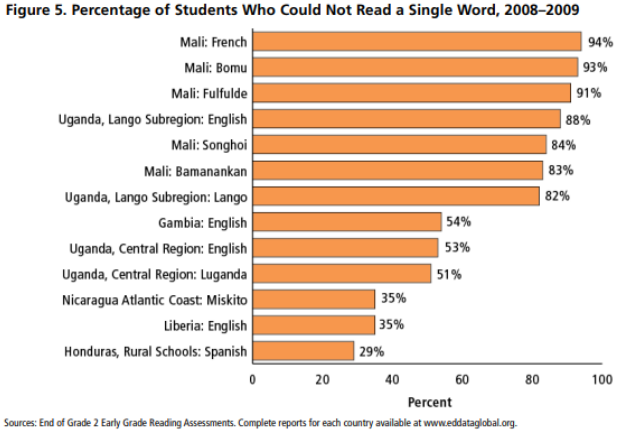
Share your reflection, including what might have led to a different outcome.

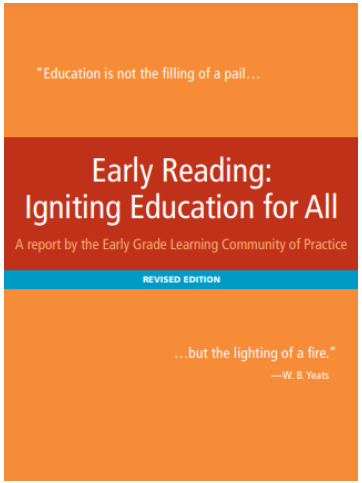
Outline

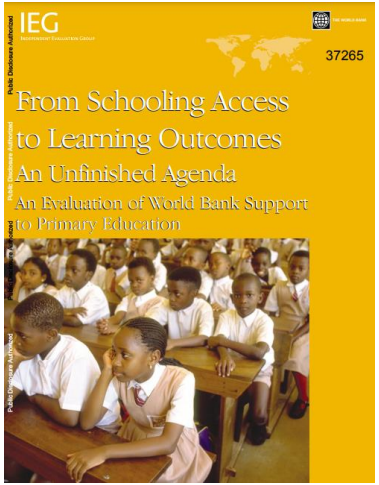
1. From access to learning
2. Global goals and indicators
3. If you build it, will they learn?
4. Results to date
5. What is the problem we are trying to solve?
6. When we only look at what works….
7. What is behavior science and how can it help?

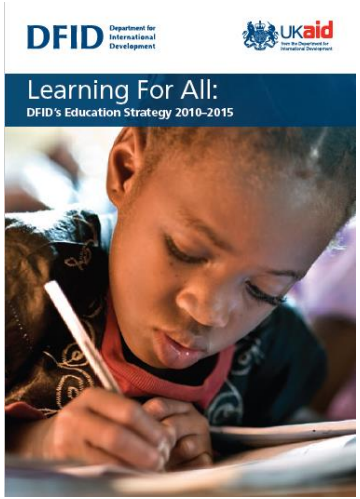
1. From access to learning

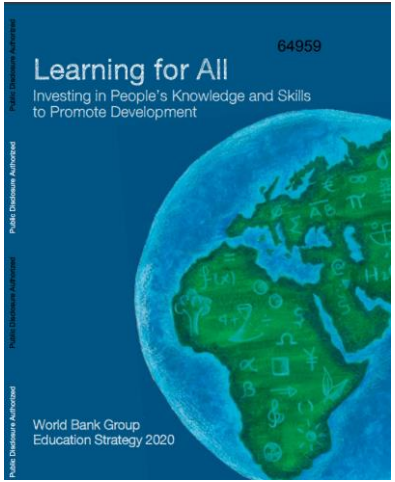
- Measurement showed widespread low reading and math levels
- Agencies responded with new strategy documents, promising to measure and improve learning











2. Global goals and indicators

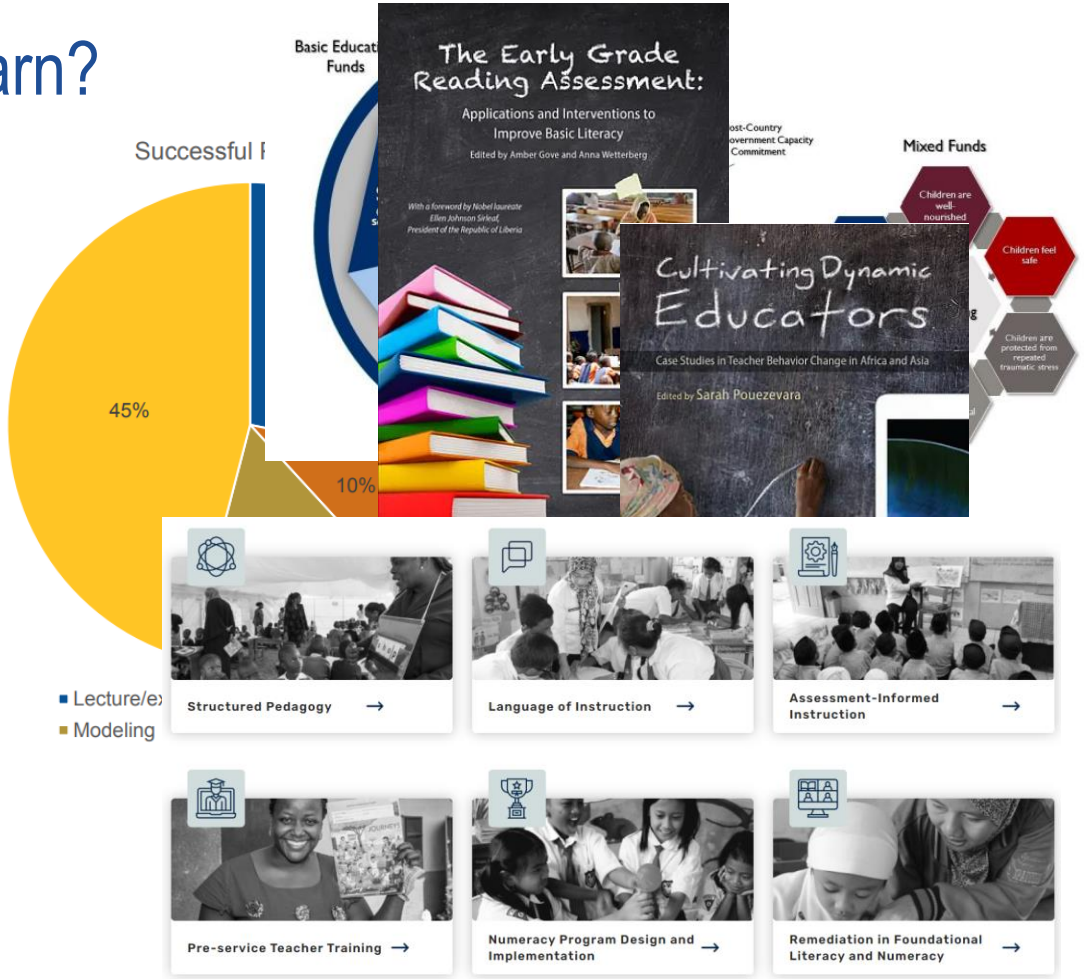
SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Indicator 4.1.1: Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex)

3. If you build it, will they learn?

Core Elements of Improving Early Grade Literacy Instruction:

- Teach
- Text
- Time
- Test
- Tongue



4. Results to date

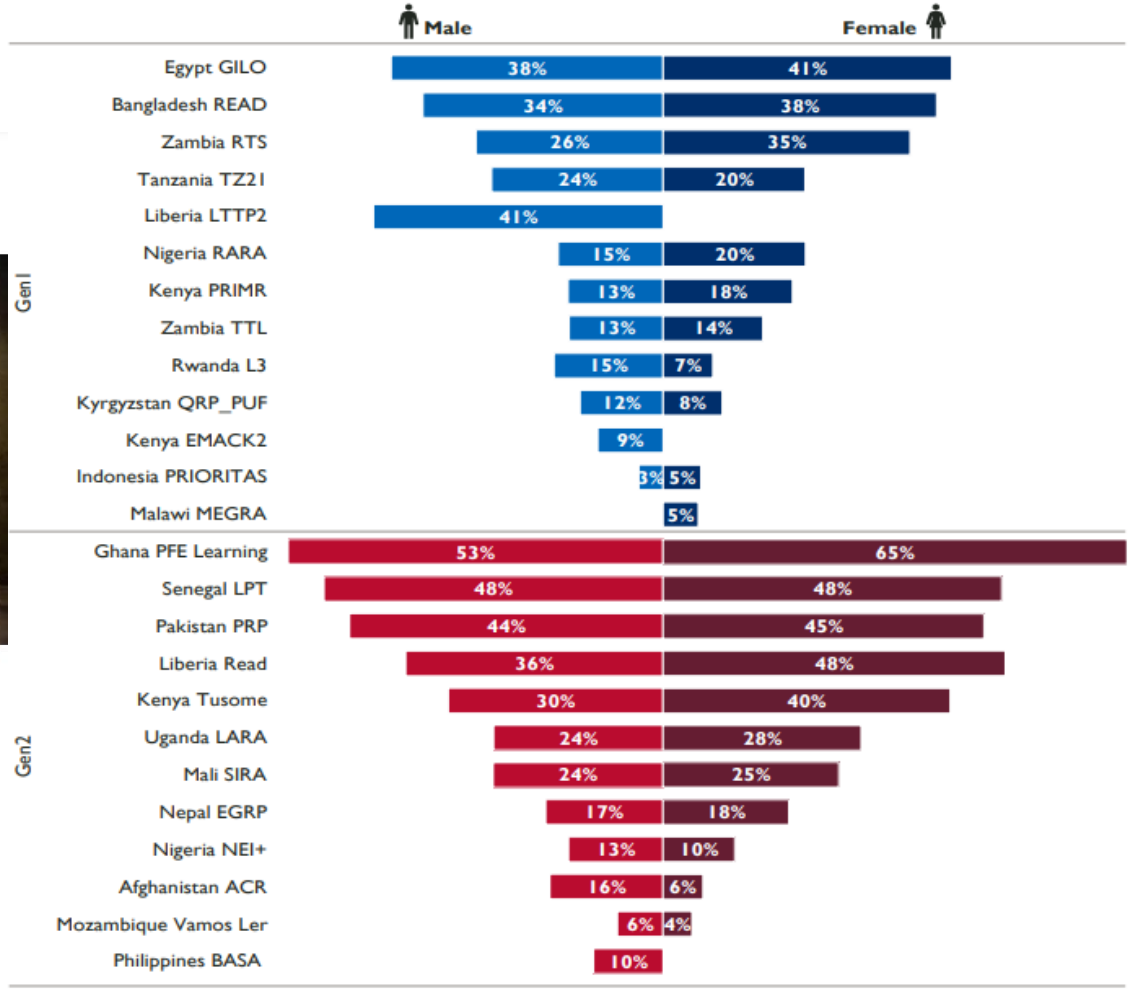
PHOTO | MORGANA WINGARD, USAID

TEN YEARS OF EARLY GRADE READING PROGRAMMING: A RETROSPECTIVE

(2011–2021)

This publication was produced for review by the United States Agency for International Development (USAID). It was prepared by a team of EnCompass LLC and its partner MSI, a Tetra Tech company, for the Data and Evidence for Education Programs (DEEP), Contract No. GS-10F-0245M. The views expressed herein do not necessarily reflect the views of USAID.

Exhibit 8. Percent of improved readers meeting statistical significance criterion by Generation 1 and 2 and by sex



4. Results to date

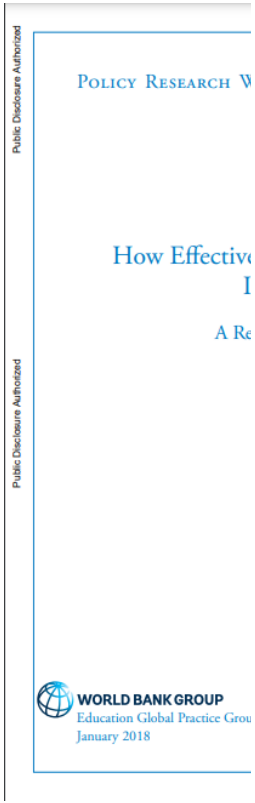
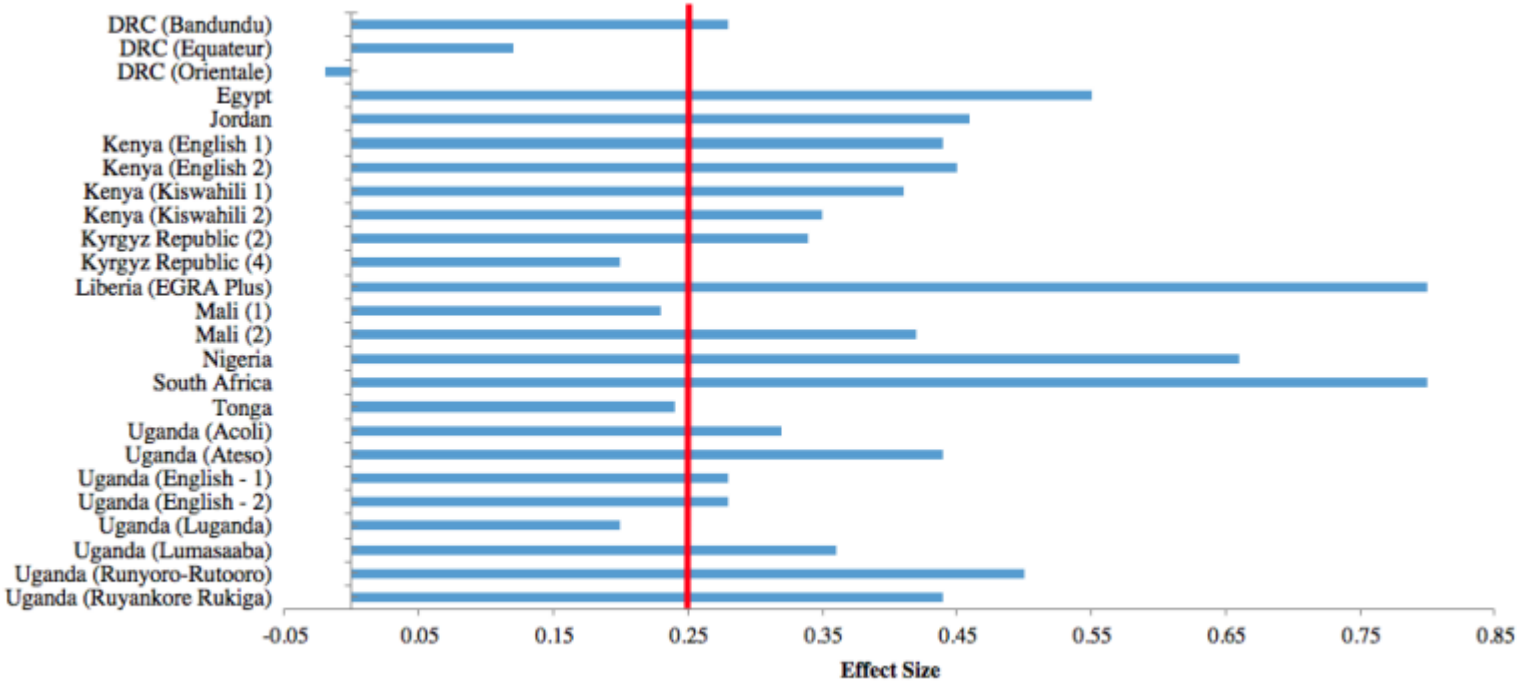


Figure 5: *ORF Effect Sizes Compared to the 0.25 SD Benchmark*



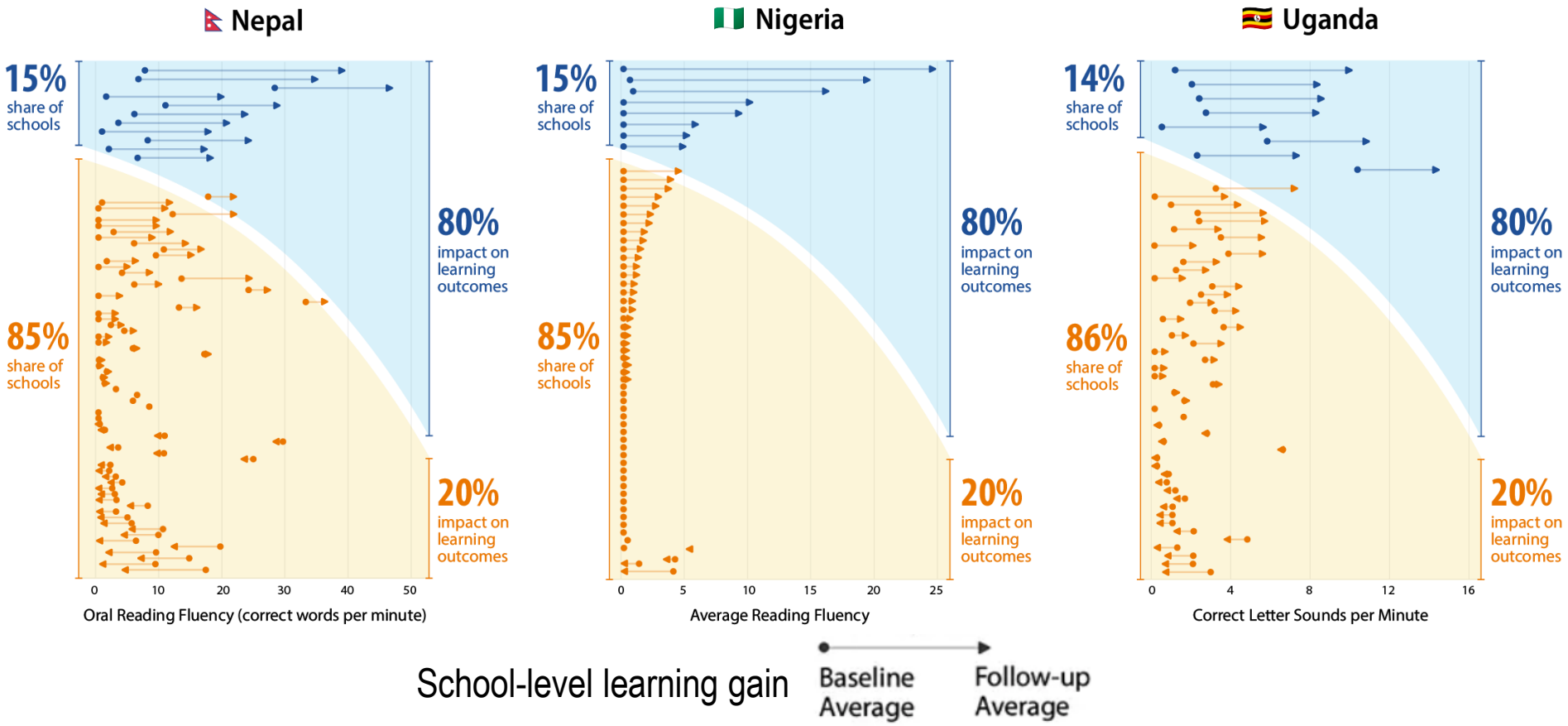
Grades and languages are in parentheses. All reported effect sizes are included.
The red line signifies the .25 SD benchmark, a substantively important effect

5. What is the problem we are trying to solve?

- A retrospective of Early Grade Reading programs put the average reading fluency gain at 3 correct words per minute (Sandefur et al., 2023)

- While impact in terms of effect sizes have often been impressive, impact in terms of percentage of pupils who are proficient readers has been disappointing (Stern and Piper 2019; USAID 2022)

6. When we only look at “what works”…



6. When we only look at “what works”…

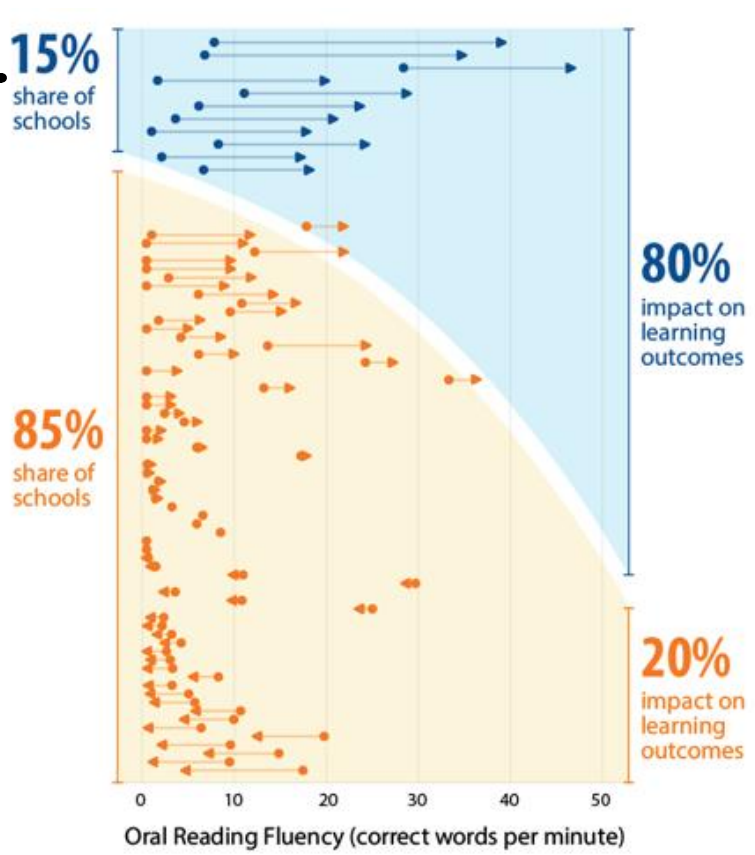
Positive Deviant Study, Nepal 2018

Associated with positive personality characteristics –

- communication behavior,
- rationality,
- empathy,
- ability to deal with abstraction
- etc.

(Rogers, 2003)

…we miss understanding how to support system-level change.

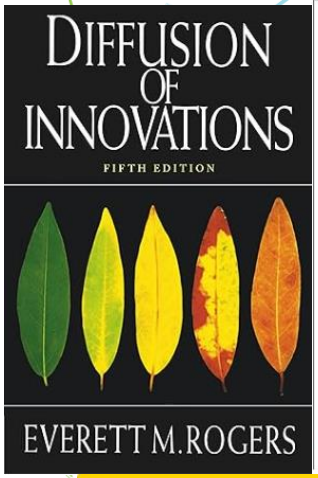


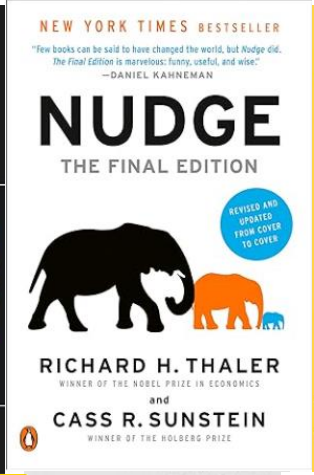
7. What is behavior science and how can it help?

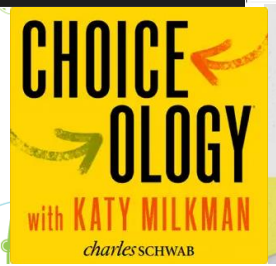
- Behavior science is the study of what people do and ***why they do it***.
- Research/Design:
  - Study barriers to positive change, rather than *what works*
  - Seek to understand why people do what they do
  - Design contextually-responsive approaches to support positive decision making
- Implementation
  - Build in testing/validation phase to understand what nudges/influences will lead to more positive behavior
  - Scale: Align data to understand how to adjust approach to improve take up

7. What is behavior science and how can it help?

- Intention vs actions
- Social norms and networks
- Power imbalance between designers and who we design with/for
- Hard to change our own habits
- System observes teachers as curriculum delivery agents– quality of approach not measured/valued
- Other people's children
- Social, economic, class, race, language influences







BEHAVIORAL GROOVES
EXPLORING WHY WE DO WHAT WE DO

INSIGHTS

Replicating Success: How Behavioral Science Can Help Education Systems Recover from Learning Loss


Amber Gove
Fellow, International Development

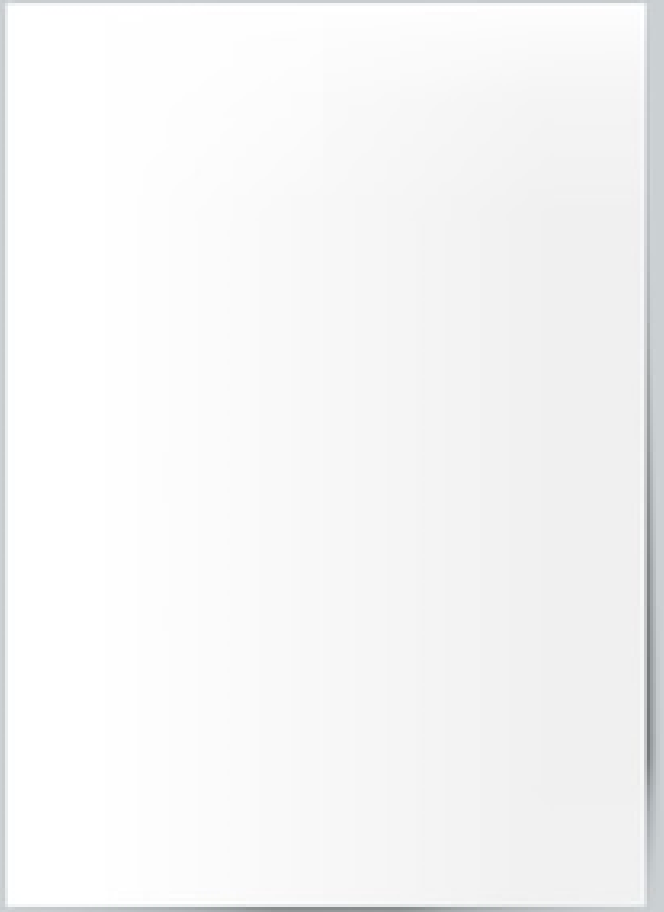

Simon King
Principal Researcher at School-to-School International

Discussion Prompt: Loss Aversion

When presented with a decision, humans tend to choose no change, i.e., *the default* – this is called **Loss Aversion** (Kahneman & Tversky, 1991)

If you started with a blank page and could design an education program that could be implemented effectively, what would it look like?

Would you build back what already exists?



Thank You!

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Learn more about RTI's work:

www.rti.org/idg_education

shared.rti.org

More of this and less of that

(CIES 2024 award – worst title)

How a behavioural science lens suggests alternative approaches to education program design & implementation

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Creative Associates International®

March 19, 2024

Presentation Aims

1. **Define** behavioural science
2. **Compare models of human behaviour** for behavioural science research and education research
3. **Apply a behavioural science research lens** to USAID education programming
4. Suggest **common approaches** for implementation aligned with education research **and** behavioural science research

Defining behavioural Science using Models of Human behaviour

Audience participation time

Wave your hands in the air if you have ever had a **colonoscopy** procedure

Behavioural Economics Example: Gut Instinct

The Colonoscopy Rationalization?

- The American Cancer Society recommends regular screening for colorectal cancer at age 45.
- On multiple occasions, my wife also recommended I start regular screening
- Data was presented to me . . .
- March is Colorectal Cancer Awareness Month - **#DressInBlueDay** March 1st

The Decision

- One colleague's Outlook calendar detailed his appointments, including a colonoscopy
- This prompted me to get the procedure, without even questioning or informing my colleague

- **Was I Rational?** No
- **Did I make a good decision?** Yes

Behavioural Economics Example: Gut Instinct

Good example of Social Norm Theory

- "*Empirical Expectations: what we believe others do*
- *Normative Expectations: what we believe others think we should do."*

(Bicchieri and Noah 2017, p.6)

Behavioural Economics Model of Human behaviour

- Individuals often do not make rational (or optimal) decisions, even when they have the information to do so
- Human behaviour is fundamentally irrational, yet predicable (Ariely 2009, Kahneman 2009, Thaler & Sunstein 2008)
- The solution to achieving good decision-making is **NOT** to try to persuade the masses to be rational
- Rather design programs that account for researched human behaviour

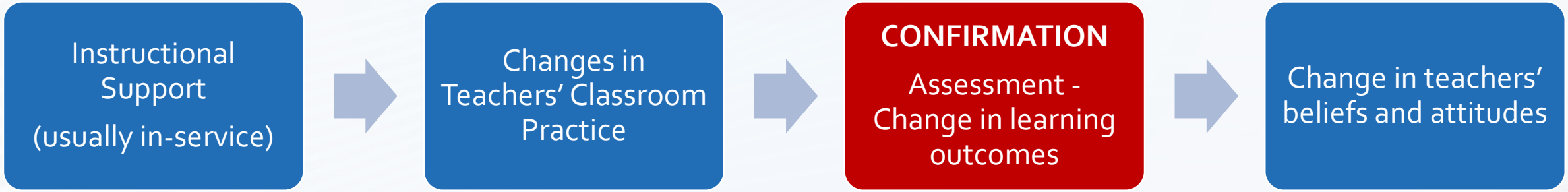
Commonly Used Models of Human behaviour

When an education program is designed, what do we assume our model of teacher behaviour to be?

1. Standard economics model of human behaviour –

A rational person who makes optimal decisions for his/her self-interest.

2. Education Research (Guskey 2002) – used for many program designs



Both models assume that humans think and act unfailingly well.

Research Frameworks

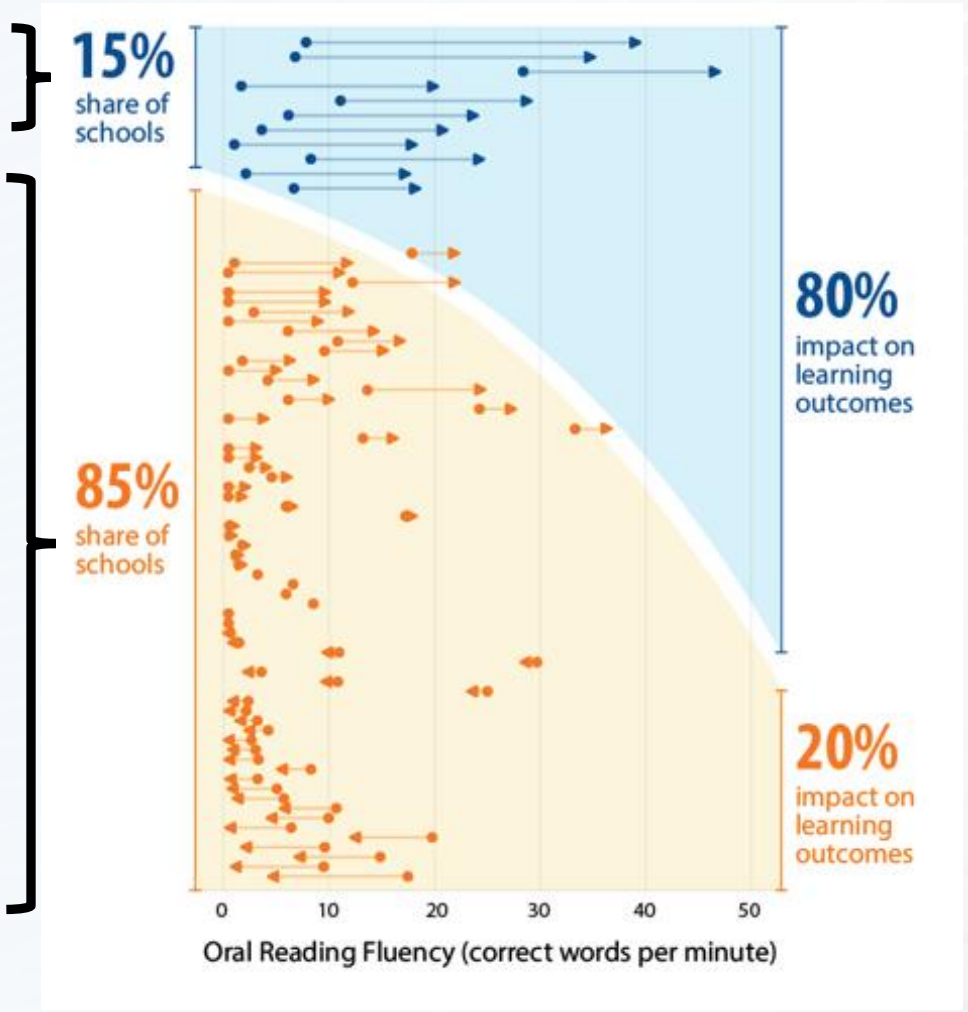
Research Frameworks

Most education research looks here

"What Works" - Positive deviance, USAID Success Stories, multivariate regression, explanatory mixed-methods, etc.

Most behavioural science research looks here

Understand and diminish the behavioural barriers to positive decision-making (Kahneman, 2011)



Apply behavioural science framework to program research

Data source:

- Tanzania (2022) – a qualitative study of 18 teachers in low-performing schools (with thanks to RTI)
- Nigeria (2023) –quantitative data linked to the impact evaluation baseline in Adamawa State, part of **Nigeria LEARN program**, implemented by Creative Associates International

Findings I - Positive systems support

- **Resistance is not a big issue**
  - Teachers are implementing the program
  - Adopting curricula and content
  - Teachers believe the new program improves their teaching
- **Systems support**
  - the frequency of teachers reporting being observed is high
- **Assessment**
  - Pupils are being assessed
- **Teacher Delivery** of phonics program is mostly adequate

Learning outcomes (Nigeria)

The States that implemented local language phonics are struggling to improve learning outcomes according to EGRAs conducted between 2013 and 2022

(note, not a perfect like for like)

Oral reading fluency – Sokoto State
2013 – zero scores 94%, average 2.1 cwpm
2023 – zero scores 87%, average 2.3 cwpm

Oral reading fluency – Bauchi State
2013 – zero scores 95%, average 0.9 cwpm
2022 – zero scores 83%, average 2.3 cwpm

Findings – assessment and learning (Nigeria LEARN)

Lots of teachers are Assessing their students

- 57% observed their pupils during class
- 45% checked exercise books
- 27% conducted a classroom literacy assessment every few weeks
- 57% conducted a termly assessment to rank their pupils

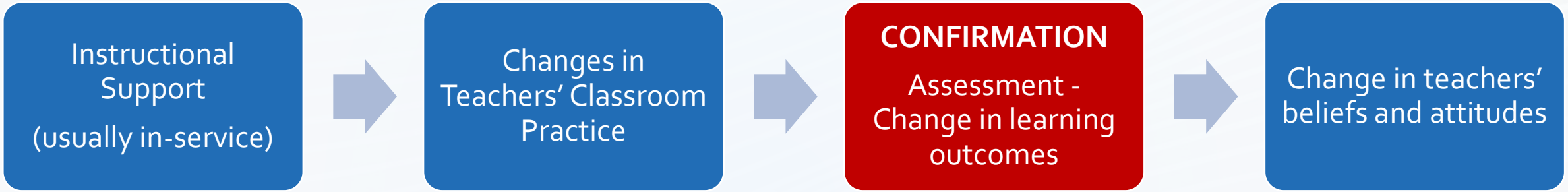
When asked: "How many pupils in your P3 class can read and comprehend well in Hausa?"

- 65% of head teachers said at least half the pupils
- 62% of teachers said at least half the pupils
- The rest of the participants said less than half (but not none)

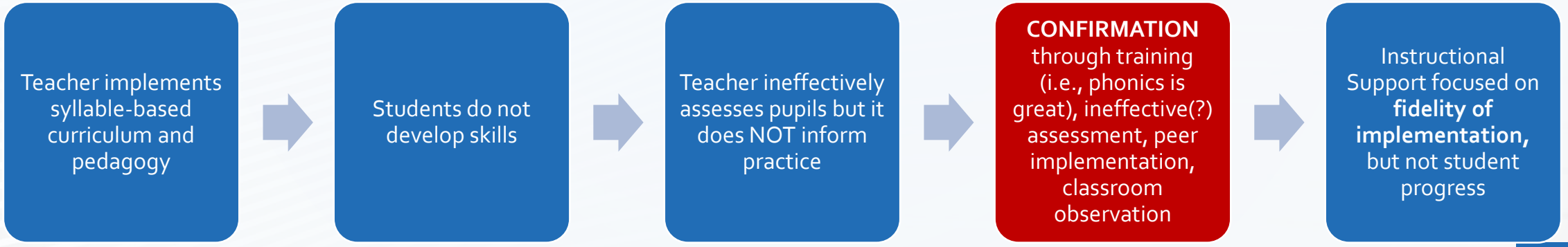
* No pupils also an option

Model of Teacher Change

- Guskey (2002)



- This is what occurred in Adamawa



Behavioural Science Theories Identified

- **Confirmation** of "effective" practice **(Rogers 2003)** through sources other than assessment
- **Heuristic Short-cut (Kahneman 2009) –** teachers can implement phonics-based instruction, but other classroom instructional practices stay the same
- **Default behaviour** - Focus is on delivery of curriculum, but not student learning

How can we design programs that build capacity and encourage beneficial decision-making?

Where do education research and behavioural science research disagree?

Implementation design:

- **Simple persuasion** - e.g., "*just try it*"
- **Trust your gut** - "*Delay your intuition*" (Kahneman, 2009)
- **Systems strengthening** –presumes the system is designed well (Heath & Heath, 2011)
- **Social Behaviour Change Communications (SBCC)** – often added as a design component, but implementation components are still not designed with consideration of actual human behaviour
- **Accountability systems** – okay for compliance, not so good for quality

Untested Recommendation: program design to support positive decision-making

- **Phonics anyone?**
- Teacher-led delivery
- Familiar change

- Student-centered practice
- Less familiar
- Most poorly done activity

Untested Recommendation: program design to support positive decision-making

- Focus on the weakest component
- Lower mental lift at the start of class

Where do education research and behavioural science research agree?

Education Research

"*The problem is that no nation has improved by focusing on individual teachers as the driver*" (Fullan, 2015, p.43)

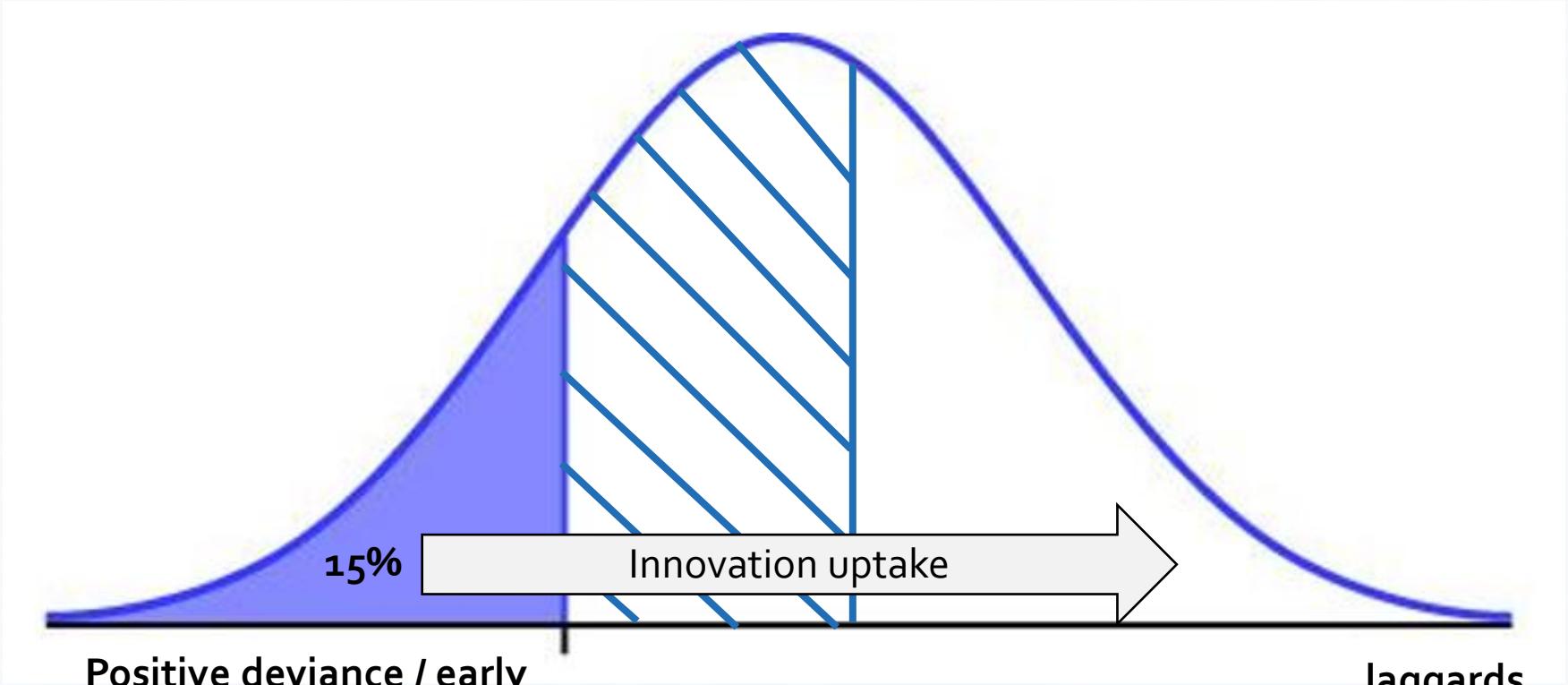
"*No amount of external accountability will be effective in the absence of internal accountability."* (Elmore 2002)

peer-to-peer

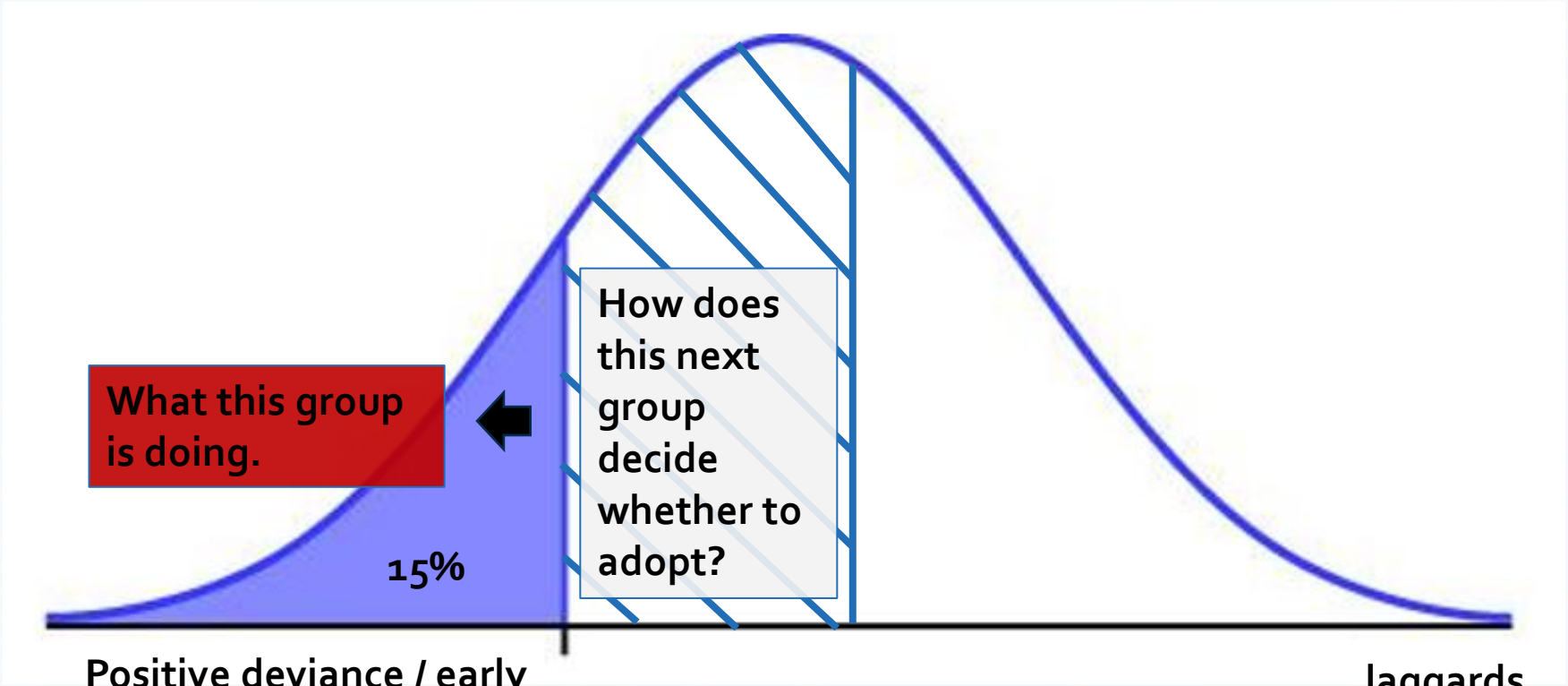
Diffusion of Innovations Theory

- “An innovation is an idea, practice, or object that is perceived as new by an individual”
  (Rogers, 2003, p.13)

- The process in which an innovation is communicated through certain channels over time among the members of a social system.
  (Rogers, 2003)

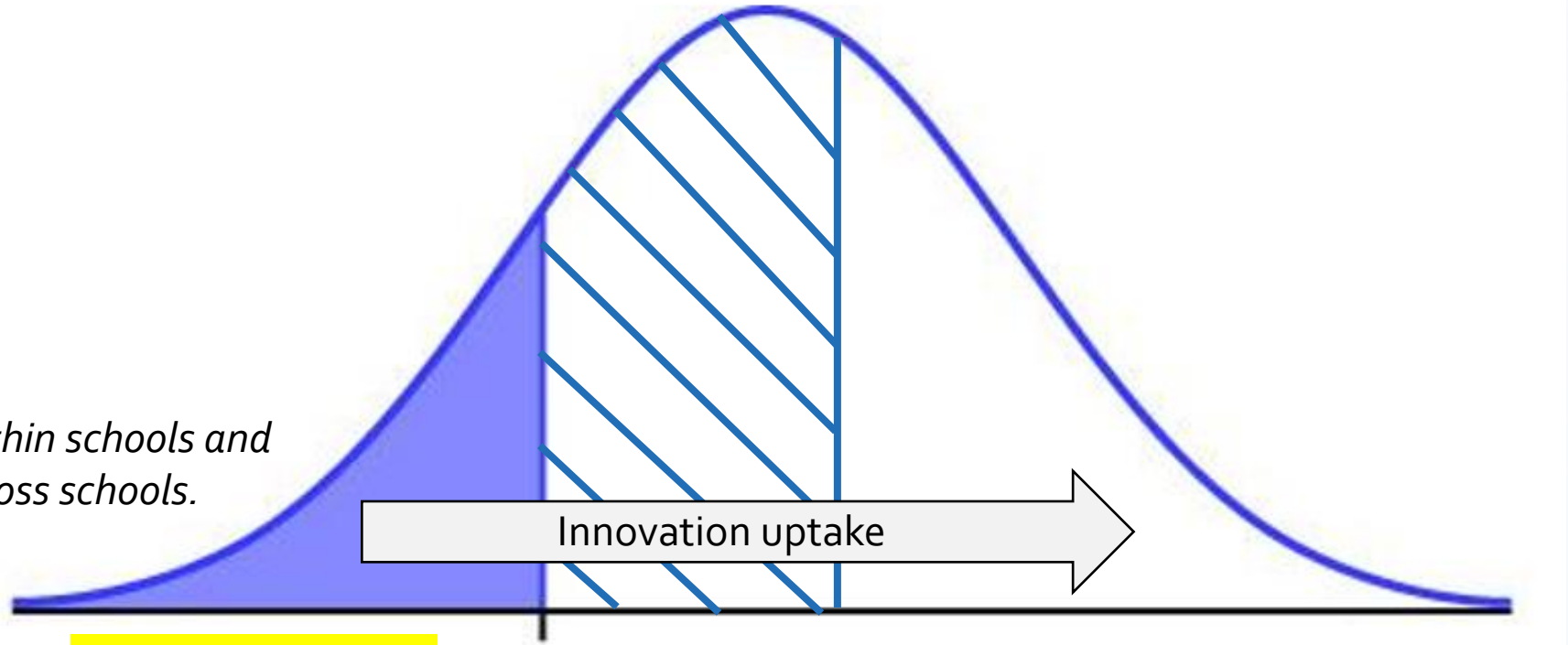

15%
Innovation uptake
Positive deviance / early implementor teachers
laggards

(Rogers, 2003)


What this group is doing.
How does this next group decide whether to adopt?
15%
Positive deviance / early implementor teachers
laggards

Change agents –facilitate learning
District and Ward external coaches and school administrators.

Within schools and across schools.



Opinion leadership (peer group)

Messy and Inconvenient

" . . . the holy grail of change is to know under what conditions hordes of people become motivated to change (because we are talking about whole system reform).

The answer is not as straightforward as we would like."

(Fullan, 2015, p.41)

Thank you!

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Creative Associates International®

March 19, 2024

Creative Associates International®
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Peer-to-Peer Learning: The Power of Social Networks in Adoption of New Pedagogies

CIES 2024

March 13, 2024

Elizabeth Marsden, Project Associate, RTI International
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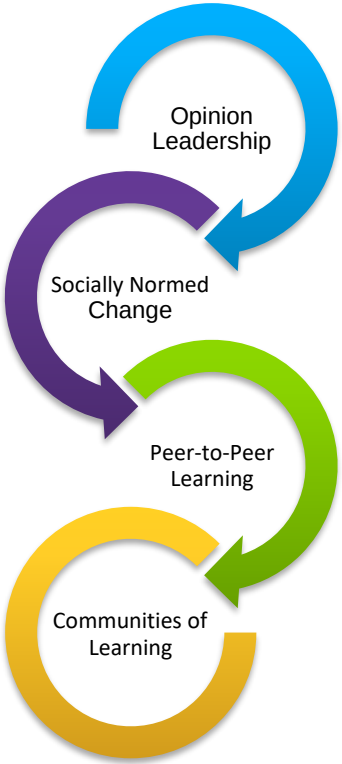
Diffusion of Pedagogy Now

What makes change sustainable?



Research Questions

1. What are the **characteristics of teacher social networks** in rural primary schools in Tanzania?

2. Who are the **potential influencers** in teacher social networks in rural primary schools in Tanzania, and how might these individuals have **influenced the adoption of pedagogical innovations?**

Methodology

- Sociometric instrument analyzed using social network analysis to calculate quantitative measurements and generate teacher sociograms
- Key informant interviews with teachers to contextualize the SNA findings and gain better understanding of teacher interactions, the content of those interactions, and context
- Focus on teacher discussions of formative assessment as pedagogical strategy of interest

20 schools in 4 wards

110 educators

KII: 14 teachers & headteachers

Examining Relationships

Within Schools:

- Frequency of relationship
- Venue/method of contact
- Directionality of advice
- Topics discussed

Across Schools:

- Collaboration frequency
- Self-efficacy re: formative assessment
- Collective efficacy re: formative assessment
- CoL activities
- CoL satisfaction

Examining Culture of Sustainable Adoption

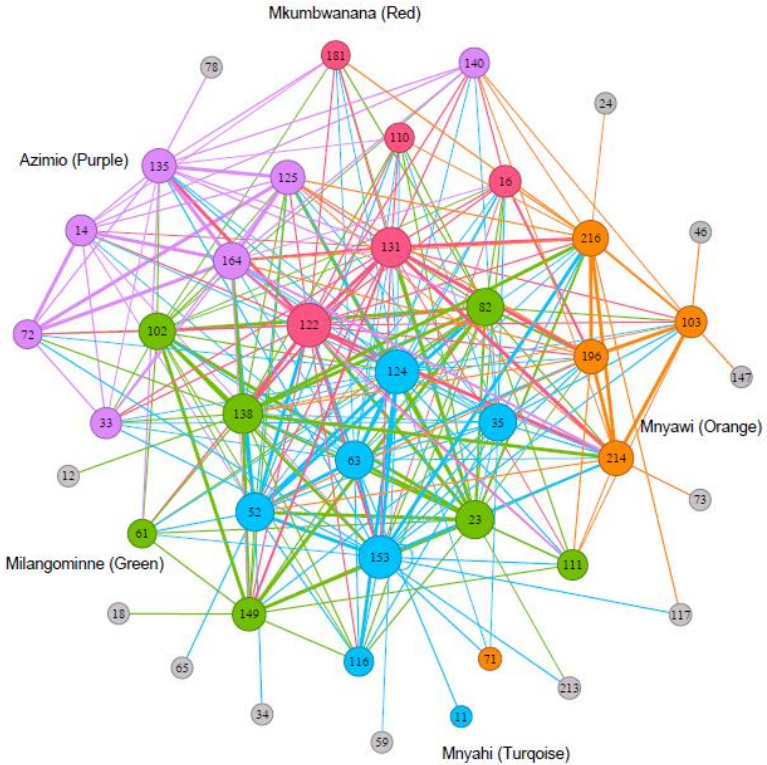
School Culture: informants' perceived expectations of their roles as teachers, perceptions of head teacher's leadership style

Information Exchange Culture: formal and informal opportunities in their schools and wards for peer exchanges and peer learning such as communities of learning and benefits therein

Pedagogy Adoption: attitudes and successes in adopting new pedagogies

Mbawala

Milangominne



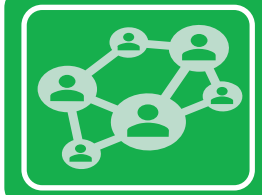
Characteristics of Teacher Social Networks

Characteristic	Mbawala	Milangominne
Size (# of Actors)	47	43
Density	0.14	0.30
Total Links in Network	151	267
Average Links per Respondent	6.43	12.42
Average % of Links Outside School	43%	74%
Average Clustering Coefficient	0.53	0.72

Opportunities that Promote Strong Teacher Professional Relationships

Formal within and across-school structures for **observation, peer learning and exchange**

Regularly scheduled **school-level CoLs** with opportunities for practicing new pedagogies



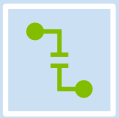
Regularly scheduled **ward-level CoLs** involving collaborative planning and follow-up

Collaborative planning involving exemplary teachers, head teachers, and other potential positive influencers

Characteristics of Influencers

Degree: number of links an actor (teacher) has with other actors

Closeness centrality: measures the *indirect* links each individual has, i.e. “friends of friends”



Betweenness centrality: individual’s ability to mediate between pairs of individuals who are not directly connected, i.e. a bridge

Positive Influencers vs. Influencers

Positive Influencers

- Mbawala & Milangominne both had **high percentages of head teachers and strong teachers** ranking in the top five performers of centrality measures (63% and 88%, respectively)
- Individuals interviewed in these wards spoke **excitedly or positively about new strategies**

Negative or Neutral Influencers

- Madimba & Nitekela both had **low percentages of head teachers and strong teachers** ranking in the top five performers of centrality measures (17% and 29%, respectively)
- Individuals interviewed in these wards **spoke negatively about new strategies or were hesitant to take up new strategies**

Conclusions and Recommendations for Future Research

Teachers in rural Mtwara Region have ***extensive social and professional networks*** both within and across schools in their wards

To leverage these networks, we need to understand ***the cohesion of teacher social networks*** and the ***characteristics of persons in positions of influence*** in these networks

Additional ***data on teacher implementation of new pedagogies and learning outcomes*** will allow for more nuanced analysis of the relative impact of teacher social networks

Thank You!

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www.rti.org/idg_education

Supporting Caregivers of Young Children in South Africa to Engage in Play

CIES 2024

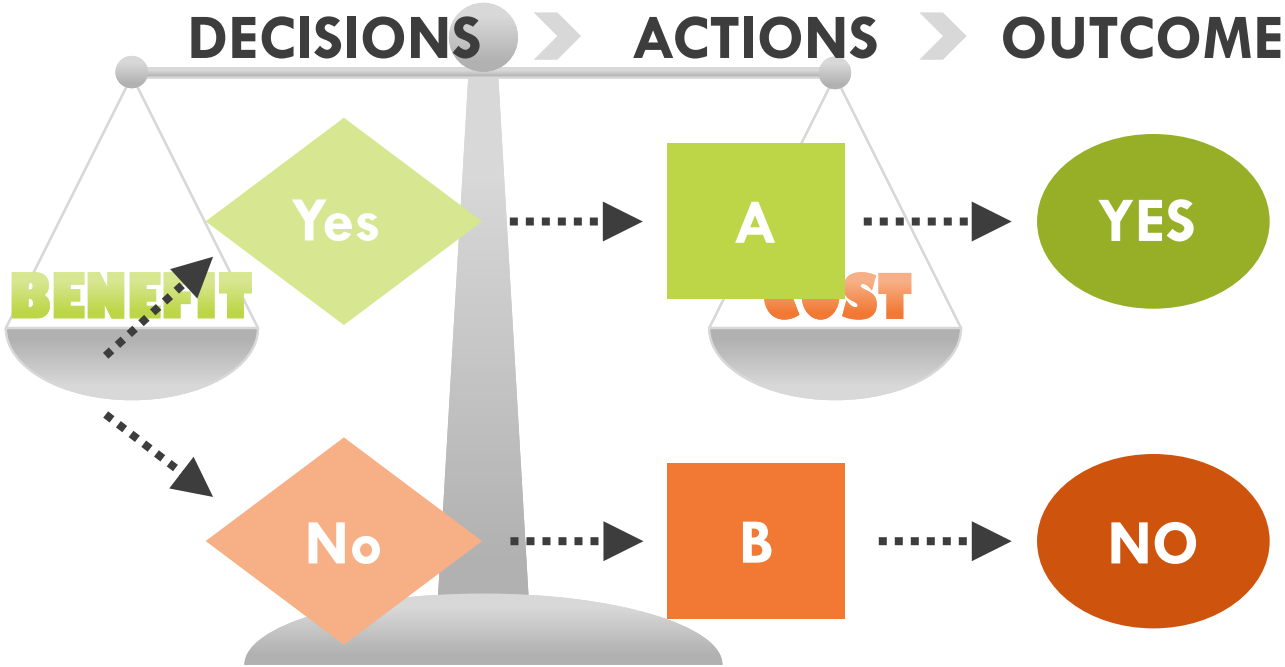
Carolina Better, March 2024

ideas42

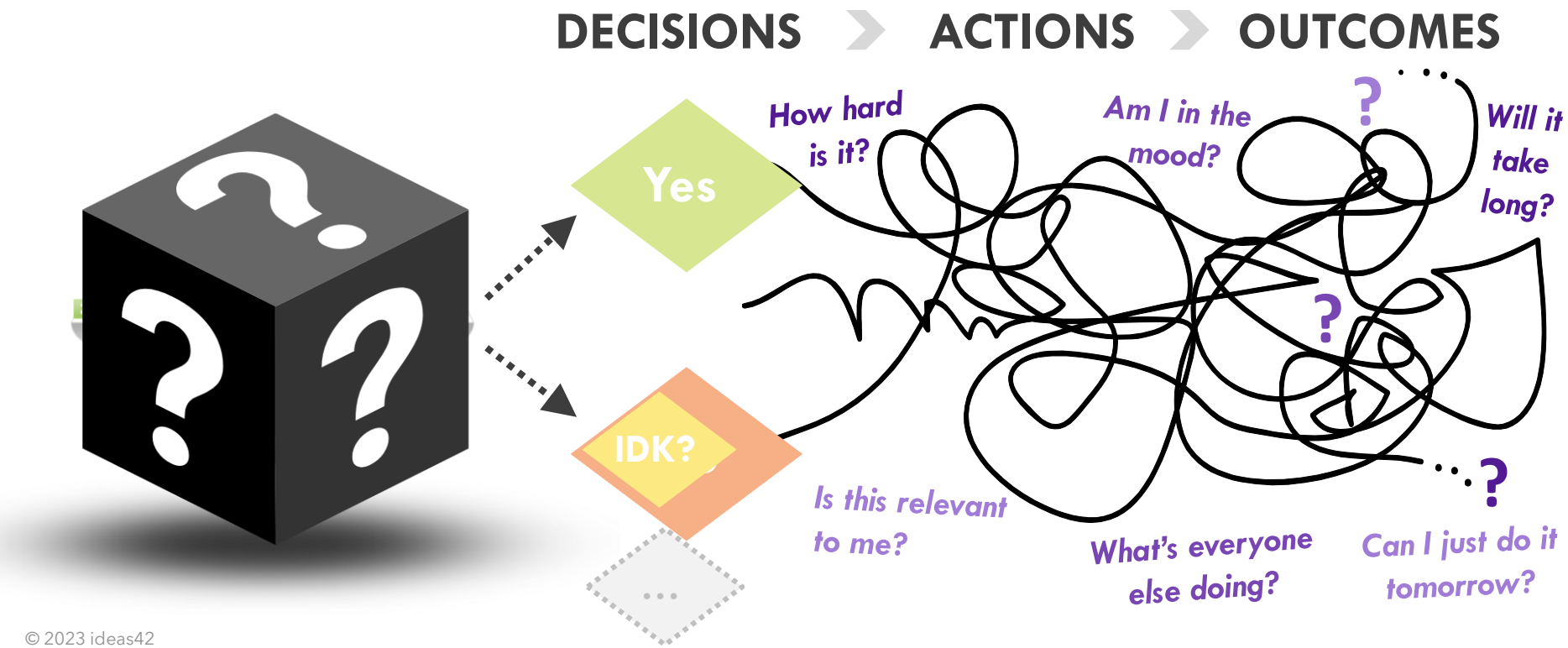
ideas 42

We apply insights from **behavioral science** to **design solutions** to some of the world's most **persistent social problems.**

The standard model of predicting behavior



The actual behavioral model



We are all subjects to behavioral biases

I'm going to exercise every morning while at CIES.

LAST WEEK

...Maybe I'll work out back in DC next week.

THIS WEEK

Our behavioral approach

Align on a behavior of focus

Study the context to identify key barriers

Create and refine solutions to address barriers

Test solutions and learn from the process

Adapt proven solutions for impact

Early learning & play with caregivers is critical, yet children in South Africa are falling behind

- **Most children (54%) who attend early learning** centers in South Africa are still **falling behind the standards** in motor development, social- emotional and executive functioning, and foundational numeracy/literacy.

- **Play-based activities and engagement with caregivers are critical** to children's brain development, cultivating social and emotional skills, and contributing to early learning.

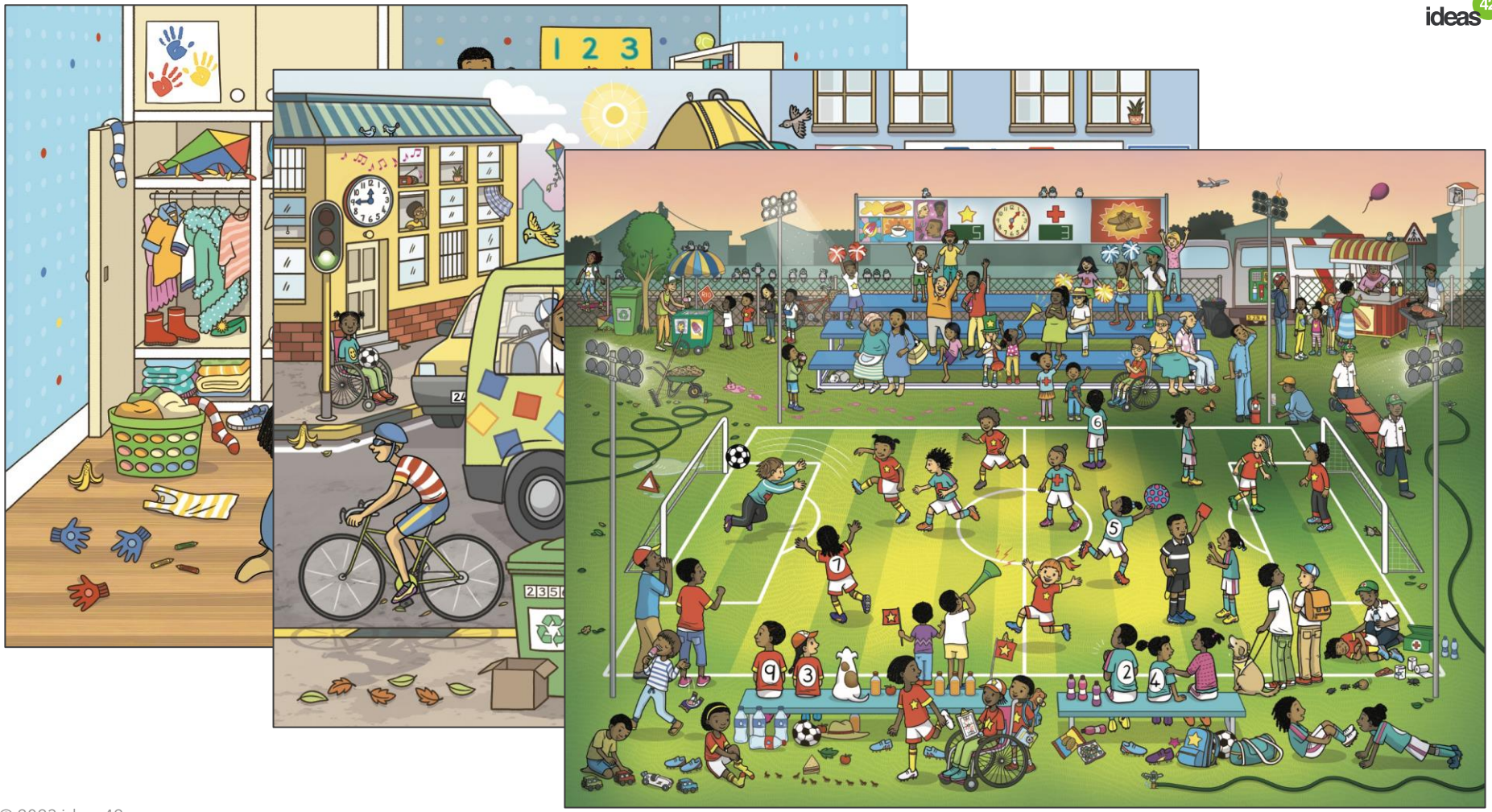
- Studies also consistently show **low rates of caregiver engagement** with children in the home. For example, in 2018 StatsSA recorded that **40% of children are never** read to nor draw with their caregivers.

Tredoux, C., Dawes, A., Mattes, F. *et al.* Are South African children on track for early learning?
Statistics South Africa. Education Series Volume VII: Children's education and well-being in South African, 2018

Finding Thabo is a game that builds connections for early learning

- A game featuring **localized pictures** and accompanying **chatbot** to support teachers and caregivers to engage in play.
- Currently implemented in ECD centers, with a **goal to reach caregivers** at home.
- Despite it's promise, **behavioral barriers** remain **preventing caregivers** from playing even when they are motivated.

Photo credit: https://www.findingthabo.com/



OUR OBJECTIVE

Support caregivers of children 4-5 years old to **play with Finding Thabo**, with the ultimate goal of improving development outcomes for children.

Photo credit: https://www.findingthabo.com

The behavioral approach in practice

DEFINE

Interviews with The Reach Trust team and **desk research** of available data

DIAGNOSE

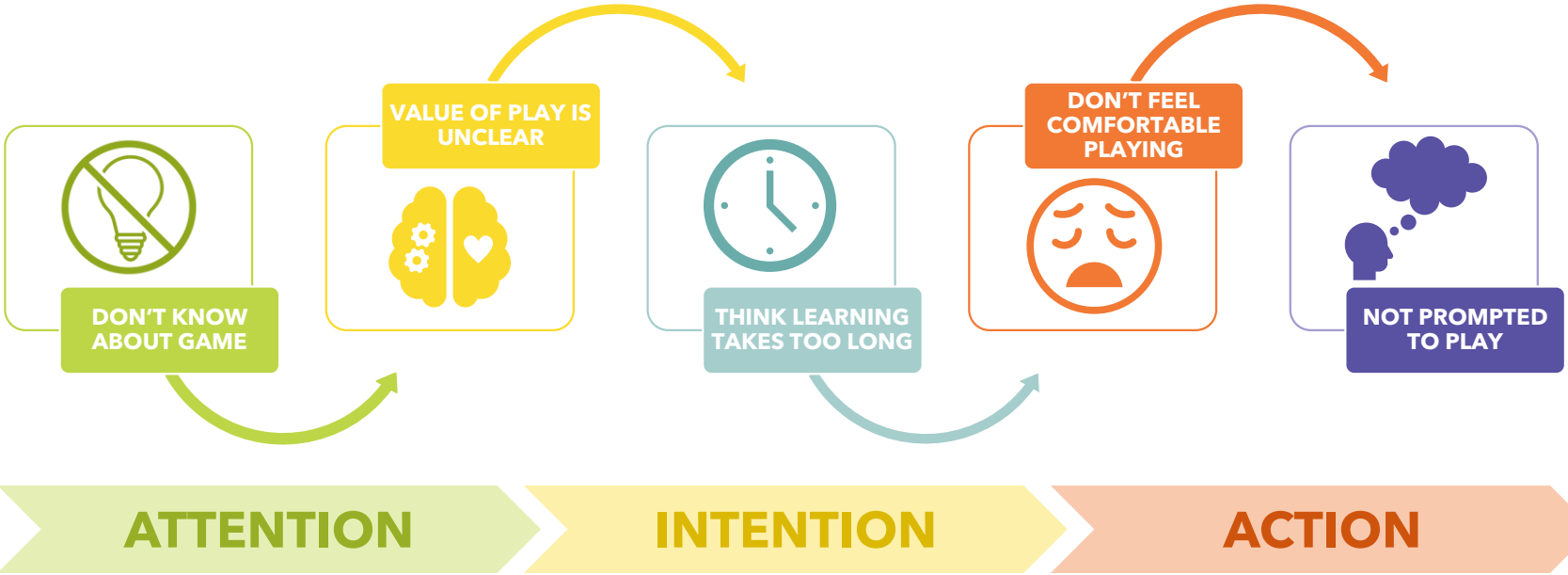
1:1 interviews with caregivers (n=15) to uncover barriers to play.

DESIGN

Co-design workshops with The Reach Trust to develop solution ideas.

User-testing prototypes with caregivers and teachers (n=36) to refine solutions.

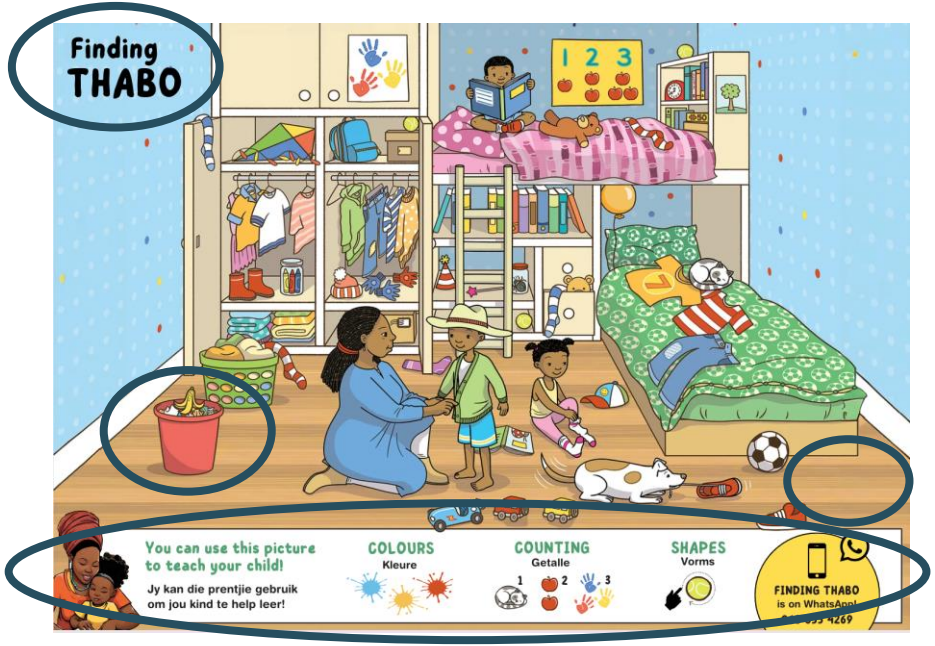
Solutions were developed to address behavioral barriers identified



Can you spot the differences?

ORIGINAL PICTURE CARD

REDESIGNED PICTURE CARD



Solution #1: Updated Picture Card with Integrated Guidelines

PROMPTING ACTION
When the picture is hung in a visible place, children prompt play more often.

FOCUSING ON LEARNING
Changes to the picture shift attention from tidiness / safety back to foundational learning.

BUILDING CONFIDENCE
Providing clear guidelines helps build caregivers' confidence in their ability to teach children.

MAKING IT EASY
Integrated guidelines ensure learning can happen without relying on digital tools.

Solution #2: Animated Explainer Video

Solution #2: Animated Explainer Video

FOSTERING TRUST
When teachers share "how-to" information with caregivers, it builds trust on both sides.

SHARING INFORMATION
Caregivers often have limited literacy. An easily sharable explainer video ensures comprehension.

CONNECTING PLAY TO LEARNING
Showing what constitutes "play" and how important it is for young children's development can help caregivers associate play with learning.

We are now running a randomized evaluation

- The study runs from Mar-May and includes **300 caregivers of children** in the Cape Town metro area.

- We are testing Finding Thabo compared to Finding Thabo + behavioral solutions. We are interested in **learning about the solutions' impact on**:
  - Caregiver behavior
  - Perceptions of play and learning
  - Caregiver confidence in their abilities to support learning
  - Caregiver and teacher relationship

Behavioral design can improve the effectiveness of ECD interventions

Children play an important role in **prompting caregivers to play** and intervention design should include them in this process.

Caregiver **confidence and perceptions of learning** impact their engagement in play. Interventions should build confidence and reshape existing perceptions.

Trust between teachers and caregivers is important. Interventions should consider how they can implement in a way that **facilitates trust-building**.

Ensuring interventions – especially when they are tech-based – are **accessible to all populations** is critical to supporting caregivers to use them.