Guidance Report

All year levels

Putting evidence to work: a school's guide to implementation

EDUCATION NT
ENGAGE GROW ACHIEVE

NORTHERN TERRITORY GOVERNMENT

This Guidance Report is based on original content from a report of the same name produced by the Education Endowment Foundation (EEF). The original content has been modified where appropriate for Australian context.

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Contents

Foreword 2

Introduction 3

Summary of recommendations 6

The stages of implementation diagram 8

Setting the foundations for good implementation 9

- **Recommendation 1**
  Treat implementation as a process, not an event; plan and execute it in stages. 10
- **Recommendation 2**
  Create a leadership environment and school climate that is conducive to good implementation. 11

A staged approach to implementation 13

- **Recommendation 3: Explore**
  Define the problem you want to solve and identify appropriate programs or practices to implement. 14
- **Recommendation 4: Prepare**
  Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources. 17
- **Recommendation 5: Deliver**
  Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time. 31
- **Recommendation 6: Sustain**
  Plan for sustaining and scaling an intervention from the outset and continually acknowledge and nurture its use. 36

How was this guide compiled? 39

Further reading and support 40

References 41

Foreword

The Department of Education is committed to a strong public education system that gives every child the opportunity to engage, grow and achieve.

To ensure that every young Territorian has access to a high quality education, it is essential that our schools receive the right support and services to have the maximum impact on teaching and learning.

A key pillar of the Education NT strategy 2018 – 2022 is differentiated support for schools.

We recognise that each school is at different stages of the improvement journey. We know that every school has different priorities and strategies to achieve the common goal of school improvement and lifting educational outcomes.

An evidence-based approach to teaching and learning is essential to tailoring support to schools and enhancing student outcomes. The benefits of evidence-based effective teaching and learning strategies are only fully realised through effective implementation.

This Guidance Report will help schools understand how they can create the right conditions for implementation, as well as a structured process for planning, delivering and sustaining change.

The Guidance Report is intended to help school leaders and teachers develop a better understanding of how to make changes to classroom practice by offering practical and evidence-informed recommendations for effective implementation.

We would like to acknowledge our partnership with Evidence for Learning and their dedication to building awareness and access to evidence-informed education strategies which drive improvement across the education sector, ensuring that *great practice* becomes *common practice*.

Vicki Baylis
Chief Executive

Introduction

Why is implementation important?

Schools are learning organisations. They continuously strive to do better for the children and young people in their charge. In doing so, they try new things, seek to learn from those experiences, and work to adopt and embed the practices that work best.

Implementation is what schools do to improve: to change and be more effective.

And yet implementation is a domain of school practice that rarely receives sufficient attention. In our collective haste to do better for students, new ideas are often introduced with too little consideration for how the changes will be managed and what steps are needed to maximise the chances of success. Too often the who, why, where, when, and how are overlooked, meaning implementation risks becoming an 'add on' task expected to be tackled on top of the day-to-day work. As a result, projects initiated with the best of intentions can fade away as schools struggle to manage these competing priorities.

One of the characteristics that distinguishes effective and less-effective schools, in addition to *what* they implement, is *how* they put those new approaches into practice. Often, individuals and schools that implement well tend to do so by instinct, or what might be called common sense. Unfortunately, good implementation occupies a rarefied space of 'uncommon common sense', with too few explicit discussions of the characteristics and qualities that make it effective.

The purpose of this guide is to begin to describe and demystify the professional practice of implementation – to document our knowledge of the steps that effective schools take to manage change well.

Ultimately, it doesn't matter how great an educational idea or intervention is in principle; what really matters is how it manifests itself in the day-to-day work of people in schools.

Introduction continued

How should I use this guide?

There are legitimate barriers to implementing effectively in schools – the bombardment of new ideas and initiatives, limited time and resources, and the pressure to yield quick results, to name just a few. Nevertheless, this Guidance Report shows a lot can be achieved with careful thought, planning, and delivery using *existing* resources and structures. It is about making the implicit explicit, providing clarity and purpose to existing processes, and reframing what you are already doing, rather than bolting on a whole new set of procedures.

The guide can be used to help implement any school improvement decision, whether program or practice, whole-school or targeted approach, or internal or externally generated ideas.

Over the last few years, Evidence for Learning, in partnership with the UK's Education Endowment Foundation (EEF) has developed an approach to evidence-informed school improvement, which treats the school as a continuously improving system. The model aims to frame research evidence in a school's context, rather than the other way around, integrating the best available external evidence with professional expertise and internal data. The cycle has five steps:

1. Decide what you want to achieve.
2. Identify possible solutions and strategies.
3. Give the idea the best chance of success.
4. Did it work?
5. Secure and spread change.

We suggest schools use this implementation guide as part of an overall advance towards evidence-informed school improvement. This guide covers all of the steps briefly, but focuses mainly on Step 3, 'Giving an idea the best chance of success'. Evidence for Learning has other resources to support schools across the other steps of this process, for example, the Impact Evaluation Cycle[1] (Steps 1, 2 and 4), and the Teaching & Learning Toolkit[2] (Step 1).

Who is the guide for?

This guide is aimed primarily at school leaders and other staff with responsibilities for managing change within a school.

Teachers should also find the guide useful in developing a better understanding of how to make practical changes to their classroom practice, as well as their role in supporting departmental or whole-school changes.

The guide may also be useful for:

- school councils and parents looking to support and challenge schools;
- program developers seeking to create more effective interventions;
- policy makers and system leaders that implement initiatives at a regional scale; and
- education researchers, in conducting further research on the features and nature of effective implementation.

How is this guide organised?

This guide starts with two important underlying factors that influence a school's ability to implement effectively: (a) treating implementation as a process, and (b) school leadership and climate.

The remainder of the guide is organised around four well-established stages of implementation – Explore, Prepare, Deliver, Sustain – with actionable recommendations at each stage. Although the four stages are presented discretely, they inevitably overlap and so should be treated as an overall guide, rather than a rigid blueprint.

The table overleaf summarises all of the recommendations in the report. Figure 1 shows a summary of the recommendations as a cycle which works through the four implementation stages.

Mikayla

Summary of recommendations

Foundations for good implementation

1

Treat implementation as a process, not an event; plan and execute it in stages.

- Allow enough time for effective implementation, particularly in the preparation stage; prioritise appropriately.

3

Explore

Define the problem you want to solve and identify appropriate programs or practices to implement.

- Specify a tight area of focus for improvement that is amenable to change.
- Determine a program of activity based on existing evidence of what has – and hasn't – worked before.
- Examine the fit and feasibility of possible interventions to the school context.
- Make an adoption decision.

See page 14

4

Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.

- Develop a clear, logical, and well-specified implementation plan:
  - a) Specify the active ingredients of the intervention clearly: know where to be 'tight' and where to be 'loose'.
  - b) Develop a targeted, yet multi-stranded, package of implementation strategies.
  - c) Define clear implementation outcomes and monitor them using robust and pragmatic measures.
- Thoroughly assess the degree to which the school is ready to implement the innovation.
- Once ready to implement an intervention, practically prepare for its use:
  - a) Create a shared understanding of the implementation process and provide appropriate support and incentives.
  - b) Introduce new skills, knowledge, and strategies with explicit up-front training.
  - c) Prepare the implementation infrastructure.

See page 17

Foundations for good implementation

2

Create a leadership environment and school climate that is conducive to good implementation.

- Set the stage for implementation through school policies, routines, and practices.
- Identify and cultivate leaders of implementation throughout the school.
- Build leadership capacity through implementation teams.

5

Deliver

Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time.

- Adopt a flexible and motivating leadership approach during the initial attempts at implementation.
- Reinforce initial training with follow-on coaching within the school.
- Use highly skilled coaches.
- Complement expert coaching and mentoring with structured peer-to-peer collaboration.
- Use implementation data to actively tailor and improve the approach.
- Make thoughtful adaptations only when the active ingredients are securely understood and implemented.

See page 31

6

Sustain

Plan for sustaining and scaling an intervention from the outset and continuously acknowledge and nurture its use.

- Plan for sustaining and scaling an innovation from the outset.
- Treat scale-up as a new implementation process.
- Ensure the implementation data remains fit for purpose.
- Continuously acknowledge, support, and reward good implementation practices.

See page 36

The stages of implementation

Foundations for good implementation

- ✓ Treat implementation as a process, not an event. Plan and execute it in stages.
- ✓ Create a leadership environment and school climate that is conducive to good implementation.

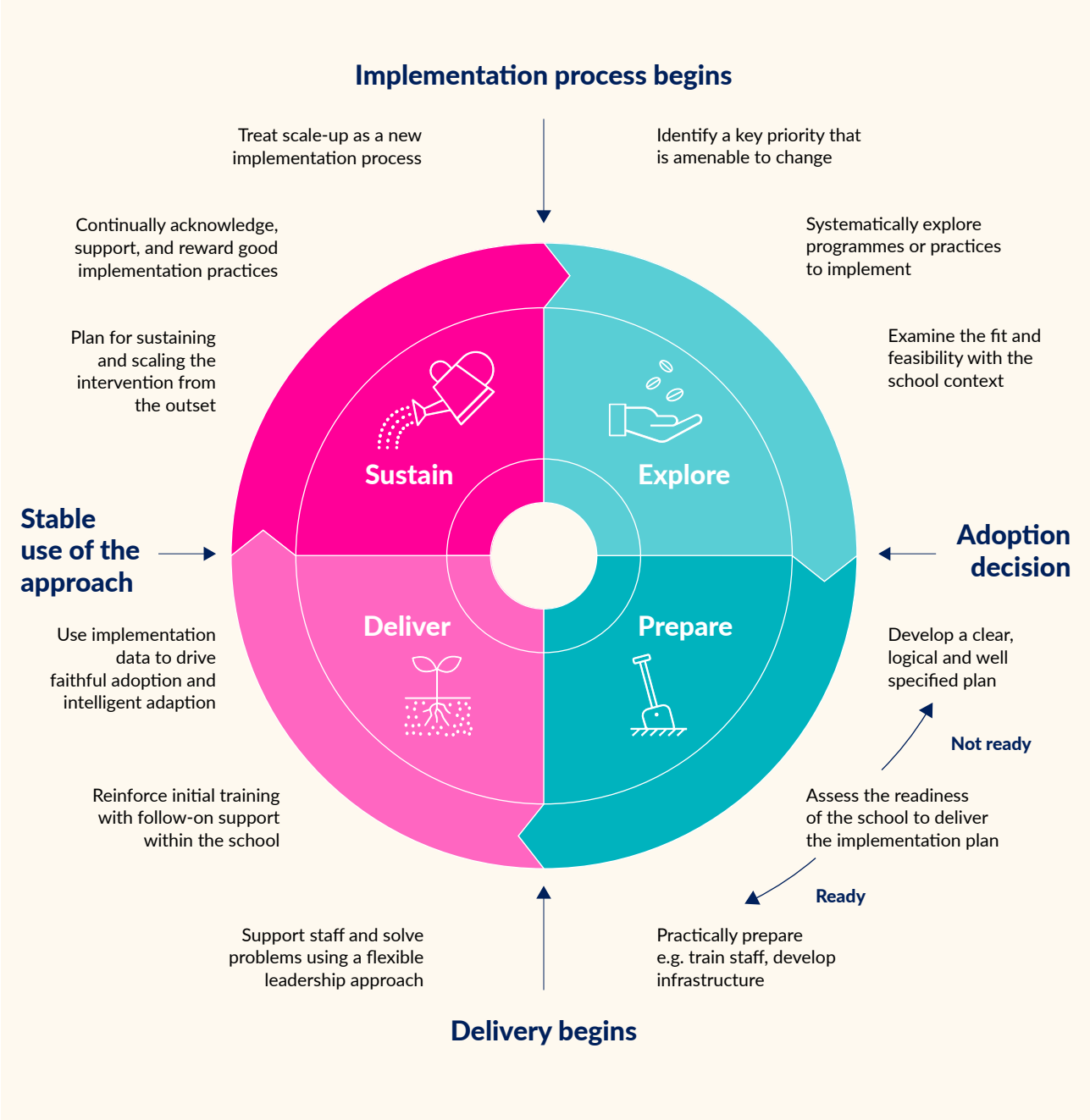


Figure 1: Implementation can be described as a series of stages relating to thinking about, preparing for, delivering, and sustaining change.

Setting the foundations for good implementation

1 Treat implementation as a process, not an event; plan and execute it in stages.

2 Create a leadership environment and school climate that is conducive to good implementation.

1 Foundations for good implementation

Treat implementation as a process, not an event; plan and execute it in stages.

Successful implementation happens in stages and unfolds over an extended period of time.[3] It is not a single event that takes place when the decision to adopt a new teaching practice is made, or on the day when training begins. Schools' implementation processes begin *before* this adoption decision and last for a long time *after*.

Take, for example, the development of new teaching strategies through professional development. Effective professional development typically includes both up-front training and follow-on supporting activities back in the school.[4] This is necessary to develop both a thorough grasp of the rationale underpinning a new approach, and for staff to be able to apply the resulting strategies and knowledge in practice. Inevitably, this all takes time, with most effective professional development lasting at least two terms, and often longer (see Box 4: Features of effective professional development).

Implementation can be described as a series of stages with activities relating to thinking about, preparing for, delivering, and sustaining, change.[3] Although these processes overlap, the 'staging' of implementation is such a crucial feature that we structure the main body of the guide in these distinct sections.

Allow enough time for effective implementation, particularly in the preparation stage; prioritise appropriately.

There are no fixed timelines for a good implementation process; its duration will depend on the intervention itself – its complexity, adaptability, and readiness for use – and the local context into which it will be embedded. Nevertheless, it is not unusual to spend between two and four years on an implementation process for complex, whole-school initiatives.[5,6]

One implication of this timescale is that schools should treat implementation as a major commitment and prioritise appropriately. Organisations across all sectors, not just education, tend to take on too many projects simultaneously and underestimate the effort involved in implementing innovations effectively.

Schools should probably make fewer, but more strategic choices, and pursue these diligently.

Reviewing and stopping some existing practices may be required before delivering new ones (see Prepare, page 17).

An overall feature of this guide is its emphasis on activities that occur in the Explore and Prepare phases; in other words, *before* the actual implementation of a new program or practice takes place. Creating sufficient time to prepare for implementation in schools is both difficult and rare.

Nonetheless, investing time and effort to carefully reflect on, plan, and prepare for implementation will reap rewards later.

The better you 'till the soil', the more likely it will be for roots to take hold.

Finally, recognise that implementation doesn't always follow a neat, linear process. It can be full of surprises, setbacks, and changes of direction and, at times, appear more like a skilful art than a systematic process. Keeping these dynamics in mind while progressing through an implementation process can be helpful in managing frustrations. Setbacks and barriers are natural features!

Checklist questions:

- ✓ Do we implement changes across the school in a structured and staged manner?
- ✓ Is adequate time and care taken when preparing for implementation?
- ✓ Are there opportunities to make fewer, but more strategic, implementation decisions and pursue these with greater effort?
- ✓ Are there less effective practices that can be stopped to free up time and resources?

2 Foundations for good implementation

Create a leadership environment and school climate that is conducive to good implementation.

The success of implementation will depend on engaged leaders who, while being actively involved themselves, also involve others in taking charge of specific activities.

Set the stage for implementation through school policies, routines, and practices.

School leaders play a central role in improving education practices through high-quality implementation.[7,8] They actively support and manage the overall planning, resourcing, delivery, monitoring, and refinement of an implementation process – all of which are discussed in detail in this guide.

In addition to these practical roles, they also create an organisational climate that is conducive to change.[9] Leaders set the stage for good implementation by defining both a vision for, and standards of, desirable implementation practices in their school. For example, if there is an explicit expectation that staff use data precisely to inform teaching and learning, or to participate in ongoing professional development, schools are more likely to find implementation easier than where such expectations do not exist or where they are only implied.

Implementation is easier when staff feel trusted to try new things and make mistakes, safe in the knowledge that they will be supported with high quality resources, training, and encouragement to try again and keep improving. In such supportive contexts, leaders develop a sense of enthusiasm, trust, and openness to change.[10]

If not present already, an 'implementation friendly' climate cannot be created overnight.

It requires continuous nurturing over time through a consistent focus on a school's implementation practices (see Prepare, page 17).

Identify and cultivate leaders of implementation throughout the school.

While dedicated leadership of implementation is key, it is also important to recognise that implementation is a complex process that requires leadership at different levels of the school.

A culture of shared leadership can be nurtured by explicitly creating opportunities for staff to take on implementation leadership responsibilities. One way to achieve this is to use dedicated implementation teams (see below and Box 1). Another approach is to intentionally acknowledge, support, and incentivise staff who display behaviours and attitudes that support good implementation. In this way, implementation leadership becomes a shared organisational activity with a broad base of expertise to draw on.

Build leadership capacity through implementation teams.

Effective implementation requires schools to pay regular attention to specific, additional activities; however, the busy everyday life of a school can make this investment of time and effort difficult.

Dedicated implementation teams can be a solution to this dilemma.[11,12] They draw together multiple types of expertise and skills, from a range of different perspectives, to guide and support the implementation process. They build local capacity to facilitate and shepherd projects and innovations, and continuously remove the barriers that get in the way of good implementation. This may involve identifying effective interventions to implement, developing plans and assessing readiness when preparing for implementation, collecting and synthesising data during delivery, and consolidating the use of the new practices across the school – to name just a few examples.

Effective implementation teams typically combine both educational and implementation expertise, rely on formal and informal leaders, and can draw on external, as well as internal, colleagues. It is important that implementation teams are adequately resourced.

Box 1 overleaf shows how an implementation team was created at a school in the Northern Territory to oversee a process of changing the way feedback is provided to students and the way students provide feedback to each other. This case study illustrates the benefits of thoroughly preparing for implementation.

2 Foundations for good implementation

Create a leadership environment and school climate that is conducive to good implementation.

Box 1: Implementing changes in feedback for literacy at Gunbalanya Community School in the Northern Territory.

In response to identifying a need for an evidence-based and data focused approach to teaching literacy, Gunbalanya Community School, in the Northern Territory, went through a structured process of changing the way feedback is provided to students. The leadership team aligned feedback to the school goals and then developed a gradual whole-school implementation approach and engaged staff to create a 12-month action plan. Dedicated leadership was key, as changing feedback for literacy is a complex challenge requiring changes in practices throughout the school for leaders, teachers and students – as well as structural changes that require leadership input, such as changing timetables so that teachers can work collaboratively to assess data and plan lessons and for walk throughs and observations.

The leadership team worked together to oversee the implementation process. This team:

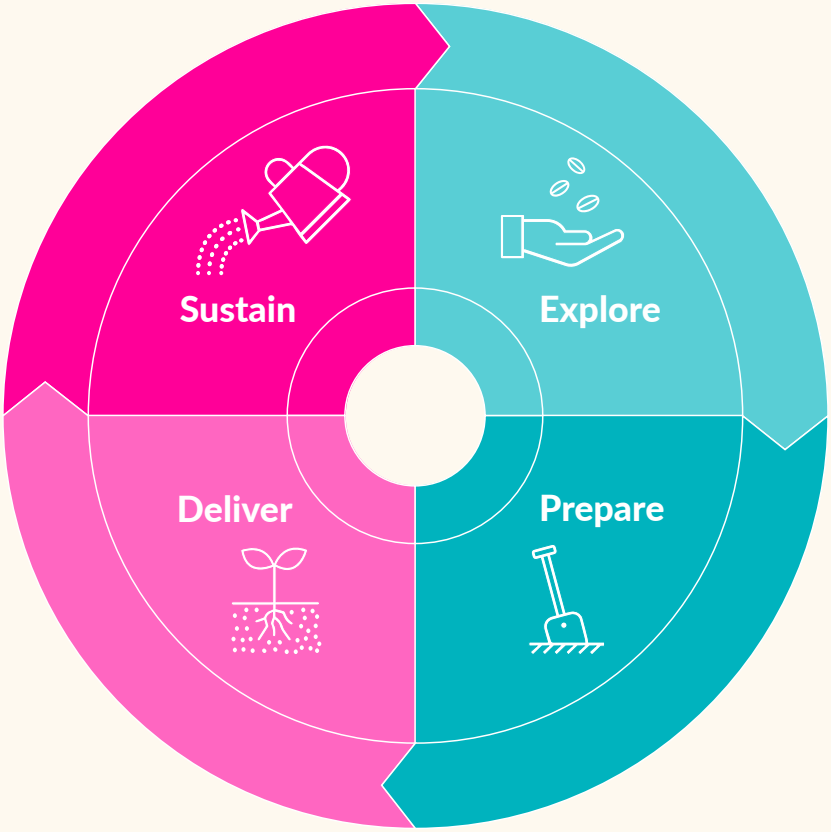
- identified specific barriers to change (e.g. students perceiving feedback negatively);
- created a detailed implementation plan (called an 'action plan' in this case);
- organised inhouse professional learning (including building staff and student capacity in providing feedback); and
- developed a set of implementation outcomes, monitored the changes (walk throughs and observations), and solved problems as they arose.

You can view a full case study of Gunbalanya Community School's journey in relation to feedback implementation here:

aitsl.edu.au/docs/default-source/feedback/aitsl-feedback-casestudy-gunbalanya.pdf

Checklist questions:

- ✓ Does our school have a climate that is conducive to good implementation?
- ✓ Does the school leadership team create a clear vision and understanding of expectations when changing practices across the school?
- ✓ Do staff feel empowered to step forward and take on implementation responsibilities?
- ✓ How do day-to-day practices affect the motivation and readiness of staff to change?



A staged approach to implementation

This main section works through four implementation stages and suggests a series of practical steps that schools can take at each stage (see page 6-7 for a summary of these recommendations). Although the activities are presented in discrete stages, the phases inevitably overlap and so should be treated as an overall guide, rather than a rigid blueprint.

Themes that cut across the different stages, such as implementation fidelity and professional development, are discussed in shaded boxes.

3 Explore

Define the problem you want to solve and identify appropriate programs or practices to implement.

3 Explore

Define the problem you want to solve and identify appropriate programs or practices to implement.

The implementation process begins with exploration. In this phase, a school clearly defines the problem it wants to solve and identifies potential solutions in the form of educational programs and practices. These activities are broadly equivalent to the first three steps in the Evidence for Learning Impact Evaluation Cycle.[1]

Specify a tight area of focus for improvement that is amenable to change.

The first activity is to identify a tight and specific area of focus.

The objective is to identify a clear priority that is amenable to change.

Don't start with a solution and look for a problem!

Use a range of student-level data sources to identify the nature and magnitude of challenges and problems. The analysis of questions from the National Assessment Program – Literacy and Numeracy (NAPLAN) or diagnostic standardised tests can help pinpoint specific areas of need. In addition to examining student-level information, data on staffing, resources, and stakeholder perceptions should also be considered.

Take care not to define the problem too broadly. For example, a summary of data for an incoming Year 7 cohort may indicate that the average reading score is low, but a more detailed analysis might reveal that students' decoding skills are good but their comprehension is poor.

Questions to consider include:

- What does local data and experience tell us about the greatest barriers to driving up standards?
- How can we define and measure those barriers?
- What do we hope will change?

Determine a program of activity based on existing evidence of what has – and hasn't – worked before.

Once schools have identified and specified an educational challenge, they inevitably turn to considering how they can best meet it through potential programs and practices. The goal is to identify interventions and approaches based on existing evidence of what has – and hasn't – worked before.

One source of evidence to draw on is the school's own insights and evidence of what has been effective. At the same time, schools should also aim to draw on external evidence of what has been shown to work in similar contexts. Try and adopt a disciplined approach to innovation rather than be novel for novelty's sake. Evidence for Learning resources such as the Teaching & Learning Toolkit, and future Guidance Reports, can all provide valuable ideas for evidence-based improvement strategies. Questions to consider at this stage include:

- How have similar problems been tackled before in schools similar to mine?
- How strong is the evidence behind the approach?
- Is it cost effective?

Examine the fit and feasibility of interventions to the school context.

Once a possible approach or intervention has been identified, schools should interrogate the extent to which its objectives – the purpose, recipients, practices, and outcomes – align with the school's needs and values. Questions to ask include:

- Does a program or practice fully meet the needs of our school in addressing the defined challenge?
- Is it likely to lead to better outcomes in *our* school?
- Do the values and norms of an innovation align with ours?
- How likely is it for a new approach to be accepted and acknowledged by those who would be using and supporting it?

3 Explore

Define the problem you want to solve and identify appropriate programs or practices to implement.

- How can the new program or practice be funded in both the short and the long term?
- What internal or external support is needed to enable the use of the innovation in the school?
- What other potential implementation barriers may emerge from the use of an innovation, and how easily could they be removed?

Further questions may be relevant to raise, depending on the setting in which the implementation will take place. By involving all relevant key stakeholders in this process, both the description and understanding of problems to be tackled, and the selection of solutions can be based on the broadest possible knowledge and expertise. This will also create immediate opportunities to build shared ownership and leadership of an implementation process.

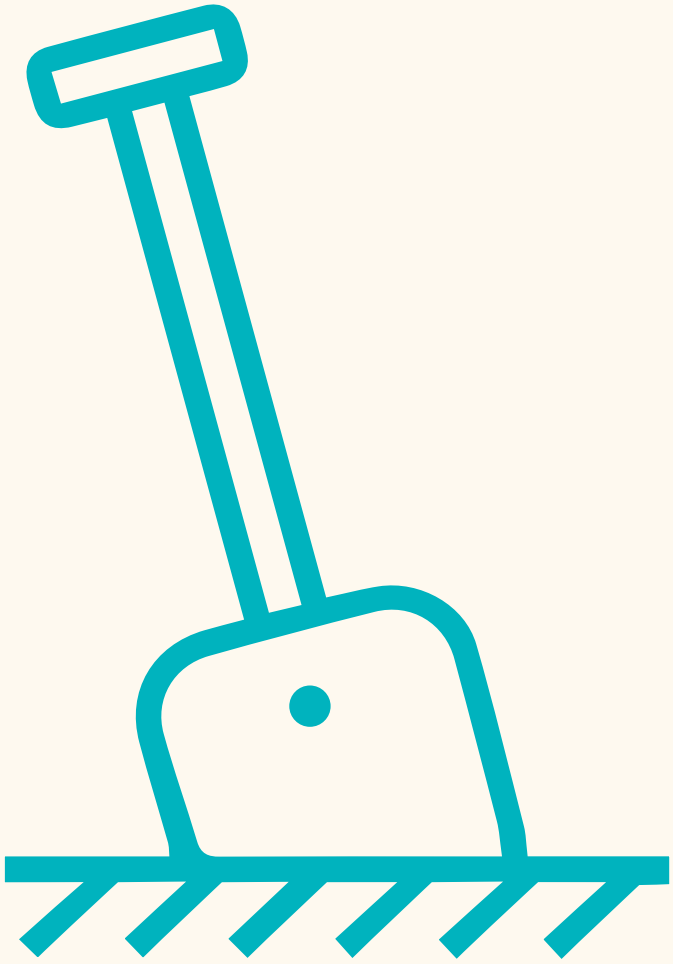
The 'Explore' phase ends with a decision to adopt a new program or practice.

Checklist questions:

- ✓ Are we confident we have identified a strong school improvement priority that is amenable to change?
- ✓ What are we looking to achieve by adopting a new program or practice?
- ✓ Have we systematically identified the right approach to achieve these goals?
- ✓ Is there reliable evidence it can have the desired impact, if implemented well?
- ✓ Is it feasible within our context?

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.



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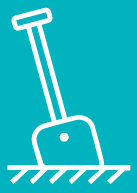


Having decided to deliver a specific program or practice, the focus turns to preparing the school and its staff. This phase can be intensive, requiring a significant effort to ensure the school is in a position to deliver the new approach effectively. As this section is extensive, and potentially overwhelming, we have organised the recommendations as three interconnected sets of activities:

- Develop a clear, logical, and well-specified plan:
  - a) specify the active ingredients of the intervention;
  - b) develop an appropriate package of implementation strategies; and
  - c) define a set of clear implementation outcomes.
- Assess the readiness of the school to deliver the implementation plan.
- Once ready to implement an intervention, practically prepare for its use:
  - a) create a shared understanding of the implementation process and provide appropriate support and incentives;
  - b) introduce new skills, knowledge, and strategies with up-front training; and
  - c) prepare the implementation infrastructure.

Although there is logic to this sequence (see Figure 1), schools may decide to approach the process differently to suit their needs. For example, it may be felt there is value in conducting an initial readiness assessment before creating a detailed implementation plan.

Develop a clear, logical, and well-specified implementation plan

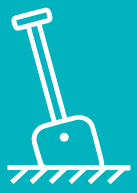
An important first step when preparing for implementation is ensuring there is a detailed and shared understanding of the program or practice that has been selected. This can be aided by creating a well-specified plan, which, in turn, can act as a basis for practically preparing for implementation.[6]

There is no set way of conceptualising and developing an implementation plan. Logic Models are one popular tool that can help (see Figure 2); other schools may take a less formal approach. Whatever method is chosen, the objective should be to describe:

- the issue you want to address;
- the approach you want to implement, for example the active ingredients of the intervention;
- the changes you hope to bring about by using the intervention;
- who will be affected by these changes and how;
- the implementation activities planned to contribute toward this change;
- the resources required; and
- any external factors that could influence results.

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.



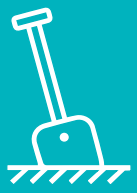
Out of this planning process should emerge a range of outputs that subsequently can be used to structure and monitor the implementation effort:

- a clear description of the intervention;
- a set of well-specified 'active ingredients';
- an appropriate package of implementation strategies; and
- a series of short, medium, and long-term implementation outcome measures.

An example of a Logic Model is provided in Figure 2, developed from a case study of Richardson Primary School, for an approach to improve feedback and collaboration.[13]

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.

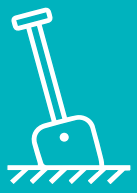


Problem	Intervention description (what are the active ingredients)
Achievement • Student achievement below benchmark in all areas.	**Active ingredient 1** (Learning intentions and success criteria) • Share learning intentions and success criteria at the beginning of every lesson. • Differentiate success criteria for students. • Provide feedback that is connected to the differentiated success criteria. **Active ingredient 2** (Building student capacity) • Teach students social skills connected to giving and receiving feedback, including building resilience and supporting students to have a cognitive rather than an emotional response to it. • Develop students' skills in applying the feedback they receive to progress their learning. **Active ingredient 3** (Peer and self-assessment) • Students review their own and each other's work against the differentiated success criteria. • Students provide both positive and constructive comments in peer feedback. • Students act on peer feedback and show how they are addressing feedback to their peers. **Active ingredient 4** (Scoreboard and walk-throughs) • Collaboratively develop a scoreboard that details four feedback practices and a series of statements that describes what the practice looks like in the classroom. • Use the scoreboard in walk-throughs with teachers and school leaders to measure and monitor the use of feedback in classrooms.

Figure 2: An example of an implementation plan developed from a case study of Richardson Primary School.

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.



Implementation activities

Professional learning

- Develop a professional learning team to grow the leadership team's understanding of the research underpinning feedback.
- Establish a teacher-led working group to explore feedback research and to develop recommendations for the school.
- Lead professional learning on feedback at the start of each school year.
- Place posters about feedback in staffroom to reinforce the school's approach.
- Hold staff meetings throughout the year to maintain a focus on feedback.

Monitoring

- Develop agreement scales of:
  - disagree and cannot support
  - disagree can support
  - mixed feelings
  - agree with a reservation
  - fully endorse.
- Use agreement scales before implementing any new practice.
- Ensure staff agree with and are willing to trial identified feedback practice within their classroom.
- Collaborative discussions within the teacher-led working group informed by journals, observing each other's practice and collecting student work.
- Regular walk-throughs with scoreboards.

Coaching

- In-school support – instructional coaching and teacher peer-to-peer feedback.

Implementation outcomes

Short term

Fidelity

- Staff demonstrate an understanding of feedback through development of scoreboards with statements.
- Staff using learning intentions and differentiated success criteria.
- Staff using questioning for understanding where students are in relation to the learning intentions.
- Students responding in range of ways including verbally, using whiteboards or feedback tools such as Plickers.
- Students seeking feedback or support from three peers before approaching the teacher (C3B4ME).
- Students using exit passes.

Acceptability

- Majority of staff experiencing increasing agreement scales for feedback practices.

Medium term

Fidelity

- Scoreboards used in walk-throughs and classroom observations with teachers and leaders.

Acceptability

- All staff have high agreement for the feedback practices.

Long term

Fidelity

- Staff regularly sharing data from scoreboards to inform discussions about progress in implementing feedback and where they can improve.

Acceptability

- All staff have embedded feedback and collaboration into all aspects of classroom practice.

Student outcomes

Short term

- Increased student engagement with feedback.
- Increased student use of C3B4ME.

Medium term

- Improved student ability to provide more purposeful self and peer assessment.
- Greater awareness of required skills for providing and receiving feedback.

Long term

- NAPLAN results demonstrate significantly higher growth between Year 3 and 5 when compared to other ACT schools.
- Increasing numbers of students performing at or above the normed range in Progressive Achievement Tests (PAT) Mathematics and PAT reading.
- Increasing numbers of students are achieving expected and better than expected growth in Performance Indictors in Primary Schools (PIPS) assessment data.

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.

a) Specify the active ingredients of the intervention clearly; know where to be 'tight' and where to be 'loose'.

Effective interventions often have a set of well-specified features or practices that are tightly related to the underlying theory and mechanism of change for the intervention.[14,15] These features or practices are sometimes called the 'active ingredients' of the intervention.

Specifying the active ingredients of an intervention enables educators to identify which features need to be adopted closely (that is, with fidelity) to get the intended outcomes.

The more clearly identified the active ingredients are, the more likely the program or practice is to be implemented successfully.[16,17]

When preparing for implementation, try and distil the essential elements of the program or practice, share them widely, and agree them as non-negotiable components that are applied consistently across the school. For example, if the intervention is focused on developing classroom teaching, capture the key pedagogical strategies and behaviours that will reflect its use. There may be some key underlying principles that you also want to specify and share.

Ultimately, the active ingredients of an intervention can relate to any aspect of the intervention that is key to its success – the important thing is that you know 'where to be tight and where to be loose' (see Deliver, page 35 on adaptations). The Logic Model in Figure 2 outlines the active ingredients for Richardson Primary School's approach to improving feedback and collaboration.

While it is entirely feasible for schools and external program developers to develop their own approaches to specifying the active ingredients of interventions, schools may find Theory of Change tools helpful in this process.[18] If you are looking to implement a program outside of the school, speak to the developers for their thoughts on the key activities and principles (they may not be documented).

Inevitably, there are limits to how accurately you can specify the active ingredients of an intervention before its use. Schools should therefore carefully monitor and assess the implementation of the active ingredients during delivery and use this data to refine the design of the intervention over time.

4 Prepare

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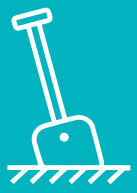

Strategy	Definition
Access new funding	Access new or existing money to facilitate the implementation effort.
Alter incentive structures	Work to incentivise the adoption and implementation of the innovation.
Audit and provide feedback	Collect and summarise performance data and give it to staff to monitor, evaluate, and modify behaviour.
Change physical structure and equipment	Evaluate current configurations and adapt, as needed, the physical structure and/or equipment (e.g., changing the layout of a room, adding equipment) to best accommodate the innovation.
Conduct small scale pilots of change	Implement changes in a cyclical fashion using small tests of change before system-wide implementation. This process continues serially over time, and refinement is added with each cycle.
Conduct educational outreach visits	Have staff meet with experienced providers in their practice settings to learn about the approach.
Conduct ongoing training	Plan for, and conduct, ongoing training.
Create a learning collaborative	Facilitate the formation of groups of staff/schools and foster a collaborative learning environment to improve implementation.
Create implementation teams	Change who serves on the team, adding different disciplines and different skills to make it more likely that the intervention is delivered successfully.
Develop academic partnerships	Partner with a university or academic unit to bring training or research skills to an implementation project.
Develop and use tools for monitoring implementation quality	Develop and apply quality-monitoring systems with the appropriate language, protocols, standards, and measures (of processes, student outcomes, and implementation outcomes).
Develop educational materials	Develop and format manuals, toolkits, and other supporting materials, to make it easier for staff to learn how to deliver the approach.
Distribute educational materials	Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically.
Identify and prepare champions	Identify and prepare individuals who can motivate colleagues and model effective implementation, overcoming indifference or resistance to the intervention.
Inform local opinion-leaders	Inform providers identified by colleagues as opinion-leaders or 'educationally influential' about the innovation in the hopes that they will influence colleagues to adopt it.
Involve executives and school council	Involve existing governing structures (e.g., school council) in the implementation effort, including the review of data on implementation processes.
Make training dynamic	Make training interactive, with active learning through observation, meaningful discussion and reflection, demonstration of skills, deliberate practice, and feedback.
Mandate change	Have leadership declare the priority of the innovation and their determination to have it implemented.
Model and simulate change	Model or simulate the change that will be implemented prior to implementation.
Obtain formal commitments	Obtain written commitments from key partners that state what they will do to implement the innovation.
Provide follow-on coaching and mentoring support	Use skilled coaches or mentors (either internal or external) to provide ongoing modelling, feedback, and support that helps staff apply new skills and knowledge in practice.
Recruit, designate, and train for leadership	Recruit, designate, and train leaders for the change effort.
Remind teachers	Develop reminder systems designed to help teachers to recall information and/or prompt them to use the program or practice.
Revise professional roles	Shift and revise roles among delivery professionals, and redesign job characteristics.
Tailor strategies	Tailor the implementation strategies to address barriers and leverage facilitators that were identified through earlier data collection.
Use an implementation advisor	Seek guidance from experts in implementation.
Use train-the-trainer strategies	Train designated teachers or organisations to train others in the innovation.

Table 1: Examples of implementation strategies, adapted from the ERIC (Expert Recommendations for Implementing Change) framework[20]

4 Prepare

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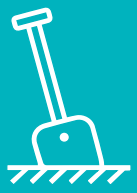

b) Develop a targeted, yet multi-stranded, package of implementation strategies.

When planning for implementation, a broad range of strategies are available to educators. Some will be very familiar (such as training, coaching, audit, and feedback) and some less so (such as using implementation advisors or train-the-trainer strategies). Table 1 outlines a range of different implementation strategies that schools may consider adopting.[19]

Typically, the application of a single strategy alone will be insufficient to successfully support the implementation of a new approach. Instead, a combination of multiple strategies will be needed.[20]

When selecting implementation strategies, aim for a tailored package that supports change at different levels of the organisation – individual practitioners, departmental teams, school level changes, and so on.[21]

The objective is to align these strategies so they reinforce each other and are sequenced appropriately. For example, activities designed to increase staff motivation, such as recruiting opinion-leaders, would typically precede training and professional development.

Build your implementation plan around the active ingredients of your intervention:

- If structural changes are necessary across the school to accommodate the active ingredients, ensure these are planned in advance and maintained over time. If you think it needs three sessions a week to be successful, make time for three sessions a week!
- If you are developing training manuals and implementation resources, ensure they are tightly aligned to the key components and objectives of the intervention. At the same time, retain sufficient scope for appropriate adaptations where there is flexibility.
- Professional development activities should focus on understanding and applying the key intervention strategies. The best programs are precise in terms of the teaching practices they are introducing or changing, with the training and coaching activities focused squarely on making these changes.[22]

Evidence-based programs have particular value in this respect, as they often contain a structured set of implementations strategies that have been tested and refined over time.[23] In doing so, evidence-based programs can act as useful tools to support the implementation of evidence-based practices. Details of evidence-based interventions within the UK context can be found at the EEF's Promising Projects webpage[24] and the Institute for Effective Education's Evidence for Impact database.[25] In the USA, the Institute for Education Sciences provides the What Works Clearinghouse.[26] Evidence for Learning is building its own database of independently evaluated programs in Australian school.[27]

In addition to using any implementation strategies that are captured within an evidence-based program, schools should also consider additional activities that can create 'readiness' for that program in their context, such as developing a receptive environment for the intervention.

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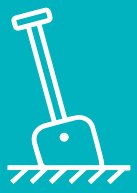

Box 2: Continuously monitor and improve the quality of implementation.

A key element of effective implementation is monitoring how well a new program or practice is adopted and whether it achieves the intended outcomes. Schools should regularly monitor and review data that describes the progress and quality of implementation, and apply this information to refine the use of the intervention over time.

Determining how well implementation is progressing relies on having a clear understanding of what 'good' implementation looks like. How tightly should teachers adhere to the principles of a new approach? Should it be used by all teachers? If so, by when? How quickly would you expect it to be integrated into existing structures and curricula? Questions like these introduce the concept of 'implementation outcomes' – the implementation goals a school wants to achieve throughout the change process.[29]

Examples of common implementation outcomes include:

- fidelity – the degree to which staff uses an intervention as intended by its developers (see Box 5 for details);
- acceptability – the degree to which different stakeholders – such as teachers, students, and parents – perceive an intervention as agreeable;
- reach – how many students it is serving;
- feasibility – the ease and convenience with which the approach can be used by staff and integrated in a school's daily routines; and
- costs.

It may be that several practical activities contribute to these overall implementation outcomes, as can be seen for 'fidelity' in the example of feedback and collaboration in Figure 2.

Having defined a set of appropriate implementation outcomes, schools will also need to develop a set of robust and pragmatic measures to capture these outcomes.[30] Data can be drawn from statistical databases and administrative systems used in schools, or can be collected directly from students, staff, or other stakeholders through surveys, interviews, and classroom observations. Wherever possible, use implementation measures that have been tested in similar contexts and shown to yield accurate and consistent results. Unfortunately, well-specified and evidence-based measures of implementation are rare, so take care to ensure any 'home grown' measures are capturing the intended implementation outcome precisely.

Capturing useful data on implementation means little unless it is acted on. Create a means of summarising data in formats that make it easy for staff to understand (see Prepare, page 17), and provide regular opportunities to tailor strategies in response to this data (see Deliver, page 31).

4 Prepare

Create a clear implementation plan, judge the readiness of the school to deliver that plan, then prepare staff and resources.

c) Define clear implementation outcomes and monitor them using robust and pragmatic measures.

To monitor the use of a new approach, and ensure it is being delivered with high quality, schools will need to define the implementation outcomes they want to achieve and develop an appropriate set of measures (see Box 2 on monitoring implementation).

When selecting implementation outcomes and measures, aim to capture both early signs of successful implementation as well as data on how the intervention is being embedded and adapted over time. Of course, there is a practical limit to what you will be able to measure, so pick implementation measures that are key to the intervention and its delivery. A good starting point is focusing on whether the intervention has been implemented as intended by measuring fidelity in relation to the active ingredients of your intervention (see Prepare, page 17). Before a school can begin monitoring the adoption of a new approach, the implementation outcomes need to be agreed and understood by those staff who are using the intervention.

Implementation monitoring and data collection processes also need to be operationalised. They need to fit with school routines and be usable for staff as part of their daily work. Data collection processes that are complicated and require extensive resources run the risk of not being supported and sustainable in a busy work environment.[29] Simple and quick to collect measures, on the other hand, will likely find greater acceptance among staff and be easier to integrate into implementation processes. Clearly, this highlights a tension between reliability and feasibility.

As an example, if a school was introducing a small-group literacy intervention for struggling readers, it may decide to capture data on the degree to which the intervention was being delivered as intended – the fidelity of delivery. A member of the implementation team may decide to review timetables and measure the frequency of sessions, observe the delivery of interventions sessions, or speak to students for their perspectives on the intervention. This data could be summarised in a standardised format and discussed regularly as part of implementation team meetings.

Thoroughly assess the degree to which the school is ready to implement the innovation.

At this point, a school should have a clearer idea of what it will implement, how it will implement it, the ways in which it will monitor that process, and the resources required to make it a success.

With a more concrete plan emerging, now is a natural point to take the temperature on how ready it is to put that plan into action.

There are many different definitions and understandings of implementation readiness, and the field is far from a consensus on how this can be measured and assessed. One helpful model posits implementation readiness as a combination of three components: the organisation's motivation to adopt an innovation, its general capacity, and its innovation-specific capacity.[30] Box 3 unpacks these three elements in more detail.

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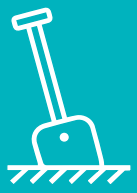

Box 3: A framework to review implementation readiness[31]

Implementation readiness = motivation + general capacity + innovation-specific capacity

The **motivation** to use an innovation depends on many factors, including the complexity of the new program or practice, its compatibility with existing structures, the perceived advantage of the innovation compared to other approaches, and the norms or values of staff, to name just a few.

An organisation's **general capacities** include factors such as staffing levels, leadership capacity, administrative availability, and the overall climate and culture in the school – all of which are foundations for a school to be able to work with any type of innovation (see School leadership and climate, page 11).

The **innovation-specific capacities** relate to the knowledge and skills needed to work with the specific program or practice to be adopted. They include the capability to train and coach staff, the presence of required staff positions, and the availability of technical equipment required for the application of a new intervention, amongst others.

Schools can use this framework to determine the degree to which they are ready to adopt a new approach, identify barriers that may impede implementation, and reveal strengths that can be used in the implementation effort. This assessment can be based on simple questions that address critical features of an innovation, but it can also include more sophisticated measures to evaluate the school's implementation climate, its general motivation or other underlying characteristics.

Examples of questions to consider during a readiness assessment include:

- Who are key individual and organisational stakeholders who need to be involved in the implementation process? In what ways?
- Are these staff sufficiently skilled? If not, does our plan contain the appropriate blend of professional development activities?
- How motivated are staff to engage in this change process? How well does the innovation align with our shared educational values?
- Are we able to make the necessary changes to existing processes and structures, such as timetables or team meetings?
- What type of administrative support is required? Who will provide it?
- What technical equipment is needed to deliver the innovation?
- How will we collect, analyse, and share data on implementation? Who will manage this?
- Does the intervention require external support that needs to be sourced outside of the school? And crucially…
- What can we stop doing to create the space, time, and effort for the new implementation effort?

This is certainly not an exhaustive list; it should be expanded and tailored so it fits the needs of the local context. Importantly, judgements relating to readiness should be seen as a matter of degree rather than binary positions (ready or not) and aim to draw on a range of stakeholder perspectives across the school (see Prepare, page 17).

By building a collective understanding of the implementation requirements, and the degree to which the school is able to meet those requirements, the leadership team should be in a position to judge whether or not they can begin practical preparation for implementation. If they are ready, the practical implementation activities – such as staff training – can begin.

If they are not (which is quite possible), schools should revisit the implementation plan and adapt it appropriately. It may, for example, be decided that additional implementation strategies are needed, further funding secured, or new individuals brought into the implementation effort.

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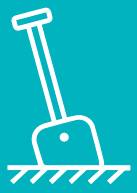

It may even be decided that it is not suitable to implement the program or practice at that moment. If that is the case, a range of alternative options need to be explored (see Explore).

Schools may decide to approach implementation planning and judging readiness the other way around, or in parallel: what is important is that they operate as an iterative process.

Once ready to implement an intervention, practically prepare for its use.

a) Create a shared understanding of the implementation process and provide appropriate support and incentives.

School leaders set the foundation for implementation by aligning it with a school's mission, vision, and goals. Nevertheless, for this vision to be become a reality there needs to be common understanding of the objectives and widespread buy-in. Having decided to commit to a new approach, school leaders need to create a common and explicit understanding of what will be expected, supported and rewarded during the implementation process.[31] It is important that leaders:

- communicate the purpose and importance of the innovation, and what is expected from staff in its use;
- clearly articulate the alignment between the intervention, student learning needs, and the school's broader purpose and values using internal data and external evidence where appropriate;
- ensure there is shared, clear understanding of the active ingredients of the approach; and
- use existing lines of communication – such as staff and school council meetings – and create repeated opportunities to discuss the planned change.

While communication is certainly valuable in developing a theoretical understanding of what is expected during the implementation process, it is unlikely by itself to be sufficient to change perceptions, attitudes, and behaviours among staff. Therefore other, more action-oriented strategies may be required, such as:

- recruiting the efforts of school opinion-leaders – student, community, and teacher leaders – to articulate the benefits of the intervention. Where possible, opinion-leaders should be assigned specific roles within implementation teams (see Prepare, page 17);
- identifying advocates for the innovation who can champion its adoption through modelling and supporting others to use it effectively;
- directly participating in activities that are conducive to good implementation – 'walking the talk'. This will signal a recognition of its priority while at the same time providing an arena for modelling the desired behaviours; and
- developing incentives and rewards that can be used to acknowledge individual and team behaviours that contribute to successful implementation (for example, promotion, monetary, or symbolic rewards).

b) Introduce new skills, knowledge, and strategies with explicit up-front training.

A large body of evidence, including from evaluations funded by Evidence for Learning's UK partner the EEF, shows the benefit of high-quality, up-front training for teachers.[4,8,32,33] The typical purpose of this training is to develop an understanding of the theory and rationale behind a new approach, and introduce the necessary skills, knowledge, and strategies (see Box 4 for further information on the characteristics of effective professional development).

Schools should aim to factor in a number of common features of effective up-front training when introducing new programs or practices:

- Create opportunities for staff to reflect on their existing beliefs and practices, and challenge them in a non-threatening manner.

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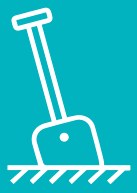

- Make training interactive, with active learning through observation, meaningful discussion and reflection, demonstration of skills, deliberate practice, and feedback.
- Focus both on generic and subject-specific pedagogy. Provide structured support to help staff apply general pedagogical strategies to specific subject areas.
- Use a range of media and delivery approaches, including video, to demonstrate skills and exemplify good practice.

When developing or attending training, ensure it captures the 'active ingredients' for the intervention that were set out in the implementation plan.

c) Prepare the implementation infrastructure.

The implementation of a new approach often relies on a range of simple things that facilitate its use: the proactive support from an administrator, the availability of digital devices that are configured properly, a process for keeping a record of decisions, and so on. Examples like these relate to the governance, administration, and resources that support an intervention.[16] These factors are unusual in that they tend not to be noticed when working well, however, they are important in removing barriers to implementation and allowing staff to focus on developing and applying new skills.

Having assessed the readiness to deliver an intervention (see above), schools should have a clearer idea of the resources and support that are needed. This is likely to include:

- dedicated administrative support from staff who are fully briefed on the purpose of the intervention, and understand their roles in supporting its use;
- appropriate governance, with a clear mandate and operating procedures;
- technical support and equipment – with staff trained and skilled in its use;
- printed and digital resources that are licensed and up-to-date;
- dedicated space to deliver the intervention, which is regularly timetabled; and
- a realistic amount of time allocated to implement the intervention, review implementation data, and address problems.

Remember, this is more about repurposing existing time, effort, and resources than adding lots of additional infrastructure.

Checklist questions:

- ✓ Is there a logical and well-specified implementation plan?
- ✓ Do we have a clear and shared understanding of the active ingredients of our intervention and how they will be implemented?
- ✓ Have we selected the right set of implementation strategies, in the right order?
- ✓ Are we able to capture the desired (and undesired) changes in practices?
- ✓ Have we honestly appraised our capacity to make those changes?
- ✓ Are staff and the school practically ready to adopt the new approach?

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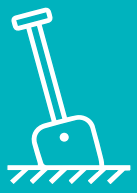


Box 4: Characteristics of effective professional development.

Regardless of the specific objective and content of a new intervention – be it introducing new instructional methods or building subject knowledge – the process of implementation requires not only organisational, but also individual, changes in behaviour. To achieve these changes, effective implementation is almost always supported by high-quality professional development.[4,8,33,34]

In this guide, we break professional development down into two distinct activities: up-front training and follow-on coaching. Training is used to describe initial activities to develop an understanding of the theory and rationale behind the new approach and to introduce skills, knowledge, and strategies. This training usually starts before an intervention is used in the school, hence is situated in the Prepare phase of this guide. Characteristics of effective training are discussed on page 30.

Coaching refers to a range of different types of follow-on support that almost always takes place within the school setting after changes to practices have begun. It involves working with skilled coaches or mentors (either internal or external) who provide ongoing modelling, feedback, and support to help apply the ideas and skills developed in initial training to practical behaviours. As such, coaching is situated in the Deliver section of this report. Characteristics of effective coaching are discussed on page 33.

A common mistake in implementing new programs and practices is only providing up-front training, with little or no follow-on support.

At the same time, professional development processes are unlikely to be successful without also ensuring there is high-quality content and a sharp focus on student outcomes. One of Evidence for Learning's evaluated projects, Thinking Maths is precise in terms of the teaching practices they are introducing and provide explicit training and support to help teachers apply general pedagogy to specific subject domains i.e. pedagogical content knowledge.[27]

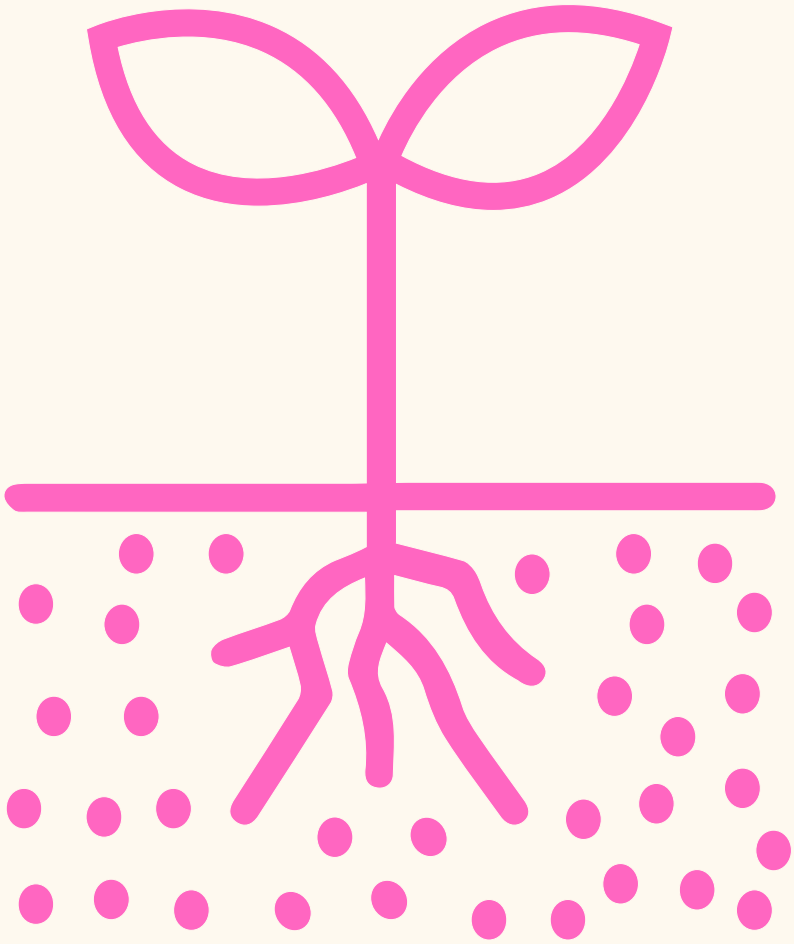
Ensure there is a rhythm, duration, and alignment to professional development activities.

Overall, the evidence suggests that professional development should be viewed as an ongoing process rather than a single event. There needs to be appropriate timing of initial training, follow-on support, and consolidation activities to fit both the school cycle and the iterative nature of adult learning.[4]

The content of professional development activities should also be aligned and purposeful so that individual learning activities collectively reinforce one another and revisit the same messages. For example, in-school coaching activities should build on, and reflect, the ideas and strategies that are introduced in initial training. Inevitably, this all takes time, with most effective professional development lasting at least two terms, and often longer. Hence, school leaders and program developers need to design interventions that allow for frequent and meaningful engagement, and move away from a model of one-day, one-off training.[4]

5 Deliver

Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time.



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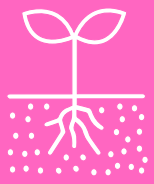


'Deliver' is a vulnerable phase in which the new program or practice is applied for the first time. To begin with, even highly experienced educators and administrators may feel awkward as new behaviours and structures are learned and old habits set aside, creating feelings of unease or 'incompetence' which can be demoralising and potentially derail the implementation effort.

The focus of this phase, therefore, is on quality assurance and quality improvement. Data and experiences should be gathered while applying the new approach, and this information used to understand, and act on, important barriers and facilitators to implementation.

Leaders should seek to support staff in using the innovation in the best possible way so they can become increasingly familiar with the new practices and routines. Good coaching and mentoring practices are instrumental in this support.

Adopt a flexible and motivating leadership approach during the initial attempts at implementation.

As mentioned, the initial period of applying a new approach is often challenging as staff get to grips with new ways of working.

A key role for leaders during this period, therefore, is to manage expectations and encourage 'buy-in' until positive signs of change emerge.[7]

Having clear and achievable short-term measures of implementation are important in capturing these changes and demonstrating early signs of success.

Barriers and challenges almost inevitably emerge as a school moves through an implementation process. Some challenges will be more of a *technical* nature: qualified staff may leave the organisation meaning that new staff need to be hired and trained; or a school may identify a gap in skills and need to develop a new strand of training. Challenges like these can be met using the routine processes and operating procedures that already exist in a school, such as human resources, professional development, and timetabling.

Other implementation challenges can be more unfamiliar: for example, a new practice may require videoing teaching in the classroom raising concerns among staff, parents, and students. Such problems are rarely met with ready-made, routine solutions, and call for a more *adaptive* leadership style. They require dialogue, involvement, negotiation, and the collaborative development of solutions.[34] In the example provided above, a meeting of parents may need to be called to work through any concerns regarding videoing in the school.

Research suggests that leaders are prone to applying the wrong leadership style when tackling implementation problems.[34] Take care in choosing the appropriate approach, recognising that problems may require a blend of technical and adaptive solutions.

Reinforce initial training with follow-on support within the school.

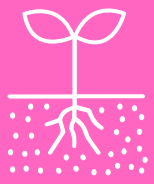
While up-front training is important in developing a conceptual understanding of a new approach, crucially, training alone is unlikely to be sufficient to yield changes in practice. Often, it is only when follow-on support is added to training, in the form of expert coaching or mentoring, that teachers are able to apply their conceptual understanding to practical classroom behaviours.[4,8,15,35]

An increasing body of evidence demonstrates the impact of coaching on improving implementation and learning outcomes.[35] Nevertheless, coaching varies in its effectiveness, depending on how it facilitates professional learning.[33] A number of activities emerge as being useful which schools should seek to factor into their post-training support:

- Create opportunities for explicit discussions around how to apply new ideas and strategies to classroom practice and adapt existing practices.
- Model the delivery of new skills and strategies.
- Encourage staff to deliberately practice specific skills and apply what they have learnt by experimenting back in the classroom.
- Structure in time for reflection on the success of experimentation and what can be improved next time.

5 Deliver

Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time.



- Observe classroom practice and provide regular and actionable feedback on performance and implementation.
- Provide ongoing moral support and encouragement.

As these coaching activities require dynamic and frequent interactions with teachers, they almost always take place within the school setting.

Use highly skilled coaches.

The skills of the coach or mentor are important. Less effective coaches adopt a more didactic model where they simply tell teachers what to do, passively observe practice, and evaluate staff performance against a set observation rubric.[33] More effective coaches:

- offer support in a constructive, collaborative manner;
- help teachers take control of their professional development, while at the same time providing appropriate challenge; and
- have the trust and confidence of teachers and regularly engage with school leaders.

Coaching support can be provided either by internal staff or external specialists, with successful examples of both approaches emerging in EEF-funded evaluations of promising programs.[22] More research is needed on the skills and experience of successful coaches; however, it appears that having significant experience in working with teachers (more than five years), and expertise across multiple areas – specialist pedagogical knowledge, adult learning, feedback, monitoring, and so on – are likely to be important.[4,33,35]

Complement expert coaching and mentoring with structured peer-to-peer collaboration.

Another important form of follow-on support is peer-to-peer collaboration in the form of approaches like professional learning communities. Here, the evidence is more mixed, with some forms of collaboration not appearing to add value to implementation and student outcomes.[4] This suggests schools should think precisely about the content of such groups and the nature and purpose of the work they are engaged in.

The features of effective peer-to-peer collaboration are still contested. A collegial problem-solving approach is recommended, with clear objectives, structured content and processes, and a tight focus on improving student outcomes.[4] Loosely defined and unstructured collaborations are unlikely to work. Coaches and mentors – either internal or external – can play a valuable role here in guiding, monitoring, and refining the work of collaborative groups.[33,36]

Use implementation data to actively tailor and improve the approach.

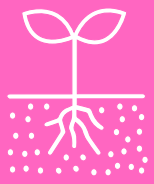
By now, schools should have developed an appropriate set of implementation outcomes and a process for collecting and analysing this data. These tools are now used to monitor the progress and quality of implementation, and apply that knowledge to inform decisions about the delivery of the intervention.

Data can be used to identify barriers that arise in using the new approach, which, in turn, should be used to tailor the intervention by, for example, restructuring teams, adapting implementation strategies, redistributing resources, or enhancing staff support. Data may also point to implementation strengths and facilitators that can be used to enhance the wider use of the innovation, for example, by identifying early adopters who can mentor and coach other colleagues.

Most importantly, implementation data will only be meaningful if it can then be applied in daily practice. This requires that data – such as fidelity scores for staff using a new program – is summarised in digestible ways that make it easy for staff to understand and apply. Frequent opportunities should be created to review implementation data, address barriers, and tailor implementation strategies, for example as a standing item on school leadership team meetings.

5 Deliver

Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time.



Box 5: Fidelity – combine faithful adoption with intelligent adaption.

A common challenge when adopting new programs and practices is ensuring they are being used as intended. Staff may like some aspects of an intervention more than others and 'cherry pick' their favourite elements; new ideas and practices may lead to unintended adaptations to a program that diminish its effect; people may struggle with some aspects of an approach and leave these elements out. The use of an approach, therefore, can vary greatly from teacher to teacher, and the educational outcomes they achieve may not meet the initial expectations.[33]

If we want to enable effective change, we need to make sure that the core requirements of the innovation are being met.

Ensure programs and practices are delivered as intended by the developers.

Fidelity is the implementation outcome most acknowledged and measured in implementation studies in education. It describes to what degree an intervention has been implemented as intended by its developers (both in-school and external developers). Fidelity can relate to structural aspects of the intervention, such as dosage (for example, the correct number of sessions are delivered) or training (for example, teachers are trained as planned and receive the necessary supervision). It can also refer to more dynamic aspects of the intervention, such as whether key teaching strategies are included in lessons, or whether the delivery of those strategies is sufficiently student-centred.[18,33]

Systematic reviews of implementation studies in education consistently report a positive relationship between the fidelity with which an intervention is implemented and the outcomes for students.[8,33]

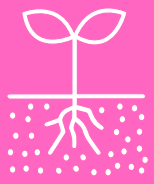
Ensure you are being faithful to what matters – use 'active ingredients' as a guide.

At the same time, it is important to ensure that the focus on fidelity is in the right place. A theme running through this guide is the importance of specifying the 'active ingredients' of an intervention – those elements and features that are tightly related to an intervention's theory and mechanism of change (see Prepare, page 17) – which could, for example, relate to key pedagogical strategies, or to aspects of its delivery, such as the duration and frequency of lessons.

Specifying the active ingredients of an intervention enables educators to identify which features need to be adopted closely (with fidelity) to get the intended outcomes, as well as areas where there is scope for intelligent adaptations (see Deliver, page 31).

5 Deliver

Support staff, monitor progress, solve problems, and adapt strategies as the approach is used for the first time.



Make thoughtful adaptations only when the active ingredients are securely understood and implemented.

A key recommendation when developing a well-specified implementation plan is establishing a clear sense of the active ingredients of the intervention (see Prepare, page 17). Embracing a notion of active ingredients implicitly acknowledges the significance of 'flexible elements' – those features or practices within an intervention that are not directly related to the theory and mechanism of change, and where there is scope for local adaptations.

Local adaptations to interventions are almost inevitable.[17] Staunch supporters of 'fidelity' have tended to view such adaptations as failures of implementation, however, this may be taking too pessimistic a view. Although the evidence base isn't robust, there is an increasing body of research showing that local adaptations can potentially be beneficial to implementation, encouraging buy-in and ownership, and enhancing the fit between an intervention and the local setting.[17] Novel additions to interventions – in contrast to modifications – are likely to be most beneficial.

Too much flexibility can be damaging, however, with over-modification resulting in lack of impact, particularly where modifications are made to the core components of the intervention.[15] As such, teachers shouldn't view fidelity as a threat to professional autonomy, rather see it as guide to understanding where to be 'tight' and where to be 'loose'.

The take-home lesson is stick tight to the active ingredients of an intervention until they are securely understood, characterised, and implemented, and only then begin to introduce local adaptations.

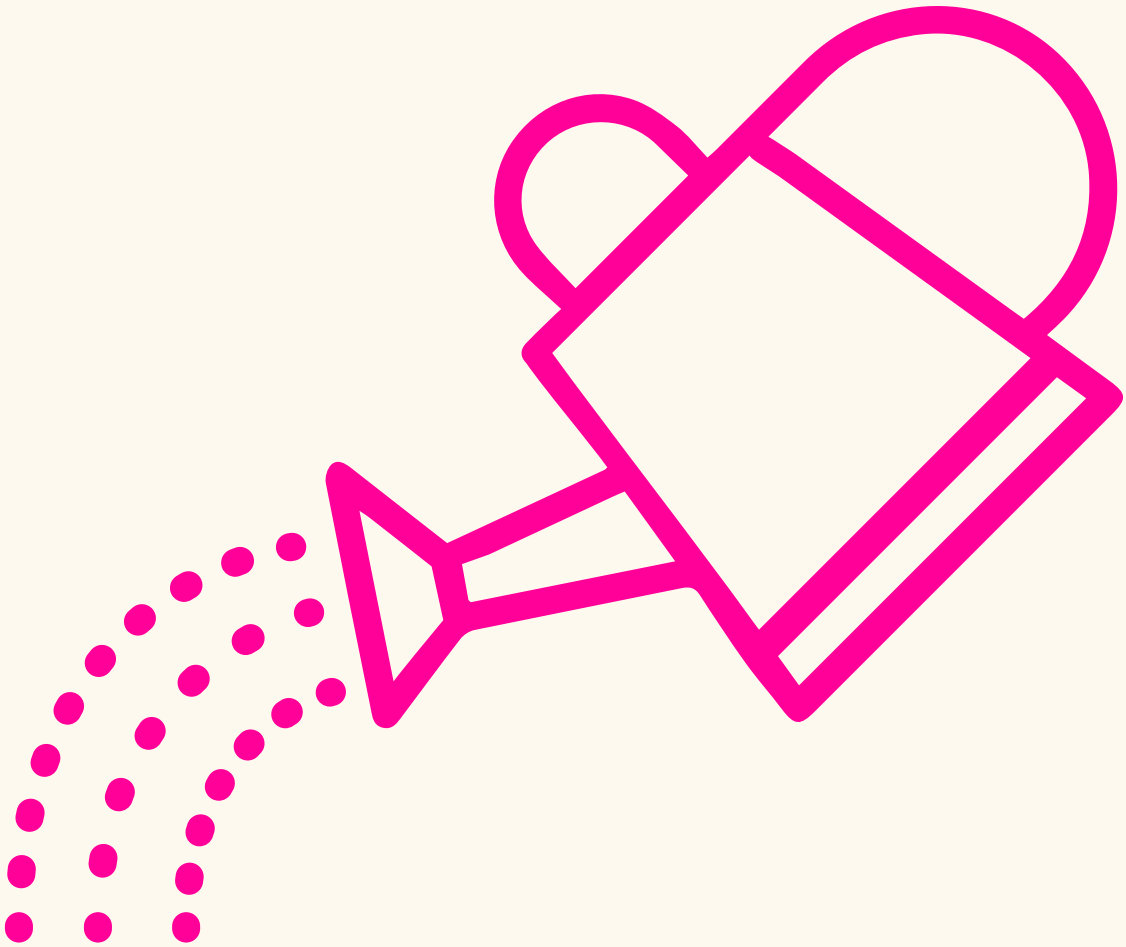
A school that has achieved a stable routinisation in the use of an innovation – with most staff able to naturally and routinely apply new behaviours and approaches – shifts its focus towards sustaining the new practice.

Checklist questions:

- ✓ Are we able to respond to challenges that arise during the initial stages of using a new approach? Can we use existing structures and processes or are novel solutions required?
- ✓ Is appropriate follow-on support available to embed new skills and knowledge developed during initial training, in the form of coaching, mentoring, and peer-to-peer collaboration?
- ✓ Is the intervention being implemented as intended? Are the active ingredients being observed in day-to-day practice?
- ✓ Does implementation data suggest we need to adapt our implementation strategies?

6 Sustain

Plan for sustaining and scaling an intervention from the outset and continuously acknowledge and nurture its use.



6 Sustain

Plan for sustaining and scaling an intervention from the outset and continuously acknowledge and nurture its use.

Plan for sustaining and scaling an innovation from the outset.

Depending on the scale and complexity of the changes, and the initial degree of alignment with the climate of the school, implementation can be, at the same time, tiring, energising, ambiguous, exhilarating, and overwhelming.

Implementation readiness – motivation, general capacity, and innovation-specific capacity – is therefore rarely static; it can be developed and built, but can also diminish and vanish. The loss of staff or opinion-leaders can fundamentally change how an intervention is perceived in an organisation, while reduction of budgets and other resources can limit its use.

These possibilities cannot first be addressed in the final stages of implementation;[37] schools should aim to plan for sustaining and scaling an innovation in the early stages. This may involve building contingency plans for turnover of staff, or considering additional funding sources to maintain the innovation over time. Take regular 'pulse checks' to ensure the stresses and strains of implementation are not adversely affecting the readiness of the school.

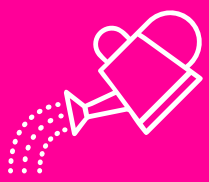
Treat scale-up of an innovation as a new implementation process.

If an implementation process is successful and reaches the Sustain phase, schools should shift their focus to consolidating the new program or practice and enhancing its skilful use among all relevant staff. Sustaining an innovation may involve expanding its use to additional staff, teams, or schools as confidence grows in its use.

Like the initial implementation process, the decision to scale-up an approach should also be driven by local data and other available evidence. Start a scale-up process by conducting a thorough review of the previous implementation experience and the achieved outcomes. This may suggest an entirely new implementation process is required – potentially leading the organisation back to Explore – as the school re-assesses the needs of the intended recipients and the capacity to deliver the intervention at scale.

6 Sustain

Plan for sustaining and scaling an intervention from the outset and continuously acknowledge and nurture its use.



Ensure that implementation data remains fit for purpose.

When implementation has reached the Sustain phase, schools should continue monitoring implementation to capture how the intervention is being adopted and adapted over time. At the same time, the foundation and context for data collection may have changed: new cohorts of students may have different learning needs, changing policy agendas may have led to new reporting requirements, or decreased capacity within the school made collecting data challenging.

With these and other changes in mind, schools should review their capacity to collect and review implementation data on a regular basis to ensure it is being measured accurately over time.[38]

Continuously acknowledge, support, and reward good implementation practices.

Once a new program or practice is integrated into the normal routines of a school, there is a risk of assuming that the implementation process requires no further leadership support.

However, to ensure that the changes brought to a school can be sustained, school leaders should continuously acknowledge, support, and reward its use (see Prepare, page 17).

Sustaining implementation requires formal leaders to continuously engage in implementation processes, provide purposeful support, and 'walk the talk'. Modelling of expected behaviours and demonstrating the use of evidence in daily routines are key ingredients of healthy, ongoing implementation leadership.

Checklist questions:

- ✓ Do we have a stable use of the intervention, as intended?
- ✓ Is it achieving the desired outcomes?
- ✓ Have we created contingency plans for any changes across the school that may disrupt successful implementation?
- ✓ Is it appropriate to extend the use of the approach to additional staff? What is required to achieve this?
- ✓ How can the existing capacity and resources be best used to support scale-up?

How was this guide compiled?

The guide draws on a series of recent reviews that summarise and interpret research on implementation in education.[4,8,32,35] These reviews have been supplemented by insights from the wider literature on implementation science, as well as findings from individual studies, including evaluations of education interventions by Evidence for Learning's UK partner, the EEF. As such, the guide is not a new study in itself, rather a translation of existing research into accessible and actionable guidance for schools.

We have taken a pragmatic approach, with not every issue and factor relevant to implementation covered in detail. Instead, we have aimed to provide a manageable introduction and focused on areas where there is existing evidence that is not regularly applied.

While the evidence base on implementation in education is evolving quickly, it is nevertheless patchy. Some areas, like training and professional development, have a reasonably robust evidence base, while others, like implementation climate, have not been studied extensively. Hence, research from other sectors, such as social work or healthcare, is also used. Although the elements in the guide have supporting evidence, the overall process and structure we propose has not been evaluated. As such, the guide should be treated as a snapshot of promising evidence in implementation and an introduction to a rapidly developing field.

Further reading and support

There are a growing number of resources and materials to support schools in their implementation journey. Here are some recommended by the Centre for Evidence and Implementation.

A short US article on implementation science and practice in the education sector describes many of the features and concepts outlined in the Guidance Report.[39]

A special 2017 edition of Quality Assurance in Education focused on continuous quality improvement that presented seven different approaches including improvement science and networked improvement communities.[40]

A Frontiers in Education journal has a helpful article on why implementation science is important for design and evaluation in educational settings.[41]

The Active Implementation Hub, developed by the National Implementation Research Network (NIRN) in the U.S., contains a useful range of resources, videos, and online modules that also relate to themes covered in this report.[42]

The US' Colorado Education Department has tailored the NIRN resources specifically for schools.

The CREd Guide on Implementation Science from the American Speech-Language-Hearing Association has a series of presentations that are relevant to school settings.[43]

The Canadian Institutes of Health Research has funded a series of videos with high level messages related to implementation in schools.[44]

RE-AIM is a public health model for effective implementation, but it is also relevant to education. RE-AIM is an acronym that consists of five elements, or dimensions; reach, effectiveness, adoption, implementation and maintenance.[45]

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