

Applying behavioral science to help more children learn

A practical guide for implementers of
foundational literacy and numeracy programs

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About ideas42



ideas42 is a nonprofit that applies insights from behavioral science—the study of how people make decisions and act in the real world—to improve lives and drive social change. Working globally, we reinvent the practices of institutions, and create more effective products and policies that can be scaled for maximum impact.

We also teach others, ultimately striving for a future where the universal application of behavioral science powers a world with optimal health, equitable wealth, and environments and systems that are sustainable and just for all.

For the past 15 years, we’ve been at the forefront of applying behavioral science to create a more equitable world. And as we’ve developed our expertise, we’ve helped to define an entire field. Our efforts have so far extended to 50+ countries as we’ve partnered with hundreds of governments, foundations, NGOs, private sector entities, and philanthropic leaders.

We want to hear from you—contact us at globaldev@ideas42.org with questions. Visit ideas42.org/global-development and follow [@ideas42](https://twitter.com/ideas42) on X (formerly Twitter) to learn more about our work.

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Introduction

The global learning crisis—where children leave school without acquiring foundational reading, writing, and math skills—is no longer news. This crisis is particularly acute in low- and middle-income countries, where [seven out of ten children](#) are unable to comprehend a simple paragraph or perform basic arithmetic at age 10. Without these foundational literacy and numeracy (FLN) skills, children are [unable to acquire the more complex skills](#) needed to secure their economic well-being, and countries cannot realize their economic potential.

FLN implementers are aware of this learning gap, as well as [cost-effective solutions](#) to address it. However, despite [growing global spending](#) to improve learning outcomes, initiatives designed to improve foundational skills fall short. This is because, despite strong political buy-in, rigorous training programs, and updated instructional materials, educators’ *actual use of materials and application of practices* that can improve FLN outcomes can often be quite limited.

Behavioral science—the study of how people make decisions, form intentions, and act—can help educators implement proven practices. Research shows that seemingly small features of the context surrounding people’s decisions and actions can have an outsized impact on their behavior. [At ideas42, we have studied how context can impact teacher decision-making in the classroom.](#) For example, contextual features like classroom organization, the amount of new information, and the way it is presented, can all affect teachers’ ability to teach a lesson.

This practical guide to applying behavioral science follows ideas42’s behavioral design approach, which has been used for over 15 years to design solutions to real-world challenges. It also draws on learnings from a cohort of seven organizations—Associates in Research and Education for Development, Busara, Center for Social and Behaviour Change at Ashoka University, Central Square Foundation, Teaching at the Right Level Africa, VVOB - Education for Development, and Youth Impact—who recently applied behavioral science to improve the uptake of pedagogical best practices in FLN programs in sub-Saharan Africa and India.

➤ **Who is this guide for?**

This guide is for anyone who is designing and implementing programs to improve FLN skills in low- and middle-income countries. We hope they will find it useful in identifying impact-limiting behavioral challenges within their programs, and designing solutions tailored to their needs.

➤ **How to use this guide**

This guide outlines 10 sequential steps for applying behavioral science to FLN programs, including a “How-To” workbook at the end of the document with interactive exercises to help readers put these learnings into practice. You can jump to each section of the “How-To” workbook throughout the guide to put your learnings into practice by clicking on the  **Use Activity X to practice this step** located at the end of each step.

A checklist of behavioral design steps

This checklist summarizes the 10 steps required to apply behavioral design to FLN programs. It is followed by a detailed explanation of each step.

UNDERSTAND THE BEHAVIORAL CHALLENGE

1. Start with the basics

Identify the key challenges holding the program from achieving its desired outcomes

2. Identify behavioral challenges

Highlight challenges driven by the behavior of educational actors, such as teachers, supervisors, school leaders, etc.

3. Prioritize a behavioral challenge to focus on

Narrow in on a behavior that is preventing the program from meeting its FLN goals, has scope for change and can be quantified or easily observed

4. Understand why the behavioral challenge exists

Identify features of the context (*or behavioral barriers*) that could be preventing educational actors from behaving in line with practices that would maximize learner's FLN skills

ADDRESS THE BEHAVIORAL CHALLENGE

5. Brainstorm potential solutions

Consider a number of solutions that directly address these barriers
Prioritize solutions with the highest feasibility and potential to improve foundational learning outcomes

6. Develop and refine promising solutions

Develop the prioritized solutions and refine them until they can be integrated in the program

7. Gather feedback through user testing

Collect feedback about the solution from intended users, like teachers
Apply this feedback to improve the solution until the final solution meets user needs

ROLL OUT THE BEHAVIORAL SOLUTION

8. Develop a testing approach

Select an approach to test the effectiveness of the behavioral solution
Start implementing the behavioral solution in line with the requirements of the testing approach

9. Test the impact of your solution

Plan how data will be collected and analyzed
Proceed with data collection and analysis
If the testing results indicate room to improve the behavioral solution, reconsider or refine the solution

10. Explore next steps

Take stock of learnings and use them to inform next steps
Consider sharing lessons with other FLN implementers and stakeholders

Understand the Behavioral Challenge

Identify a behavioral challenge to focus on

1 Start with the basics

As you work to identify behavioral challenges, keep your program's goals front and center. Start by creating a list of all the behaviors required for the program to succeed.

For example:

1. Develop updated teaching materials
2. Teachers show up to teacher training
3. Teachers receive updated teaching materials
4. Teachers show up to class on time
5. Teachers bring their new materials from training
6. Teachers use the new teaching materials in the classroom
7. ...

Examine this list critically. Are there specific aspects of the program that are not having their desired effect? Are there specific behaviors not happening? Are these challenges impacting the program negatively? Use any data available about the program to help you answer these questions. Data collected for administrative or assessment purposes can be very helpful in understanding what is working well, and what can be improved. Throughout this process, try to talk to individuals working on distinct aspects of the program to make sure you have a holistic perspective of the existing challenges.

IN PRACTICE *What does this process look like?*

Funda Wandé, a South African organization running an FLN program, provided teachers with helpful materials, including updated teacher guides. However, they found that not all teachers were using these materials. This created a challenge: the materials would not improve learning outcomes unless teachers incorporated them into their lessons. As a result, Funda Wandé prioritized addressing the challenge of increasing teachers' use of the provided materials to improve learner outcomes.

2 Identify behavioral challenges

After identifying all potential challenges in your program, identify which of them rely on people's behavior. Specifically, identify challenges that stem from specific educational actors either (1) doing something to impede the program's objectives, or (2) not doing something that would further the program's objectives. Then, state those challenges clearly using the following format:

IN PRACTICE <i>Behavioral challenges developed by FLN implementers</i>	
WHO is doing/not doing WHAT BEHAVIOR?	We want them to do/not do WHAT BEHAVIOR?
▶ Teachers do not implement the classroom activities outlined in their teacher guide effectively.	▶ We want teachers to implement the classroom activities outlined in our program's teacher guide effectively.
▶ Teachers do not practice TaRL in their classrooms a year after receiving their initial training.	▶ We want teachers, after receiving training in the TaRL methodology, to maintain this practice in their classrooms a year after receiving the initial training.
▶ Teachers' supervisors do not provide high-quality verbal and written feedback to teachers during classroom observations.	▶ We want supervisors to provide high-quality verbal and written feedback to teachers during their classroom observations.
▶ District officials do not use our dashboard to identify schools with low FLN outcomes.	▶ We want district officials to use our dashboard to identify schools with low FLN outcomes and develop targeted strategies to help these schools improve.



Tip:

When stating a behavioral challenge, make sure that it is free of embedded assumptions about *why* the target actor may or may not be engaging in the desired behavior. Building on the first example outlined above:

- ✗ Teachers do not want to put in effort to implement the classroom activities in our program's teacher guide effectively.
- ✗ Teachers do not think it is important to implement the classroom activities in our program's teacher guide effectively.
- ✓ Teachers do not implement the classroom activities in our program's teacher guide effectively.



Use **Activity A** to practice this step.

3 Prioritize a behavioral challenge to focus on

Prioritize among the selected behavioral challenges by making sure they are meaningful, moveable, and measurable. This “3M” approach can help select a behavioral challenge that is important and feasible to change through the behavioral approach.

3M Criteria

Meaningful: Would shifting the target behavior help us achieve the program’s objectives?

- ▶ What does the evidence say about the target behavior’s link to these objectives?
- ▶ What do experts tell us about the relevance of the target behavior?
- ▶ What does our own experience suggest about the target behavior?

Moveable: Does the target behavior have scope for change?

- ▶ How wide is the gap between where we are now and where we want to be?
- ▶ Is shifting the target behavior possible?
- ▶ How costly or difficult would it be to shift this particular target behavior?

Measurable: Can we quantify and observe the target behavior?

- ▶ Is the target behavior already being recorded in a way we can access?
- ▶ Are there easy ways we can observe the target behavior?
- ▶ If not, can we find other ways to reliably estimate the target behavior?

IN PRACTICE Applying this framework

Evaluate each behavioral challenge using the 3M criteria (rated as high, medium, or low). If all three criteria are rated high, proceed with selecting that challenge. However, if any criterion is rated medium or low and the issue cannot be resolved, consider prioritizing a different challenge or prioritizing the challenge with the highest overall rating.

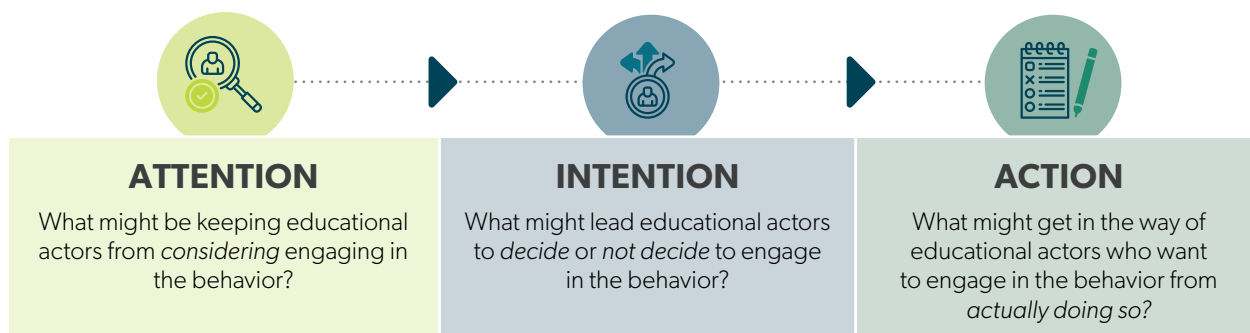
Behavioral Challenge	Meaningful	Moveable	Measurable	Select
We want teachers to implement the classroom activities outlined in our program’s teacher guide effectively.	High. Evidence shows this is strongly linked to improvement in FLN outcomes.	Medium. Initial research indicates that most teachers are already doing this, so might not lead to impact.	Medium. Requires collection of new data, and we don’t have the budget available to collect this data.	✓
We want teachers, after receiving training in the TaRL methodology, to maintain this practice in their classrooms a year after receiving the initial training.	High. Evidence shows this is strongly linked to improvement in FLN outcomes.	High. Initial research indicates that only 50% of teachers do this, so there is room for improvement.	High. This could be measured during a year-end assessment that already takes place.	✓
We want district officials to use our dashboard to identify schools with low FLN outcomes and develop targeted strategies to help these schools improve.	Medium. Unclear which “targeted strategies” district officials could use to improve school performance.	Low. District officials have been resistant to this in the past, so may not be able to shift behavior.	Medium. Easy to measure use of dashboard, but hard to measure what happens in schools as a consequence.	✗

 Use **Activity B** to practice this step.

4 Understand why the behavioral challenge exists

The next step is to identify *behavioral barriers*—features of the context or environment that prevent actors from behaving as the program requires.

Behavioral barriers can be organized by three stages of people’s decision-making process:



IN PRACTICE *It's okay (and encouraged!) to iterate throughout the process.*

It is never too late to revisit the behavioral challenge you selected earlier in the process. In fact, we encourage updating your selected challenge based on new information that arises through your research. For example, Association in Research and Education for Development (ARED) and ideas42 worked with a [program in Senegal](#) that trained public school teachers to use structured pedagogy for smaller levelled groups to improve FLN outcomes for second and third graders in after-school remediation hours. Initially, the defined behavioral challenge was, “We want teachers to *effectively use this new methodology* in after-school remediation classes.” Classroom observations, however, revealed that teachers specifically had difficulty when tasked with supporting multiple groups of learners in the same classroom—especially those learners who were supposed to be studying more independently, also known as “autonomous groups.” As a result, the behavioral challenge was revised to, “We want teachers to *increase the amount and quality of support provided to autonomous groups* in the after-school remediation classes.” Further specifying the target behavior in this way allowed program implementers to address a more meaningful, moveable, and measurable challenge.

Example: *Common behavioral barriers faced by educational actors.*

A cohort of organizations used a behavioral science approach to improve the uptake of pedagogical best practices by teachers in five distinct FLN programs in sub-Saharan Africa and India. Qualitative and quantitative research with teachers participating in these programs yielded [eight common behavioral barriers](#). Although these barriers were specific to teachers and to the uptake of new teaching methods and materials, the same barriers are also likely to apply to other educational actors when seeking to adopt new practices to improve FLN outcomes.

**ATTENTION: What might be keeping teachers from considering utilizing new practices or materials in the first place, or remembering to do so consistently?**

1. **Too much to do:** Teachers and other educational actors have many things to do and limited time.
2. **Not top of mind:** Teachers and other educational actors can only pay attention to a limited amount of information.

**INTENTION:****What might lead teachers to decide *not* to utilize new practices or materials?**

3. **Change is hard:** Shifting away from prior practices can be difficult.
4. **Misperceptions of value:** Teachers and other educational actors may not think the adoption of new practices is worth the added effort.
5. **Can't do this:** Teachers and other educational actors have low confidence in their ability to execute new practices.
6. **It's outside of my control:** Teachers and other educational actors can believe that improving learner outcomes is not in their power.

**ACTION: What might get in the way of teachers who want to adopt new practices or materials from actually doing so?**

7. **Too complicated:** New practices can be difficult to use or implement.
8. **Things keep getting in the way:** Small obstacles can impede adoption of new practices. For example, teachers may not show up to trainings if they are scheduled at an inconvenient time or place.

This list provides a good starting place to consider common behavioral barriers in FLN programs. This list is not exhaustive, and other behavioral barriers may contribute to the challenge. Use quantitative and qualitative research to assess whether these behavioral barriers exist in your particular context and uncover any additional behavioral barriers that could be creating or exacerbating the challenge. In-depth interviews, focus groups with educational actors in the program, and in-person classroom observations are all useful tools to gather evidence about the most pressing barriers contributing to the challenge.



Use Activity C to practice this step.

Address the Behavioral Challenge

Design and user test solutions that address the identified behavioral barriers

5 Brainstorm potential solutions

The next phase of the behavioral design process focuses on designing solutions that directly address the behavioral barriers identified earlier.

Begin by brainstorming a wide range of potential solutions, keeping the identified barriers top of mind. For example, if the barrier teachers face in adopting new practices is that they are too complicated, one solution might be to summarize the new practices in checklists that include clear and easy to follow steps. There will often be more than one approach to tackling any barrier, and a large number of diverse ideas will ultimately result in better ideas. Keep generating potential solutions until there are multiple solutions to address each core challenge!

 **Tip:** Often, we add components to existing programs, making them more complicated. Instead, consider removing unnecessary parts of a program or enhancing current features. If adding a component, embed it into existing processes or materials to improve adoption.

Once you have a list of potential design ideas, evaluate each of them using the three criteria below:

- ▶ **Feasibility:** What resources (budget, staff time, etc.) are required to develop and implement the solution? Are there existing channels through which the solution can be implemented?
- ▶ **Impact potential:** How likely is the solution to further the overall goal of improving FLN outcomes?
- ▶ **Behaviorality:** Is the solution addressing the behavioral barriers identified during diagnosis? How likely is the solution going to address the challenge we are trying to solve?

Prioritize solutions that are feasible to implement, have high impact potential, and are directly addressing the behavioral barriers identified during diagnosis for further development. Also, make sure that you include input from key stakeholders (e.g., government officials, school leaders, etc.) early to improve the quality and feasibility of solutions, and increase the likelihood of them being used as planned.

IN PRACTICE *Evaluating feasibility*

When evaluating a solution, consider whether the intended implementers will have the willingness and capacity to deliver it well. For example, Funda Wande worked on a program to improve teacher use of high-quality teacher and learner support materials in which coaches had to deliver the prioritized solutions, but their understanding of the value of these solutions and capacity to implement them was limited. The solution could only be successfully implemented because Funda Wande worked closely with coaches to build their understanding of the solutions, secure their buy-in, and support implementation.

 Use **Activity D** and **Activity E** to practice this step.

6 Develop and refine promising solutions

Good design is iterative. Start with simple representations of your brainstormed solutions, such as basic descriptions or sketches that help visualize your ideas. Use these early versions to facilitate discussion and collect feedback. Refine the initial ideas based on this input and add more detail and sophistication with each iteration, eventually leading to the final solution.

For example, the solution of a simplified teacher guide might start out by describing a checklist summarizing the key activities in the guide. Then, it might evolve into descriptions of a series of flashcards. Next, there could be basic sketches of a simpler, document-based guide in response to feedback from experts in the context that flashcards would not be feasible. These sketches may become more detailed until finally, the conventional teacher guide is redesigned into a shorter, easier to read document.

Developing multiple versions of the same solution can reveal the strengths and weaknesses of each approach. In the example above, trying to imagine the solution as flashcards could inform the design of the more conventional, document-based guide by offering insights on how to make guides accessible, engaging, and cost effective. In this way, each iteration builds towards a more sophisticated solution.

IN PRACTICE

Co-designing solutions with stakeholders who have different perspectives on the challenge

Busara, VVoB, and TaRL Africa collaborated on “Catch-Up,” a modified version of a Teaching at the Right Level (TaRL) program in Zambia. Teachers participating in two co-design workshops built out solutions to promote sustained and high-quality use of the TaRL approach. In the first workshop, teachers helped build early prototypes of the solution. In the second workshop, stakeholders from the Ministry of Education helped refine and improve the solution. Including teachers and government officials—those responsible for using and administering the solution—in the design process made the solution more likely to be impactful and scalable.

Tip:

At every step of the design process, take a step back and make sure your designs are directly addressing the behavioral barriers identified. Remember that even the most innovative and fancy designs might not be impactful if they are not addressing the barriers that are creating or exacerbating the challenge that you are looking to solve.

Tip:

As you are designing a solution for a program, think about how it can fit into existing program materials and processes, rather than creating something new or additional. This will simplify and streamline tasks without creating additional work for intended users, most of whom—the education actors tasked with administering most FLN programs—are already overburdened.

 **Use Activity F to practice this step.**

Illustrative examples of behavioral solutions that cohort members developed to address some of the specific behavioral barriers identified in their programs.

Note: These solutions were developed for the specific context in which they were implemented, with various degrees of success, and may not be practical or effective elsewhere. These examples are meant to show how solutions should be designed to target identified barriers, rather than showcase these as tested solutions that should be implemented in different contexts.

Country	Behavioral challenge	Behavioral barriers identified	Behavioral solution
Senegal 	Teachers do not spend enough time with and provide quality support to all learners during remediation classes	- Teachers prioritize the upskilling of one group and the needs of other groups are overlooked. - Teachers assume that if learners are quiet, they are on task. - Teachers don't have a rule of thumb for when to rotate between groups. - Teachers face obstacles that impede their ability to provide support to all groups.	Additional training module and commitment contract: A classroom management training with role modeling and a commitment exercise to help teachers support and engage all learner groups effectively. Heuristics checklist and reminders: A concise checklist and visual reminders in the teacher guide to help teachers set up and manage the classroom and allocate time effectively among groups. Ndaw Wune Promise: A catchy chant recited at the start of class to set behavioral goals and expectations for both teachers and learners.
Zambia 	Teachers do not deliver TaRL with consistent quality	- Teachers are less confident teaching numeracy than they are teaching literacy. - Teachers do not take responsibility for learning outcomes, often attributing poor learning to factors outside their control like learner absenteeism and lack of parental involvement	Recognition and timely feedback: Improve teacher confidence by recognizing them and giving them timely feedback on their performance. More information for teachers: Increase teachers' effort and sense of control over learner outcomes by giving them comprehensive instructions for implementing TaRL through teacher manuals and flashcards.
South Africa 	Teachers do not consistently implement the activities in their teacher and learner guides	- Using the guide is not top-of-mind, so teachers may not even consider using it. - Planning ahead for specific weeks and lessons doesn't feel necessary and teachers do not have time for it. - Implementing the guide may feel costly and risky. - The complexity of the guide makes it feel unrealistic. - Even if teachers appreciate the guide, they default to their regular approach.	One-day supplementary training session: Emphasize improvements in learner learning through use of the teacher guide, and help teachers find time to prepare for their lessons using the teacher guide. Reminders: Regular coaching visits each term, reminding teachers to dedicate time for lesson planning and preparation.
India 	Teacher use of effective teaching practices and program materials such as teacher guides is low	- Teachers want to stick to their old teaching methods - Teachers perceive a high initial cost of adoption - Teachers found the teacher guides too text-heavy and detailed - Teachers have limited cognitive bandwidth	WhatsApp chatbot: A conversational chatbot for teachers, giving them textual and audio summaries of daily lesson plans from the teacher guide. The chatbot incorporated reminders to adopt lesson plans and rewards for engagement. Micro-practice videos: Bite-sized videos of a relatable teacher character from their context implementing effective teaching practices. These videos, along with testimonials from experienced teachers recommending the practice, were shared on WhatsApp group of peers. The micro-practice videos also incorporated reminders and rewards.

7 Gather feedback through user testing

The behavioral solution is developed, but still not ready for implementation. Before integrating the solution in program materials, it is critical to **user-test** it. User testing—collecting feedback about the solution from its intended users—is a great opportunity to assess whether the intervention fits users’ needs and is working in the way it was designed.

Ideally, when providing their feedback, users should be able to interact with the proposed solution *as they would in real life*. Especially in cases where developing the final design is costly and time consuming, it may be better to err on the side of collecting more feedback on rough prototypes than to put off collecting feedback until a more polished prototype is ready. In these cases, designers should be creative in developing prototypes that give users the experience of testing the proposed solution.

IN PRACTICE

Refining designs and their implementation through user feedback and engagement

In Uttar Pradesh, India, CSF and CSBC worked on developing a chatbot to help teachers use teaching guides effectively. They started by collecting teachers’ feedback on a low-fidelity prototype of the chatbot, including the chatbot concept with some visual examples. CSF and CSBC learned that teachers were interested in using the teaching guide but found it overly technical and inaccessible. Teachers also shared that converting the teaching guide daily lesson plans into textual summaries and audio notes would make the chatbot useful to them. These features were incorporated into the final prototype of the chatbot.

CSF and CSBC continued monitoring teacher engagement with the chatbot after it was implemented. They realized that teachers were struggling to use the chatbot correctly. As a result, CSF and CSBC developed a detailed tutorial video to help teachers learn to use the chatbot at their own pace.

Roll Out the Behavioral Solution

Implement the behavioral solution and evaluate its effectiveness

8 Develop a testing approach

Once a solution is ready to implement, programs should consider implementing it in a way that generates evidence the solution is working as envisioned. Testing solutions in this way can yield useful insights about their strengths and weaknesses. Programs often test solutions to understand:

- ▶ How a solution’s design or implementation could be adjusted to meet people’s needs;
- ▶ How effective a solution is, or which of several solutions are most effective; and
- ▶ Whether a solution is worth the money, time, and effort it requires.

Some testing approaches may be better suited to answering certain types of questions than others. Each approach has its strengths and weaknesses, so programs should select a testing approach that is aligned with their learning needs and constraints such as time and resources. The table below describes questions that programs commonly have, and some of the testing methods that might help answer those questions.

i Experimental vs. non-experimental methods:

Experimental testing approaches require sorting two similar sets of participants into “treatment” groups (who receive the treatment or designed solution) and “comparison” groups (who do not). Comparing their outcomes identifies the solution’s impact.

Looking to measure	Suggested methodology	Type of method
The experience of participants with the behavioral solutions	Interviews or focus groups	Non-experimental
How participants interact with the behavioral solutions	Observations	
How participants who received the behavioral solutions improved after the intervention was completed	Pre-post (Before and after)	Quasi-experimental
The difference in outcomes between participants who received the behavioral solutions and non-participants	Simple difference	
The relative change in outcomes for participants who received the behavioral solutions compared to non-participants	Difference in difference	
The difference between individuals who received the behavioral solutions and similar individuals who did not	Statistical matching	
The causal effect of the behavioral solutions	Randomized evaluation	Experimental

Adapted from: “Impact Evaluation Methods,” J-PAL. More detailed guidance can be accessed in [this guide](#).

When making a selection, it's important to consider:

- ▶ **Rigor:** Experimental methods like randomized evaluations offer the strongest evidence because they isolate the impact of a specific treatment, such as a behavioral solution. In other words, they establish *causality*—any impact is understood to be caused by the treatment alone, rather than any external factor.
- ▶ **Effort:** The most rigorous methods can also be more costly and challenging to implement, for example, by requiring larger sample populations, longer time periods, or more data.

Programs that are new to testing should seek expert help in combining different testing methods to find the balance of rigour and effort that best suits the program's needs.

IN PRACTICE **Avoid contamination**

In an experiment, contamination results when the effect of the solution cannot be isolated to the treatment group, but “spills over” to the comparison group. To reduce this risk, group assignment is best completed at higher levels. In Senegal, instead of sorting learners within a classroom or even whole classrooms into different groups, ARED reduced the risk of contamination by assigning all classrooms overseen by a given supervisor to the treatment or comparison group. Programs can also consider sorting entire schools or districts into a single group, to be compared with learners in other schools or districts.



Tips for aligning implementation efforts with the selected testing approach:

1. Explain the testing approach to all program and evaluation stakeholders.
2. Secure any required permissions to ensure data can be collected at the intended time.
3. Minimize contamination risks across experimental groups by ensuring stakeholders are aligned on *when* solutions will be rolled out, and for *whom*.

9 Test the impact of your solution

A testing plan outlines a method for collecting and analyzing data to learn about the impact of the behavioral solution. The main steps that are often involved in conducting a test are detailed below:

- ▶ **Develop a testing plan** based on the selected testing approach. Outline details such as the indicators that will be used to measure outcomes of interest, how they will be monitored, and the analytical approaches that will be used to analyze them.
- ▶ **Collect data** by sharing data requirements and timelines for data collection with program staff. Many programs may already be collecting data that can be leveraged for testing. At other times, arrangements will need to be made to collect new data.
- ▶ **Analyze data** using statistical or qualitative analysis techniques as appropriate. Every testing method has strengths and weaknesses: be sure to account for these when interpreting findings. If the findings suggest room for improvement in the behavioral solution, reconsider or refine the behavioral solution. If the findings show positive impact—congratulations! You may wish to explore the pathways to scale in step 10.

IN PRACTICE *How to ensure high-quality data*

- a. Testing a behavioral solution developed for teachers will often require collecting teacher feedback through interviews or surveys. FLN programs that have surveyed teachers have sometimes found teachers are reluctant to participate due to concerns about disclosing identifiable information. Implementers from these programs recommend de-identifying data when it is first collected. For example, they have found it helpful to use anonymous, self-administered surveys instead of surveying teachers in person.
- b. When existing program data is not sufficient to measure the effectiveness of the behavioral solution, programs may seek support from external firms to collect additional data. In these instances, programs should work closely with survey managers to ensure enumerators are trained in data collection protocols, and conduct frequent data checks to ensure that the data meets expected quality standards.



Tip:

Plan how you will implement your test. Write down each step you will need in order to implement the intervention and test its impact. The more details you include in this plan, the better! This will help ensure that solutions are implemented with fidelity, and in a way that meets the requirements of your chosen testing approach.

10 Explore next steps

Finally, programs must decide how to move forward with their insights from behavioral design and the new evidence they have generated.

If testing results indicate that the behavioral solution had a positive impact on FLN outcomes, congratulations! You have succeeded in strengthening your program. If there is evidence to suggest that the behavioral solutions had no impact, or were detrimental to FLN outcomes, you may need to dig deeper to understand why, and whether the solutions can be improved or should be discarded in favor of a different approach.

In both cases, lessons learned from behavioral design can be useful to share with the program and wider community of FLN implementers who are often grappling with similar challenges across programs. Consider taking the steps below to disseminate insights:

- ▶ **Communicate the findings** with a wider audience through articles and presentations, to ensure learnings about the behavioral solution are documented and can be accessed by other FLN implementers. Sharing the results with stakeholders such as government ministries or other authorities is helpful for capturing learnings for other FLN practitioners.
- ▶ **Integrate proven behavioral solutions into program design** by ensuring program materials such as teacher training manuals, lesson plans, and school curricula retain the solutions that proved effective. On the other hand, remove solutions from program materials if testing results indicate a negative impact.

IN PRACTICE *Sharing learnings to facilitate scaling efforts*

In Botswana, Youth Impact secured a government partnership for scaling TaRL nationally, but knew securing teachers' buy-in would be essential for success. They implemented three strategies to engender support:

- | | | |
|--|--|--|
| (1) Sensitization sessions with teaching and non-teaching staff to help them develop a deeper understanding of the program. | (2) Direct delivery of TaRL classes in select schools by Youth Impact staff to model the TaRL approach. | (3) Sharing student learning gains from these schools with teachers to help them appreciate the impact of TaRL. |
|--|--|--|

IN PRACTICE *Integrating proven behavioral solutions in program design*

In Senegal, ARED rolled out behavioral solutions to encourage tutors to provide targeted instruction to learners in an FLN program. These included a training module and adjustments to tutor guides. While testing results indicated moderate positive impacts, their low cost and ease of implementation made these solutions compelling additions to be retained in program materials. They continue to be implemented today.

 **Use Activity G to practice this step.**

Conclusion

Evidence-based interventions to improve FLN outcomes like TaRL and structured pedagogy fail to maximize impact when program designers do not take into account the reality of their intended users—those who are expected to engage with the new approaches and materials. Initiatives to improve FLN outcomes are often mandated top-down, leaving educational actors with little agency and intrinsic motivation to adopt the new approach as their own.

The behavioral design process helps educators identify, through a systematic process, how to tailor new approaches and materials to their intended users and ultimately optimize the impact of their programs. By (1) understanding the behavioral challenge that leads to suboptimal outcomes, (2) addressing it by designing solutions that directly address the identified barriers, and (3) rolling out the behavioral solutions in the program with fidelity, FLN practitioners can overcome the challenges that limit the impact of their programs.

This guide offers practical steps for FLN implementers who are interested in applying behavioral science to their programs. The ten behavioral guidelines, practical tips, and examples from organizations who have improved their programs through the behavioral approach and the complementary how-to activities offer a starting point to readers interested in improving their FLN programs from a behavioral lens.

The journey of actually applying these behavioral guidelines to programs may be longer, and result in small adjustments to program design or implementation. Although these changes might seem minor, they can often be made at low cost and have the potential to have a large impact on learners, giving more children a chance to succeed.



HOW-TO GUIDE

Understand the behavioral challenge

Activity A. Identify behavioral challenges

In this activity, identify the behavioral challenges in your FLN program. Use the instructions below:

- 1 **Write down one program you are working on:**
- 2 **Write down the main objective(s) of the program, noting what success looks like:** 💡 *Tip: Be more specific than writing something like “improve learning outcomes”*
- 3 **List challenges revealed by initial research:**
- 4 **State challenges behaviorally:** *i.e., make the target actor and desired behavior explicit*

Who is doing/not doing what behavior

We want them to do/not do what behavior



Return to Step 2



Understand the behavioral challenge

Activity B. Prioritize a behavioral challenge to focus on

In this activity, prioritize a behavioral challenge you will focus on. Use the following instructions:

- 1 Evaluate each behavioral challenge using the 3M criteria**
(rated as high, medium, or low).
- 2 Select one behavioral challenge to focus on.**
Ideally, this would be one where all criteria have a medium to high rating.

Behavioral Challenge	Meaningful? (High/Medium/Low)	Manageable? (High/Medium/Low)	Measurable? (High/Medium/Low)	Select?



Return to Step 3



Understand the behavioral challenge

Activity C. Understand why the behavioral challenge exists

STEP 1

In this activity, understand what might be causing or exacerbating the behavioral challenge. Use the instructions below:

- 1 **Identify what you are looking to understand better.**
- 2 **Choose a relevant diagnosis tool.**

Looking for:	Relevant diagnosis tool	Choose
Individual, in-depth insights about personal experiences and perceptions	Interview	
Collective viewpoints and group dynamics on a specific topic	Focus groups	
Assessing real-time teaching practices and learner interactions in an educational setting Assessing the classroom context and how it facilitates or interferes with teaching practices.	Classroom observations	
Identifying analysis and trends in existing quantitative or qualitative data	Existing data	
Data that does not already exist, related to facts or perceptions/subjective experiences	Surveys	

STEP 2

Now, identify and prioritize behavioral barriers that might be present in your FLN program. Use the instructions below:

- 1 **Note the evidence you have gathered for each barrier.**
- 2 **Then, rate the strength of this evidence** (validated, unvalidated, unclear).
- 3 **If additional barriers come up in your research, note them in the barrier column.**



HOW-TO GUIDE

Understand the behavioral challenge

Barrier	Evidence Collected	Strength of evidence (Validated/ Unvalidated/Unclear)	Prioritize for design?
Change is hard			
Too much to do			
Not top of mind			
Change is hard			
Misperceptions of value			
Can't do this			
It's outside of my control			
Too complicated			
Things keep getting in the way			



Return to Step 4



Address the behavioral challenge

Activity D. Brainstorm potential solutions (idea generation)

In this activity, generate solutions for your behavioral challenge using the instructions below:

- 1 Write the behavioral challenge your program is facing.**
You can use the top behavioral challenge you identified in Activity B.
- 2 Update the 'how might we' statement with the target educational actor, problem behavior, and desired behavior.**
- 3 Note the behavioral barriers and the evidence collected for behavioral barriers identified in Activity C.**
- 4 Finally, brainstorm as many solutions as possible to address this challenge.**
 *Tip: More ideas means better ideas, so generate as many diverse ideas as possible.*

Behavioral challenge:	
How might we help to go from to ?	
Prioritized behavioral barriers <i>Copy from Activity C Evidence collected</i>	Brainstormed solutions <i>Solutions that could help address the behavioral barriers</i>



Return to Step 5



Address the behavioral challenge

Activity E. Brainstorm potential solutions (idea prioritization)

In this activity, prioritize a behavioral solution to build further by using the instructions below:

- 1** Note all behavioral solutions from the previous activity.
- 2** Evaluate their likelihood of impact , feasibility, and behaviorality.
- 3** Select a behavioral solution with the highest likelihood of impact, feasibility, and behaviorality.

	<i>How connected is the solution with the overall goal of improving FLN outcomes?</i>	<i>What resources are required and how costly would it be to develop and implement the solution?</i>	<i>What is the likelihood of the solution addressing the challenge we are trying to solve?</i>	<i>Check the box if this behavioral solution is a priority</i>
Brainstormed solutions Copy from Activity D	Likelihood of impact (High/Medium/Low)	Feasibility (High/Medium/Low)	Behaviorality (High/Medium/Low)	Priority



Return to Step 5



Address the behavioral challenge

Activity F. Develop and refine promising solutions

In this activity, start adding details and refinements to your behavioral solution by using the instructions below:

- 1 **Note your reflections on the given prompts in the 'reflections' column.**
- 2 **If there is room to further refine the solution, list the tweaks that could help address any remaining gaps.**
- 3 **In 3-4 lines, describe the updated solution with refinements in the 'updated solution' section.**

Prioritized Solution:		
Prompts	Reflections	Tweaks to refine the solution
How does this solution address the behavioral barrier?		
Who is this solution for?		
What existing resources could be used to implement this solution?		
Who will implement the solution?		
What is the top constraint target educational actors might face in engaging with the solution?		
Updated solution:		



Return to Step 6



HOW-TO GUIDE

Roll out the behavioral solution

Activity G. Explore next steps

In the activity, start planning to scale by using the instructions below:

- 1 Read the prompts for scaling considerations and note your reflections in the reflections section.**
- 2 Use the scaling plan section to start planning scaling efforts.**

Final solution selected for scaling:		
Scaling considerations	Reflections	Scaling plan
Who is the behavioral solution for? ▶ What is the total number of users you hope to impact?		
What are some risks or challenges involved in scaling? Consider logistical details such as: ▶ Cost of scaling ▶ Availability of resources required for scale, like budget and scale ▶ The strength of partnerships that can support scaling efforts		
What challenges might prevent its use at scale? Consider logistical details such as: ▶ Who might implement the solution, and their capacity ▶ Who else might use the solution, and their capacity ▶ Complementary program elements that could integrate with the solution		



Return to Step 10

