From assessment to action: lessons from the development of Theories of Change with the People's Action for Learning Network

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From assessment to action: Development of Theories of Change

Abstract

In recent years, much attention has been given to extremely poor levels of learning outcomes in low-and lower-middle income countries. Citizen-led assessments have played a vital role in highlighting this 'learning crisis'. Having developed these citizen-led assessments, members of the People's Action for Learning (PAL) Network are now increasingly devising and implementing actions aimed at tackling the learning crisis in different country contexts. This article documents the process we undertook of developing theories of change with PAL Network members across 10 countries to inform their shift from assessment of children's learning to action aimed at raising learning outcomes. The article highlights in particular the importance for theories of change to take account of context in identifying appropriate actions. Based on their country circumstances, the actions identified by PAL Network members vary, for example, from using assessment data to influence national government reform, to more localised activities associated with 'teaching at the right level'. For appropriate actions to tackle the learning crisis to be identified and successfully implemented, an important lesson from the PAL Network experience is the need to enable South to South learning and adaptation. As such, the article highlights a pressing need for flexible and iterative theories of change that reflect contextual realities.

1. Introduction

The People's Action for Learning (PAL) Network is a leading South-South collaboration in education. It brings together members working in 14 countries across three continents to assess the basic reading and numeracy competencies of children through household-based, 'citizen-led assessments'. Network members' citizen-led assessments have played a vital role in identifying a 'learning crisis' in low- and lower-middle income countries. Their use of household-based learning assessments provides coverage well beyond that offered by conventional school-based assessments. For example, by including children who are out of school in the learning assessments, these learning assessments provide a robust evidence base on the most vulnerable children globally. Through further adaptations to their learning assessment processes, PAL Network members have continued to extend the range of children whose learning is acknowledged in educational debates, such as those with disabilities (in Pakistan) and those living in refugee settlements (in Uganda).

By identifying the extent to which children have achieved foundational skills – such as the ability to read a paragraph or divide a three-digit number by a single-digit number – findings from the analysis of learning assessment data have galvanised educational debates within member countries. They have shown, for example, that many children are unable to perform these simple tasks, intended to be achieved after two years in school, even after spending five years in school. In addition to promoting national debate, their methods and findings have also gained traction in global policy fora, as highlighted in the UNESCO Institute for Statistics' Handbook on

Measurement of Equity in Education (2018) and The International Commission on Financing Global Education Opportunity (2017), in addition to a range of peer-reviewed academic publications (see, for example: Alcott & Rose 2015, 2016, 2017; Chudgar 2012; Goodnight & Bobde 2018; Jones & Schipper 2015; Jones, Schipper, Ruto & Rajani 2014; Pritchett & Beatty, 2015; Singal et al., 2019).

Building on their vast experience of identifying low levels of learning across a range of contexts, PAL Network members have been developing a variety actions with the aim of raising learning outcomes. These interventions have been informed directly or indirectly by a theory of change. This article draws on our work with PAL Network members across 10 countries[1] in developing their theories of change for moving from assessment to action more formally, and the implications of this for understanding context-specific reform. The actions included vary across countries, for example, from using learning assessment data to influence national government reform, to more localised activities associated with changing the pace of the curriculum to ensure children at risk of being left behind are able to learn the basics. As such, the article aims to present an understanding of the pathways from *assessments of* to *improvements in* learning outcomes in different country contexts. As the article discusses, for appropriate actions to tackle the learning crisis to be identified and successfully implemented, an important lesson from the PAL Network experience is the need to enable South to South learning and adaptation. This

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[1] The organizations and countries included are ASER (Annual Status of Education Report) Centre (India), ASER Pakistan, Bɛɛkunko (Mali), Jangandoo (Senegal), LEARNigeria, MIA (Mexico), TPC Mozambique, Uwezo (Kenya, Tanzania, and Uganda).

highlights a pressing need for flexible and iterative theories of change that reflect contextual realities.

The paper is organised as follows. Section 2 presents a review of theories of change with the aim of understanding the concept within the academic literature. Section 3 introduces our methodology for developing theories of change with PAL Network members, which drew on participatory approaches to achieve a common understanding for developing a framework to map how assessments of learning could lead to improvement in learning. Section 4 presents the approach to developing theories of change across PAL Network members, and the final section concludes with the implications of the findings for the broader field.

2. Understanding Theories of Change

Theory of Change can be defined as 'a systematic and cumulative study of the links between activities, outcomes and context of the initiative' (Fulbright-Anderson, Kubisch and Connell, 1998: 16). In this definition, the central argument of a theory of change is that it carries the underlying foundations or theory in which programs or policies operate that should lead to the desired changes in outcomes (Chen, 1990). In this sense, articulating the underlying theory, as well as the assumptions and any contextual requirements or 'enablers', paves the way for more effective program design, evaluation and implementation.

There are three main types of theory of change (Vogel, 2012). First, a policy theory of change focuses on identifying a broad conceptual framework which can be used

to focus in on specific activities in a specific context. Second, an implementing agency theory of change is used to support decision-making on project implementation. Finally, a causal map for evaluators focuses more specifically on issues of effectiveness. While all three types of theory of change differ in terms of their focus, the process of developing a theory of change is essentially the same. This involves working backwards from the final outcome, identification of activities (mechanisms) given a particular situation (context). All theories of change should highlight the assumptions made for the program or policy to change outcomes or the barriers that may stand in the way of the program achieving the expected benefits.

There is a debate in the literature as to whether theories of change are actually applications of the advancement of academic theory or a program management tool. Historically, the term theory of change was developed in the 1960s, with its origins in program theory. However, in recent years, with the increasing pressure to demonstrate impact and recognition of the complexities and ambiguities of international development work, theories of change have become increasingly associated with the use of log frames as part of program management. Originally, log frames were intended to summarise an in-depth discussion about project goals and aims. However, as they have been incorporated into standard practice, they have arguably become used less as a tool for critical reflection and increasingly compiled in order to secure funding. As Vogel states, 'Completing a log-frame is now often a mandatory funding requirement, with standardised templates that allow little flexibility. Because they are used for management and measurement, log-frames become enshrined into results-based contracts which are then administratively difficult to change' (Vogel, 2012: 19). As such, a theory of change is seen as a

response to the need to return to the more robust analysis that the log frame was originally designed to elicit. However, as theories of change have been increasingly adopted as a requirement alongside the development of log frames, they have received similar critiques to those levelled towards log frames (Vogel, 2012).

An important critique of the development of theories of change for program management is that they have tended to adopt a more standardised approach. This ignores the way in which contextual realities might influence pathways to change, which may be central to uncovering the circumstances in which, and the reasons why, a particular policy or program works.

In order to provide further clarity on theories of change, it is important to acknowledge that there are two key questions regarding impact. Firstly, a theory of change is used to determine how successful a policy or theory is in achieving its goals, what Weiss terms 'implementation theory' (Weiss, 1998). In addition, they provide an assessment of whether what the program set out to do was the correct response in that context, also termed 'program theory' (Weiss, 1998). It is the combination of these two aspects that separates theories of change from traditional methods-based approaches or log frames.

There is a plethora of terms associated with the use of theories of change. In this paper, we take the approach of Pawson and Tilley (1997) and focus on the contexts, mechanisms and outcomes of the theory of change. For this purpose, context refers to the location as well as its associated norms and values. Mechanisms are defined

as the choices and capacities that lead to regular patterns of behaviour. Finally, outcomes are defined as the results of a program, whether they are intended or not.

3. Methodology

Given our approach of working in collaboration with PAL Network members to support the development of their actions, this study's research design bears some hallmarks of participatory approaches (Baum et al. 2006; Wadsworth 2005). We sought to be flexible in integrating PAL Network members' divergent perspectives throughout an iterative process in our development of the theory of change model in response to their ongoing feedback (Cornwall and Jewkes 1995). The analysis in this article is, therefore, based on a range of activities and points of engagement with PAL Network members, and combines documentary analysis, interviews, feedback meetings, and participation in PAL Network events. These took place sequentially as follows.

First, PAL Network members provided documentation about each of their organization's relevant activities, including on theories of change as they had been developed so far. Further documents were obtained by the research team from published and unpublished literature. We received initial theories of change for 10 of the 14 PAL Network organizations. These theories of change were provided either as a narrative or in diagrams, and varied significantly in terms of the approach used, and amount of detail provided. In order to grasp a better understanding of _why_ PAL Network members differed in their approaches to pathways to impact, members of

the research team held two individual interviews each with each of the PAL Network's country members, as well as an interview with the PAL Network Secretariat.

The first interview took place when members of the research team attended the PAL Network's annual meeting in Mexico in March 2017. For the interviews, consent was requested from interviewees, recognizing that it was implausible to maintain anonymity given the uniqueness of each of the PAL Network member's work. During the workshop, interviewers started by asking the background of the work that each of the organizations was doing prior to engaging with citizen-led assessments and the reasons that led the organization to set up its citizen-led assessment. Interviewees were asked to reflect on their ultimate goal in conducting these learning assessments, and the steps and processes necessary to achieve their goal. Interviews also focused on specific actions or interventions undertaken by the organization to achieve its aims and the challenges faced. The research team also asked direct questions on the theory of change for the organization, in particular, whether the respondent was familiar with a theory of change approach, the reasons for developing a theory of change, their purpose and usefulness, and if there were any developments in their work that would mean that the theories of change submitted to the research team were no longer valid.

Interviews were transcribed and examined together with each organization's theory of change, with the aim of identifying similarities and variations and of proposing a common framework to better understand the impact pathways between *assessments of* and *improvements in* learning outcomes. Building on this, we produced a generic

framework which is depicted in Figure 1. This generic framework contains all the common intermediate outcomes through which PAL Network members move from collection of learning assessment data to identifying actions, with the ultimate goal of raising learning outcomes for children. A draft of this framework was shared with PAL network members for their adaptations and, ultimately, their approval.

Figure 1: Common stages between assessment and action
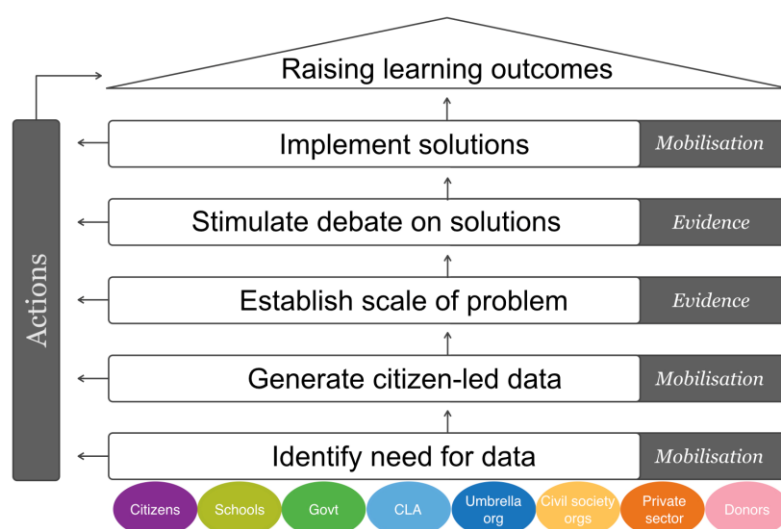
Notes: CLA refers to the organization carrying out the Citizen Led Assessment. Umbrella Organization is the parent organization for the CLA.

The proposed generic framework contained a sequential progression from the initial need to generate the data, collect citizen-led assessment data, use the data to provide evidence (*Establishing the scale of the problem)* regarding the given country's learning levels. Then, as suggested by many PAL Network members, this

should *Stimulate debate on solutions,* which then would lead into *Implementation of solutions* aimed at raising learning outcomes.

Our generic framework provided the basic elements for building a theory of change (Pawson and Tilley, 1997). First, it included the initial norms and values which guided the work of the PAL Network members, as well as the reasons for identifying relevant actions, as well as the actors participating in a given stage. This is the context element of the theory of change. It also included intermediate and final outcomes. Intermediate outcomes included, for example, the mobilisation of citizens, the generation of evidence, or the stimulation of debate for establishing solutions. These were all part of the mechanisms to reach the final outcome, namely to raise learning outcomes.

PAL Network members were given this generic framework together with a more detailed example of a country theory of change, depicting the movement between the intermediate outcomes of *Generating citizen-led data* on learning to using these data for *Establishing the scale of the problem* with respect to the extent to which children are learning the basics (see Figure 2). This theory of change aimed to inform the identification of relevant actions in each PAL Network member country that would potentially have a direct impact on the ultimate goal of *Raising learning outcomes.* As part of this process, PAL Network members identified the actions, the actors and importantly the assumptions made between stages which are central for building a theory of change. Actions identified by members included, for example, ones associated with reforming the teaching and learning process (such as in

Mexico and Pakistan), and aimed at promoting community engagement to mobilise change (such as in Senegal) (see Appendix for more details).

Figure 2: A sample inter-stage theory of change
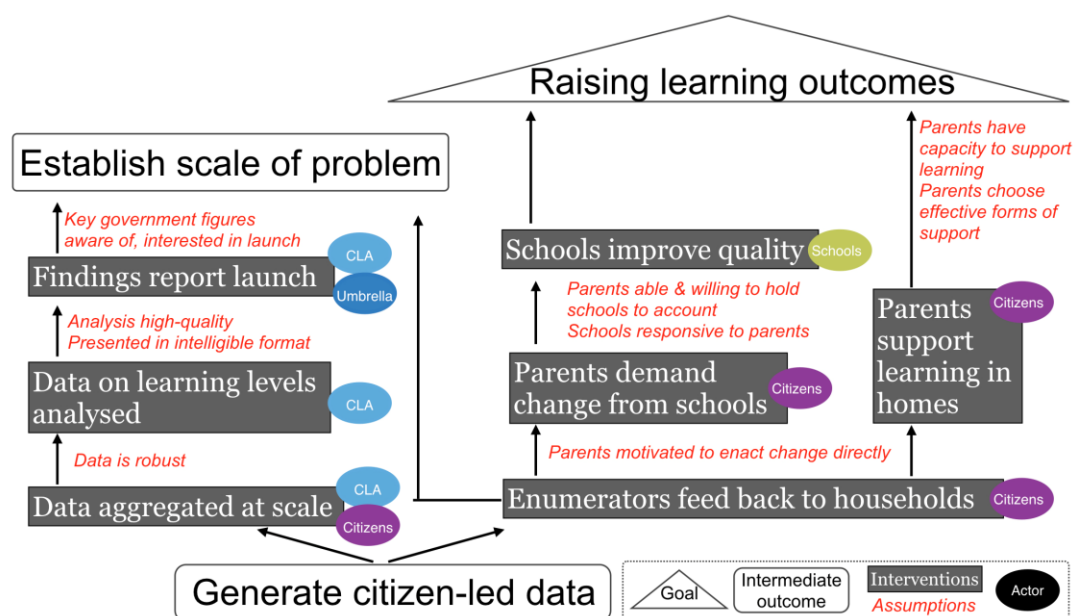
PAL Network members were requested to provide feedback on whether the proposed stages of the generic framework appropriately reflected how their country team envisaged the process through which the generation of learning assessment data would lead to action for raising learning outcomes. They were also asked to consider how their country's theory of change would look in comparison to the example provided in Figure 2, and if there were any adaptations to be made. On the basis of this, we re-drafted each country member's own theory of change in line with the generic framework, making adaptations where requested.

Further insights into how the PAL Network members perceived their work and the underlying theory of change that could explain their activities as a Network were

obtained during the second workshop, which took place in Uganda in May 2018. This workshop was attended by the PAL Network Secretariat and representatives from each of the 10 participating PAL Network countries as well as the research team. Ahead of this meeting, each country member was provided with a revision of their individual theory of change, for which they then provided feedback. The appendix provides examples of narratives associated with individual theories of change that resulted from this process for four country members: Mexico, Nigeria, Pakistan, Senegal.

The workshop then used participatory approaches to engage with all PAL Network members, shifting from each organization's individual theory of change to a common understanding of the underlying principles that make the PAL Network work for a common aim. The key topics for discussion were selected by the research team based on the feedback already received by PAL Network members from the generic theory of change. Key salient areas included how and when to collaborate with other community and civil society organizations, how to align to local, regional and national government priorities, establishing the main principles that bring different member organizations together to work as a Network and finally commonalities, strengths and actions that drive the PAL Network towards the goal of improving learning in the Global South.

Information from the Uganda workshop enabled us to develop further ideas in terms of how PAL Network members use the assessment data to choose their actions, and the extent of similarities and differences across contexts. The next section presents the results on the proposed theory of change for the PAL Network.

4. Assessment for action: a theory of change

In the initial phase of our work, through the interviews, workshops and review of existing documentation, it was clear that the large-scale citizen-led assessments carried out by PAL Network members provided an essential foundation for identifying widespread low levels of learning that required future action. This foundation is created both through the process of data collection and analysis (involving citizens and civil society organizations), as well as from the findings themselves. In a given country, initiating a citizen-led assessment is an organic, within-country process, driven by a participating organization's recognition of the need for data on children's learning. Citizens and other key actors, such as government and civil-society organizations, then mobilise to generate the data. These groups are encouraged to discuss the analysed data, which serves to establish the scale of the problem faced in children's learning outcomes. As such, the process serves two purposes: firstly, it provides robust evidence on the need for action in education, and, secondly, through the shared act of developing and conducting the citizen-led assessment, it also builds engagement for addressing the challenge.

Figure 3: A theory of change depicting the PAL Network's work in assessment for action
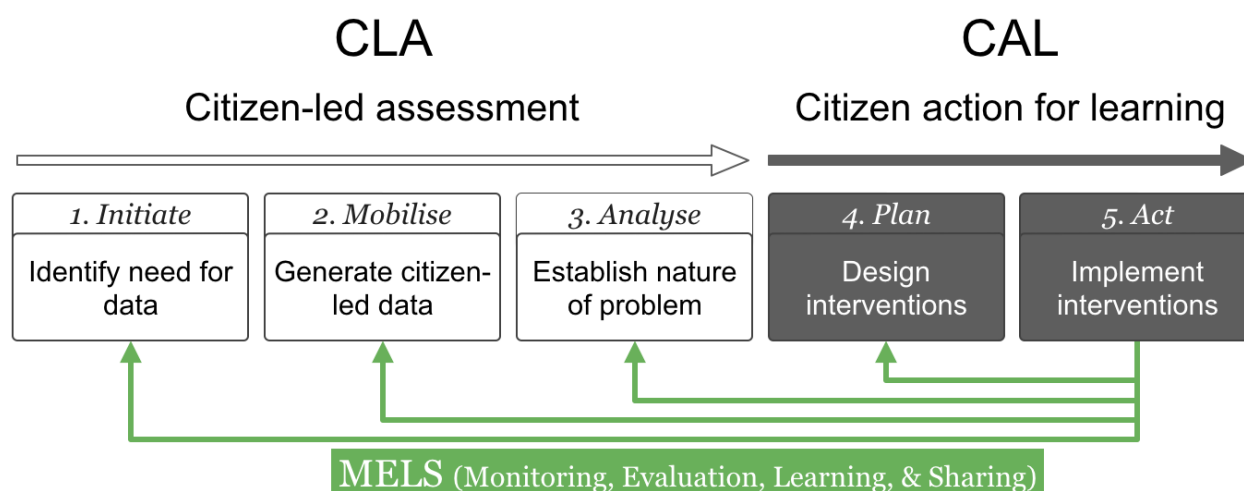
CLA
Citizen-led assessment

CAL
Citizen action for learning

1. Initiate	2. Mobilise	3. Analyse	4. Plan	5. Act
Identify need for data	Generate citizen-led data	Establish nature of problem	Design interventions	Implement interventions

MELS (Monitoring, Evaluation, Learning, & Sharing)

Figure 3 illustrates the common stages through which PAL Network members works towards assessment for action. Given the diversity of country contexts across the Global South, PAL Network members differ in the specifics of their work at each stage from assessment to action and have made adaptations in response to their own context`s constraints and opportunities. For example, Bɛɛkunko in Mali found that focusing on story-telling methods greatly improved its literacy activities; TPC Mozambique has prioritised grassroots community meetings to distribute and discuss findings whereas many other countries have focused more on dissemination with state and national government; and LEARNigeria sought to incorporate government agencies in the development of its assessment tools to strengthen subsequent government support for its action interventions.

Regarding the Network at large though, five key stages are apparent in its work from assessment for action:

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(1) Initiate: Identify the need for data. In recent years, more children are attending primary school across the world. However, there has been very little information on whether or not they are learning. This lack of data has led to the invisibility of millions of children attending school without acquiring the foundational skills that provide the basis for all future learning (UNESCO 2014). The majority of existing approaches to obtain learning data at national and global level focus on standardized school-based assessments. These are typically pen and paper assessments, which assume that a child is already able to read and write, and only undertaken with children who are in school, thus omitting the millions of children who remain out of school or attend irregularly. This means that school-based assessments suffer from selection bias and fail to cater to the realities of many children in these countries.

To address this, the first step in the PAL Network's Theory of Change identifies the need to collect data that captures the learning outcomes of *all* children through the use of household-based surveys.[i] In order to identify which children are not learning the basics, the data collected includes information on background characteristics of children such as gender, wealth, where the child lives (whether in an urban or rural area) and, in recent rounds in some countries, disability.

(2) Mobilise: Generate citizen-led data. The majority of existing assessments are administered in schools by teachers, trained enumerators or specialized education professionals. In addition to ignoring out-of-school children, this has also excluded parents, families and community members from assessment processes. A key aspect of PAL Network assessments is to democratize understanding of the state of education among citizens, and so involve them in data collection, analysis and

dissemination processes. This leads to the second step in PAL Network's Theory of Change. This is based on the assumption across PAL Network members that, if citizens are not informed about the scale of the problem based on robust, accessible evidence, then they cannot support the process of identifying and implementing solutions. PAL Network members have therefore identified citizen 'volunteers' who are provided with training to collect robust data, at large scale and low cost.

(3) Analyse: Establish the nature of the problem. Establishing the scale and nature of low levels of learning is a key step for identifying where action needs to be taken to support those children who are furthest behind. To address this, PAL Network members produce analysis of assessment data in ways that are easy to communicate, and use this to engage key stakeholders – including government, civil society, teachers and local communities. However, provision of information alone is unlikely to lead to improve learning outcomes (Banerjee et al. 2008). For this reason, PAL Network members then move to the next stage in the process.

(4) Plan: Design solutions. PAL Network members have used their learning assessment data to identify potential 'solutions' for raising learning outcomes in different ways. In some PAL Network countries, conducting the learning assessment is the first step in the journey towards improving learning outcomes. In other countries, the learning assessment is a standalone process. And in others, they are one of several parallel strategies to encourage citizen engagement with learning outcomes. Wherever member countries fit on this continuum of assessment to action, there is broad agreement across the membership that data on learning outcomes needs to be robust, inclusive of all children, simple to understand and

easy to act upon – whether it is their own organization or others who are taking the actions.

This relates to the fourth step in PAL Network's theory of change. Solutions are expected to be based on relevant and recent data, need to be contextually-relevant and appropriate, respond to the immediate learning needs of the child (based on where they have reached in their learning, not where they expected to be according to the school curriculum) and should be scalable and sustainable. In addition, the inclusive nature of the assessment process is anticipated to help broaden the scope of who is able to have a voice in identifying appropriate interventions aimed at raising learning outcomes.

(5) Act: Implement solutions. The final step in the PAL Network's Theory of Change is the implementation of assessment to action programs. The ultimate change envisaged through the Theory of Change is the acquisition and improvement of foundational learning skills for all children, providing them with the building blocks for future learning. But an important aspect of the implementation of solutions is that each Network member tailors their intervention program according to the opportunities and constraints of their specific context. This is the case even for interventions which seem to be similar in their approach, as for example with 'Teaching at the Right Level', an intervention which entails grouping children according to current ability and using pedagogical approaches tailor to each group's level and which has been implemented in India, Pakistan, Mexico and Senegal (and other PAL Network members). Important differences exist in terms of how each of these Network members work with stakeholder groups in their countries to deliver

Teaching at the Right Level, as in each context there are different stakeholders with different set of skills and motivations, as well as sources of funding, to be able to implement actions. There are also important differences in the adaptation of Teaching at the Right Level, and the use of local resources which vary by country (see Alcott et al., 2018 for more details).

Another difference is in the scale at which these interventions are implemented in each country, as some interventions reach national coverage (for example in India and Pakistan), while others are operating in specific regions or provinces (for example in Senegal and Mexico). For the development of an in-depth theory of change these factors need to be taken into account.

(6) Monitoring, Evaluation, Learning and Sharing: Although there is a tendency for theories of change to follow a linear pathway, the development of learning and sharing amongst PAL Network members highlights the importance of a cyclical process. The dynamic adaptive model of moving from assessment to action implies the need for a flexible and adaptive theory of change. Many of the PAL Network members have therefore established processes for Monitoring, Evaluation (both external and internal), Learning and, importantly, Sharing amongst themselves of the success and challenges of implementing interventions. For these purposes, some PAL Network members collect baseline data, periodically monitor learning outcomes throughout the implementation of the program, and collect data at the end of the program to identify the extent of learning gains over time. Such data are used to provide iterative improvements throughout the assessment and action processes,

thus helping improve the efficacy of the Network's assessment for action work over time.

For example, monitoring and evaluation of interventions in India (such as Read India or Teacher Training programs) have showed significant learning improvements in reading and basic arithmetic for children (Banerji and Chavan, 2016). Community-based activity groups in libraries in India and remedial literacy and numeracy camps in Pakistan have contributed in creating learning environments in the communities that encourages children's sustained learning. Additionally, measurement of learning and citizen mobilisation has been shown to be an effective way to encourage communities and volunteers to understand a problem and participate in actions to solve it. The learning from these actions has been used amongst PAL Network members for the design of actions in other member countries, as well as for informing the global evidence-base on what works to raise learning outcomes.

5. Discussion and conclusion

Citizen-led assessments developed by PAL Network members have played a vital role in highlighting the extremely poor levels of learning in many low and lower-middle income countries, particularly for children from disadvantaged backgrounds. Highlighting the extent of the problem is not enough to combat this 'learning crisis' and to move countries towards the achievement of learning for all children. Clearly aware of this situation, members of the PAL Network have been increasingly devising and implementing actions aimed at tackling the learning crisis in their own

countries, sharing successful experiences for what works and under which circumstances and supporting other members towards the implementation of context specific actions. Through our work in collaboration with PAL Network members, we developed more formal theories of change, identifying similarities and differences in their approaches from moving from assessment to action, and implications for understanding context-specific interventions.

As a starting point, all the countries' theories of change share a common desired outcome of raising learning outcomes. Similarly, a common starting point for their engagement is the desire for robust evidence on learning as a basis for action in education, identified in collaboration with citizens. The assumption is that, unless citizens understand and are informed about the scale of the problem based on robust data and accessible analysis, they will face difficulties in identifying relevant solutions.

While there are these similarities in the beginning and end points of the theory of change, the process and mechanisms through which these are reached varies, as actions are planned in consultation with local stakeholders and adapted to context. Despite these variations, an important aspect of the theory of change for PAL network members is on-going sharing of experiences amongst themselves, allowing for feedback loops and adaptations in the process.

An important question remains whether the variations in actions is due to a priori analysis of the problem and solution through the development of a theory of change, or post hoc development of a theory of change more formally (as in many cases).

Our analysis suggests that, even where formal theories of change have not been developed in advance, they are usually implicitly based on one. So the question arises of whether it ultimately matters whether a country has developed an intricate theory of change in advance? Having an overarching (relatively simple) theory of change, such as the one identified in this paper, is beneficial, but flexibility and on-going adaptation of this is vital. We therefore conclude that there is a pressing need for greater recognition that theories of change need to be seen as flexible and iterative tools, allowing for on-going reflection of contextual realities and sharing of experience in other relevant contexts.

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Mexico: Medición Independiente de Aprendizajes (MIA)
(Parent organisation: CIESAS and the University of Veracruz)[2]

1.

Start date	2014 CLA: Founded in 2014 to implement CLAs, MIA is a project of a university centre specializing in conducting scientific research and evaluating public policy.
Parent organisation type	Civil society and university
Typology of action	Changes in teaching and learning, public awareness and action
Forms of action to improve children's foundational skills	A. Learning interventions (Summer Schools and work in schools B. Community discussion groups; Creating co-creation spaces with local government; Budgeting follow-up to substantive reading and arithmetic policies; Incorporation of new lessons called "learning for life" C. Immediate feedback and training to households
Partnerships	• Civil society organisations • Government (local municipality) • Schools e.g. City Hall of Naolinco, Veracruz; Center for the Integral Development of Women AC - CEDIM, in Sihuapan, municipality of San Andrés Tuxtla; Salud y Genero; Bunko Papalote; Parish Monseñor Guizar and Valencia, in Xalapa, Veracruz
Examples of MELS (Monitoring, Evaluation, Learning, and Sharing)	• Adaption of intervention model in response to local educational context and needs.

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[2] MIA is a project of the Center for Research and Higher Studies in Social Anthropology (CIESAS) and the University of Veracruz, which works to improve education by using evidence to inform and influence public policy. The first MIA survey took place in 2014. More than 2,000 volunteers have participated in assessing children's reading and numeracy skills, the only independent source of information about the learning capacities of children in southeast Mexico.

3.   1. Identify need for data

MIA is a project of the Center for Research and Higher Studies in Social Anthropology (CIESAS) and the University of Veracruz, which works to improve education by using evidence to inform and influence public policy. It seeks to achieve better accountability for learning outcomes by facilitating linkages between community-based organisations, parents, teachers and volunteers.

MIA was founded in 2014 to implement the citizen-led assessments (CLAs) model, which it saw as a means to improve learning, foster involvement and engage citizens with education. By engaging teachers in discussions, the project promotes changing a culture of blaming educators for poor learning outcomes. It also trains parents on how to interact with schools in a non-confrontational way that supports learning.

MIA has worked with a network of actors within state and local organisations concerned with educational quality. Increased involvement and engagement with citizens is a way of promoting ownership of and investment in the assessment process aimed at benefitting children's learning.

4.   2. Generate citizen-led data

In developing its CLA, MIA met representatives from PAL Network member Pratham/ASER India and observed their instruments being used in the field. MIA then developed its own tool with the help of experts from the Institute of Psychology in Education. The initial sampling frame was developed with the Center for Analysis of Opinion at the University of Veracruz.

MIA establishes partnerships with state and local bodies, recruiting volunteers from churches, civil society organisations and educational institutions and involving them in the training, thereby strengthening their sense of ownership and participation. While MIA plans, leads and executes the data collection on education assessment, it is also looking beyond education. In the future, MIA plans to assess other aspects of children and youth wellbeing, such as self-care, proper nutrition and ideas of citizenship.

5.   3. Establish the scale of the problem *and* 4. Stimulate debate on solutions

MIA analyses data internally, producing state-level and local reports. It also evaluates its actions or those of its local partners to generate evidence about what interventions could be scaled up or replicated.

Local commitments to action. MIA holds meetings and workshops to discuss results and solutions at the local and municipal level with community-based organisations, community members and education representatives. The workshops enable training of and technical support to local actors to take place, specifically so parents and volunteers can implement remedial learning activities at home or at a small scale thereby replicating these workshops and amplifying the impact of the initial workshops. Purposely not assigning blame for poor learning outcomes and focusing on solutions and training is an MIA approach aimed at enabling more constructive conversations between parents and schools about ways to improve education.

Sharing local initiatives. MIA produces findings in reports, communications materials and academic papers. MIA establishes partnerships that increase linkages between civic institutions, educational institutions and citizens. It shares results and holds workshops in

which parents and volunteers are supported in implementing remedial learning activities at home or at a small scale.

National report. MIA holds an official launch event at the state level as well as smaller events at local municipalities and educational institutions, bringing together government stakeholders, teachers, parents, and civil society to discuss how to improve education.

6. 5. Implement solutions

MIA has implemented various interventions that it seeks to scale up by collaborating with governments and schools in other regions and through replication of its programmes by CSOs, universities and schools. Current forms of actions include:

A: Summer Schools

MIA developed Summer Schools, a basic education intervention to improve math and reading skills in young as well as older children. The intervention consists of MIA coordinators and local governments signing an agreement to organise the summer sessions. This programme has two main elements:

1. *Out of school*. MIA and its partners designed Summer Schools to improve math and reading skills using various didactic tools such as Circles of Literary Expression, Peer Tutoring and Bancubi.
2. *In schools*. MIA developed interventions in basic education and seeks to collaborate with governments and schools in various regions that want to replicate the models.

B: Replicating interventions

MIA plans to replicate its basic education and summer schools programmes by:

1. Collaborating with governments and schools in other regions seeking to replicate these intervention models.
2. Establishing co-creation channels and acting as a liaison between local governments and MIA coordinators.
3. Helping citizens and community based organisations design interventions
4. Providing technical support, financial resources and volunteers as well as informal support to those wishing to replicate the model.

Nigeria: LEARNigeria
(Parent organisation: TEP LEARNigeria Initiative)[3]

7.

Start date	2009 CLA: LEARNigeria, which stands for Let's Assess, Engage and Report Nigeria, is a consultancy established in 2015 by The Education Partnership (TEP) Centre.
Parent organisation type	Not for-profit education consultancy
Typology of action	Design and implement research programmes in the education sector including assessments
Forms of action to improve children's foundational learning	D. Training and capacity development E. Education sector stakeholder convenings F. Advocacy and community sensitisation towards sector accountability G. Policy design consultation for public sector initiative *Planned:* H. Learning interventions (Teaching At the Right Level)
Partnerships	UK Department for International Development; Open Alliance; National, state and local governments; private sector; community leaders; UNICEF; local NGOs *Planned:* BudgIt; Local community organisations
Examples of MELS (Monitoring, Evaluation, Learning and Sharing)	• During initial phase, LEARNigeria asked for government feedback on survey questions • Following pilot, LEARNigeria hosted community sessions to focus on discussing solutions (TARL) and getting feedback from local stakeholders • Following survey implementation, LEARNigeria held a preliminary national dissemination event with all key stakeholder groups • Scaling up assessment and action to national level

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[3] LEARNigeria, the citizen-led household survey, whose acronym stands for Let's Engage, Assess & Report Nigeria, was set up in 2015 at an education summit. It is a programme of The Education Partnership (TEP) Centre, an education consultancy that specialises in the design, implementation and evaluation of education initiatives across the public, private and non-profit sectors.

8. 1. Identify need for data

LEARNigeria is a programme of The Education Partnership Centre, an education consultancy that specialises in the design, implementation and evaluation of education initiatives across the public, private and non-profit sectors. It seeks to become a reliable evidence source that could facilitate conversations at state and national policy levels.

LEARNigeria has worked to promote government, parent and citizen participation and action to influence policy and practice. It brings together a broad range of stakeholders from government, civil society, and public private partnerships that share in the belief that broad support is key to effecting change in the education system.

TEP Centre established LEARNigeria to conduct learning assessments, which it saw as an opportunity to mine data in order to produce knowledge products. It enlisted governments and NGOs to join its steering committee and promotes partnerships with organisations that make use of data to inform their planning.

9. 2. Generate citizen-led data

In developing its CLA, LEARNigeria received support from PAL Network members – ASER Pakistan and India – and attended a high-level summit in Uganda to meet critical stakeholders.

LEARNigeria developed its own test-tool and survey methodology using frameworks from other PAL members. The National Bureau of Statistics and the National Population Commission determined the enumeration area and LEARNigeria built relationships with a network of partners including corporations and non-profit organisations that were involved in the verification of enumeration areas and the recruitment of volunteers.

10. 3. Establish the scale of the problem

TEP Centre aggregates and analyses the data, producing communication materials and other products.

11. 4. Stimulate debate on solutions

Local commitments to action. LEARNigeria disseminates reports and publications on various forums such as social media and to the wider public.

Sharing local initiatives. LEARNigeria documents and shares its data with other participating organisations, including one that was subsequently motivated to form a network of like-minded civil society and private actors that wanted to use the data to work on educational initiatives.

National report. LEARNigeria holds a national education summit, bringing together critical stakeholders to discuss innovation in the Nigerian education system.

12. 5. Implement solutions

Since 2016, TEP Centre has continued with its innovation work that started at the Nigerian summit a year earlier as well as working as part of a coalition of NGOs, private sector and government. Current and planned forms of action include mining data to produce knowledge products, such as building a tool kit. More partnerships are possible because of data collection and the ability to communicate that data where evidence is needed. In addition, other organisations can make use of the data to inform their planning.

A: Support (technical) to Foundation

TEP Centre provides technical support for Adopt-A-School initiative of the Oando Foundation by analysing project cycle management in 28 public schools.

B: Volunteer Teachers to community schools

LEARNigeria volunteers working with state officials to provide volunteer teachers in community schools. This remedial support programme not only improves teaching quality but also provides evidence of the quality of learning in the community.

C: Support (with expertise) public sector initiatives

TEP Centre provides policy design consulting to the public sector. These include:

5. Assessment of a four-year, $95 million project partnership between state government and the World Bank project aimed at improving the quality of teaching and learning in secondary schools.

D: Teach At the Right Level (TARL)

TEP/LEARNigeria is developing an initiative to implement TARL modules.

From assessment to action: Development of Theories of Change

13.

Start date	Action: 2000 CLA: Idara-e-Taleem-o-Aahi (ITA) is a public trust that established ASER Pakistan in 2008 to assess all children between age 5 and 16 in reading and arithmetic.
Parent organisation type	Public Trust; Civil Society
Typology of action	Changes in teaching and learning; pedagogical approaches; public awareness and action campaigns; ECCD investments
Forms of action to improve children's foundational learning	I. Learning interventions (both in and out of school) Chalo Parho Barho (Let's Read & Grow) Accelerated Learning Programme Working with adolescent girls (9-19) through accelerated learning programs J. Children's Literature Festival (CLF) K. Early Childhood Education L. Immediate feedback to households/schools
Partnerships	Civil society organisations, government, corporate and development partners
Examples of MELS (Monitoring, Evaluation, Learning and Sharing)	• ITA/ASER Pakistan works with citizens to promote evidence-based advocacy for educational improvement.

14. 1. Identify need for data

Idara-e-Taleem-o-Agahi (ITA) or the Centre of Education and Consciousness is a Public Trust working to promote and improve education in Pakistan, which it deems vital to human evolution.

ITA established ASER Pakistan in 2008. Since adopting citizen-led assessments (CLAs), ASER Pakistan has sought to promote evidence-based advocacy for educational improvement. It mobilises resources and influences educational public policy by involving citizens and communities in the process of gathering data on learning outcomes of in-school and out-of-school children and facilitating linkages between citizens, civil society and government.

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[4] Parent organisation Idara-e-Taleem-o-Agahi (ITA) or the Centre of Education and Consciousness is a Public Trust working to promote and improve education in Pakistan. Established in 2000, ITA has grown from a small organisation to one that has a nation-wide presence with over 200 staff and 5000 volunteers in 29 districts across Pakistan. The trust works with 13 international partners and reaches an estimated two million people. Established in 2008, ASER Pakistan is facilitated by the South Asian Forum for Educational Development (SAFED).

In developing its CLA, ITA's founder visited ASER India to see first hand that the test-tool could work in the Pakistani context. ASER Pakistan has worked with civil society and public sector partners to pursue universal access and standard setting in education. Its CLAs fill an evidence gap that facilitates local citizen-provider interactions and discussions at the national policy level.

15. 2. Generate citizen-led data

ASER Pakistan identifies partners to help implement its household-based survey by developing relationships with government authorities at the national, provincial and district levels as well as with national and local civil society organisations.
ASER Pakistan holds an annual national workshop for new and old partners, some of which consistently join the survey effort each year. Volunteer assessors are trained and data is collected, processed and verified by ASER staff before it is entered into a database and made available publicly.

16. 3. Establish the scale of the problem

ASER Pakistan analyses data internally, producing national and state level reports as well as online communications, policy briefs, district report cards, narratives and case studies. The media reports on the survey findings and ASER Pakistan conducts additional research on any issues raised in the findings, such as about a household's voter registration, social safety nets, computer and mobile phone usage, use of SMS or WhatsApp and the presence of solar panels. At the school level, additional information was collected on the availability of solar panels or smart boards.
ASER Pakistan also conducts national advocacy and mobilisation campaigns aimed at spurring political leaders as well as citizens into action. One campaign worked with civil society organisations to enlist politicians to go door to door for discussions on education quality. Two other campaigns promoting youth activism in education, collected millions of children's signatures, which were then presented to world leaders at the United Nations.

17. 4. Stimulate debate on solutions

Local commitments to action. ASER Pakistan holds meetings at both the province and district levels to discuss findings, raise awareness and spur citizen action to implement change. The survey's release is timed to be included in budgetary decision-making processes at the national, provincial and district levels and in order to secure commitments for collaboration.
Sharing local initiatives. As part of its education advocacy, ASER Pakistan disseminates its findings at communal and town-hall meetings to a wider public and a variety of audiences, including civil society organisations, teachers, community members, local leaders and district education representatives. ASER Pakistan hosts provincial launch events where media and other leaders in civil society and politics are invited to discuss findings and how to implement change that improves educational quality.
National report. ASER Pakistan holds a national report launch, bringing together government, media, teachers, parents, children and civil society organisations to discuss how to improve education. Mothers and women are especially included in the process to ensure gender-balanced participation. ASER Pakistan has proposed enlisting experts to devise initiatives aimed at improving educational outcomes.

18. 5. Implement solutions

ASER Pakistan proposes to help the government scale up programmes that work as well as create public-private partnerships to further efforts to improve learning outcomes. ASER Pakistan has already developed several initiatives to support children's learning and conducted various forms of action, These include:

A: Reading Camp: Let's Learn and Grow

ASER Pakistan borrows elements from Pratham's Read India programme and conducts a remedial/accelerated learning intervention through learning camps for out-of-school and at-risk-of-dropping-out children. Elements of the programme include:

3. *Out of school.* Support teachers and district officials using TARL programmes and CAMaL methodologies in areas where camps are run for out-of-school and at-risk-of-dropping-out children.
4. *In schools.* Provide school improvement and teacher learning materials to conduct TARL and CAMaL activities.

B: Children's Literature Festival

ASER Pakistan partners with like-minded stakeholders in various sectors (i.e. publishers, civil society, business) to offer a programme to help children explore their critical thinking skills. The festivals, which are held across the country, allow organisers to:

6. Design culturally relevant events in which teachers and parents can participate and also learn
7. Explore large public spaces for learning

C: Early Childhood Education

Early Childhood Education remains a top priority for policy makers. ASER Pakistan established a programme to help under-privileged children transition from pre-primary to primary education. The initiative provides children with early support in order mitigate other factors that might contribute to lower learning levels.

D: Immediate feedback to households

- Volunteers are trained and provide immediate feedback to parents on their children's learning levels.

From assessment to action: Development of Theories of Change

(Parent organisation: LARTES - Research Laboratory for Social and Economic Transformation)[5]

Start date	2011
	CLA: Jàngandoo is a programme of LARTES, located within the Fundamental Institute of Black Africa at Cheikh Anta Diop University. The Jàngandoo survey has been conducted every year in every region of Senegal since 2013.
Parent organisation type	Non-governmental organisation; research organisation; university
Typology of action	Social mobilization; evaluation; remediation purpose; Objective: Changes in teaching and learning; community engagement and volunteerism
Forms of action to improve children's foundational skills Partnerships	M. Set up remediation programme N. Sharing results at the national level (Ministry of Education and development partners, research institutions in education, NGOs) and local level (departments, local authorities) O. Sharing information with households
Examples of MELS (Monitoring, Evaluation, Learning and Sharing)	Hewlett; UNICEF; Aide et Action; Dubai Care; NYU • Jàngandoo contracts independent "Focal Points" to monitor its impact at the local level and to evaluate the performance of its network of NGO partners. • With evaluations, Jàngandoo monitors its own impact on public discourse and produces a collection of perceptible effects and summary of assessments at the end of the programme • Interviews and focus groups are organised with all categories of actors

19. 1. Identify need for data

LARTES or the Research Laboratory for Social and Economic Transformation is a non-governmental think-tank within the Fundamental Institute of Black Africa at Cheikh Anta Diop University working to improve educational quality. It seeks to achieve this by mobilising stakeholders from national and local government authorities to parent associations, trade unions and NGO's.

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[5] LARTES or the Research Laboratory for Social and Economic Transformation is a non-governmental think-tank within the Fundamental Institute of Black Africa at Cheikh Anta Diop University is the parent organisation of Jàngandoo. LARTES, which works to improve educational quality in Senegal, has three teams working on the educational measurement survey that began with a pilot in 2012 and assesses children between the ages of 6 and 18.

LARTES founded Jàngandoo in 2011 to conduct citizen-led assessments (CLAs), which it saw as a means of providing reliable measures of children's learning outcomes. In addition to filling an evidence gap that could inform households and schools within the social context, Jàngandoo saw CLAs as the foundation for an action plan that could facilitate conversations among decision makers at the national and local levels. The survey assesses all children between age 6 and 18 and remains the only current countrywide source of national annual information on children's ability to read and do basic arithmetic.

20. 2. Generate citizen-led data

LARTES's pedagogical team developed its testing tool and a task force undertakes an annual review of the tool's cultural relevance. Jàngandoo/LARTES worked with the National Association of Statistics and Demography to build its sampling frame, which was initially developed in 2013 using official government census data. LARTES updates demographic changes annually.

LARTES enlists partner organisations to recruit and train volunteers as well as collect data. The partner NGO appoints a community supervisor to oversee implementation, and data reporting. Since 2015, computers have been used in the data collection process.   One of LARTES's major challenges is expanding its interventions nationally.

21. 3. Establish the scale of the problem

Jàngandoo aggregates, analyses and uploads the data online as well as develops communications materials such as a final national report and a region-wide report. Proposed actions include providing additional support for potential users of the database, such as education inspectorates and local authorities.

22. 4. Stimulate debate on solutions

Local commitments to action. Jàngandoo holds meetings and workshops with parents, teachers, school administrators and local government officials. Jàngandoo also works with government departments to discuss policy roadmaps and action plans.
National report. LARTES holds formal report launches, bringing together the Minister for Education, local administrators, partner government NGOs and representatives from partner government departments to discuss how to improve education. It uses print, radio, and television to share its findings with a wider audience.
Sharing initiatives and engaging with debates internationally. Jàngandoo disseminates its findings in coordination with the PAL Network and during international conferences.

23. 5. Implement solutions

Jàngandoo operates an in-school remedial intervention at the primary level and has plans to expand to the secondary level. Jàngandoo focuses the programme in schools and in communities, providing training to remedial teachers and focusing resources on 7- and 8-year-old children. The pilot phase showed an improvement in the performance of children who took remediation courses.

A: Remedial Intervention

> Jàngandoo operates an in-school remedial programme in partnership with UNICEF and PAJE (Plateforme d'accompagnement des Jeunes de Senegal). Formally known as *Keppaaru Jàngandoo* and inspired by ASER India's Teaching at the Right Level (TARL) model, the intervention, now called the Programme for the Betterment of Reading and Geometry, helps identify children with the most urgent educational needs and offers them remedial help. Teachers use computers to aid teaching and local authorities provide textbooks. The remedial programmes has the following elements:

5. *Out of School.* Support local authorities in identifying children with the greatest need and providing trained remedial teachers to their community
6. *In school.* Support local authorities in providing remedial teachers and experts to run TARL-inspired programmes with special attention paid to cultural relevance. This includes, for example, the use of more concrete and context-specific examples in comparison to the frequently abstract examples used in the standard curriculum. A majority of resources is focused on young children, i.e. age 7-8.

B: Dubai Care initiative

Jàngandoo has received funding to work in three new regions of the country targeting 50,000 children and to replicate its remedial intervention model but some adjustments will need to be made based on the region. These adjustments include:

8. Focusing the programmes to work solely in schools rather than communities
9. Providing their own training to volunteers working on the interventions
10. Focusing a majority (80%) of resources on children in the first school grade, i.e. age 7 – 8.

C: Immediate feedback to households

- Volunteers provide feedback to parents who are then motivated to take action (i.e. speak with school, support students). In turn, schools are better able to engage with parents to support student learning.

Endnotes

[i] Children living in nomadic or travelling families, displaced or refugee children, children in care institutions and children's homes, children attending boarding schools, and children in hospital may not be included in the sample.