Policy Brief

Frameworks for understanding, measuring, tracking and reporting implementation fidelity

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Introduction

Significant effort, analysis, and iterations go into designing and refining interventions aimed at improving learning outcomes. Equally important, but often more challenging, is understanding **how** these interventions are implemented in practice, including the fidelity and quality of delivery. While some aspects of implementation are routinely measured, assessing the overall implementation quality is more complex. Certain aspects can be quantified, but others are more intangible, or nuanced, and difficult to capture through standard measurement.

In this policy brief the focus is on exploring the design of an implementation plan and framework and the measurement and reporting of implementation quality. However, we touch on the elements required for good intervention design and how this links to implementation.

Structured learning programmes in South Africa are used in this brief to explore key elements of implementation. Achieving impact on learning outcomes relies not only on the overall design of the intervention—including all necessary components—but also on effective implementation, supported by a well-developed plan delivered with fidelity and quality.

Why are structured learning programmes effective in South Africa?

A 2007 Mckinsey Report, suggests that interventions to 'fix' education depend on the level of development of the education system.[1] South Africa's education system is characterised by the inadequate preparedness of teachers in effective reading instruction methods, such as phonics, differentiated teaching, and comprehension strategies. High student-to-teacher ratios, especially in the Foundation Phase, further limit teachers' ability to provide the individualized attention essential for fostering reading skills, and generally complicate classroom management. Additionally, the lack of access to quality teaching materials, including books and visual aids, undermines teachers' capacity to deliver engaging and impactful lessons. Language variation across the country also poses a challenge, as teachers often need to teach in multiple languages or in languages that are not their own, which can negatively impact the quality of instruction and learning. These challenges are amplified by severe resource constraints, both human and financial, particularly for learners in historically disadvantaged communities. In such a context, **structured learning programmes provide much-needed pedagogical support to Foundation Phase teachers.** Through clear and comprehensive lesson plans, practical teaching

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[1] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company. P 15

tools and ongoing professional development, they are provided with clear, step-by-step guidance on how to deliver lessons that support reading acquisition.

What makes for a successful structured learning programme?

The key components/steps/requirements to design a successful structured learning programme are:

- **Well defined outcomes and a clear target population**
- **Credible and cohesive theory of change**
- **Robust and carefully designed intervention**
- **Detailed and practical implementation plan**
- **Consistent monitoring to ensure implementation fidelity**

Clearly defining the desired outcomes and target population is an essential first step**.** It guides programme design, helps direct resources toward the outcomes that are most important, and establishes a clear foundation for measuring success.

The **Theory of Change** illustrates how specific interventions, provision of lesson plans, high quality materials and training, achieve their intended outcomes by addressing specific educational needs within a defined context. It identifies the relationships between the resources provided, the activities undertaken (such as teaching methods or training), and the outputs or immediate results (like change in instructional practice or skill acquisition). It further sets out clear assumptions, a good risk analysis and stakeholder analysis, as well as a monitoring framework to track progress.

A robust and carefully designed intervention articulates how impact can be achieved**.** The effectiveness depends on how well the programme is able to translate the evidence on literacy development and pedagogy as well as general pedagogy and classroom management into concrete practical steps for teachers to implement in their lessons; to effectively integrate the various components of lesson plans - *all* supporting materials such as books, flash cards and other teaching and learning materials - and teacher development activities; and to adapt the programme and materials to the specific context.

The need for contextually relevant research to improve design underscores the importance of co-creation and collaborative partnerships. Recent findings suggest that projects designed by researchers jointly with policymakers are significantly more likely to result in evidence utilization, compared to the strikingly low average of 3% for non-partnered initiatives. This highlights the pivotal role of collaboration in enhancing the uptake of evidence.[2]

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[2]Bonargent, A. (2024). *Can research with policymakers change the world?* [Working paper]. London School of Economics and Political Science

A well-designed structured learning programme pays due attention to the resources required to achieve its goal: time, funding, materials, and human resources. Furthermore, a robust structured learning programme requires that the intervention be aligned to the curriculum, be cost - and resource- effective. It also takes into consideration scalability from the outset, ensuring the programme integrates into existing systems, remains cost-effective as it grows, and delivers a sustainable impact.

Detailed and practical implementation plan outlines how the programme will be realised**:** Even with a strong theory of change and robust intervention design, the ultimate impact of the programme depends on how effectively it is implemented in practice: all materials need to reflect the design and be of a high quality; training needs to take place when planned and additional support needs to be provided with the right approach and at a high enough quantity. In essence all components should be delivered at the right time, in the intended manner and in the correct dosage to ensure effectiveness. Ensuring that the programme is implemented as per design is a critical dimension and necessitates a rigorous, systematic methodology to monitor and ensure that all components of the theory of change are executed as intended. This includes adherence to the **prescribed protocol**s, synchronization with the specified timeline, appropriate intensity levels, and the integration of all requisite elements.

Monitoring Implementation Fidelity requires that the project team make use of a combination of qualitative and quantitative methods to track the **implementation parameters**. **Implementation parameters** specify the operational aspects of how a programme will be carried out, rather than focusing on the content of the programme itself. These include critical elements such as timelines, resource allocation, defined roles and responsibilities, and clear operational guidelines for all elements to be executed. They are the "nuts and bolts" that shape how a plan moves from theory to practice. Regularly checking that these are in place and being used according to the design is critical to the success of the programme.

In the context of the wider education system, system leadership at school, national, provincial, district, and school levels plays a critical role in ensuring **implementation fidelity**. Clear communication at all levels fosters a shared understanding of the programme goals and core elements. Having a shared vision across the system leads to better alignment, increased accountability, and better support in all aspects of programme delivery, from implementation to monitoring and evaluation. Coordination and commitment of system leaders across all tiers are fundamental to ensuring the programme is delivered with fidelity and achieves its intended impact.

The Early Grade Reading Study Series

The South African Department of Basic Education (DBE) has over the years carried out a research programme, comprising iterative studies, in an effort to build contextually relevant

knowledge and identify an optimal structured learning programme to enhance early grade reading.

This research programme, known as the Early Grade Reading Study (EGRS) series has been guided by theory of literacy development, earlier reading programmes in the country and international evidence on literacy interventions. The studies have been supported by mixed method evaluations, including the 'gold-standard' randomized control trials, to understand their effectiveness, as well as what works and why.

Over the years the DBE research team has implemented 5 studies on early grade reading, each testing a variation of components known to enhance reading skills, to arrive at the most effective and sustainable intervention design for South African schools in historically disadvantaged communities and rural areas.

Following this framework and through various iterations of the EGRS, the DBE has shown that a structured learning programme comprising curriculum aligned **Scripted Daily Lesson Plans**, additional **learning and teaching support materials (LTSM)** and **teacher professional development, including coaching,** are effective in **improving learning outcomes in the early grades (Grade 1-3).**[3]

We now turn to an example from one of the studies in the EGRS series—EGRP I—to take a closer look at key features of an implementation plan and the associated monitoring framework. This example illustrates how the monitoring system is used to track and verify the fidelity of implementation, in line with the original design.

Implementation Framework Example: The Early Grade Reading Programme (EGRP I)

The Early Grade Reading Programme was implemented from 2021 to 2023 in the Ruth Mompati District of the North West Province in South Africa. Drawing on insights from prior studies on the effectiveness of teacher coaching, and the need to identify cheaper options for this critical component, the guiding question of the research programme was: "**Can teacher coaching by Department Heads (DHs) have a similar impact on learner reading outcomes as coaching by professional external coaches, but at lower cost?"**

The study was designed as a randomised control trial which allocated 140 schools into two intervention groups (40 schools with external coaching and 40 schools with DH coaching along

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[3] This combination of well integrated elements are referred to as the 'Education Triple Cocktail', alluding to their joint effectiveness in 'treating the problem'

with the 'base' intervention of a structured learning programme with materials and teacher training, and a control group of 60 schools with only the 'base' intervention, without coaching.[4]

EGRP I Theory of Change

Figure 1 outlines the theory of change for EGRP I. The theory of change is an important consideration during the development of the implementation plan as it gives some insight on the key elements that are considered critical for the success of the programme - consequently these key elements should be tracked.

Figure 1. The EGRP I Theory of change
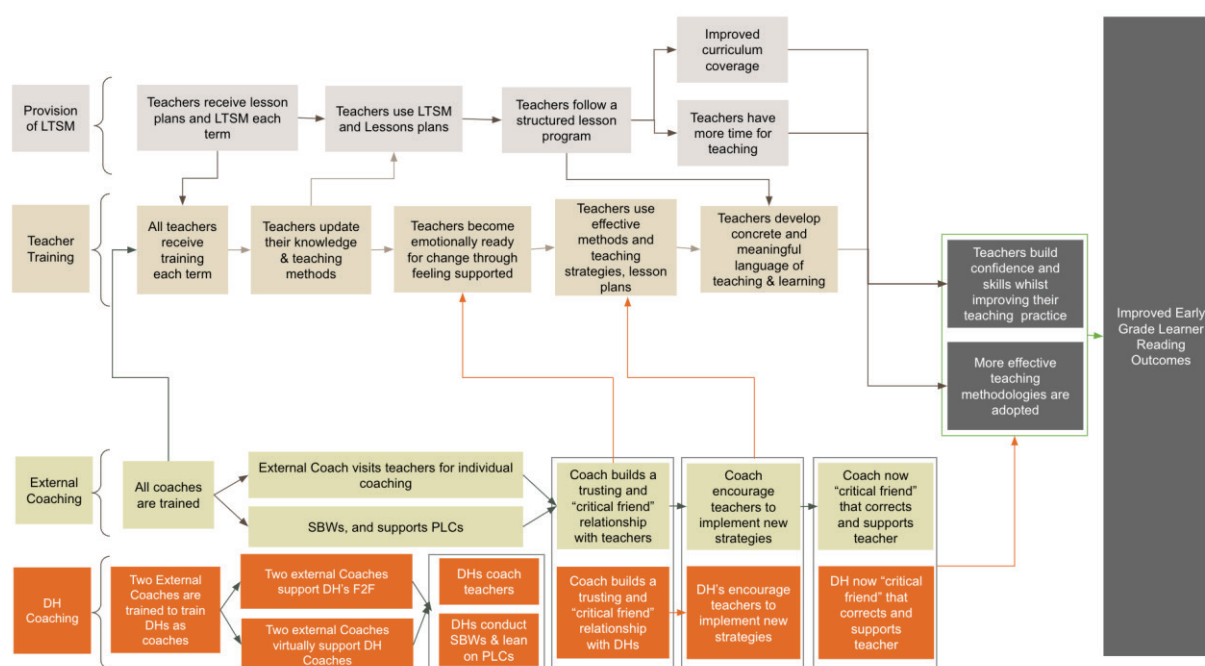
Source: Early Grade Reading Programme I Evaluation Findings: Summary Report (2024)

The components that were tracked were derived from the EGRP I theory of change. While the broad parameters needed to be tracked to ensure overall implementation goals were achieved, by and large the largest and most important group were the Fidelity parameters:

1. **FIdelity parameters:** These are the key components that can be measured and which are used to assess whether the intervention is being implemented as per protocol. Some of these include:
   a. **Adherence to design:** Evaluating whether the planned training, processes, or components of the training are taking place as designed.
   b. **Intended Dosage or Intensity:** Measuring how and how much of the coaching/training is delivered, such as the timing, frequency, duration of training, to ensure alignment with the design.

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[4] Early Grade Reading Programme (I) Evaluation Summary Report (2024), Department of Basic Education, South Africa

      c. **Reach / Scale Achieved**: Assessing whether the desired number or % of participants are reached
2. **Quality of Delivery**: Assessing the manner in which the training and coaching elements are delivered, and expertise of those charged with delivering the coaching.
3. **Budget compliance**: Checking if the activities are being carried out in line with intended expenditure levels.

The table below provides an example of the types of metrics that would be included in a Monitoring framework. The metrics included here are fairly high level - this is far from an exhaustive list. A fairly exhaustive list that documents all of the data points collected for on-site, in-person coaches can be found on p. 15 in this *Coaching Norms and Standards document*.[5]

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[5]https://www.education.gov.za/LinkClick.aspx?fileticket=63GhEwXm240%3d&tabid=1629&portalid=0&mid=10703

Table 2. Examples of parameters used to track the implementation design in EGRP I

Parameters

Components	Implementation Fidelity (Adherence to design, dosage and reach)	Quality of Delivery	Budget compliance and cost effectiveness
Provision of daily Lesson plans and LTSM	• Are these aligned to the curriculum? • Lesson plans and LTSM received every term • Are these delivered on time?	• Ease of use (For printed, size vs. tablet, connectivity and ability to print)	• Printing and delivery costs at budget
Teacher training	• Did the teacher training reflect intervention elements such as use of lesson plans and LTSM and specific methodologies eg. group guided reading? • Are two days of training offered at the start of every term? • What are attendance rates of teachers at training? • What are the attendance rates of DHs at training	• Materials included all the areas covered by lesson plans • What was the engagement of teachers at the training? • What was the teacher's perception of the training? • Were pre and post tests administered?	• Venue and catering costs within budget • Option to use district venues utilised if feasible
External coaching	• Teacher- coach and schools-coach ratios • Number of school visits planned, offered and realised • Lesson observation details (Date, subject observed, lesson taught, preparation of teacher, observation tool completed, suggestions provided) • Were the routines for a school visit followed?	• What was the tone of the interaction? • How were feedback and suggestions provided? • What is the level of trust between coach and teacher? • Teacher confidence and motivation • Changes to teacher behaviour in class (related to programme approach)	• Coach salaries within budget • Travel and communication costs within budget
DH Coaching	• What was the ratio of DHs to teachers to support the coaching element? • Were 2 external coaches assigned to each DH? • Did 2 external coaches spend the minimum number of face to face hours with each coach? • How often were DHs trained for their new role?	• Are DHs following the schedules of training and coaching? • Is the quality of the DH coaching leading to instructional change? • Are there differences in quality of delivery by DHs vs External coaches?	• Number of external coaches corresponds to budget • DH Coach salaries are within budget • Training costs of DHs are within budget

How to track these parameters

To track fidelity, a monitoring framework should be established. This framework must clearly specify:

- **What data will be collected**
- **Who is responsible for collecting and reviewing the data**
- **How frequently data will be collected**
- **What tools will be used** (e.g., forms, dashboards, observation templates)
- **How data will be collated, shared, and reported**

Each aspect of the framework should have an assigned responsible party (such as implementation leads, M&E officers, or data managers), and the flow of data into reporting systems (such as dashboards) must be well defined.

Implementation fidelity — to monitor implementation fidelity, a simple and structured monitoring plan should outline what is to be tracked over time, this is often stored or recorded in the form of an Excel sheet or equivalent digital dashboard.

Data may be entered into the Excel spreadsheet or a capturing form directly. Other possible data sources, that would provide the input, could be paper based and include forms such as:
- Attendance registers,
- Signed registers on delivery of lesson plans and LTSM
- School visit records

The monitoring tools should be kept up to date and reviewed regularly. They should also be complete to ensure that all key elements of the implementation plan are being tracked. This helps to identify areas that may need additional support.

Quality of Delivery—Monitoring quality requires deeper insights into how the intervention is being delivered. Commonly used tools to gain insights to elements of quality delivery include:

- **Training or lesson observations**, using a fidelity and quality checklist;
- **Surveys** or interviews with teachers, coaches, school management team members or district officials;
- **Feedback mechanisms** that capture teacher experiences, engagement and perceptions;
- **Coach or teacher self-reports** or activity logs.

These methods help assess not just *whether* something was delivered, but *how well* it was delivered and received.

Budget Fidelity— Tracking financial fidelity involves comparing actual expenditures to the planned budget. This includes:

- Regular reviews of **costs and spending**
- Checks to ensure spending **aligns with budget** lines and programme activities
- **Reconciliation reports** and financial dashboards where possible

Ensuring financial data is regularly collected and reviewed is critical for both accountability and sustainability planning.

Was the programme implemented well?

In EGRP I all tools underwent a thorough pilot phase and received approval from the DBE before data collection.The fidelity insights based on qualitative and quantitative data were collected in different phases throughout the evaluation.

Figure 2. EGRP Theory of Change with Implementation Fidelity and Outcome RAG Rating[6]
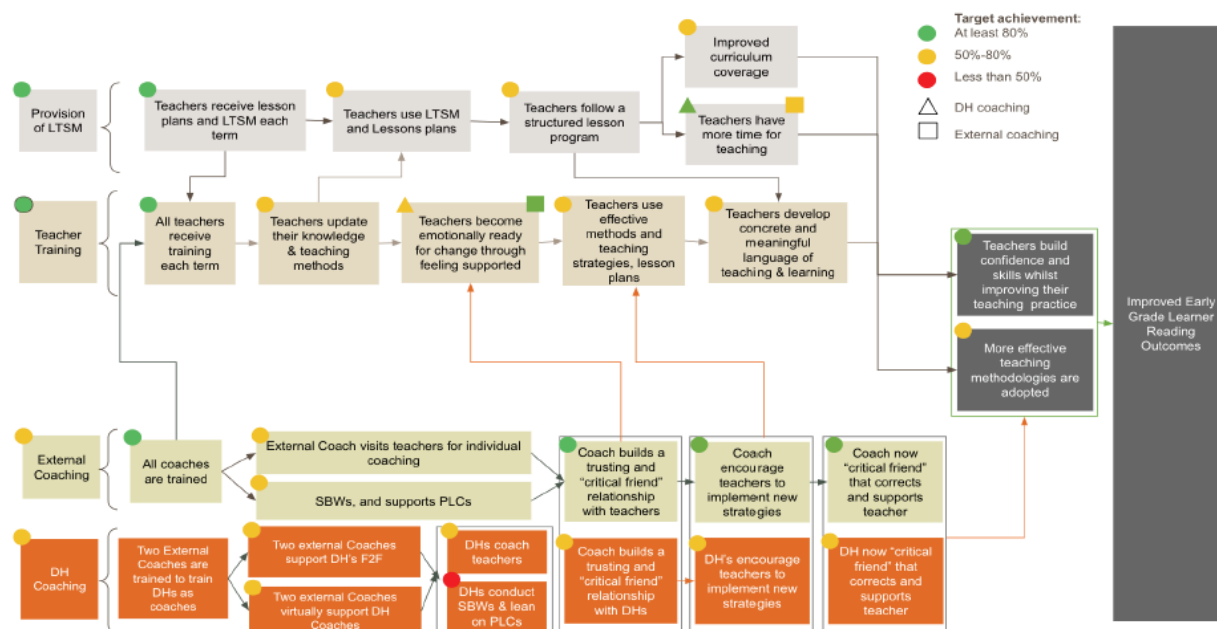
Source: Early Grade Reading Programme I Evaluation Findings: Summary Report (2024)

This data supplemented the evaluation's primary findings and offered additional insights into specific indicators, particularly training quality, LTSM distribution and training attendance. A

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[6] The term **RAG rating** is a system used to evaluate and communicate the status or progress of outcomes, projects, or tasks. **RAG** stands for **Red, Amber, Green**, which are colors that represent different levels of performance or risk, with red being the highest.

comprehensive understanding of the EGRPs implementation landscape was gained by triangulating insights from these diverse sources.

This is useful in ensuring that implementation fidelity is high, and also useful diagnostically to determine which elements were not well done, and where it could be improved - for example for both External and DH coaching less than 80% of the target was achieved on key measures.

So the implementation did (or didn't go) well, BUT did the programme improve literacy outcomes?

At regular intervals - and particularly relevant at the end of a programme - the project management team still needs to **check that the intended objectives have been achieved**, and if not, why.

This exercise is often done as part of an evaluative process, which also takes into account the underlying principles of a good intervention: replicability, implementability, relevance, cost effectiveness, and scalability. However, implementation fidelity metrics are an essential tool to help answer some of the 'why' questions.

The EGRP I study was able to conclude that the impact of teacher coaching by Department Heads (DHs) had no significant effect over and above that of the base programme, whilst the external professional coaches significantly improved learning outcomes. This conclusion carries significant policy implications: external professional, in-person coaching has the proven potential to sustainably enhance early grade learning outcomes. However, its implementation comes at a substantial cost. If the government aims to improve these outcomes, it must either allocate sufficient funding to support this initiative or redefine the roles of existing DBE staff to equip them with the capacity to provide this vital support to teachers.

Conclusion

Project managers must appreciate the crucial components that drive successful programming.

The first most critical aspect is achieving clear alignment on **desired outcomes—both what we aim to accomplish and who will benefit from these results**. This clarity serves as a foundation for every subsequent step.

Next is a **strong theory of change**, providing a clear pathway linking activities to desired outcomes. When backed by evidence, this theory becomes a reliable foundation that ensures the programme's design is rooted in proven strategies. It helps managers and stakeholders understand how and why specific interventions are expected to lead to measurable results.

This is followed by a **robust intervention design,** key to achieving impact, relying on the translation of evidence on literacy, pedagogy, and classroom management into practical steps for teachers.

Beyond the theory of change and intervention design there is a need for a detailed **implementation plan,** outlining the practical activities that need to take place. Key elements include ensuring high-quality materials, timely training, and providing support with the correct approach and intensity. Each component must be delivered as planned, at the right time, in the intended manner, and dosage. **Rigorous monitoring** and systematic methods are critical to maintain adherence to protocols, timelines, and intensity, while integrating all necessary elements of the theory of change.

The next important step is tracking implementation fidelity, critical for maintaining programme quality and effectiveness. This involves monitoring whether the intervention is being delivered as intended, identifying deviations from the plan, gaps in the theory of change and addressing challenges promptly. Given that no single element of a programme can achieve the intended goal on its own and that their effectiveness lies in the balance and thoughtful combination of all components, by consistently checking fidelity, managers can ensure the programme remains aligned with the intended outcomes and impact.

Lastly, a **solid evaluation design** allows the project team to assess what elements have succeeded, identify areas of failure, and uncover the underlying reasons behind the outcomes. This process not only ensures accountability but also generates valuable, contextually relevant insights and evidence, enriching the sector's knowledge base and informing the design of future interventions and policy decisions.