Housekeeping

- To keep the technical process simple, we will not be using webcams for this session;

- Organisers will keep your microphones **"Muted"** while listening to a presenter to avoid background noise during the session;

- Please submit your questions and comments through the **Chat Box** which is visible in the GoToMeeting control panel. You can submit questions at any point during the webinar;

- Panelists/presenters will collect all questions submitted by you during the session;

- Please raise your hand by writing **"hand up"** in the chat box for questions and we will unmute you during the QnA.

- In case you did not get answer on your question during the live session, panelists will get back to you later via email;

- In case of technical problems, please write to **Precious** ace@uj.ac.za;

About The Africa Evidence Network

- Pan-African community

- **Vision**: end poverty & inequality

- **Mission**: evidence-informed decision-making in Africa

- **4 ways of working**
  - Informs e.g. newsletter
  - Connects e.g. Evidence 2020
  - Learns e.g. landscape maps
  - Advocates e.g. Africa Evidence Leadership Award

- Get in touch!
  @Africa_evidence
  ace@uj.ac.za
  www.africaevidencenetwork.org

Picture: Africa Evidence Network
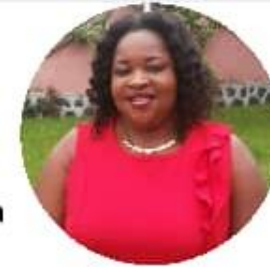
AFRICA EVIDENCE NETWORK

Speakers

Date:16 September 2020
Time:14:00 -15:15 (SAST)
where: online webinar using GoToWebinar

Facilitator,
Clotilda Andiensa

speakers

Patrick Okwen   **Melaine Nsaikila**   **Aweh Akofu**   **Rigobert Pambe**   **Andrew Tangang**

The #AfricaEvidenceWebinar series is a platform to engage and discuss the role of evidence to inform decision-making in Africa
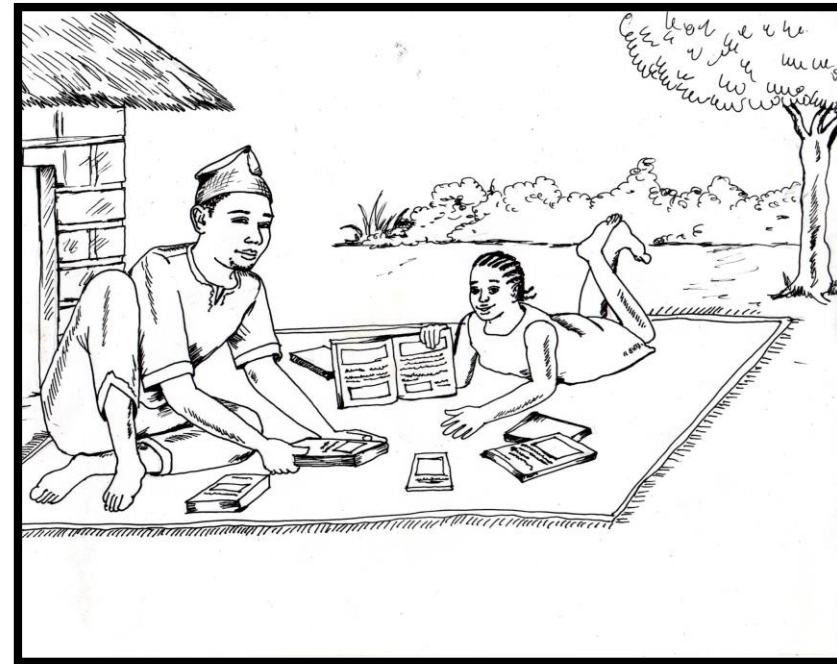
Experimenting and Learning in Education in Middle Africa

Patrick Okwen
Team Lead, eBASE Africa

Experimenting and Learning

- Two things that should happen together but usually don't …

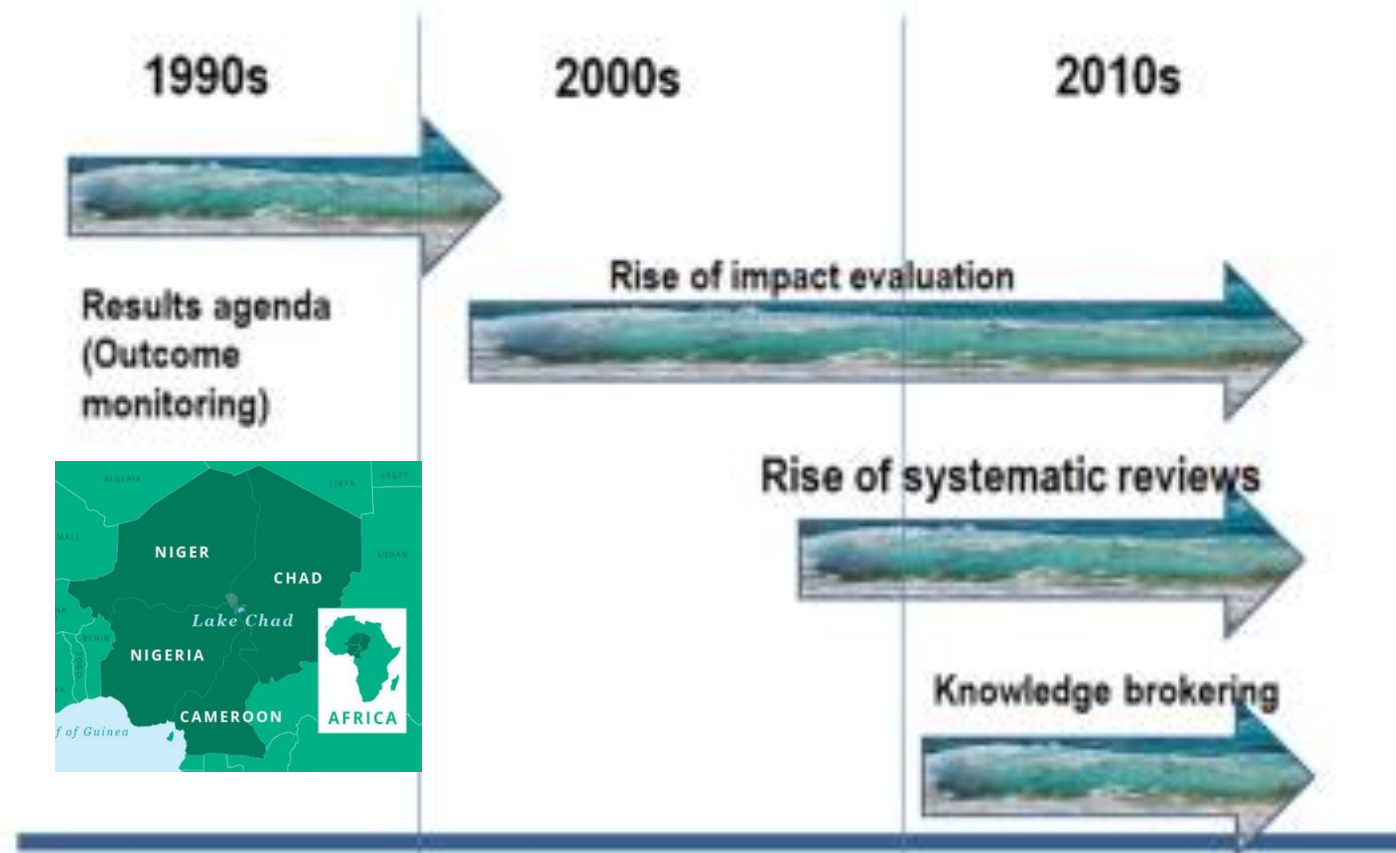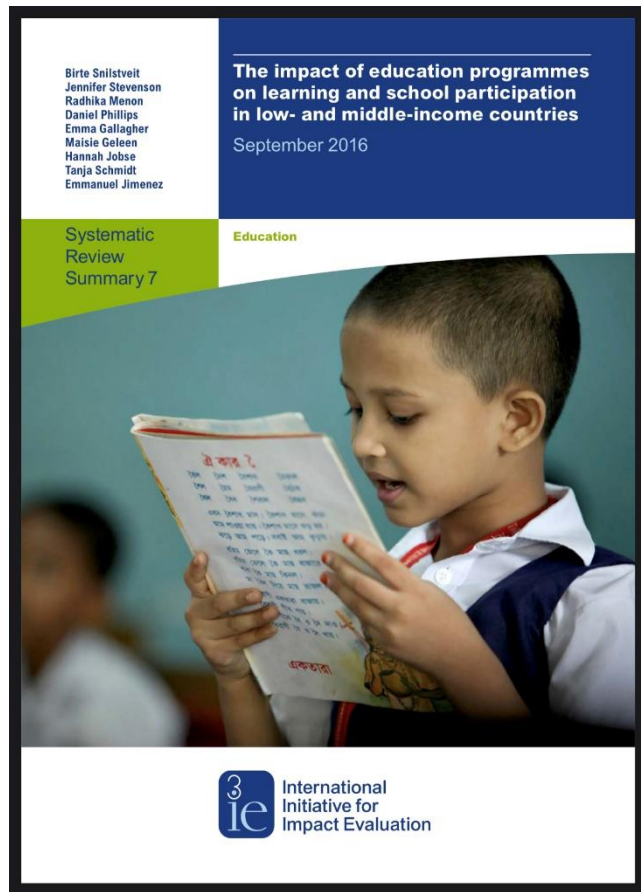# The Four Waves of Evidence Revolution

Fig. 1 Four waves of the evidence revolution

White 2019: Palgrave Communications.

… Yet there exists several meta-analysis

The impact of education programmes on learning and school participation in low- and middle-income countries

Birte Snilstveit
Jennifer Stevenson
Radhika Menon
Daniel Phillips
Emma Gallagher
Maisie Geleen
Hannah Jobse
Tanja Schmidt
Emmanuel Jimenez

September 2016

Systematic Review Summary 7

Education

International Initiative for Impact Evaluation

Identifying Effective Education Interventions in Sub-Saharan Africa:

A meta-analysis of rigorous impact evaluations

Katharine Conn

EDUCATION   LABOR MARKETS   GENDER   J-PAL AFRICA

Returns to Secondary Schooling in Ghana

Researchers: Esther Duflo, Michael Kremer, Pascaline Dupas

Impossible generalisations: meta-analyses of education interventions in international development

Edoardo Masset*

June 11, 2019

White 2019. Palgrave Communications.

Tip: No Reinvention but More Learning

Feeding from the Experimenting Society

- What did we do?
- What are more cost-effective ways of getting global content to local use?
- Why must we engage stakeholders?
- To PUSH or not to PUSH – That's the question!

Thank you

Dr Patrick Okwen
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The eBASE teaching and learning Toolkit

Rigobert H. Pambe

Outline

- Background
  - Attainment in middle Africa
  - Equity issues in education
  - Evidence in policy

- Objective

- Toward improving educational attainment in middle Africa
  - A triple jump approach
  - Qualitative study
  - Stakeholders engagement
  - Engaging the academic community
  - Engaging the government and CSOs

- How the toolkit works
  - Strands
  - Evidence, cost and impact

- Way forward

eBASE AFRICA

Attainment in middle Africa

- A multilingual and multicultural conflict-prone region

- Educational attainment in middle Africa is amongst the lowest in the world

- Less than 1/3 of adults have completed primary education in many sub-Saharan African Countries.

Picture: Source name.

Equity issues

- Attainment is even worse in rural communities and underserved groups

- Ever present gender disparities

- A widened attainment gap
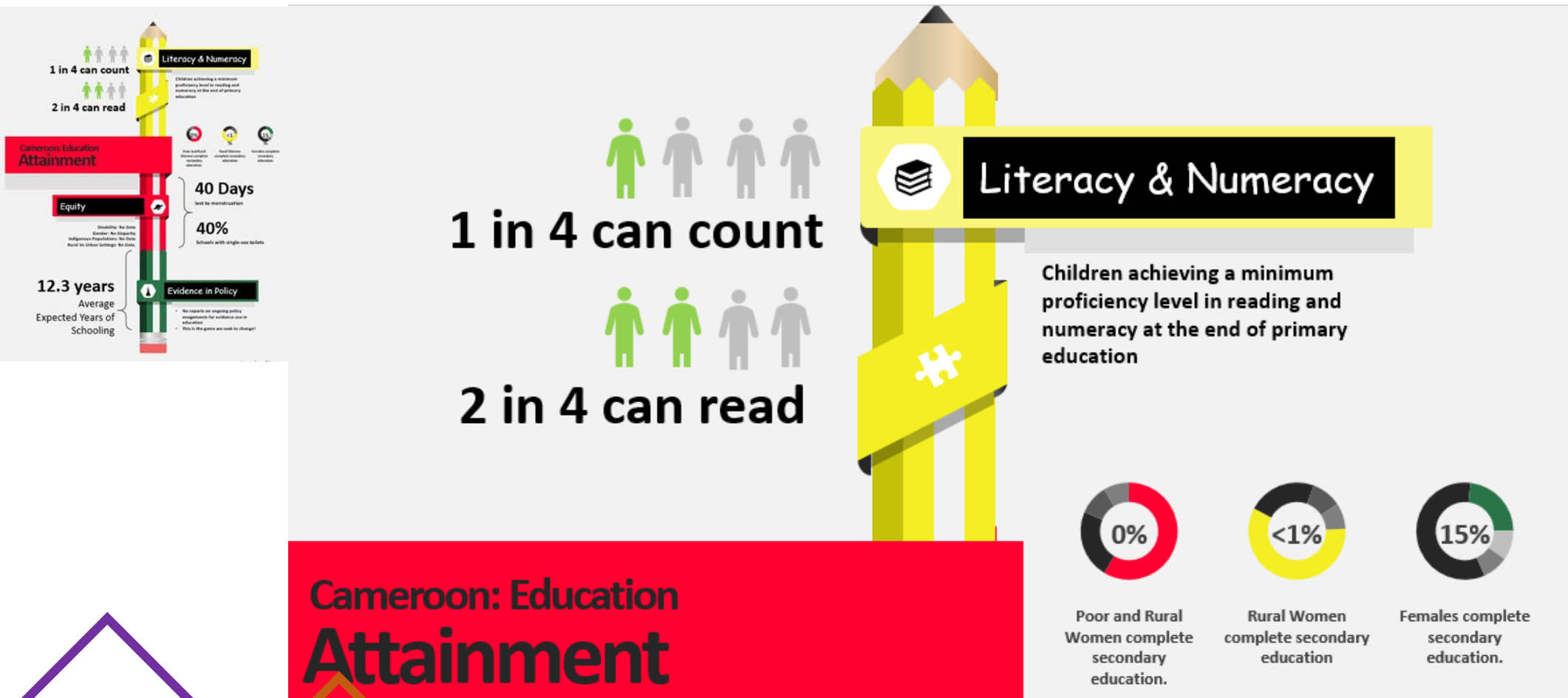
- #Allmeansall

- #leavingnoonebehind

eBASE AFRICA

Education Outcomes in Middle Africa

Literacy and Numeracy in Cameroon

Equity Consideration in Cameroon

Equity

40 Days
lost to menstruation

40%
Schools with single-sex toilets

Disability: No Data
Gender: No Disparity
Indigenous Populations: No Data
Rural Vs Urban Settings: No Data.

Evidence in Policy in Cameroon
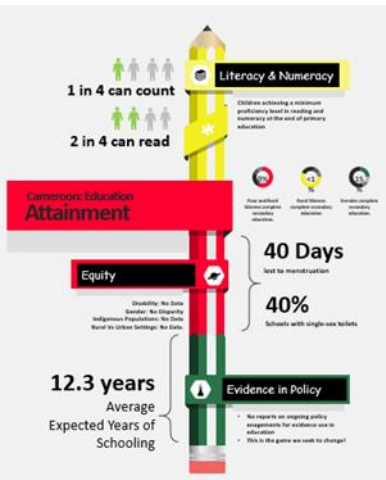
Evidence in Policy in Middle Africa
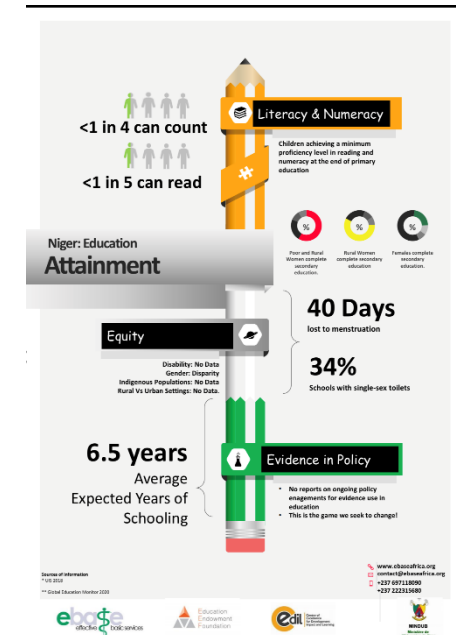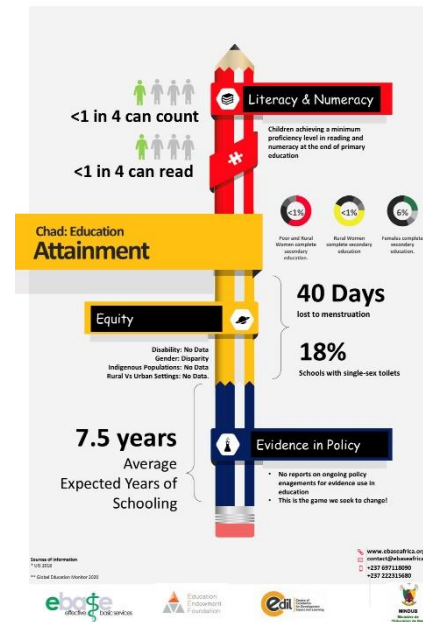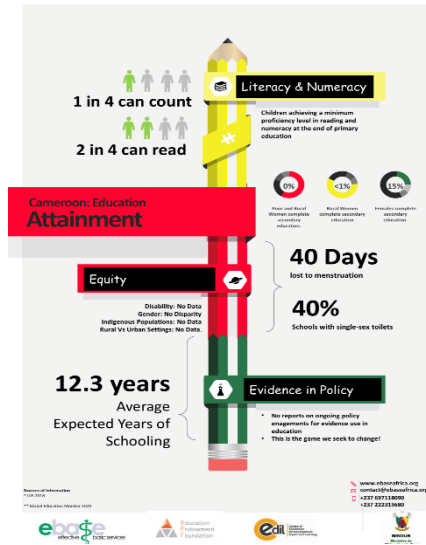
Evidence into policy

- Dearth in the use of evidence in policy
- EIDM in education

Toward improving educational attainment in middle Africa: A tripple jump approach

- The triple jump concept assumes that for evidence to be embedded we need 3 major steps
  - eBASE TLT,
  - recontextualization using midrange theories,
  - randomized controlled trials to continuously inform the toolkit.)

4. The Triple-Jump Strategy

- Main phases of We Attain project with key stakeholders

- Global Fellowship: teachers, learners, parents, policymakers

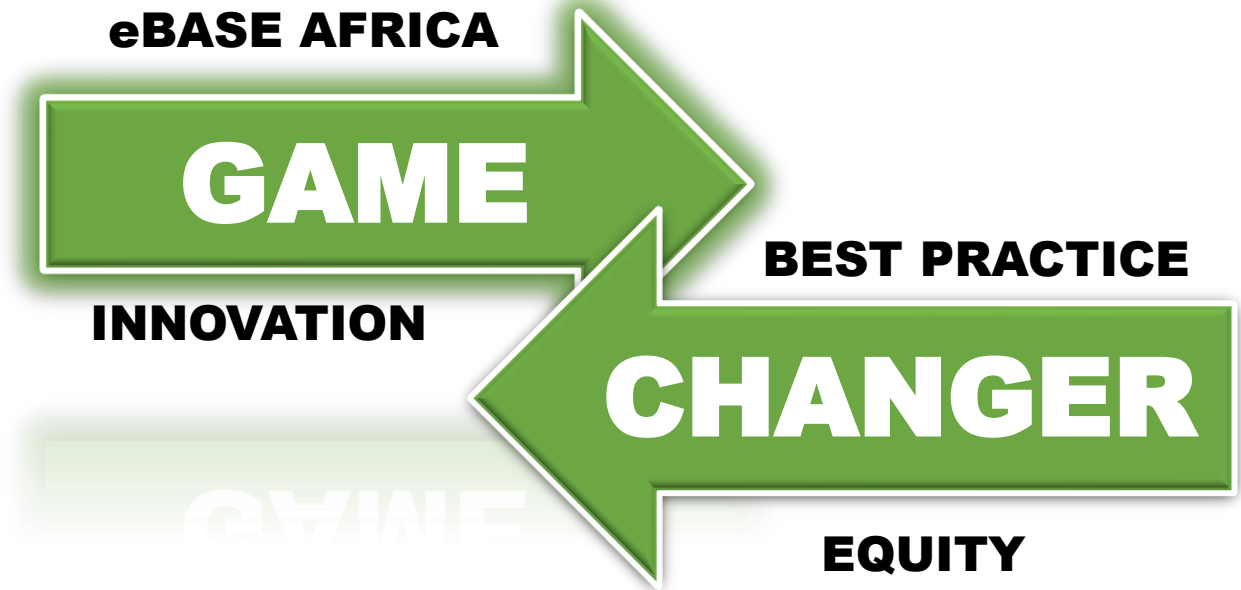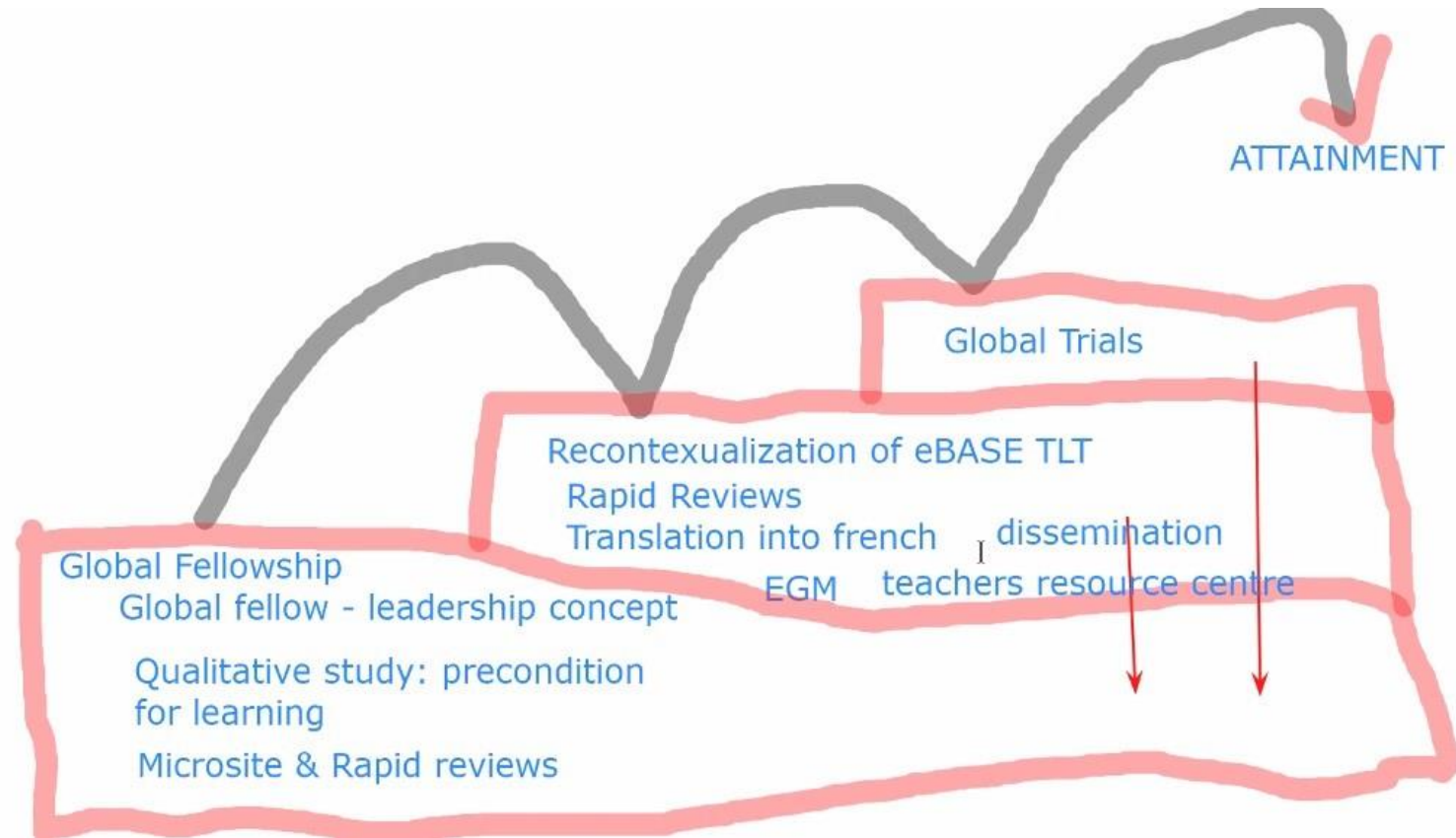- Recontextualization of eBASE Teaching and Learning Toolkit: teachers, learners, parents, policymakers

- Global Trials: teachers, learners, parents, policymakers, CSOs and Universities

- ATTAINMENT

ATTAINMENT

Global Trials

Recontexualization of eBASE TLT
Rapid Reviews
Translation into french   dissemination
EGM   teachers resource centre

Global Fellowship
Global fellow - leadership concept

Qualitative study: precondition for learning

Microsite & Rapid reviews

Picture: eBASE Africa, 2020.

Dissemination

eBASE TLT

eBASE TLT cont'd

- eBASE Teaching and Learning Toolkit is a resource that has been developed with 29 strands

- Strands were developed based on the Education Endowment Foundation (EEF) Toolkit made of 35 strands

- A microsite has been developed

- Strands are available in French and in english

The eBASE TLT Con.d

- Cost estimations are based on the approximate cost of implementing an approach in a class of 25 pupils. Estimates commonly include the cost of additional resources, and training or professional development if required

- Strength/quality of the evidence

- Month of impact: Months' impact is estimated in terms of the additional months' progress you can expect pupils to make as a result of an approach being used in school, taking average pupil progress over a year as a benchmark.

COST

SECURITY

+2

IMPACT

Picture: Source name.

eBASE TLT cont'd

- There are 29 strands
- We intend to a do a split between pedagogy and school structure strands for effective implementation

How is local content produced

- Stakeholder engagements
- Qualitative studies (KIs and FGDs)
- Systematic Reviews
- Local experts and academic teams
- Global Trials

Aims

- Create local buy in
- Bring out the nuances of good implementation
- Show where an approach has been tested in a local context

eBASE TLT cont'd

• **Pros**

- A large amount of evidence is made accessible to non-academics
- The process is neutral and transparent
- The Toolkit allows for comparisons of different approaches
- There is an emphasis on rigour and it is made clear where evidence is less secure
- The Toolkit is a live resource that does not go out of date

• **Cons**

- Averages can hide variation in outcomes
- The Toolkit does not provide a step by step guide for change and needs to be part of a larger school improvement process
- The Toolkit is constrained by the quality of the meta-analyses conducted by other academics

Thank you

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Questions? Email
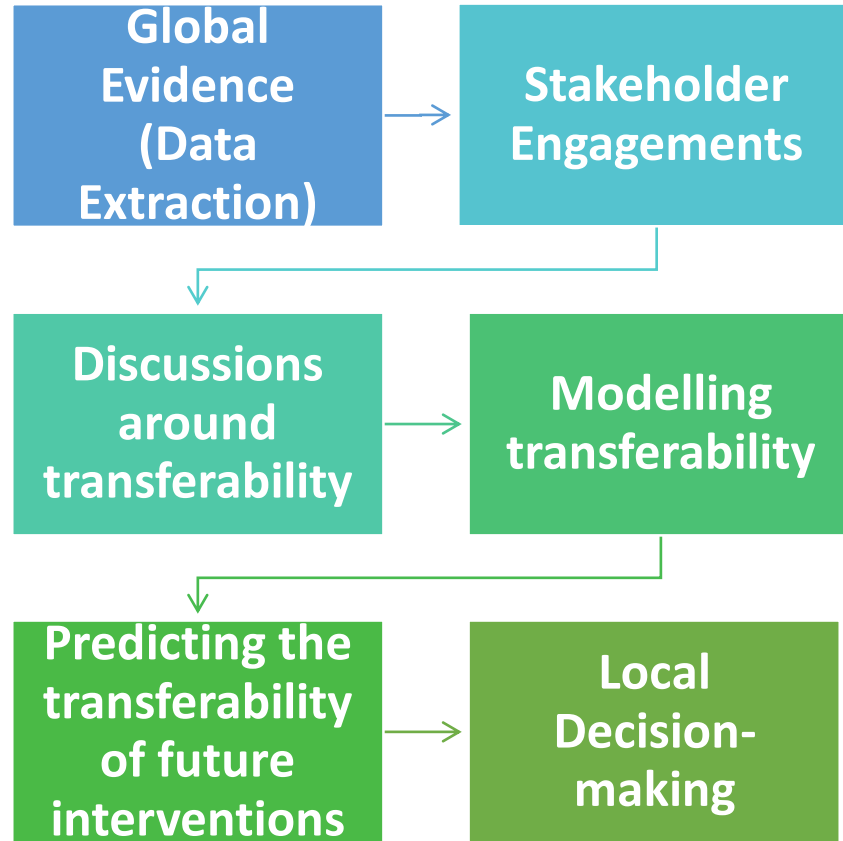rigobertpambe@ebaseafrica.org

Using Meta-Analysis to Explore the Transferability of Education Mid-Range Theories to Cameroon, Chad, Niger and Nigeria

Nsaikila, Melaine Nyuyfoni

Effective Basic Services (eBASE) Africa

From Global Evidence to Local Decisions: Predicting Transferability

```
Global Evidence (Data Extraction)  →  Stakeholder Engagements
                                              ↓
Discussions around transferability  →  Modelling transferability
                                              ↓
Predicting the transferability of future interventions  →  Local Decision-making
```

- The process begins with identifying global evidence and making sense out of it. The data extraction process is key at this stage.

- Global evidence is a result of synthesized findings of studies conducted in several countries. Some LMICs and others high income countries.

- Without locally conducted trials, the only objective strategy to ascertain the local viability of the evidence is stakeholder engagements around the transferability and contextual importance of the intervention.

- Based-off these engagements transferability can be modelled and a framework for predicting the transferability of future interventions is developed.

- Moving on, local decisions can be taken.

Modelling Transferability

- The model uses a total of 228 interventions (Observations) across 35 strands.

- The variables used are;

- Relevance of Intervention (Yes / No)

- Complexity of Intervention (Low, Medium, High).

- The Cost of Intervention (Low, Medium, High)

- Average Contextual Importance to Teachers, Students and Policy Makers (Weighted Average on 10).

- The Impact of Intervention: Derived from Effect Size (Low, Medium, High).

- Transferability (Yes / No)

Cont'd

Bar Graph: eBASE Africa
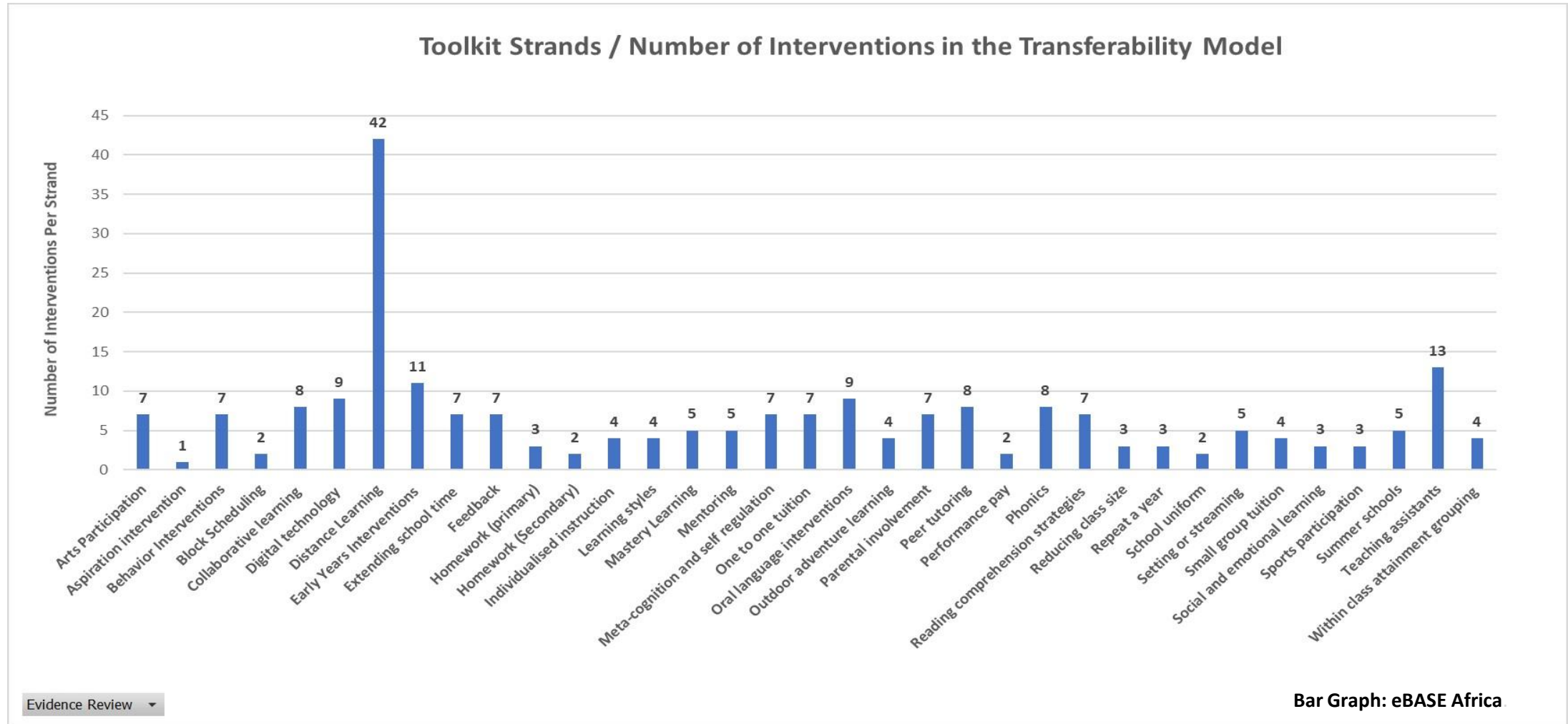
Cont'd

The Model Expression: We use the CART

- *transferability = f(relevance, complexity, cost, importance, impact)*

- *The CART or Decision Tree creates sequential questions such that it partitions the data into smaller groups. As the partition ends, a predictive decision is made.*

- While there are other CART algorithms like **entropy**, we use the **Gini impurity Index** for its computational simplicity.

Cont'd

Gini impurity Index (I) = 1 - $\sum_{i=1}^{m}(pk)^2$

➢*Where (pk) is the probability of an object (intervention) being classified to a particular class.*

➢*The Calculation is recursive and the attribute with the least Gini index forms the root node.*

Modelling Transferability

How the Gini Impurity Index algorithm works:

Probability of Relevance

X = P(Relevance = Yes):

Y = P(Relevance = No)

Conditional Probabilities

A=If (Relevance = Yes & Transferability = Yes)

B=if (Relevance = Yes & Transferability = No)

Gini Impurity Index AB (GIIAB)= $1 - (A^2 + B^2)$

C=If (Relevance = No & Transferability = Yes)

D=If (Relevance = No & Transferability = No)

Gini Impurity Index CD (GIICD)= $1 - (C^2 + D^2)$

Weighted Gini Impurity Index = X(GIIAB) + Y(GIICD)

Preliminary Results

- Based on these results, the root node of the tree will be ***Relevance of Intervention***

Attribute Feature	Gini Impurity Index
Relevance of Intervention	0.332
Cost of Intervention	0.41*
Average Importance	0.344*
Impact of Intervention	0.52*

Summary Results: eBASE Africa

Preliminary Results

Error Report: Training Score

Class	# Cases	# Errors	% Error
No	36	7	19.444
Yes	87	16	18.396
Overall	123	23	18.6999

Error Report: Validation Score

Class	# Cases	# Errors	% Error
No	28	7	25
Yes	73	11	15.068
Overall	101	18	17.821

Summary Results: eBASE Africa

Preliminary Results: Full and Best-Pruned Tree
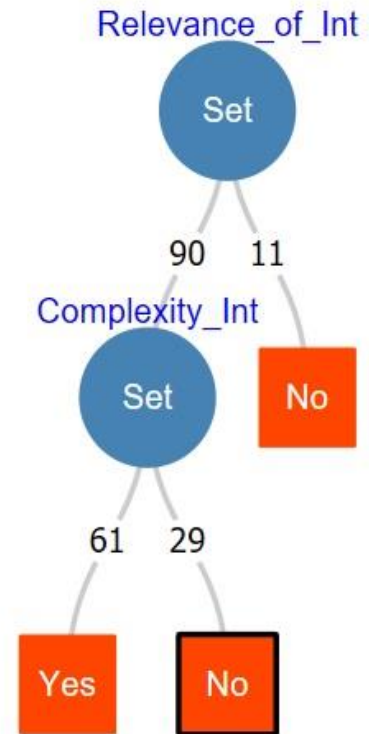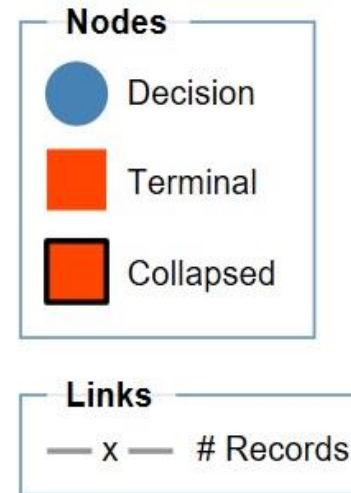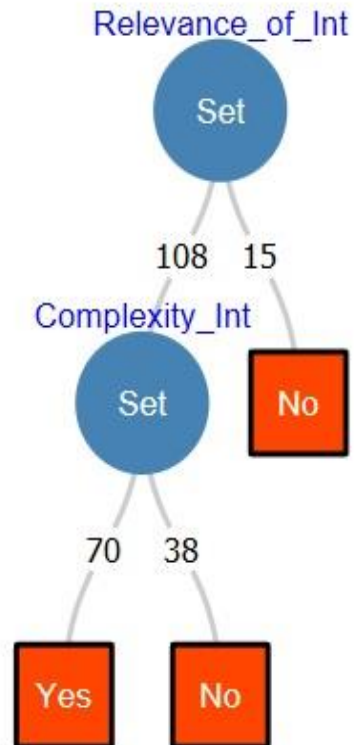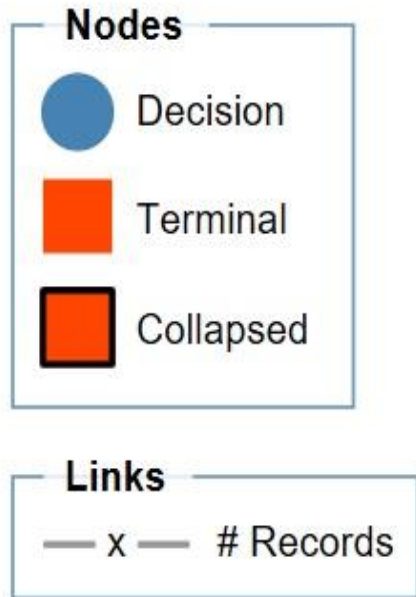
Best practice: A synopsis

Relevant, Credible Scientific Evidence

Relevant stakeholders & Professionals

Population Needs and Goals
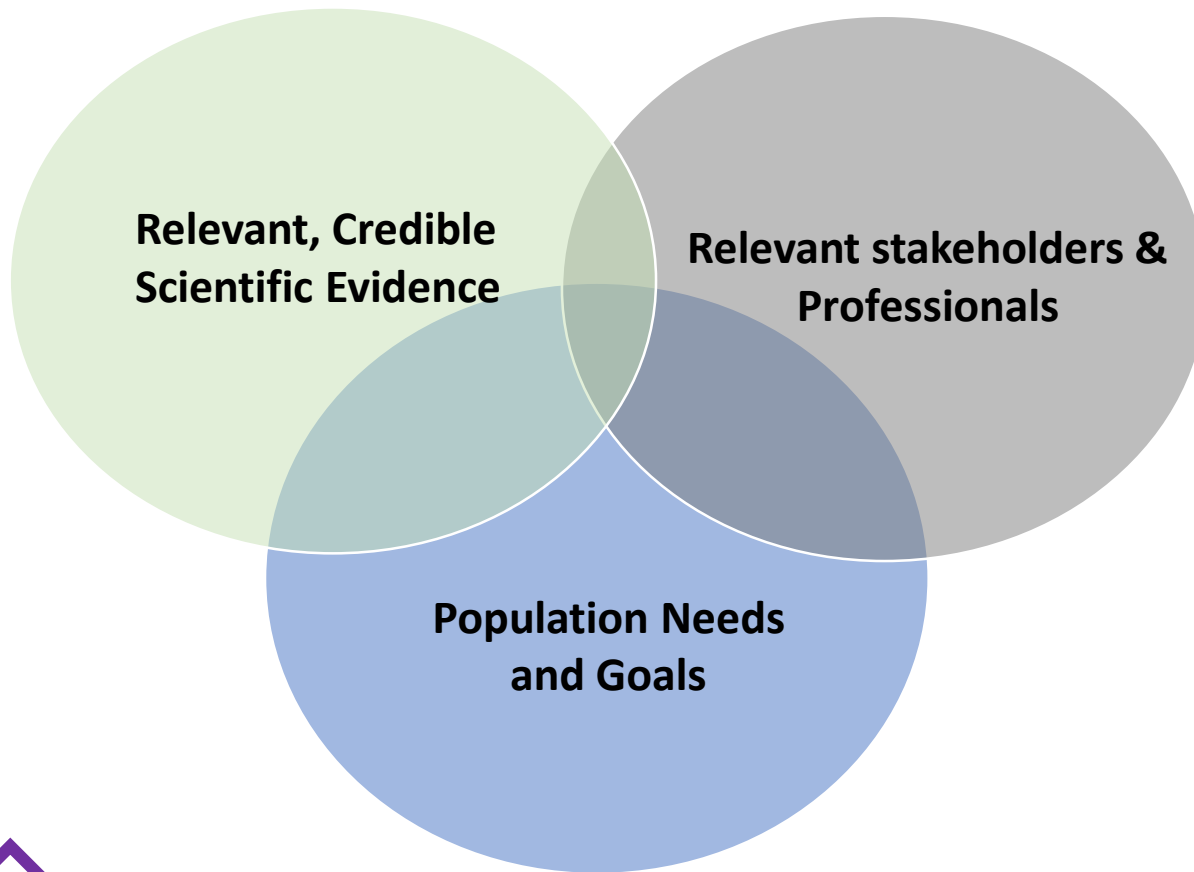
Venn Diagram: eBASE Africa

- Our practice involves identifying the target population needs and goals.
- We engage the relevant stakeholders and professionals.
- We identify the best available scientific evidence to solve problems.

In essence, we identify global evidence, locally adapt the evidence for better decision-making.

Our approach encompasses data-driven projects, impact evaluations, leading to evidence portals or knowledge translation for policy makers.

"Evidence is the best buy in development. Funding research on what works is the best investment we can make". (**Howard White**).

Thank you

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Africa Centre for Evidence
Working together to make evidence-informed decision-making a reality

UNIVERSITY OF JOHANNESBURG

1. Introduction

- Stakeholder involvement from different sectors at different levels
- Public sector, CSOs, international development partners, research institutions/networks and academic community
- Stakeholder mapping through Alignment, Interest and Influence Matrix (AIIM)

AIIM Matrix

- Alignment: Will project lead to change acceptable to the stakeholder? Do they share the same sense of its importance?

- Interest: Do stakeholders want something to happen? Are they allocating resources for this activity or talking openly about it?

- Influence: Are stakeholders in a position of authority that can significantly influence decision-making ?
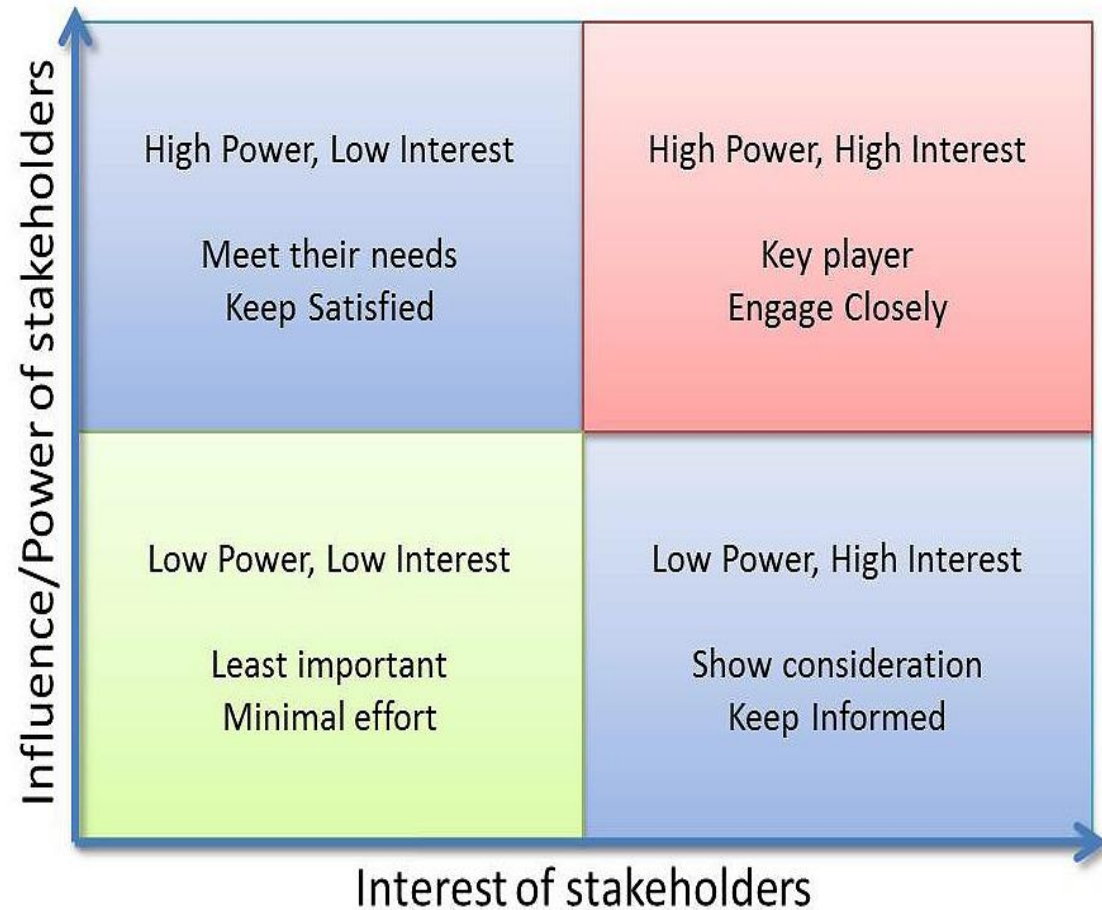
AIIM Matrix

- The eBASE Africa AIIM Matrix

Power	High	• Department of cooperation at the ministries of basic and secondary education in Cameroon • Ministère de L'Education Secondaires (Cameroun) • Parliament (all) • Senate (Cameroon and Nigeria) • Micro-finance institutions • Banks • Ministry of Social Affairs (Cameroon, Niger, Chad) • Regional/State governments and local governments • Traditional Leaders • British High Commission (Cameroon)	• Ministère de L'Education de Base (Cameroun, Niger, and Chad) • Ministère de L'Education Secondaires (Chad and Niger) • Prime Minister's Office • Development Agencies (UN Women, UNICEF, World Bank, UNESCO) • African Union • National and regional pedagogy inspectors (both basic and secondary education) • Educational Secretariats of Confessional Schools (Catholic, Protestant, Baptist, etc) • Academia • State Ministry of education (Nigeria) • AEN, eBASE Africa • CDBPS • Media: CRTV, print press • HP Foundation (Niger and Nigeria) • AFIDEP (Niger, Nigeria, and Cameroon)
	Low	• Informal sector learning structures • Schools in conflict regions •	• Teachers (private and public schools; primary and secondary schools; TVET and general education; formal sector education • Universities and Research Centers • MBOSCUDA (indigenous group advocacy CSO) • CAGEAD (CSO) • Local farmers and women's groups
		Low	High
		Interest	

2. Stakeholders

- Public sector (sectoral ministries): Ministries of Education (Basic Education and Secondary)

- Development Partners and Diplomatic missions (UNESCO, UNICEF, UN Women, British High Commissions/Embassies)

- Universities and Research Centres/Networks

- CSOs

- Academic community (learners, parents and teachers)

3. Engagement methods

- One-on-One meetings

- Academia workshops

- Stakeholder sessions

- Expert Panel

- Teachers Resource Centre

One-on-One Meetings

- Ministries, Universities and Diplomatic missions

- 6 working sessions with Ministry of Basic Education Cameroon (MINEDUB)

- 2 audiences at MINEDUB (Deputy Minister) and the British High Commission-Yaounde

- 8 working sessions with Universities

Picture: eBASE Africa, 2020.

Academia Workshops

- Researchers at Universities

- Facilitate evidence generation and synthesis

- Access existing (grey) literature from theses

- Jointly developing Global Trial proposals

- Currently engaging with 7 Universities in Cameroon (public and private)

Picture: eBASE Africa, 2020

Stakeholder Sessions

- Bringing together key actors in educational sector

- Policymakers, learners, teachers and parents

- Includes formal and informal learning environments

- 9 Stakeholder Sessions: Cameroon (4), Nigeria (2), Niger (2), and Chad (1)

Picture: eBASE Africa, 2020.

The Expert Panel

- Advisory body created to ensure eBASE Teaching and Learning Toolkit is a bilingual, inclusive and effective evidence portal for Middle Africa

- Group of educational stakeholders nominated voluntarily

- Policymakers, teachers, researchers, and indigenous groups

- Meets once every quarter, first meeting convened in May 2020

Picture: eBASE Africa, 2020.

# The Teachers' Resource Centre

- Database for teachers in primary and secondary schools

- Disseminating relevant resources for improving teaching and learning

- Providing answers to questions from teachers related to teaching and learning

- Consolidating and disseminating information on best practices

Picture: University of Oregon

5. Policy engagement layers

- How do we increase use of evidence for policy and decision-making in education sector?

- Engaging key stakeholders at three different inter-related layers:

- Inside the Room: Policymakers

- Around the Room: Universities, Research Centres/Networks, Development Partners, CSOs

- Outside the Room: Teachers, parents, learners

3. Outside the Room | 2. Around the Room | 1. In the Room | Education Policy
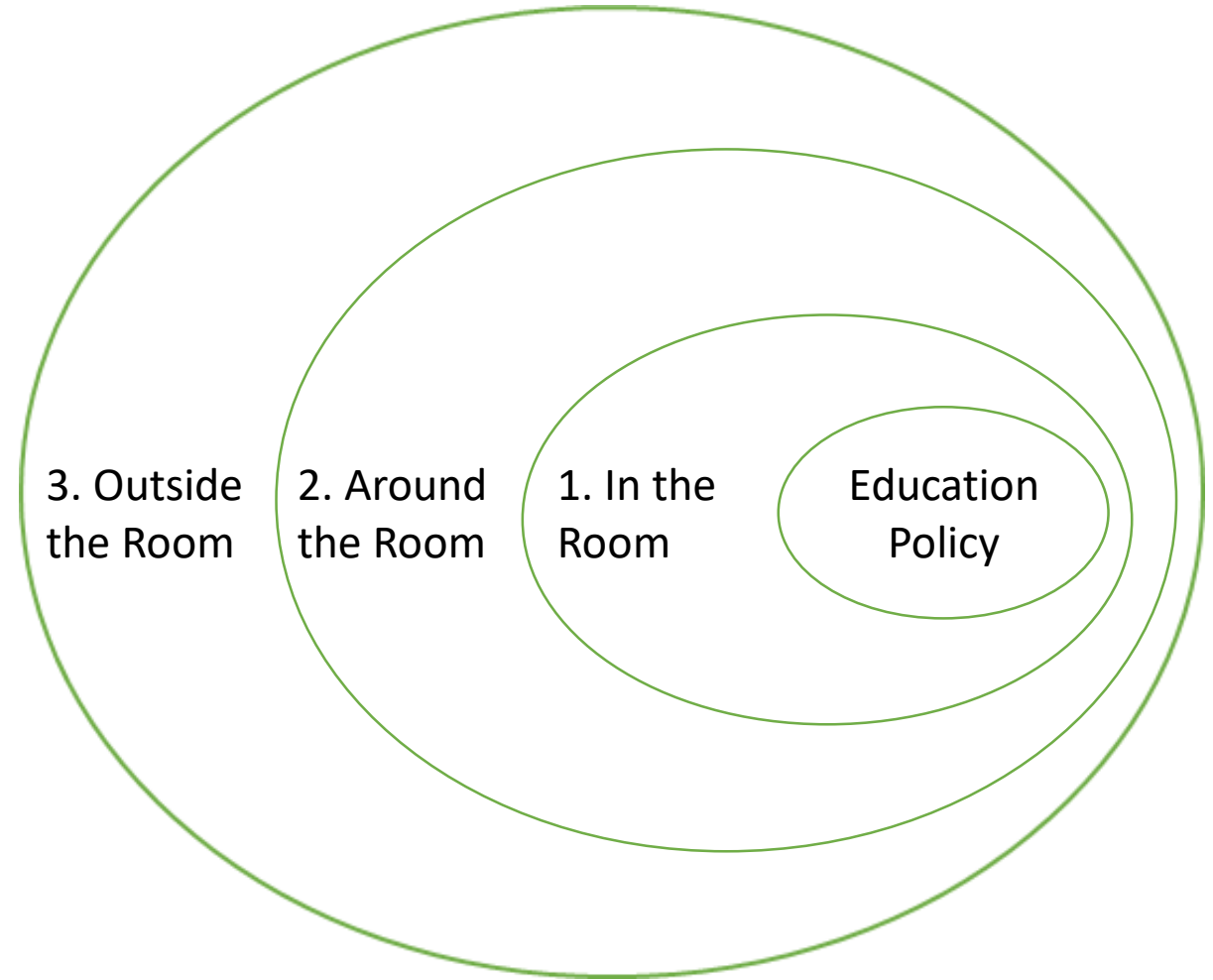
Source: Altiok & Grizelj, 2019

Policy engagement layers Cont'd

- Layer 1 (In the Room): Stakeholders directly involved in formal policy formulation (Act as a Knowledge Brokering Centre using BCURE/Building Capacity for Use of Research Evidence)

- Layer 2 (Around the Room): Stakeholders who can influence policy formulation with high quality evidence (awareness creation sessions, global evidence summits, policy briefs, publications)

- Layer 3 (Outside the Room): Stakeholders directly involved in evidence production and use which can inform/influence policy (through global trials, eBASE Teaching and Learning Toolkit)

- 3 layers distinct yet interdependent

Thank you

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UNIVERSITY OF JOHANNESBURG

What is Dissemination?

- **"This is the act of spreading news, information, ideas to a lot of people"** *(Cambridge English Dictionary).*

- "**Delivering and receiving a message**" "**the engagement of an individual in a process**" and "**the transfer of a process or a product**" *(Harmsworth 2000)*

- An example: eBASE distributing evidence summaries to teachers, policy makers, parents, students, school boards.

Our Approaches to Dissemination

PUSH APPROACHES	PULL APPROACHES
1. Mailing list 2. Café Ushahidi 3. Evidence Tori Dey 4. Radio and TV shows 5. Workshops Capacity Building 6. Stakeholder sessions 7. Policy briefs 8. Audiovisual files on social media platforms	1. Teachers Resource Center eBASE Teaching and Learning Toolkit 2. Workshops on developing PICO 3. Global Fellowship 5. Audits and feedback

PUSH: Pushing Evidence to Stakeholders

- Supply!

- We make the moves!

- Actively sending research evidence to stakeholders without them making any request

- It helps stimulate demand

- Useful where knowledge or capacity for evidence use is low

- Adaptive to non-literate communities

PUSHing Evidence

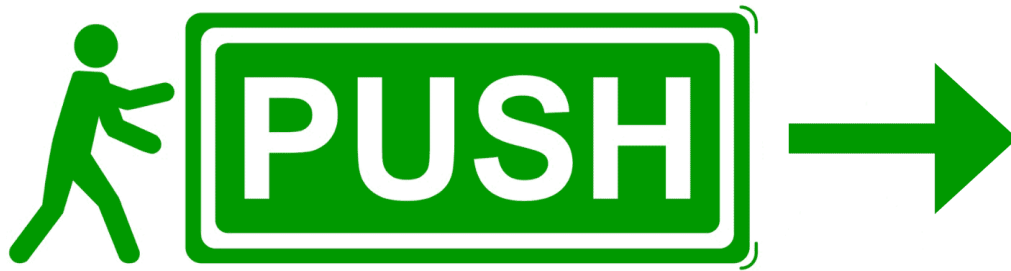## PUSH APPROACHES

1. Mailing list
2. Café Ushahidi
3. Evidence Tori Dey
4. Radio and TV shows
5. Workshops Capacity Building
6. Stakeholder sessions
7. Policy briefs
8. Audiovisual files on social media platforms

PULL: Pulling Evidence from eBASE Portal

- Demand!

- You make the moves!

- Self service!

- Stakeholders reach out to pull evidence tailored to their needs

- It puts consumers of evidence in the drivers' seat

- Useful where knowledge or capacity for evidence use exists

Jedi PULL Force

PULLing Evidence

PULL APPROACHES

1. Teachers Resource Center where teachers can stop by to get evidence on T & L interventions.
2. eBASE Teaching and Learning Toolkit
3. Workshops on developing PICO
4. Global Fellowship
5. Audits and feedback

Helping Home Learning
Read with TRUST

Reading opportunities are everywhere. You can make anything a learning experience for your child, just follow the TRUST ideas to talk about anything your child enjoys reading.

T Take turns to talk about what you are going to read

R Recap the predictions as you are reading

U Use lots of encouragement

S Share what you know about the text

T Tune-in and be interested

PUSH and PULL: Finding the Right Balance

- ***IDEAL***: Evidence users serving themselves to what they need, when they need, and how they need it

- To ***facilitate,*** we:
  - Engage stakeholders in design, implementation, and reporting
  - The case of adult learning in Maroua, Cameroon
  - Conduct audits and feedback
  - Build capacity

- This allows for the right balance

Media

- Print,
- Radio
- TV etc

Evidence Tori Dey

Evidence Summary

EVIDENCE SUMMARY

CASH TRANSFERS
Medium impact for High cost, based on extensive evidence.

In many countries, primary school enrolment is still not universal. More than 20 per cent of children do not attend school in many countries in sub-Saharan Africa, and around a third of those who do enrol drop out before completing sixth grade. Secondary school enrolments are far lower. In many countries, fewer than half of all children attend secondary school. And the quality of education is low, with many students having low literacy and math's skills after several years of schooling.

Highlights

- There is evidence on the impact of cash transfer programmes

- Cash transfer increase school enrolment, but there is small evidence base on learning.

- CCT programs with compliance monitor and penalty for non-compliance have larger effects.

- There are limited studies that look at learning outcomes

- Cost of intervention can be seen as high with medium impact

French Outreach

- The main objective of this campaign was to identify 500 teachers (primary and secondary) within the francophone sub-system who could be interested in participating in the We Attain project.

- Contact information for over 700 teachers has been collected for the eBASE Africa database of teachers

Publications

- Conferences
- Journals

Thank you

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Questions/ Discussion

Thank you

Thank you to:

- All the speakers from e-BASE Africa
- All the #AfricaEvidenceWebinar participants
- AEN/ACE team
- **Work stream 2: Enhancing Evidence Capacities working group led by Charity Chisoro and her team:**
  - Frejus Thoto
  - Wiseman Ndlela
  - Enock Musungwini
  - Deo-Gracias Houndolo
  - Ndi Euphrasia Ebai-Atuh

Join us and stay in touch!

- To become a member of AEN: https://www.africaevidencenetwork.org/fr/members/join/

- To register for Evidence2020:

https://confsa.eventsair.com/evidence-2020-conference/registrations